

MOULDED CASE CIRCUIT BREAKERS

CATALOGUE OF MOULDED CASE
CIRCUIT BREAKERS AND SWITCH
DISCONNECTORS



5 years
WARRANTY

NOARK

MOULDED CASE CIRCUIT BREAKERS

In order to increase the safety and control of electrical installations, the Ex9M series of moulded case circuit breakers (MCCBs) was developed to bring enhanced quality and innovation to the low-voltage sector.

Applications in industrial, commercial, photovoltaic, and other power generation and control systems require these protective devices in a variety of sizes, control methods, and protection characteristics.

Noark offers a wide portfolio of MCCBs designed to meet the diverse needs of such installations — from classic and robust thermomagnetic types for both AC and DC applications to advanced models with electronic trip units that offer precise and intelligent protection. Additional functionality can be achieved by combining MCCBs with our wide range of compatible accessories.

Customization

With a variety of internal accessories — such as auxiliary contacts, shunt or undervoltage releases, toggle extensions, or motor operators — you can fully customize your Noark MCCB to meet your exact requirements.

Adjustable current

Noark produces MCCBs in a wide range of sizes, from very low rated currents to high-capacity models, all offering the possibility to adjust the tripping current within the range of 70–100% of I_n .

High withstandability

One of the key parameters of an MCCB is its short-circuit breaking capacity, I_{cu} — the maximum current the device can safely interrupt. Noark offers models with exceptionally high I_{cu} values, ensuring maximum protection and reliability in demanding environments.

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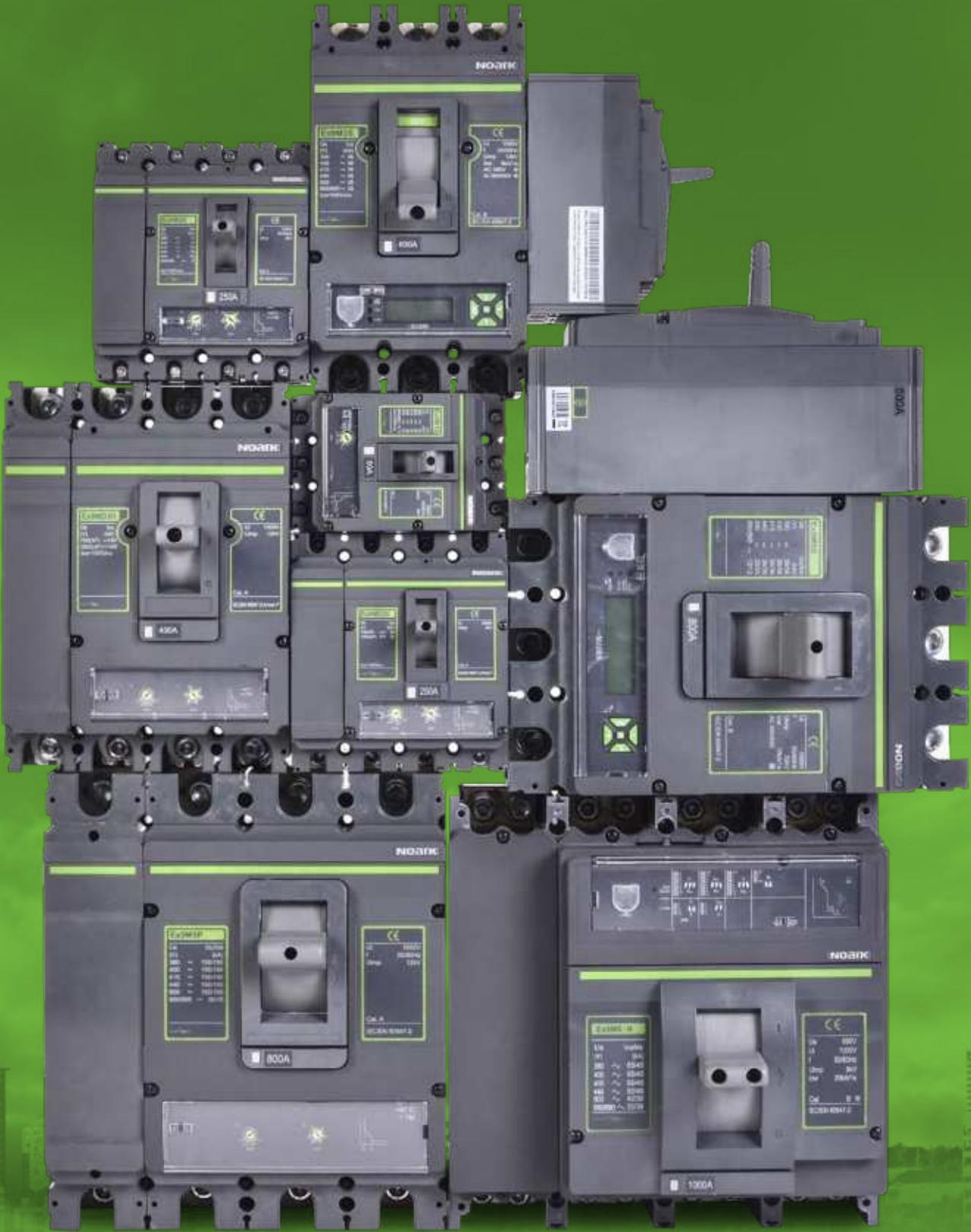
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MOULDED CASE CIRCUIT BREAKERS



MOULDED CASE CIRCUIT BREAKERS

Professional tips



- 1 5 years warranty
- 2 Rated current from 16 A up to 1600 A
- 3 Breaking capacity up to 150 kA
- 4 1 to 4-pole versions available
- 5 Six frame sizes M1 - M6
- 6 AC and DC MCCBs and Switch disconnectors
- 7 Wide range of accessories
- 8 Thermomagnetic release for sizes up to M5 and electronic release for frame sizes M2 to M6

Moulded Case Circuit Breakers **Ex9M AC TM**



- Thermo-magnetic tripping unit for power distribution
- Frame sizes M1-M5
- Rated operating current up to 800 A
- 1, 2, 3 and 4-pole versions
- Rated ultimate short circuit breaking capacity $I_{cu} = I_{cs}$ up to 150 kA
- Rated voltage 415 / 690 V AC

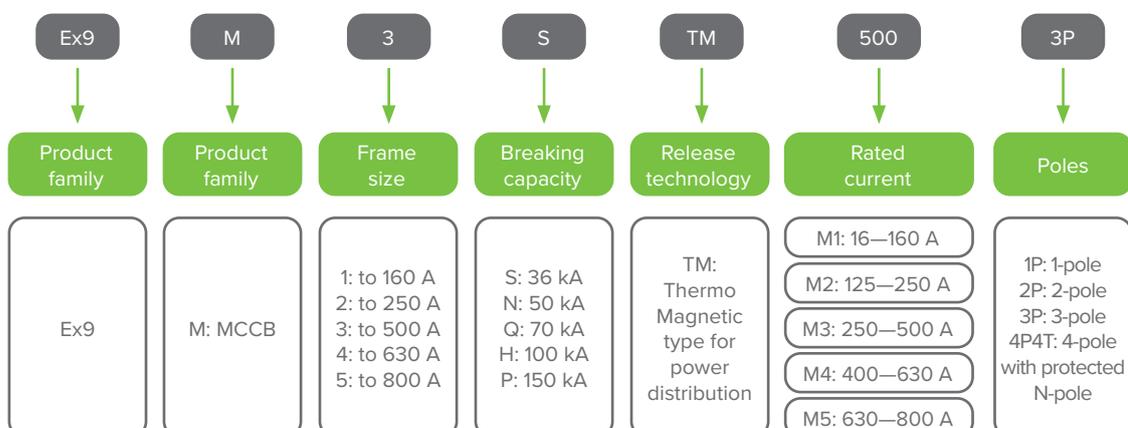
Moulded Case Circuit Breakers **Ex9M AC TM**

Moulded Case Circuit Breakers Ex9M Thermo-magnetic (TM) type are intended for applications in power distribution mainly. Testing according to IEC / EN 60947-2 standards ensures the functionality and reliability for wide variety of applications including isolation.

These breakers are offered with breaking capacities from 36 kA up to extreme 150 kA. High rated impulse withstand voltage makes it possible to use them even in system with occurrences of transient overvoltage waves of high intensity, e.g. in heavy industry.

Utilization category A circuit breakers.

Type Key

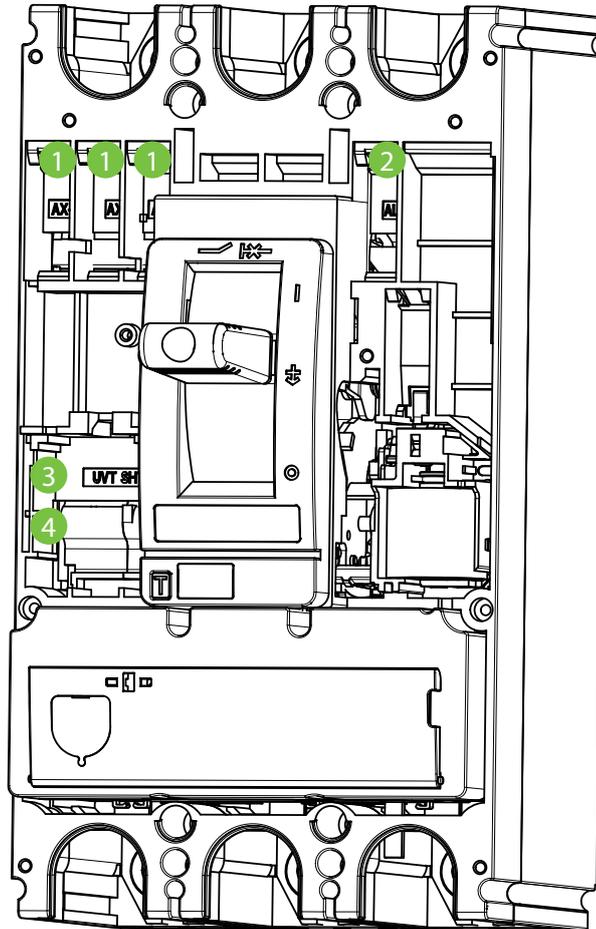


Certification marks



Moulded Case Circuit Breakers **Ex9M AC TM**

Internal accessories



1

Auxiliary contact
AX21/M

2

Signal contact
AL21/M

3

Shunt trip release
SHT2i
1 unit or UVT2i

4

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21/M

Signal contact AL21/M

Shunt trip release SHT2i

Undervoltage release UVT2i

All internal accessories for the frame sizes M2+M3 and M4+M5 are identical.

Moulded Case Circuit Breakers **Ex9M AC TM**

External accessories Ex9M1-M5 AC TM



Phase barriers
PHS2i



Terminal cover, short
TCV2i



Terminal cover, long
TCE2i



Remote operator
MOD2i



Direct rotary handle
RHD2i



Extended rotary handle
ERH2i



Draw-Out Base
DOB 2i F/B



Plug-In Base
PIA 2i F/B

Phase barriers PHS2i

Terminal cover, short TCV2i

Terminal cover, long TCE2i

Remote operators MOD2i

Direct rotary handles RHD2i

Extended rotary handles ERH2i

Draw-Out Base DOB 2i F/B

Plug-In Base PIA 2i F/B

Moulded Case Circuit Breakers **Ex9M AC TM**

External accessories Ex9M1-M5 AC TM



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



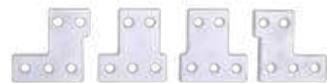
Box terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i



Front plate connection
JP 2i



Rear connection plate
RCP 2i



Off position toggle key
lock
KLK 2i



Mechanical interlock
MIT 2i

Tunnel terminals MC2i W

Mounting depth spacers WG i

Box terminals MC2i

Screw terminals MCS2i

Din rail adapter DRA2i

Front plate connection JP 2i

Rear connection plate RCP 2i

Off position toggle key lock KLK 2i

Mechanical interlock MIT 2i

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M1S up to 160 A, $I_{cu} = 36 \text{ kA}$

- 1, 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- $I_r(1.0)$ Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_i(10)$ range not adjustable (1 Pole)
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- I_{iN} fixed at $10 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	16A	16 A	160 A	113950	Ex9M1S TM 16 1P	2/12
1	20A	20 A	200 A	113951	Ex9M1S TM 20 1P	2/12
1	25A	25 A	250 A	113952	Ex9M1S TM 25 1P	2/12
1	32A	32 A	320 A	113953	Ex9M1S TM 32 1P	2/12
1	40A	40 A	400 A	113954	Ex9M1S TM 40 1P	2/12
1	50A	50 A	500 A	113955	Ex9M1S TM 50 1P	2/12
1	63A	63 A	630 A	113956	Ex9M1S TM 63 1P	2/12
1	80A	80 A	800 A	113957	Ex9M1S TM 80 1P	2/12
1	100A	100 A	1000 A	113958	Ex9M1S TM 100 1P	2/12
1	125A	125 A	1250 A	113959	Ex9M1S TM 125 1P	2/12
1	160A	160 A	1600 A	113960	Ex9M1S TM 160 1P	2/12
2	16A	11-16 A	160 A	113984	Ex9M1S TM 16 2P	1/10
2	20A	14-20 A	200 A	113985	Ex9M1S TM 20 2P	1/10
2	25A	17-25 A	250 A	113986	Ex9M1S TM 25 2P	1/10
2	32A	22-32 A	320 A	113987	Ex9M1S TM 32 2P	1/10
2	40A	28-40 A	400 A	113988	Ex9M1S TM 40 2P	1/10
2	50A	35-50 A	500 A	113989	Ex9M1S TM 50 2P	1/10
2	63A	44-63 A	630 A	113990	Ex9M1S TM 63 2P	1/10
2	80A	56-80 A	800 A	113991	Ex9M1S TM 80 2P	1/10
2	100A	70-100 A	1000 A	113992	Ex9M1S TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	113993	Ex9M1S TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	113994	Ex9M1S TM 160 2P	1/10
3	16A	11-16 A	160 A	111791	Ex9M1S TM 16 3P	1/12
3	20A	14-20 A	200 A	111792	Ex9M1S TM 20 3P	1/12
3	25A	17-25 A	250 A	111793	Ex9M1S TM 25 3P	1/12
3	32A	22-32 A	320 A	111794	Ex9M1S TM 32 3P	1/12
3	40A	28-40 A	400 A	111795	Ex9M1S TM 40 3P	1/12
3	50A	35-50 A	500 A	111796	Ex9M1S TM 50 3P	1/12
3	63A	44-63 A	630 A	111797	Ex9M1S TM 63 3P	1/12
3	80A	56-80 A	800 A	111798	Ex9M1S TM 80 3P	1/12
3	100A	70-100 A	1000 A	111799	Ex9M1S TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	111800	Ex9M1S TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	111801	Ex9M1S TM 160 3P	1/12
4	16A	11-16 A	160 A	111802	Ex9M1S TM 16 4P4T	1/12
4	20A	14-20 A	200 A	111803	Ex9M1S TM 20 4P4T	1/12
4	25A	17-25 A	250 A	111804	Ex9M1S TM 25 4P4T	1/12
4	32A	22-32 A	320 A	111805	Ex9M1S TM 32 4P4T	1/12
4	40A	28-40 A	400 A	111806	Ex9M1S TM 40 4P4T	1/12
4	50A	35-50 A	500 A	111807	Ex9M1S TM 50 4P4T	1/12
4	63A	44-63 A	630 A	111808	Ex9M1S TM 63 4P4T	1/12
4	80A	56-80 A	800 A	111809	Ex9M1S TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	111810	Ex9M1S TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	111811	Ex9M1S TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	111812	Ex9M1S TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M1N up to 160 A, $I_{cu} = 50 \text{ kA}$

- 1, 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- $I_r(1.0)$ Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_i(10)$ range not adjustable (1 Pole)
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- I_{in} fixed at $10 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	16A	16 A	160 A	113961	Ex9M1N TM 16 1P	2/12
1	20A	20 A	200 A	113962	Ex9M1N TM 20 1P	2/12
1	25A	25 A	250 A	113963	Ex9M1N TM 25 1P	2/12
1	32A	32 A	320 A	113964	Ex9M1N TM 32 1P	2/12
1	40A	40 A	400 A	113965	Ex9M1N TM 40 1P	2/12
1	50A	50 A	500 A	113966	Ex9M1N TM 50 1P	2/12
1	63A	63 A	630 A	113967	Ex9M1N TM 63 1P	2/12
1	80A	80 A	800 A	113968	Ex9M1N TM 80 1P	2/12
1	100A	100 A	1000 A	113969	Ex9M1N TM 100 1P	2/12
1	125A	125 A	1250 A	113970	Ex9M1N TM 125 1P	2/12
1	160A	160 A	1600 A	113971	Ex9M1N TM 160 1P	2/12
2	16A	11-16 A	160 A	113995	Ex9M1N TM 16 2P	1/10
2	20A	14-20 A	200 A	113996	Ex9M1N TM 20 2P	1/10
2	25A	17-25 A	250 A	113997	Ex9M1N TM 25 2P	1/10
2	32A	22-32 A	320 A	113998	Ex9M1N TM 32 2P	1/10
2	40A	28-40 A	400 A	113999	Ex9M1N TM 40 2P	1/10
2	50A	35-50 A	500 A	114000	Ex9M1N TM 50 2P	1/10
2	63A	44-63 A	630 A	114001	Ex9M1N TM 63 2P	1/10
2	80A	56-80 A	800 A	114002	Ex9M1N T M 80 2P	1/10
2	100A	70-100 A	1000 A	114003	Ex9M1N TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	114004	Ex9M1N TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	114005	Ex9M1N TM 160 2P	1/10
3	16A	11-16 A	160 A	111813	Ex9M1N TM 16 3P	1/12
3	20A	14-20 A	200 A	111814	Ex9M1N TM 20 3P	1/12
3	25A	17-25 A	250 A	111815	Ex9M1N TM 25 3P	1/12
3	32A	22-32 A	320 A	111816	Ex9M1N TM 32 3P	1/12
3	40A	28-40 A	400 A	111817	Ex9M1N TM 40 3P	1/12
3	50A	35-50 A	500 A	111818	Ex9M1N TM 50 3P	1/12
3	63A	44-63 A	630 A	111819	Ex9M1N TM 63 3P	1/12
3	80A	56-80 A	800 A	111820	Ex9M1N TM 80 3P	1/12
3	100A	70-100 A	1000 A	111821	Ex9M1N TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	111822	Ex9M1N TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	111823	Ex9M1N TM 160 3P	1/12
4	16A	11-16 A	160 A	111824	Ex9M1N TM 16 4P4T	1/12
4	20A	14-20 A	200 A	111825	Ex9M1N TM 20 4P4T	1/12
4	25A	17-25 A	250 A	111826	Ex9M1N TM 25 4P4T	1/12
4	32A	22-32 A	320 A	111827	Ex9M1N TM 32 4P4T	1/12
4	40A	28-40 A	400 A	111828	Ex9M1N TM 40 4P4T	1/12
4	50A	35-50 A	500 A	111829	Ex9M1N TM 50 4P4T	1/12
4	63A	44-63 A	630 A	111830	Ex9M1N TM 63 4P4T	1/12
4	80A	56-80 A	800 A	111831	Ex9M1N TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	111832	Ex9M1N TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	111833	Ex9M1N TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	111834	Ex9M1N TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M1Q up to 160 A, $I_{cu} = 70 \text{ kA}$

- 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- I_{th} fixed at $10 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	16A	11-16 A	160 A	114006	Ex9M1Q TM 16 2P	1/10
2	20A	14-20 A	200 A	114007	Ex9M1Q TM 20 2P	1/10
2	25A	17-25 A	250 A	114008	Ex9M1Q TM 25 2P	1/10
2	32A	22-32 A	320 A	114009	Ex9M1Q TM 32 2P	1/10
2	40A	28-40 A	400 A	114010	Ex9M1Q TM 40 2P	1/10
2	50A	35-50 A	500 A	114011	Ex9M1Q TM 50 2P	1/10
2	63A	44-63 A	630 A	114012	Ex9M1Q TM 63 2P	1/10
2	80A	56-80 A	800 A	114013	Ex9M1Q TM 80 2P	1/10
2	100A	70-100 A	1000 A	114014	Ex9M1Q TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	114015	Ex9M1Q TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	114016	Ex9M1Q TM 160 2P	1/10
3	16A	11-16 A	160 A	111835	Ex9M1Q TM 16 3P	1/12
3	20A	14-20 A	200 A	111836	Ex9M1Q TM 20 3P	1/12
3	25A	17-25 A	250 A	111837	Ex9M1Q TM 25 3P	1/12
3	32A	22-32 A	320 A	111838	Ex9M1Q TM 32 3P	1/12
3	40A	28-40 A	400 A	111839	Ex9M1Q TM 40 3P	1/12
3	50A	35-50 A	500 A	111840	Ex9M1Q TM 50 3P	1/12
3	63A	44-63 A	630 A	111841	Ex9M1Q TM 63 3P	1/12
3	80A	56-80 A	800 A	111842	Ex9M1Q TM 80 3P	1/12
3	100A	70-100 A	1000 A	111843	Ex9M1Q TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	111844	Ex9M1Q TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	111845	Ex9M1Q TM 160 3P	1/12
4	16A	11-16 A	160 A	111846	Ex9M1Q TM 16 4P4T	1/12
4	20A	14-20 A	200 A	111847	Ex9M1Q TM 20 4P4T	1/12
4	25A	17-25 A	250 A	111848	Ex9M1Q TM 25 4P4T	1/12
4	32A	22-32 A	320 A	111849	Ex9M1Q TM 32 4P4T	1/12
4	40A	28-40 A	400 A	111850	Ex9M1Q TM 40 4P4T	1/12
4	50A	35-50 A	500 A	111851	Ex9M1Q TM 50 4P4T	1/12
4	63A	44-63 A	630 A	111852	Ex9M1Q TM 63 4P4T	1/12
4	80A	56-80 A	800 A	111853	Ex9M1Q TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	111854	Ex9M1Q TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	111855	Ex9M1Q TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	111856	Ex9M1Q TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M1H up to 160 A, $I_{cu} = 100 \text{ kA}$

- 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- I_{in} fixed at $10 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	16A	11-16 A	160 A	114017	Ex9M1H TM 16 2P	1/10
2	20A	14-20 A	200 A	114018	Ex9M1H TM 20 2P	1/10
2	25A	17-25 A	250 A	114019	Ex9M1H TM 25 2P	1/10
2	32A	22-32 A	320 A	114020	Ex9M1H TM 32 2P	1/10
2	40A	28-40 A	400 A	114021	Ex9M1H TM 40 2P	1/10
2	50A	35-50 A	500 A	114022	Ex9M1H TM 50 2P	1/10
2	63A	44-63 A	630 A	114023	Ex9M1H TM 63 2P	1/10
2	80A	56-80 A	800 A	114024	Ex9M1H TM 80 2P	1/10
2	100A	70-100 A	1000 A	114025	Ex9M1H TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	114026	Ex9M1H TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	114027	Ex9M1H TM 160 2P	1/10
3	16A	11-16 A	160 A	111857	Ex9M1H TM 16 3P	1/12
3	20A	14-20 A	200 A	111858	Ex9M1H TM 20 3P	1/12
3	25A	17-25 A	250 A	111859	Ex9M1H TM 25 3P	1/12
3	32A	22-32 A	320 A	111860	Ex9M1H TM 32 3P	1/12
3	40A	28-40 A	400 A	111861	Ex9M1H TM 40 3P	1/12
3	50A	35-50 A	500 A	111862	Ex9M1H TM 50 3P	1/12
3	63A	44-63 A	630 A	111863	Ex9M1H TM 63 3P	1/12
3	80A	56-80 A	800 A	111864	Ex9M1H TM 80 3P	1/12
3	100A	70-100 A	1000 A	111865	Ex9M1H TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	111866	Ex9M1H TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	111867	Ex9M1H TM 160 3P	1/12
4	16A	11-16 A	160 A	111868	Ex9M1H TM 16 4P4T	1/12
4	20A	14-20 A	200 A	111869	Ex9M1H TM 20 4P4T	1/12
4	25A	17-25 A	250 A	111870	Ex9M1H TM 25 4P4T	1/12
4	32A	22-32 A	320 A	111871	Ex9M1H TM 32 4P4T	1/12
4	40A	28-40 A	400 A	111872	Ex9M1H TM 40 4P4T	1/12
4	50A	35-50 A	500 A	111873	Ex9M1H TM 50 4P4T	1/12
4	63A	44-63 A	630 A	111874	Ex9M1H TM 63 4P4T	1/12
4	80A	56-80 A	800 A	111875	Ex9M1H TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	111876	Ex9M1H TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	111877	Ex9M1H TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	111878	Ex9M1H TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M1P up to 160 A, $I_{cu} = 150 \text{ kA}$

- 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- I_{th} fixed at $10 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	16A	11-16 A	160 A	114028	Ex9M1P TM 16 2P	1/10
2	20A	14-20 A	200 A	114029	Ex9M1P TM 20 2P	1/10
2	25A	17-25 A	250 A	114030	Ex9M1P TM 25 2P	1/10
2	32A	22-32 A	320 A	114031	Ex9M1P TM 32 2P	1/10
2	40A	28-40 A	400 A	114032	Ex9M1P TM 40 2P	1/10
2	50A	35-50 A	500 A	114033	Ex9M1P TM 50 2P	1/10
2	63A	44-63 A	630 A	114034	Ex9M1P TM 63 2P	1/10
2	80A	56-80 A	800 A	114035	Ex9M1P TM 80 2P	1/10
2	100A	70-100 A	1000 A	114036	Ex9M1P TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	114037	Ex9M1P TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	114038	Ex9M1P TM 160 2P	1/10
3	16A	11-16 A	160 A	111879	Ex9M1P TM 16 3P	1/12
3	20A	14-20 A	200 A	111880	Ex9M1P TM 20 3P	1/12
3	25A	17-25 A	250 A	111881	Ex9M1P TM 25 3P	1/12
3	32A	22-32 A	320 A	111882	Ex9M1P TM 32 3P	1/12
3	40A	28-40 A	400 A	111883	Ex9M1P TM 40 3P	1/12
3	50A	35-50 A	500 A	111884	Ex9M1P TM 50 3P	1/12
3	63A	44-63 A	630 A	111885	Ex9M1P TM 63 3P	1/12
3	80A	56-80 A	800 A	111886	Ex9M1P TM 80 3P	1/12
3	100A	70-100 A	1000 A	111887	Ex9M1P TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	111888	Ex9M1P TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	111889	Ex9M1P TM 160 3P	1/12
4	16A	11-16 A	160 A	111890	Ex9M1P TM 16 4P4T	1/12
4	20A	14-20 A	200 A	111891	Ex9M1P TM 20 4P4T	1/12
4	25A	17-25 A	250 A	111892	Ex9M1P TM 25 4P4T	1/12
4	32A	22-32 A	320 A	111893	Ex9M1P TM 32 4P4T	1/12
4	40A	28-40 A	400 A	111894	Ex9M1P TM 40 4P4T	1/12
4	50A	35-50 A	500 A	111895	Ex9M1P TM 50 4P4T	1/12
4	63A	44-63 A	630 A	111896	Ex9M1P TM 63 4P4T	1/12
4	80A	56-80 A	800 A	111897	Ex9M1P TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	111898	Ex9M1P TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	111899	Ex9M1P TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	111900	Ex9M1P TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M2S up to 250 A, $I_{cu} = 36 \text{ kA}$

- 1, 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- $I_r(1.0)$ Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_i(10)$ range not adjustable (1 Pole)
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- $I_{th} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery

Moulded Case Circuit Breakers Ex9M AC TM



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	125 A	125 A	1250 A	113972	Ex9M2S TM 125 1P	2/16
1	160 A	160 A	1600 A	113973	Ex9M2S TM 160 1P	2/16
1	180 A	180 A	1800 A	113974	Ex9M2S TM 180 1P	2/16
1	200 A	200 A	2000 A	113975	Ex9M2S TM 200 1P	2/16
1	225 A	225 A	2250 A	113976	Ex9M2S TM 225 1P	2/16
1	250 A	250 A	2500 A	113977	Ex9M2S TM 250 1P	2/16
2	125 A	87-125 A	875-1500 A	114039	Ex9M2S TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114040	Ex9M2S TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114041	Ex9M2S TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114042	Ex9M2S TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114043	Ex9M2S TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114044	Ex9M2S TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	111901	Ex9M2S TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	111902	Ex9M2S TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	111903	Ex9M2S TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	111904	Ex9M2S TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	111905	Ex9M2S TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	111906	Ex9M2S TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	111907	Ex9M2S TM 125 4P4T	1/8
4	160 A	112-160 A	800-1600 A	111908	Ex9M2S TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	111909	Ex9M2S TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	111910	Ex9M2S TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	111911	Ex9M2S TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	111912	Ex9M2S TM 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M2N up to 250 A, $I_{cu} = 50 \text{ kA}$

- 1, 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- $I_r(1.0)$ Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_i(10)$ range not adjustable (1 Pole)
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- $I_{iN} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	125 A	125 A	1250 A	113978	Ex9M2N TM 125 1P	2/16
1	160 A	160 A	1600 A	113979	Ex9M2N TM 160 1P	2/16
1	180 A	180 A	1800 A	113980	Ex9M2N TM 180 1P	2/16
1	200 A	200 A	2000 A	113981	Ex9M2N TM 200 1P	2/16
1	225 A	225 A	2250 A	113982	Ex9M2N TM 225 1P	2/16
1	250 A	250 A	2500 A	113983	Ex9M2N TM 250 1P	2/16
2	125 A	87-125 A	875-1500 A	114045	Ex9M2N TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114046	Ex9M2N TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114047	Ex9M2N TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114048	Ex9M2N TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114049	Ex9M2N TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114050	Ex9M2N TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	111913	Ex9M2N TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	111914	Ex9M2N TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	111915	Ex9M2N TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	111916	Ex9M2N TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	111917	Ex9M2N TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	111918	Ex9M2N TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	111919	Ex9M2N TM 125 4P4T	1/8
4	160 A	112-160 A	800-1600 A	111920	Ex9M2N TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	111921	Ex9M2N TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	111922	Ex9M2N TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	111923	Ex9M2N TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	111924	Ex9M2N TM 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M2Q up to 250 A, $I_{cu} = 75 \text{ kA}$

- 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- $I_{th} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	125 A	87-125 A	875-1500 A	114051	Ex9M2Q TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114052	Ex9M2Q TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114053	Ex9M2Q TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114054	Ex9M2Q TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114055	Ex9M2Q TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114056	Ex9M2Q TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	111925	Ex9M2Q TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	111926	Ex9M2Q TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	111927	Ex9M2Q TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	111928	Ex9M2Q TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	111929	Ex9M2Q TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	111930	Ex9M2Q TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	111931	Ex9M2Q TM 125 4P4T	1/8
4	160 A	112-160 A	900-1600 A	111932	Ex9M2Q TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	111933	Ex9M2Q TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	111934	Ex9M2Q TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	111935	Ex9M2Q TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	111936	Ex9M2Q TM 250 4P4T	1/8

Version Ex9M2H up to 250 A, $I_{cu} = 100 \text{ kA}$

- 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- $I_{th} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	125 A	87-125 A	875-1500 A	114057	Ex9M2H TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114058	Ex9M2H TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114059	Ex9M2H TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114060	Ex9M2H TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114061	Ex9M2H TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114062	Ex9M2H TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	111937	Ex9M2H TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	111938	Ex9M2H TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	111939	Ex9M2H TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	111940	Ex9M2H TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	111941	Ex9M2H TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	111942	Ex9M2H TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	111943	Ex9M2H TM 125 4P4T	1/8
4	160 A	112-160 A	800-1600 A	111944	Ex9M2H TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	111945	Ex9M2H TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	111946	Ex9M2H TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	111947	Ex9M2H TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	111948	Ex9M2H TM 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M2P up to 250 A, $I_{cu} = 150 \text{ kA}$

- 2, 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- $I_{IN} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	125 A	87-125 A	875-1500 A	114063	Ex9M2P TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114064	Ex9M2P TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114065	Ex9M2P TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114066	Ex9M2P TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114067	Ex9M2P TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114068	Ex9M2P TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	111949	Ex9M2P TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	111950	Ex9M2P TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	111951	Ex9M2P TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	111952	Ex9M2P TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	111953	Ex9M2P TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	111954	Ex9M2P TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	111955	Ex9M2P TM 125 4P4T	1/8
4	160 A	112-160 A	800-1600 A	111956	Ex9M2P TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	111957	Ex9M2P TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	111958	Ex9M2P TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	111959	Ex9M2P TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	111960	Ex9M2P TM 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M3S up to 500 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	111961	Ex9M3S TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	111962	Ex9M3S TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	111963	Ex9M3S TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	111964	Ex9M3S TM 400 3P	1/2
3	500 A	350-500 A	2500-5000 A	111965	Ex9M3S TM 500 3P	1/2
4	250 A	175-250 A	1250-2500 A	111966	Ex9M3S TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	111967	Ex9M3S TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	111968	Ex9M3S TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	111969	Ex9M3S TM 400 4P4T	1/2
4	500 A	350-500 A	2500-5000 A	111970	Ex9M3S TM 500 4P4T	1/2

Version Ex9M3N up to 500 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	111971	Ex9M3N TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	111972	Ex9M3N TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	111973	Ex9M3N TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	111974	Ex9M3N TM 400 3P	1/2
3	500 A	350-500 A	2500-5000 A	111975	Ex9M3N TM 500 3P	1/2
4	250 A	175-250 A	1250-2500 A	111976	Ex9M3N TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	111977	Ex9M3N TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	111978	Ex9M3N TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	111979	Ex9M3N TM 400 4P4T	1/2
4	500 A	350-500 A	2500-5000 A	111980	Ex9M3N TM 500 4P4T	1/2

Version Ex9M3Q up to 500 A, $I_{cu} = 75 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	111981	Ex9M3Q TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	111982	Ex9M3Q TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	111983	Ex9M3Q TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	111984	Ex9M3Q TM 400 3P	1/2
3	500 A	350-500 A	2500-5000 A	111985	Ex9M3Q TM 500 3P	1/2
4	250 A	175-250 A	1250-2500 A	111986	Ex9M3Q TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	111987	Ex9M3Q TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	111988	Ex9M3Q TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	111989	Ex9M3Q TM 400 4P4T	1/2
4	500 A	350-500 A	2500-5000 A	111990	Ex9M3Q TM 500 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M3H up to 500 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	111991	Ex9M3H TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	111992	Ex9M3H TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	111993	Ex9M3H TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	111994	Ex9M3H TM 400 3P	1/2
3	500 A	350-500 A	2500-5000 A	111995	Ex9M3H TM 500 3P	1/2
4	250 A	175-250 A	1250-2500 A	111996	Ex9M3H TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	111997	Ex9M3H TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	111998	Ex9M3H TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	111999	Ex9M3H TM 400 4P4T	1/2
4	500 A	350-500 A	2500-5000 A	112000	Ex9M3H TM 500 4P4T	1/2

Version Ex9M3P up to 500 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	112001	Ex9M3P TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	112002	Ex9M3P TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	112003	Ex9M3P TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	112004	Ex9M3P TM 400 3P	1/2
3	500 A	350-500 A	2500-5000 A	112005	Ex9M3P TM 500 3P	1/2
4	250 A	175-250 A	1250-2500 A	112006	Ex9M3P TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	112007	Ex9M3P TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	112008	Ex9M3P TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	112009	Ex9M3P TM 400 4P4T	1/2
4	500 A	350-500 A	2500-5000 A	112010	Ex9M3P TM 500 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M4S up to 630 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112011	Ex9M4S TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112012	Ex9M4S TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112013	Ex9M4S TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112014	Ex9M4S TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112015	Ex9M4S TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112016	Ex9M4S TM 630 4P4T	1/1

Version Ex9M4N up to 630 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112017	Ex9M4N TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112018	Ex9M4N TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112019	Ex9M4N TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112020	Ex9M4N TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112021	Ex9M4N TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112022	Ex9M4N TM 630 4P4T	1/1

Version Ex9M4Q up to 630 A, $I_{cu} = 75 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112023	Ex9M4Q TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112024	Ex9M4Q TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112025	Ex9M4Q TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112026	Ex9M4Q TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112027	Ex9M4Q TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112028	Ex9M4Q TM 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M4H up to 630 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112029	Ex9M4H TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112030	Ex9M4H TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112031	Ex9M4H TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112032	Ex9M4H TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112033	Ex9M4H TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112034	Ex9M4H TM 630 4P4T	1/1

Version Ex9M4P up to 630 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112035	Ex9M4P TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112036	Ex9M4P TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112037	Ex9M4P TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112038	Ex9M4P TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112039	Ex9M4P TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112040	Ex9M4P TM 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M5S up to 800 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112041	Ex9M5S TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112042	Ex9M5S TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112043	Ex9M5S TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112044	Ex9M5S TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112045	Ex9M5S TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112046	Ex9M5S TM 800 4P4T	1/1

Version Ex9M5N up to 800 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112047	Ex9M5N TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112048	Ex9M5N TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112049	Ex9M5N TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112050	Ex9M5N TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112051	Ex9M5N TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112052	Ex9M5N TM 800 4P4T	1/1

Version Ex9M5Q up to 800 A, $I_{cu} = 75 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112053	Ex9M5Q TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112054	Ex9M5Q TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112055	Ex9M5Q TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112056	Ex9M5Q TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112057	Ex9M5Q TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112058	Ex9M5Q TM 800 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M AC TM**

Version Ex9M5H up to 800 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112059	Ex9M5H TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112060	Ex9M5H TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112061	Ex9M5H TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112062	Ex9M5H TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112063	Ex9M5H TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112064	Ex9M5H TM 800 4P4T	1/1

Version Ex9M5P up to 800 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112065	Ex9M5P TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112066	Ex9M5P TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112067	Ex9M5P TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112068	Ex9M5P TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112069	Ex9M5P TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112070	Ex9M5P TM 800 4P4T	1/1

NOTES

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Moulded Case Circuit Breakers **Ex9M AC M**



- Electromagnetic tripping unit for motor protection
- Frame sizes M1-M5
- Rated operating current up to 800 A
- 3 and 4-pole versions
- Rated ultimate short circuit breaking capacity $I_{cu} = I_{cs}$ up to 150 kA
- Rated voltage 415 / 690 V AC

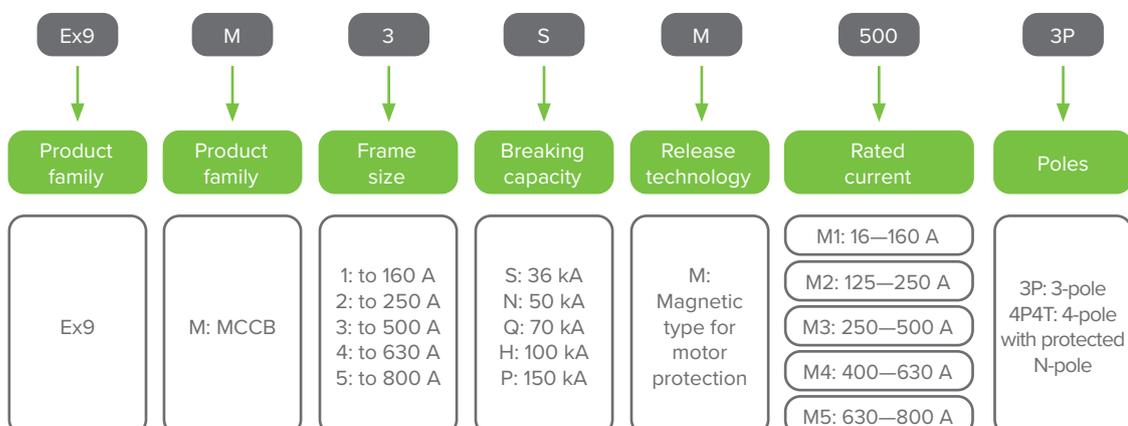
Moulded Case Circuit Breakers **Ex9M AC M**

Moulded Case Circuit Breakers Ex9M Magnetic (M) type are intended for applications in motor protection mainly. Testing according to IEC / EN 60947-2 standards ensures the functionality and reliability for wide variety of applications including isolation.

These breakers are offered with breaking capacities from 36 kA up to extreme 150 kA. High rated impulse withstand voltage makes it possible to use them even in system with occurrences of transient overvoltage waves of high intensity, e.g. in heavy industry.

Utilization category A circuit breakers.

Type Key

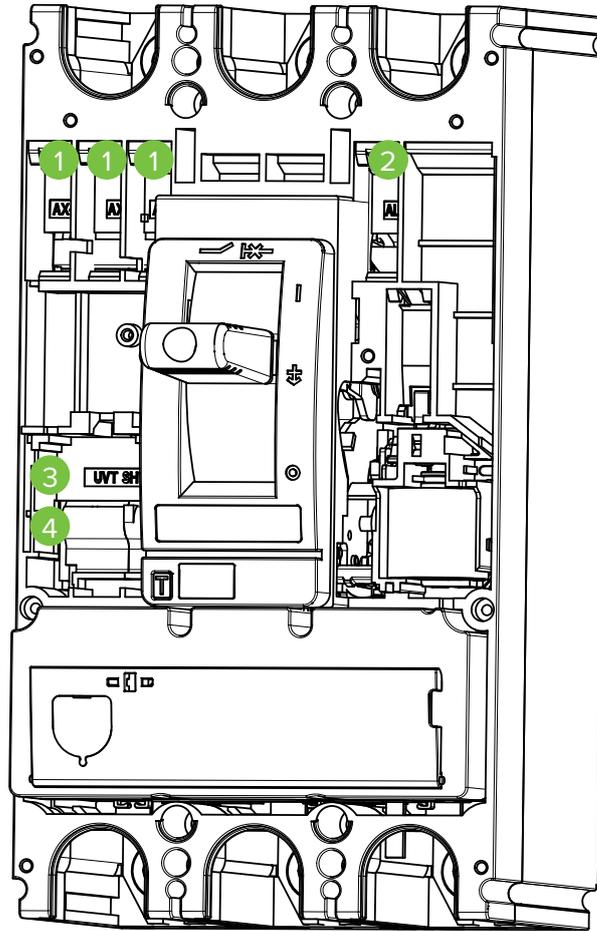


Certification marks



Moulded Case Circuit Breakers **Ex9M AC M**

Internal accessories



1

Auxiliary contact
AX21/M

2

Signal contact
AL21/M

3

Shunt trip release
SHT2i
1 unit or UVT2i

4

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21/M

Signal contact AL21/M

Shunt trip release SHT2i

Undervoltage release UVT2i

All internal accessories for the frame sizes M2+M3 and M4+M5 are identical.

Moulded Case Circuit Breakers **Ex9M AC M**

External accessories **Ex9M1-M5 AC M**



Phase barriers
PHS2i



Terminal cover, short
TCV2i



Terminal cover, long
TCE2i



Remote operator
MOD2i



Direct rotary handle
RHD2i



Extended rotary handle
ERH2i



Draw-Out Base
DOB 2i F/B



Plug-In Base
PIA 2i F/B

Phase barriers PHS2i

Terminal cover, short TCV2i

Terminal cover, long TCE2i

Remote operators MOD2i

Direct rotary handles RHD2i

Extended rotary handles ERH2i

Draw-Out Base DOB 2i F/B

Plug-In Base PIA 2i F/B

Moulded Case Circuit Breakers **Ex9M AC M**

External accessories Ex9M1-M5 AC M



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



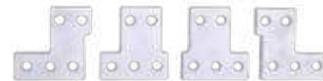
Box terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i



Front plate connection
JP 2i



Rear connection plate
RCP 2i



Off position toggle key
lock
KLK 2i



Mechanical interlock
MIT 2i

Tunnel terminals MC2i W

Mounting depth spacers WG i

Box terminals MC2i

Screw terminals MCS2i

Din rail adapter DRA2i

Front plate connection JP 2i

Rear connection plate RCP 2i

Off position toggle key lock KLK 2i

Mechanical interlock MIT 2i

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M1S M up to 160 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_j can be set in range $(9 - 14) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $12 \times I_n$
- I_{in} fixed at $12 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_j	Article No.	Type	Packing
3	16A	192 A	115643	Ex9M1S M 16 3P	1/12
3	20A	240 A	115644	Ex9M1S M 20 3P	1/12
3	25A	300 A	115645	Ex9M1S M 25 3P	1/12
3	32A	384 A	115646	Ex9M1S M 32 3P	1/12
3	40A	480 A	115647	Ex9M1S M 40 3P	1/12
3	50A	600 A	115648	Ex9M1S M 50 3P	1/12
3	63A	756 A	115649	Ex9M1S M 63 3P	1/12
3	80A	960 A	115650	Ex9M1S M 80 3P	1/12
3	100A	1200 A	115651	Ex9M1S M 100 3P	1/12
3	125A	1125-1750 A	115652	Ex9M1S M 125 3P	1/12
3	160A	1440-2240 A	115653	Ex9M1S M 160 3P	1/12
4	16A	192 A	115654	Ex9M1S M 16 4P4T	1/12
4	20A	240 A	115655	Ex9M1S M 20 4P4T	1/12
4	25A	300 A	115656	Ex9M1S M 25 4P4T	1/12
4	32A	384 A	115657	Ex9M1S M 32 4P4T	1/12
4	40A	480 A	115658	Ex9M1S M 40 4P4T	1/12
4	50A	600 A	115659	Ex9M1S M 50 4P4T	1/12
4	63A	756 A	115660	Ex9M1S M 63 4P4T	1/12
4	80A	960 A	115661	Ex9M1S M 80 4P4T	1/12
4	100A	1200 A	115662	Ex9M1S M 100 4P4T	1/12
4	125A	1125-1750 A	115663	Ex9M1S M 125 4P4T	1/12
4	160A	1440-2240 A	115664	Ex9M1S M 160 4P4T	1/12

Version Ex9M1N up to 160 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_j can be set in range $(9 - 14) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $12 \times I_n$
- I_{in} fixed at $12 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_j	Article No.	Type	Packing
3	16A	192 A	115665	Ex9M1N M 16 3P	1/12
3	20A	240 A	115666	Ex9M1N M 20 3P	1/12
3	25A	300 A	115667	Ex9M1N M 25 3P	1/12
3	32A	384 A	115668	Ex9M1N M 32 3P	1/12
3	40A	480 A	115669	Ex9M1N M 40 3P	1/12
3	50A	600 A	115670	Ex9M1N M 50 3P	1/12
3	63A	756 A	115671	Ex9M1N M 63 3P	1/12
3	80A	960 A	115672	Ex9M1N M 80 3P	1/12
3	100A	1200 A	115673	Ex9M1N M 100 3P	1/12
3	125A	1125-1750 A	115674	Ex9M1N M 125 3P	1/12
3	160A	1440-2240 A	115675	Ex9M1N M 160 3P	1/12
4	16A	192 A	115676	Ex9M1N M 16 4P4T	1/12
4	20A	240 A	115677	Ex9M1N M 20 4P4T	1/12
4	25A	300 A	115678	Ex9M1N M 25 4P4T	1/12
4	32A	384 A	115679	Ex9M1N M 32 4P4T	1/12
4	40A	480 A	115680	Ex9M1N M 40 4P4T	1/12
4	50A	600 A	115681	Ex9M1N M 50 4P4T	1/12
4	63A	756 A	115682	Ex9M1N M 63 4P4T	1/12
4	80A	960 A	115683	Ex9M1N M 80 4P4T	1/12
4	100A	1200 A	115684	Ex9M1N M 100 4P4T	1/12
4	125A	1125-1750 A	115685	Ex9M1N M 125 4P4T	1/12
4	160A	1440-2240 A	115686	Ex9M1N M 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M1Q up to 160 A, $I_{cu} = 70 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $12 \times I_n$
- I_{th} fixed at $12 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	16A	192 A	115687	Ex9M1Q M 16 3P	1/12
3	20A	240 A	115688	Ex9M1Q M 20 3P	1/12
3	25A	300 A	115689	Ex9M1Q M 25 3P	1/12
3	32A	384 A	115690	Ex9M1Q M 32 3P	1/12
3	40A	480 A	115691	Ex9M1Q M 40 3P	1/12
3	50A	600 A	115692	Ex9M1Q M 50 3P	1/12
3	63A	756 A	115693	Ex9M1Q M 63 3P	1/12
3	80A	960 A	115694	Ex9M1Q M 80 3P	1/12
3	100A	1200 A	115695	Ex9M1Q M 100 3P	1/12
3	125A	1125-1750 A	115696	Ex9M1Q M 125 3P	1/12
3	160A	1440-2240 A	115697	Ex9M1Q M 160 3P	1/12
4	16A	192 A	115698	Ex9M1Q M 16 4P4T	1/12
4	20A	240 A	115699	Ex9M1Q M 20 4P4T	1/12
4	25A	300 A	115700	Ex9M1Q M 25 4P4T	1/12
4	32A	384 A	115701	Ex9M1Q M 32 4P4T	1/12
4	40A	480 A	115702	Ex9M1Q M 40 4P4T	1/12
4	50A	600 A	115703	Ex9M1Q M 50 4P4T	1/12
4	63A	756 A	115704	Ex9M1Q M 63 4P4T	1/12
4	80A	960 A	115705	Ex9M1Q M 80 4P4T	1/12
4	100A	1200 A	115706	Ex9M1Q M 100 4P4T	1/12
4	125A	1125-1750 A	115707	Ex9M1Q M 125 4P4T	1/12
4	160A	1440-2240 A	115708	Ex9M1Q M 160 4P4T	1/12

Version Ex9M1H up to 160 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $12 \times I_n$
- I_{th} fixed at $12 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	16A	192 A	115709	Ex9M1H M 16 3P	1/12
3	20A	240 A	115710	Ex9M1H M 20 3P	1/12
3	25A	300 A	115711	Ex9M1H M 25 3P	1/12
3	32A	384 A	115712	Ex9M1H M 32 3P	1/12
3	40A	480 A	115713	Ex9M1H M 40 3P	1/12
3	50A	600 A	115714	Ex9M1H M 50 3P	1/12
3	63A	756 A	115715	Ex9M1H M 63 3P	1/12
3	80A	960 A	115716	Ex9M1H M 80 3P	1/12
3	100A	1200 A	115717	Ex9M1H M 100 3P	1/12
3	125A	1125-1750 A	115718	Ex9M1H M 125 3P	1/12
3	160A	1440-2240 A	115719	Ex9M1H M 160 3P	1/12
4	16A	192 A	115720	Ex9M1H M 16 4P4T	1/12
4	20A	240 A	115721	Ex9M1H M 20 4P4T	1/12
4	25A	300 A	115722	Ex9M1H M 25 4P4T	1/12
4	32A	384 A	115723	Ex9M1H M 32 4P4T	1/12
4	40A	480 A	115724	Ex9M1H M 40 4P4T	1/12
4	50A	600 A	115725	Ex9M1H M 50 4P4T	1/12
4	63A	756 A	115726	Ex9M1H M 63 4P4T	1/12
4	80A	960 A	115727	Ex9M1H M 80 4P4T	1/12
4	100A	1200 A	115728	Ex9M1H M 100 4P4T	1/12
4	125A	1125-1750 A	115729	Ex9M1H M 125 4P4T	1/12
4	160A	1440-2240 A	115730	Ex9M1H M 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M1P up to 160 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_j can be set in range $(9 - 14) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $12 \times I_n$
- I_{iN} fixed at $12 \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_j	Article No.	Type	Packing
3	16A	192 A	115731	Ex9M1P M 16 3P	1/12
3	20A	240 A	115732	Ex9M1P M 20 3P	1/12
3	25A	300 A	115733	Ex9M1P M 25 3P	1/12
3	32A	384 A	115734	Ex9M1P M 32 3P	1/12
3	40A	480 A	115735	Ex9M1P M 40 3P	1/12
3	50A	600 A	115736	Ex9M1P M 50 3P	1/12
3	63A	756 A	115737	Ex9M1P M 63 3P	1/12
3	80A	960 A	115738	Ex9M1P M 80 3P	1/12
3	100A	1200 A	115739	Ex9M1P M 100 3P	1/12
3	125A	1125-1750 A	115740	Ex9M1P M 125 3P	1/12
3	160A	1440-2240 A	115741	Ex9M1P M 160 3P	1/12
4	16A	192 A	115742	Ex9M1P M 16 4P4T	1/12
4	20A	240 A	115743	Ex9M1P M 20 4P4T	1/12
4	25A	300 A	115744	Ex9M1P M 25 4P4T	1/12
4	32A	384 A	115745	Ex9M1P M 32 4P4T	1/12
4	40A	480 A	115746	Ex9M1P M 40 4P4T	1/12
4	50A	600 A	115747	Ex9M1P M 50 4P4T	1/12
4	63A	756 A	115748	Ex9M1P M 63 4P4T	1/12
4	80A	960 A	115749	Ex9M1P M 80 4P4T	1/12
4	100A	1200 A	115750	Ex9M1P M 100 4P4T	1/12
4	125A	1125-1750 A	115751	Ex9M1P M 125 4P4T	1/12
4	160A	1440-2240 A	115752	Ex9M1P M 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M AC M**

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M2S up to 250 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{th} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	125 A	1125-1750 A	115753	Ex9M2S M 125 3P	1/8
3	160 A	1440-2240 A	115754	Ex9M2S M 160 3P	1/8
3	180 A	1620-2520 A	115755	Ex9M2S M 180 3P	1/8
3	200 A	1800-2800 A	115756	Ex9M2S M 200 3P	1/8
3	225 A	2025-3150 A	115757	Ex9M2S M 225 3P	1/8
3	250 A	2250-3500 A	115758	Ex9M2S M 250 3P	1/8
4	125 A	1125-1750 A	115759	Ex9M2S M 125 4P4T	1/8
4	160 A	1440-2240 A	115760	Ex9M2S M 160 4P4T	1/8
4	180 A	1620-2520 A	115761	Ex9M2S M 180 4P4T	1/8
4	200 A	1800-2800 A	115762	Ex9M2S M 200 4P4T	1/8
4	225 A	2025-3150 A	115763	Ex9M2S M 225 4P4T	1/8
4	250 A	2250-3500 A	115764	Ex9M2S M 250 4P4T	1/8

Version Ex9M2N up to 250 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{th} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	125 A	1125-1750 A	115765	Ex9M2N M 125 3P	1/8
3	160 A	1440-2240 A	115766	Ex9M2N M 160 3P	1/8
3	180 A	1620-2520 A	115767	Ex9M2N M 180 3P	1/8
3	200 A	1800-2800 A	115768	Ex9M2N M 200 3P	1/8
3	225 A	2025-3150 A	115769	Ex9M2N M 225 3P	1/8
3	250 A	2250-3500 A	115770	Ex9M2N M 250 3P	1/8
4	125 A	1125-1750 A	115771	Ex9M2N M 125 4P4T	1/8
4	160 A	1440-2240 A	115772	Ex9M2N M 160 4P4T	1/8
4	180 A	1620-2520 A	115773	Ex9M2N M 180 4P4T	1/8
4	200 A	1800-2800 A	115774	Ex9M2N M 200 4P4T	1/8
4	225 A	2025-3150 A	115775	Ex9M2N M 225 4P4T	1/8
4	250 A	2250-3500 A	115776	Ex9M2N M 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M2Q up to 250 A, $I_{cu} = 75 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	125 A	1125-1750 A	115777	Ex9M2Q M 125 3P	1/8
3	160 A	1440-2240 A	115778	Ex9M2Q M 160 3P	1/8
3	180 A	1620-2520 A	115779	Ex9M2Q M 180 3P	1/8
3	200 A	1800-2800 A	115780	Ex9M2Q M 200 3P	1/8
3	225 A	2025-3150 A	115781	Ex9M2Q M 225 3P	1/8
3	250 A	2250-3500 A	115782	Ex9M2Q M 250 3P	1/8
4	125 A	1125-1750 A	115783	Ex9M2Q M 125 4P4T	1/8
4	160 A	1440-2240 A	115784	Ex9M2Q M 160 4P4T	1/8
4	180 A	1620-2520 A	115785	Ex9M2Q M 180 4P4T	1/8
4	200 A	1800-2800 A	115786	Ex9M2Q M 200 4P4T	1/8
4	225 A	2025-3150 A	115787	Ex9M2Q M 225 4P4T	1/8
4	250 A	2250-3500 A	115788	Ex9M2Q M 250 4P4T	1/8

Version Ex9M2H up to 250 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	125 A	1125-1750 A	115789	Ex9M2H M 125 3P	1/8
3	160 A	1440-2240 A	115790	Ex9M2H M 160 3P	1/8
3	180 A	1620-2520 A	115791	Ex9M2H M 180 3P	1/8
3	200 A	1800-2800 A	115792	Ex9M2H M 200 3P	1/8
3	225 A	2025-3150 A	115793	Ex9M2H M 225 3P	1/8
3	250 A	2250-3500 A	115794	Ex9M2H M 250 3P	1/8
4	125 A	1125-1750 A	115795	Ex9M2H M 125 4P4T	1/8
4	160 A	1440-2240 A	115796	Ex9M2H M 160 4P4T	1/8
4	180 A	1620-2520 A	115797	Ex9M2H M 180 4P4T	1/8
4	200 A	1800-2800 A	115798	Ex9M2H M 200 4P4T	1/8
4	225 A	2025-3150 A	115799	Ex9M2H M 225 4P4T	1/8
4	250 A	2250-3500 A	115800	Ex9M2H M 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M2P up to 250 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	125 A	1125-1750 A	115801	Ex9M2P M 125 3P	1/8
3	160 A	1440-2240 A	115802	Ex9M2P M 160 3P	1/8
3	180 A	1620-2520 A	115803	Ex9M2P M 180 3P	1/8
3	200 A	1800-2800 A	115804	Ex9M2P M 200 3P	1/8
3	225 A	2025-3150 A	115805	Ex9M2P M 225 3P	1/8
3	250 A	2250-3500 A	115806	Ex9M2P M 250 3P	1/8
4	125 A	1125-1750 A	115807	Ex9M2P M 125 4P4T	1/8
4	160 A	1440-2240 A	115808	Ex9M2P M 160 4P4T	1/8
4	180 A	1620-2520 A	115809	Ex9M2P M 180 4P4T	1/8
4	200 A	1800-2800 A	115810	Ex9M2P M 200 4P4T	1/8
4	225 A	2025-3150 A	115811	Ex9M2P M 225 4P4T	1/8
4	250 A	2250-3500 A	115812	Ex9M2P M 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M3S up to 500 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	250 A	2250-3500 A	115813	Ex9M3S M 250 3P	1/2
3	315 A	2835-4410A	115814	Ex9M3S M 315 3P	1/2
3	350 A	3150-4900 A	115815	Ex9M3S M 350 3P	1/2
3	400 A	3600-5600 A	115816	Ex9M3S M 400 3P	1/2
3	500 A	4500-7000 A	115817	Ex9M3S M 500 3P	1/2
4	250 A	2250-3500 A	115818	Ex9M3S M 250 4P4T	1/2
4	315 A	2835-4410A	115819	Ex9M3S M 315 4P4T	1/2
4	350 A	3150-4900 A	115820	Ex9M3S M 350 4P4T	1/2
4	400 A	3600-5600 A	115821	Ex9M3S M 400 4P4T	1/2
4	500 A	4500-7000 A	115822	Ex9M3S M 500 4P4T	1/2

Version Ex9M3N up to 500 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	250 A	2250-3500 A	115823	Ex9M3N M 250 3P	1/2
3	315 A	2835-4410A	115824	Ex9M3N M 315 3P	1/2
3	350 A	3150-4900 A	115825	Ex9M3N M 350 3P	1/2
3	400 A	3600-5600 A	115826	Ex9M3N M 400 3P	1/2
3	500 A	4500-7000 A	115827	Ex9M3N M 500 3P	1/2
4	250 A	2250-3500 A	115828	Ex9M3N M 250 4P4T	1/2
4	315 A	2835-4410A	115829	Ex9M3N M 315 4P4T	1/2
4	350 A	3150-4900 A	115830	Ex9M3N M 350 4P4T	1/2
4	400 A	3600-5600 A	115831	Ex9M3N M 400 4P4T	1/2
4	500 A	4500-7000 A	115832	Ex9M3N M 500 4P4T	1/2

Version Ex9M3Q up to 500 A, $I_{cu} = 75 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	250 A	2250-3500 A	115833	Ex9M3Q M 250 3P	1/2
3	315 A	2835-4410A	115834	Ex9M3Q M 315 3P	1/2
3	350 A	3150-4900 A	115835	Ex9M3Q M 350 3P	1/2
3	400 A	3600-5600 A	115836	Ex9M3Q M 400 3P	1/2
3	500 A	4500-7000 A	115837	Ex9M3Q M 500 3P	1/2
4	250 A	2250-3500 A	115838	Ex9M3Q M 250 4P4T	1/2
4	315 A	2835-4410A	115839	Ex9M3Q M 315 4P4T	1/2
4	350 A	3150-4900 A	115840	Ex9M3Q M 350 4P4T	1/2
4	400 A	3600-5600 A	115841	Ex9M3Q M 400 4P4T	1/2
4	500 A	4500-7000 A	115842	Ex9M3Q M 500 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M3H up to 500 A, $I_{cu} = 100$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	250 A	2250-3500 A	115843	Ex9M3H M 250 3P	1/2
3	315 A	2835-4410A	115844	Ex9M3H M 315 3P	1/2
3	350 A	3150-4900 A	115845	Ex9M3H M 350 3P	1/2
3	400 A	3600-5600 A	115846	Ex9M3H M 400 3P	1/2
3	500 A	4500-7000 A	115847	Ex9M3H M 500 3P	1/2
4	250 A	2250-3500 A	115848	Ex9M3H M 250 4P4T	1/2
4	315 A	2835-4410A	115849	Ex9M3H M 315 4P4T	1/2
4	350 A	3150-4900 A	115850	Ex9M3H M 350 4P4T	1/2
4	400 A	3600-5600 A	115851	Ex9M3H M 400 4P4T	1/2
4	500 A	4500-7000 A	115852	Ex9M3H M 500 4P4T	1/2

Version Ex9M3P up to 500 A, $I_{cu} = 150$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150$ kA at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	250 A	2250-3500 A	115853	Ex9M3P M 250 3P	1/2
3	315 A	2835-4410A	115854	Ex9M3P M 315 3P	1/2
3	350 A	3150-4900 A	115855	Ex9M3P M 350 3P	1/2
3	400 A	3600-5600 A	115856	Ex9M3P M 400 3P	1/2
3	500 A	4500-7000 A	115857	Ex9M3P M 500 3P	1/2
4	250 A	2250-3500 A	115858	Ex9M3P M 250 4P4T	1/2
4	315 A	2835-4410A	115859	Ex9M3P M 315 4P4T	1/2
4	350 A	3150-4900 A	115860	Ex9M3P M 350 4P4T	1/2
4	400 A	3600-5600 A	115861	Ex9M3P M 400 4P4T	1/2
4	500 A	4500-7000 A	115862	Ex9M3P M 500 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M4S up to 630 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	400 A	3600-5600 A	115863	Ex9M4S M 400 3P	1/1
3	500 A	4500-7000 A	115864	Ex9M4S M 500 3P	1/1
3	630 A	5670-8820 A	115865	Ex9M4S M 630 3P	1/1
4	400 A	3600-5600 A	115866	Ex9M4S M 400 4P4T	1/1
4	500 A	4500-7000 A	115867	Ex9M4S M 500 4P4T	1/1
4	630 A	5670-8820 A	115868	Ex9M4S M 630 4P4T	1/1

Version Ex9M4N up to 630 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	400 A	3600-5600 A	115869	Ex9M4N M 400 3P	1/1
3	500 A	4500-7000 A	115870	Ex9M4N M 500 3P	1/1
3	630 A	5670-8820 A	115871	Ex9M4N M 630 3P	1/1
4	400 A	3600-5600 A	115872	Ex9M4N M 400 4P4T	1/1
4	500 A	4500-7000 A	115873	Ex9M4N M 500 4P4T	1/1
4	630 A	5670-8820 A	115874	Ex9M4N M 630 4P4T	1/1

Version Ex9M4Q up to 630 A, $I_{cu} = 75 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{iN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	400 A	3600-5600 A	115875	Ex9M4Q M 400 3P	1/1
3	500 A	4500-7000 A	115876	Ex9M4Q M 500 3P	1/1
3	630 A	5670-8820 A	115877	Ex9M4Q M 630 3P	1/1
4	400 A	3600-5600 A	115878	Ex9M4Q M 400 4P4T	1/1
4	500 A	4500-7000 A	115879	Ex9M4Q M 500 4P4T	1/1
4	630 A	5670-8820 A	115880	Ex9M4Q M 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M4H up to 630 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{th} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	400 A	3600-5600 A	115881	Ex9M4H M 400 3P	1/1
3	500 A	4500-7000 A	115882	Ex9M4H M 500 3P	1/1
3	630 A	5670-8820 A	115883	Ex9M4H M 630 3P	1/1
4	400 A	3600-5600 A	115884	Ex9M4H M 400 4P4T	1/1
4	500 A	4500-7000 A	115885	Ex9M4H M 500 4P4T	1/1
4	630 A	5670-8820 A	115886	Ex9M4H M 630 4P4T	1/1

Version Ex9M4P up to 630 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{th} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	400 A	3600-5600 A	115887	Ex9M4P M 400 3P	1/1
3	500 A	4500-7000 A	115888	Ex9M4P M 500 3P	1/1
3	630 A	5670-8820 A	115889	Ex9M4P M 630 3P	1/1
4	400 A	3600-5600 A	115890	Ex9M4P M 400 4P4T	1/1
4	500 A	4500-7000 A	115891	Ex9M4P M 500 4P4T	1/1
4	630 A	5670-8820 A	115892	Ex9M4P M 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M5S up to 800 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	630 A	5670-8820 A	115893	Ex9M5S M 630 3P	1/1
3	700 A	6300-9800 A	115894	Ex9M5S M 700 3P	1/1
3	800 A	7200-11200 A	115895	Ex9M5S M 800 3P	1/1
4	630 A	5670-8820 A	115896	Ex9M5S M 630 4P4T	1/1
4	700 A	6300-9800 A	115897	Ex9M5S M 700 4P4T	1/1
4	800 A	7200-11200 A	115898	Ex9M5S M 800 4P4T	1/1

Version Ex9M5N up to 800 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	630 A	5670-8820 A	115899	Ex9M5N M 630 3P	1/1
3	700 A	6300-9800 A	115900	Ex9M5N M 700 3P	1/1
3	800 A	7200-11200 A	115901	Ex9M5N M 800 3P	1/1
4	630 A	5670-8820 A	115902	Ex9M5N M 630 4P4T	1/1
4	700 A	6300-9800 A	115903	Ex9M5N M 700 4P4T	1/1
4	800 A	7200-11200 A	115904	Ex9M5N M 800 4P4T	1/1

Version Ex9M5Q up to 800 A, $I_{cu} = 75 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75 \text{ kA}$ at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	630 A	5670-8820 A	115905	Ex9M5Q M 630 3P	1/1
3	700 A	6300-9800 A	115906	Ex9M5Q M 700 3P	1/1
3	800 A	7200-11200 A	115907	Ex9M5Q M 800 3P	1/1
4	630 A	5670-8820 A	115908	Ex9M5Q M 630 4P4T	1/1
4	700 A	6300-9800 A	115909	Ex9M5Q M 700 4P4T	1/1
4	800 A	7200-11200 A	115910	Ex9M5Q M 800 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M AC M**

Version Ex9M5H up to 800 A, $I_{cu} = 100$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	630 A	5670-8820 A	115911	Ex9M5H M 630 3P	1/1
3	700 A	6300-9800 A	115912	Ex9M5H M 700 3P	1/1
3	800 A	7200-11200 A	115913	Ex9M5H M 800 3P	1/1
4	630 A	5670-8820 A	115914	Ex9M5H M 630 4P4T	1/1
4	700 A	6300-9800 A	115915	Ex9M5H M 700 4P4T	1/1
4	800 A	7200-11200 A	115916	Ex9M5H M 800 4P4T	1/1

Version Ex9M5P up to 800 A, $I_{cu} = 150$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150$ kA at 415 V AC
- I_i can be set in range $(9 - 14) \times I_n$
- $I_{IN} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	630 A	5670-8820 A	115917	Ex9M5P M 630 3P	1/1
3	700 A	6300-9800 A	115918	Ex9M5P M 700 3P	1/1
3	800 A	7200-11200 A	115919	Ex9M5P M 800 3P	1/1
4	630 A	5670-8820 A	115920	Ex9M5P M 630 4P4T	1/1
4	700 A	6300-9800 A	115921	Ex9M5P M 700 4P4T	1/1
4	800 A	7200-11200 A	115922	Ex9M5P M 800 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M DC TM**



- Thermo-magnetic tripping unit for power distribution
- Frame sizes M1-M5
- Rated operating current up to 800 A
- 1, 2, 3 and 4-pole versions
- Rated ultimate short circuit breaking capacity $I_{cu} = I_{cs}$ up to 100 kA
- Rated voltage 750 V DC (3-pole) and 1000 V DC (4-pole)

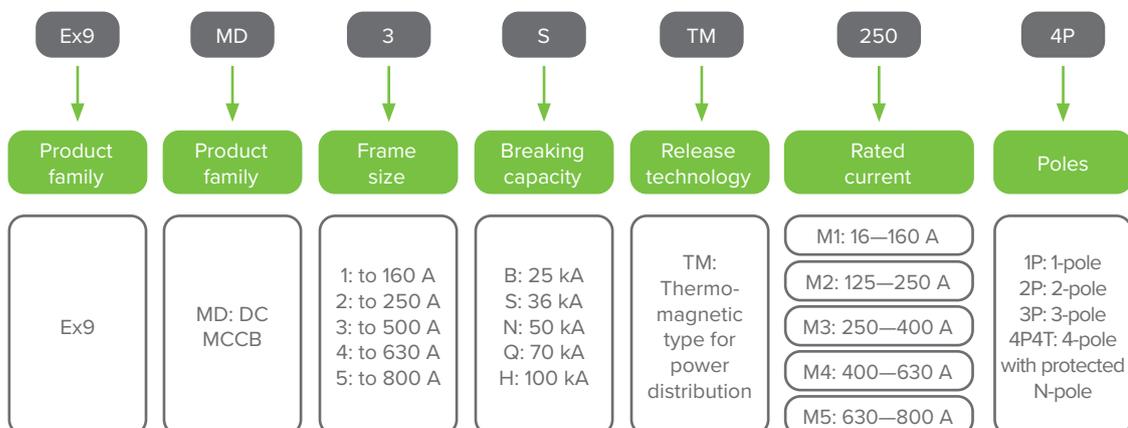
Moulded Case Circuit Breakers **Ex9M DC TM**

DC Moulded Case Circuit Breakers Ex9MD Thermo-magnetic (TM) are intended mainly for photovoltaic applications. Testing according to IEC / EN 60947-2 standards ensures functionalities and reliability for wide variety of applications including isolation.

These breakers are offered with breaking capacities from 25 kA up to extreme 100 kA. High rated impulse withstand voltage makes it possible to use them even in system with occurrences of transient overvoltage waves of high intensity, e.g. in heavy industry.

Utilization category A circuit breakers.

Type Key

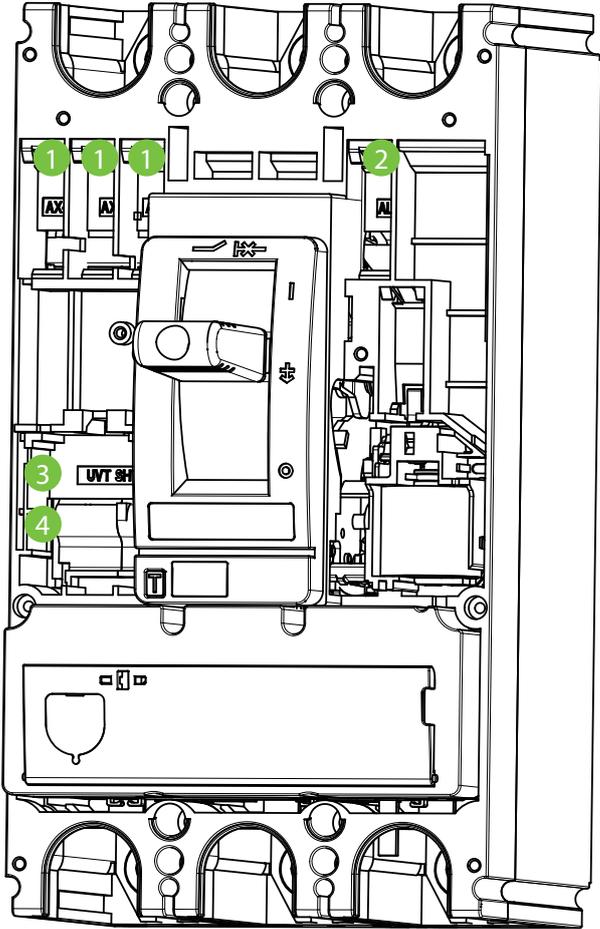


Certification marks



Moulded Case Circuit Breakers **Ex9M DC TM**

Internal accessories



1

Auxiliary contact
AX21/M

2

Signal contact
AL21/M

3

Shunt trip release
SHT2i
1 unit or UVT2i

4

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21M

Signal contact AL21M

Shunt trip releases SHT2i

Undervoltage releases UVT2i

All internal accessories for the frame sizes M2+M3 and M4+M5 are identical.

Moulded Case Circuit Breakers **Ex9M DC TM**

External accessories Ex9M1-M5 DC TM



Phase barriers
PHS2i



Terminal cover, short
TCV2i



Terminal cover, long
TCE2i



Remote operator
MOD2i



Direct rotary handle
RHD2i



Extended rotary handle
ERH2i



Draw-Out Base
DOB 2i F/B



Plug-In Base
PIA 2i F/B

Phase barriers PHS2i

Terminal cover, short TCV2i

Terminal cover, long TCE2i

Remote operators MOD2i

Direct rotary handles RHD2i

Extended rotary handles ERH2i

Draw-Out Base DOB 2i F/B

Plug-In Base PIA 2i F/B

Moulded Case Circuit Breakers **Ex9M DC TM**

External accessories Ex9M1-M5 DC TM



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



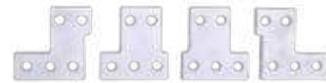
Box terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i



Front plate connection
JP 2i



Rear connection plate
RCP 2i



Off position toggle key
lock
KLK 2i



Mechanical interlock
MIT 2i

Tunnel terminals MC2i W

Mounting depth spacers WG i

Box terminals MC2i

Screw terminals MCS2i

Din rail DRA2i

Front plate connection JP 2i

Rear connection plate RCP 2i

Off position toggle key lock KLK 2i

Mechanical interlock MIT 2i

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD1B up to 160 A, $I_{cu} = 25 \text{ kA}$

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 25 \text{ kA}$ at 1000 V DC
- $I_r(1.0)$ Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_i(10)$ range not adjustable (1 and 2 Pole)
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	16A	16 A	160 A	114069	Ex9MD1B TM 16 1P	2/12
1	20A	20 A	200 A	114070	Ex9MD1B TM 20 1P	2/12
1	25A	25 A	250 A	114071	Ex9MD1B TM 25 1P	2/12
1	32A	32 A	320 A	114072	Ex9MD1B TM 32 1P	2/12
1	40A	40 A	400 A	114073	Ex9MD1B TM 40 1P	2/12
1	50A	50 A	500 A	114074	Ex9MD1B TM 50 1P	2/12
1	63A	63 A	630 A	114075	Ex9MD1B TM 63 1P	2/12
1	80A	80 A	800 A	114076	Ex9MD1B TM 80 1P	2/12
1	100A	100 A	1000 A	114077	Ex9MD1B TM 100 1P	2/12
1	125A	125 A	1250 A	114078	Ex9MD1B TM 125 1P	2/12
1	160A	160 A	1600 A	114079	Ex9MD1B TM 160 1P	2/12
2	16A	11-16 A	160 A	114120	Ex9MD1B TM 16 2P	1/10
2	20A	14-20 A	200 A	114121	Ex9MD1B TM 20 2P	1/10
2	25A	17-25 A	250 A	114122	Ex9MD1B TM 25 2P	1/10
2	32A	22-32 A	320 A	114123	Ex9MD1B TM 32 2P	1/10
2	40A	28-40 A	400 A	114124	Ex9MD1B TM 40 2P	1/10
2	50A	35-50 A	500 A	114125	Ex9MD1B TM 50 2P	1/10
2	63A	44-63 A	630 A	114126	Ex9MD1B TM 63 2P	1/10
2	80A	56-80 A	800 A	114127	Ex9MD1B TM 80 2P	1/10
2	100A	70-100 A	1000 A	114128	Ex9MD1B TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	114129	Ex9MD1B TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	114130	Ex9MD1B TM 160 2P	1/10
3	16A	11-16 A	160 A	112511	Ex9MD1B TM 16 3P	1/12
3	20A	14-20 A	200 A	112512	Ex9MD1B TM 20 3P	1/12
3	25A	17-25 A	250 A	112513	Ex9MD1B TM 25 3P	1/12
3	32A	22-32 A	320 A	112514	Ex9MD1B TM 32 3P	1/12
3	40A	28-40 A	400 A	112515	Ex9MD1B TM 40 3P	1/12
3	50A	35-50 A	500 A	112516	Ex9MD1B TM 50 3P	1/12
3	63A	44-63 A	630 A	112517	Ex9MD1B TM 63 3P	1/12
3	80A	56-80 A	800 A	112518	Ex9MD1B TM 80 3P	1/12
3	100A	70-100 A	1000 A	112519	Ex9MD1B TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	112520	Ex9MD1B TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	112521	Ex9MD1B TM 160 3P	1/12
4	16A	11-16 A	160 A	112522	Ex9MD1B TM 16 4P4T	1/12
4	20A	14-20 A	200 A	112523	Ex9MD1B TM 20 4P4T	1/12
4	25A	17-25 A	250 A	112524	Ex9MD1B TM 25 4P4T	1/12
4	32A	22-32 A	320 A	112525	Ex9MD1B TM 32 4P4T	1/12
4	40A	28-40 A	400 A	112526	Ex9MD1B TM 40 4P4T	1/12
4	50A	35-50 A	500 A	112527	Ex9MD1B TM 50 4P4T	1/12
4	63A	44-63 A	630 A	112528	Ex9MD1B TM 63 4P4T	1/12
4	80A	56-80 A	800 A	112529	Ex9MD1B TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	112530	Ex9MD1B TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	112531	Ex9MD1B TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	112532	Ex9MD1B TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD1S up to 160 A, $I_{cu} = 36 \text{ kA}$

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 1000 V DC
- I_r (1.0) Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i (10) range not adjustable (1 and 2 Pole)
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	16A	16 A	160 A	114080	Ex9MD1S TM 16 1P	2/12
1	20A	20 A	200 A	114081	Ex9MD1S TM 20 1P	2/12
1	25A	25 A	250 A	114082	Ex9MD1S TM 25 1P	2/12
1	32A	32 A	320 A	114083	Ex9MD1S TM 32 1P	2/12
1	40A	40 A	400 A	114084	Ex9MD1S TM 40 1P	2/12
1	50A	50 A	500 A	114085	Ex9MD1S TM 50 1P	2/12
1	63A	63 A	630 A	114086	Ex9MD1S TM 63 1P	2/12
1	80A	80 A	800 A	114087	Ex9MD1S TM 80 1P	2/12
1	100A	100 A	1000 A	114088	Ex9MD1S TM 100 1P	2/12
1	125A	125 A	1250 A	114089	Ex9MD1S TM 125 1P	2/12
1	160A	1160 A	1600 A	114090	Ex9MD1S TM 160 1P	2/12
2	16A	11-16 A	160 A	114131	Ex9MD1S TM 16 2P	1/10
2	20A	14-20 A	200 A	114132	Ex9MD1S TM 20 2P	1/10
2	25A	17-25 A	250 A	114133	Ex9MD1S TM 25 2P	1/10
2	32A	22-32 A	320 A	114134	Ex9MD1S TM 32 2P	1/10
2	40A	28-40 A	400 A	114135	Ex9MD1S TM 40 2P	1/10
2	50A	35-50 A	500 A	114136	Ex9MD1S TM 50 2P	1/10
2	63A	44-63 A	630 A	114137	Ex9MD1S TM 63 2P	1/10
2	80A	56-80 A	800 A	114138	Ex9MD1S TM 80 2P	1/10
2	100A	70-100 A	1000 A	114139	Ex9MD1S TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	114140	Ex9MD1S TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	114141	Ex9MD1S TM 160 2P	1/10
3	16A	11-16 A	160 A	112533	Ex9MD1S TM 16 3P	1/12
3	20A	14-20 A	200 A	112534	Ex9MD1S TM 20 3P	1/12
3	25A	17-25 A	250 A	112535	Ex9MD1S TM 25 3P	1/12
3	32A	22-32 A	320 A	112536	Ex9MD1S TM 32 3P	1/12
3	40A	28-40 A	400 A	112537	Ex9MD1S TM 40 3P	1/12
3	50A	35-50 A	500 A	112538	Ex9MD1S TM 50 3P	1/12
3	63A	44-63 A	630 A	112539	Ex9MD1S TM 63 3P	1/12
3	80A	56-80 A	800 A	112540	Ex9MD1S TM 80 3P	1/12
3	100A	70-100 A	1000 A	112541	Ex9MD1S TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	112542	Ex9MD1S TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	112543	Ex9MD1S TM 160 3P	1/12
4	16A	11-16 A	160 A	112544	Ex9MD1S TM 16 4P4T	1/12
4	20A	14-20 A	200 A	112545	Ex9MD1S TM 20 4P4T	1/12
4	25A	17-25 A	250 A	112546	Ex9MD1S TM 25 4P4T	1/12
4	32A	22-32 A	320 A	112547	Ex9MD1S TM 32 4P4T	1/12
4	40A	28-40 A	400 A	112548	Ex9MD1S TM 40 4P4T	1/12
4	50A	35-50 A	500 A	112549	Ex9MD1S TM 50 4P4T	1/12
4	63A	44-63 A	630 A	112550	Ex9MD1S TM 63 4P4T	1/12
4	80A	56-80 A	800 A	112551	Ex9MD1S TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	112552	Ex9MD1S TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	112553	Ex9MD1S TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	112554	Ex9MD1S TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD1N up to 160 A, $I_{cu} = 50 \text{ kA}$

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 1000 V DC
- $I_r(1.0)$ Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_i(10)$ range not adjustable (1 and 2 Pole)
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	16A	16 A	160 A	114091	Ex9MD1N TM 16 1P	2/12
1	20A	20 A	200 A	114092	Ex9MD1N TM 20 1P	2/12
1	25A	25 A	250 A	114093	Ex9MD1N TM 25 1P	2/12
1	32A	32 A	320 A	114094	Ex9MD1N TM 32 1P	2/12
1	40A	40 A	400 A	114095	Ex9MD1N TM 40 1P	2/12
1	50A	50 A	500 A	114096	Ex9MD1N TM 50 1P	2/12
1	63A	63 A	630 A	114097	Ex9MD1N TM 63 1P	2/12
1	80A	80 A	800 A	114098	Ex9MD1N TM 80 1P	2/12
1	100A	100 A	1000 A	114099	Ex9MD1N TM 100 1P	2/12
1	125A	125 A	1250 A	114100	Ex9MD1N TM 125 1P	2/12
1	160A	160 A	1600 A	114101	Ex9MD1N TM 160 1P	2/12
2	16A	11-16 A	160 A	114142	Ex9MD1N TM 16 2P	1/10
2	20A	14-20 A	200 A	114143	Ex9MD1N TM 20 2P	1/10
2	25A	17-25 A	250 A	114144	Ex9MD1N TM 25 2P	1/10
2	32A	22-32 A	320 A	114145	Ex9MD1N TM 32 2P	1/10
2	40A	28-40 A	400 A	114146	Ex9MD1N TM 40 2P	1/10
2	50A	35-50 A	500 A	114147	Ex9MD1N TM 50 2P	1/10
2	63A	44-63 A	630 A	114148	Ex9MD1N TM 63 2P	1/10
2	80A	56-80 A	800 A	114149	Ex9MD1N TM 80 2P	1/10
2	100A	70-100 A	1000 A	114150	Ex9MD1N TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	114151	Ex9MD1N TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	114152	Ex9MD1N TM 160 2P	1/10
3	16A	11-16 A	160 A	112555	Ex9MD1N TM 16 3P	1/12
3	20A	14-20 A	200 A	112556	Ex9MD1N TM 20 3P	1/12
3	25A	17-25 A	250 A	112557	Ex9MD1N TM 25 3P	1/12
3	32A	22-32 A	320 A	112558	Ex9MD1N TM 32 3P	1/12
3	40A	28-40 A	400 A	112559	Ex9MD1N TM 40 3P	1/12
3	50A	35-50 A	500 A	112560	Ex9MD1N TM 50 3P	1/12
3	63A	44-63 A	630 A	112561	Ex9MD1N TM 63 3P	1/12
3	80A	56-80 A	800 A	112562	Ex9MD1N TM 80 3P	1/12
3	100A	70-100 A	1000 A	112563	Ex9MD1N TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	112564	Ex9MD1N TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	112565	Ex9MD1N TM 160 3P	1/12
4	16A	11-16 A	160 A	112566	Ex9MD1N TM 16 4P4T	1/12
4	20A	14-20 A	200 A	112567	Ex9MD1N TM 20 4P4T	1/12
4	25A	17-25 A	250 A	112568	Ex9MD1N TM 25 4P4T	1/12
4	32A	22-32 A	320 A	112569	Ex9MD1N TM 32 4P4T	1/12
4	40A	28-40 A	400 A	112570	Ex9MD1N TM 40 4P4T	1/12
4	50A	35-50 A	500 A	112571	Ex9MD1N TM 50 4P4T	1/12
4	63A	44-63 A	630 A	112572	Ex9MD1N TM 63 4P4T	1/12
4	80A	56-80 A	800 A	112573	Ex9MD1N TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	112574	Ex9MD1N TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	112575	Ex9MD1N TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	112576	Ex9MD1N TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD1Q up to 160 A, $I_{cu} = 70 \text{ kA}$

- 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70 \text{ kA}$ at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_i(10)$ range not adjustable (2 Pole)
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	16A	11-16 A	160 A	114153	Ex9MD1Q TM 16 2P	1/10
2	20A	14-20 A	200 A	114154	Ex9MD1Q TM 20 2P	1/10
2	25A	17-25 A	250 A	114155	Ex9MD1Q TM 25 2P	1/10
2	32A	22-32 A	320 A	114156	Ex9MD1Q TM 32 2P	1/10
2	40A	28-40 A	400 A	114157	Ex9MD1Q TM 40 2P	1/10
2	50A	35-50 A	500 A	114158	Ex9MD1Q TM 50 2P	1/10
2	63A	44-63 A	630 A	114159	Ex9MD1Q TM 63 2P	1/10
2	80A	56-80 A	800 A	114160	Ex9MD1Q TM 80 2P	1/10
2	100A	70-100 A	1000 A	114161	Ex9MD1Q TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	114162	Ex9MD1Q TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	114163	Ex9MD1Q TM 160 2P	1/10
3	16A	11-16 A	160 A	112577	Ex9MD1Q TM 16 3P	1/12
3	20A	14-20 A	200 A	112578	Ex9MD1Q TM 20 3P	1/12
3	25A	17-25 A	250 A	112579	Ex9MD1Q TM 25 3P	1/12
3	32A	22-32 A	320 A	112580	Ex9MD1Q TM 32 3P	1/12
3	40A	28-40 A	400 A	112581	Ex9MD1Q TM 40 3P	1/12
3	50A	35-50 A	500 A	112582	Ex9MD1Q TM 50 3P	1/12
3	63A	44-63 A	630 A	112583	Ex9MD1Q TM 63 3P	1/12
3	80A	56-80 A	800 A	112584	Ex9MD1Q TM 80 3P	1/12
3	100A	70-100 A	1000 A	112585	Ex9MD1Q TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	112586	Ex9MD1Q TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	112587	Ex9MD1Q TM 160 3P	1/12
4	16A	11-16 A	160 A	112588	Ex9MD1Q TM 16 4P4T	1/12
4	20A	14-20 A	200 A	112589	Ex9MD1Q TM 20 4P4T	1/12
4	25A	17-25 A	250 A	112590	Ex9MD1Q TM 25 4P4T	1/12
4	32A	22-32 A	320 A	112591	Ex9MD1Q TM 32 4P4T	1/12
4	40A	28-40 A	400 A	112592	Ex9MD1Q TM 40 4P4T	1/12
4	50A	35-50 A	500 A	112593	Ex9MD1Q TM 50 4P4T	1/12
4	63A	44-63 A	630 A	112594	Ex9MD1Q TM 63 4P4T	1/12
4	80A	56-80 A	800 A	112595	Ex9MD1Q TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	112596	Ex9MD1Q TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	112597	Ex9MD1Q TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	112598	Ex9MD1Q TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD1H up to 160 A, $I_{cu} = 100 \text{ kA}$

- 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_i(10)$ range not adjustable (2 Pole)
- I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	16A	11-16 A	160 A	114164	Ex9MD1H TM 16 2P	1/10
2	20A	14-20 A	200 A	114165	Ex9MD1H TM 20 2P	1/10
2	25A	17-25 A	250 A	114166	Ex9MD1H TM 25 2P	1/10
2	32A	22-32 A	320 A	114167	Ex9MD1H TM 32 2P	1/10
2	40A	28-40 A	400 A	114168	Ex9MD1H TM 40 2P	1/10
2	50A	35-50 A	500 A	114169	Ex9MD1H TM 50 2P	1/10
2	63A	44-63 A	630 A	114170	Ex9MD1H TM 63 2P	1/10
2	80A	56-80 A	800 A	114171	Ex9MD1H TM 80 2P	1/10
2	100A	70-100 A	1000 A	114172	Ex9MD1H TM 100 2P	1/10
2	125A	87-125 A	625-1250 A	114173	Ex9MD1H TM 125 2P	1/10
2	160A	112-160 A	800-1600 A	114174	Ex9MD1H TM 160 2P	1/10
3	16A	11-16 A	160 A	112599	Ex9MD1H TM 16 3P	1/12
3	20A	14-20 A	200 A	112600	Ex9MD1H TM 20 3P	1/12
3	25A	17-25 A	250 A	112601	Ex9MD1H TM 25 3P	1/12
3	32A	22-32 A	320 A	112602	Ex9MD1H TM 32 3P	1/12
3	40A	28-40 A	400 A	112603	Ex9MD1H TM 40 3P	1/12
3	50A	35-50 A	500 A	112604	Ex9MD1H TM 50 3P	1/12
3	63A	44-63 A	630 A	112605	Ex9MD1H TM 63 3P	1/12
3	80A	56-80 A	800 A	112606	Ex9MD1H TM 80 3P	1/12
3	100A	70-100 A	1000 A	112607	Ex9MD1H TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	112608	Ex9MD1H TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	112609	Ex9MD1H TM 160 3P	1/12
4	16A	11-16 A	160 A	112610	Ex9MD1H TM 16 4P4T	1/12
4	20A	14-20 A	200 A	112611	Ex9MD1H TM 20 4P4T	1/12
4	25A	17-25 A	250 A	112612	Ex9MD1H TM 25 4P4T	1/12
4	32A	22-32 A	320 A	112613	Ex9MD1H TM 32 4P4T	1/12
4	40A	28-40 A	400 A	112614	Ex9MD1H TM 40 4P4T	1/12
4	50A	35-50 A	500 A	112615	Ex9MD1H TM 50 4P4T	1/12
4	63A	44-63 A	630 A	112616	Ex9MD1H TM 63 4P4T	1/12
4	80A	56-80 A	800 A	112617	Ex9MD1H TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	112618	Ex9MD1H TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	112619	Ex9MD1H TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	112620	Ex9MD1H TM 160 4P4T	1/12

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD2B up to 250 A, $I_{cu} = 25 \text{ kA}$

- 1 (up to 250 V DC) 2 (up to 500 V DC) 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 25 \text{ kA}$ at 1000 V DC
- I_r (1.0) Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i (10) range not adjustable (1 and 2 Pole)
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	125 A	125 A	1250 A	114102	Ex9MD2B TM 125 1P	2/16
1	160 A	160 A	1600 A	114103	Ex9MD2B TM 160 1P	2/16
1	180 A	180 A	1800 A	114104	Ex9MD2B TM 180 1P	2/16
1	200 A	200 A	2000 A	114105	Ex9MD2B TM 200 1P	2/16
1	225 A	225 A	2250 A	114106	Ex9MD2B TM 225 1P	2/16
1	250 A	250 A	2500 A	114107	Ex9MD2B TM 250 1P	2/16
2	125 A	87-125 A	875-1500 A	114175	Ex9MD2B TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114176	Ex9MD2B TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114177	Ex9MD2B TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114178	Ex9MD2B TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114179	Ex9MD2B TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114180	Ex9MD2B TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	112621	Ex9MD2B TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	112622	Ex9MD2B TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	112623	Ex9MD2B TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	112624	Ex9MD2B TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	112625	Ex9MD2B TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	112626	Ex9MD2B TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	112627	Ex9MD2B TM 125 4P4T	1/8
4	160 A	112-160 A	800-1600 A	112628	Ex9MD2B TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	112629	Ex9MD2B TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	112630	Ex9MD2B TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	112631	Ex9MD2B TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	112632	Ex9MD2B TM 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD2S up to 250 A, $I_{cu} = 36 \text{ kA}$

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 1000 V DC
- $I_r(1.0)$ Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_i(10)$ range not adjustable (1 and 2 Pole)
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	125 A	125 A	1250 A	114108	Ex9MD2S TM 125 1P	2/16
1	160 A	160 A	1600 A	114109	Ex9MD2S TM 160 1P	2/16
1	180 A	180 A	1800 A	114110	Ex9MD2S TM 180 1P	2/16
1	200 A	200 A	2000 A	114111	Ex9MD2S TM 200 1P	2/16
1	225 A	225 A	2250 A	114112	Ex9MD2S TM 225 1P	2/16
1	250 A	250 A	2500 A	114113	Ex9MD2S TM 250 1P	2/16
2	125 A	87-125 A	875-1500 A	114181	Ex9MD2S TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114182	Ex9MD2S TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114183	Ex9MD2S TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114184	Ex9MD2S TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114185	Ex9MD2S TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114186	Ex9MD2S TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	112633	Ex9MD2S TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	112634	Ex9MD2S TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	112635	Ex9MD2S TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	112636	Ex9MD2S TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	112637	Ex9MD2S TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	112638	Ex9MD2S TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	112639	Ex9MD2S TM 125 4P4T	1/8
4	160 A	112-160 A	800-1600 A	112640	Ex9MD2S TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	112641	Ex9MD2S TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	112642	Ex9MD2S TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	112643	Ex9MD2S TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	112644	Ex9MD2S TM 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD2N up to 250 A, $I_{cu} = 50 \text{ kA}$

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 1000 V DC
- I_r (1.0) Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i (10) range not adjustable (1 and 2 Pole)
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
1	125 A	125 A	1250 A	114114	Ex9MD2N TM 125 1P	2/16
1	160 A	160 A	1600 A	114115	Ex9MD2N TM 160 1P	2/16
1	180 A	180 A	1800 A	114116	Ex9MD2N TM 180 1P	2/16
1	200 A	200 A	2000 A	114117	Ex9MD2N TM 200 1P	2/16
1	225 A	225 A	2250 A	114118	Ex9MD2N TM 225 1P	2/16
1	250 A	250 A	2500 A	114119	Ex9MD2N TM 250 1P	2/16
2	125 A	87-125 A	875-1500 A	114187	Ex9MD2N TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114188	Ex9MD2N TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114189	Ex9MD2N TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114190	Ex9MD2N TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114191	Ex9MD2N TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114192	Ex9MD2N TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	112645	Ex9MD2N TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	112646	Ex9MD2N TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	112647	Ex9MD2N TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	112648	Ex9MD2N TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	112649	Ex9MD2N TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	112650	Ex9MD2N TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	112651	Ex9MD2N TM 125 4P4T	1/8
4	160 A	112-160 A	800-1600 A	112652	Ex9MD2N TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	112653	Ex9MD2N TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	112654	Ex9MD2N TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	112655	Ex9MD2N TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	112656	Ex9MD2N TM 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD2Q up to 250 A, $I_{cu} = 70 \text{ kA}$

- 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70 \text{ kA}$ at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	125 A	87-125 A	875-1500 A	114193	Ex9MD2Q TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114194	Ex9MD2Q TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114195	Ex9MD2Q TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114196	Ex9MD2Q TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114197	Ex9MD2Q TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114198	Ex9MD2Q TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	112657	Ex9MD2Q TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	112658	Ex9MD2Q TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	112659	Ex9MD2Q TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	112660	Ex9MD2Q TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	112661	Ex9MD2Q TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	112662	Ex9MD2Q TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	112663	Ex9MD2Q TM 125 4P4T	1/8
4	160 A	112-160 A	800-1600 A	112664	Ex9MD2Q TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	112665	Ex9MD2Q TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	112666	Ex9MD2Q TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	112667	Ex9MD2Q TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	112668	Ex9MD2Q TM 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD2H up to 250 A, $I_{cu} = 100 \text{ kA}$

- 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
2	125 A	87-125 A	875-1500 A	114199	Ex9MD2H TM 125 2P	1/8
2	160 A	112-160 A	800-1600 A	114200	Ex9MD2H TM 160 2P	1/8
2	180 A	126-180 A	900-1800 A	114201	Ex9MD2H TM 180 2P	1/8
2	200 A	140-200 A	1000-2000 A	114202	Ex9MD2H TM 200 2P	1/8
2	225 A	158-225 A	1125-2250 A	114203	Ex9MD2H TM 225 2P	1/8
2	250 A	175-250 A	1250-2500 A	114204	Ex9MD2H TM 250 2P	1/8
3	125 A	87-125 A	875-1500 A	112669	Ex9MD2H TM 125 3P	1/8
3	160 A	112-160 A	800-1600 A	112670	Ex9MD2H TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	112671	Ex9MD2H TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	112672	Ex9MD2H TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	112673	Ex9MD2H TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	112674	Ex9MD2H TM 250 3P	1/8
4	125 A	87-125 A	875-1500 A	112675	Ex9MD2H TM 125 4P4T	1/8
4	160 A	112-160 A	800-1600 A	112676	Ex9MD2H TM 160 4P4T	1/8
4	180 A	126-180 A	900-1800 A	112677	Ex9MD2H TM 180 4P4T	1/8
4	200 A	140-200 A	1000-2000 A	112678	Ex9MD2H TM 200 4P4T	1/8
4	225 A	158-225 A	1125-2250 A	112679	Ex9MD2H TM 225 4P4T	1/8
4	250 A	175-250 A	1250-2500 A	112680	Ex9MD2H TM 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD3B up to 400 A, $I_{cu} = 25 \text{ kA}$

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 25 \text{ kA}$ at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	112681	Ex9MD3B TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	112682	Ex9MD3B TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	112683	Ex9MD3B TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	112684	Ex9MD3B TM 400 3P	1/2
4	250 A	175-250 A	1250-2500 A	112685	Ex9MD3B TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	112686	Ex9MD3B TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	112687	Ex9MD3B TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	112688	Ex9MD3B TM 400 4P4T	1/2

Version Ex9MD3S up to 400 A, $I_{cu} = 35 \text{ kA}$

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 35 \text{ kA}$ at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	112689	Ex9MD3S TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	112690	Ex9MD3S TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	112691	Ex9MD3S TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	112692	Ex9MD3S TM 400 3P	1/2
4	250 A	175-250 A	1250-2500 A	112693	Ex9MD3S TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	112694	Ex9MD3S TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	112695	Ex9MD3S TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	112696	Ex9MD3S TM 400 4P4T	1/2

Version Ex9MD3N up to 400 A, $I_{cu} = 50 \text{ kA}$

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	112697	Ex9MD3N TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	112698	Ex9MD3N TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	112699	Ex9MD3N TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	112700	Ex9MD3N TM 400 3P	1/2
4	250 A	175-250 A	1250-2500 A	112701	Ex9MD3N TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	112702	Ex9MD3N TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	112703	Ex9MD3N TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	112704	Ex9MD3N TM 400 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD3Q up to 400 A, $I_{cu} = 70$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	112705	Ex9MD3Q TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	112706	Ex9MD3Q TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	112707	Ex9MD3Q TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	112708	Ex9MD3Q TM 400 3P	1/2
4	250 A	175-250 A	1250-2500 A	112709	Ex9MD3Q TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	112710	Ex9MD3Q TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	112711	Ex9MD3Q TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	112712	Ex9MD3Q TM 400 4P4T	1/2

Version Ex9MD3H up to 400 A, $I_{cu} = 100$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	112713	Ex9MD3H TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	112714	Ex9MD3H TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	112715	Ex9MD3H TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	112716	Ex9MD3H TM 400 3P	1/2
4	250 A	175-250 A	1250-2500 A	112717	Ex9MD3H TM 250 4P4T	1/2
4	315 A	220-315 A	1575-3150 A	112718	Ex9MD3H TM 315 4P4T	1/2
4	350 A	245-350 A	1750-3500 A	112719	Ex9MD3H TM 350 4P4T	1/2
4	400 A	280-400 A	2000-4000 A	112720	Ex9MD3H TM 400 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD4B up to 630 A, $I_{cu} = 25$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 25$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112721	Ex9MD4B TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112722	Ex9MD4B TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112723	Ex9MD4B TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112724	Ex9MD4B TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112725	Ex9MD4B TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112726	Ex9MD4B TM 630 4P4T	1/1

Version Ex9MD4S up to 630 A, $I_{cu} = 36$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112727	Ex9MD4S TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112728	Ex9MD4S TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112729	Ex9MD4S TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112730	Ex9MD4S TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112731	Ex9MD4S TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112732	Ex9MD4S TM 630 4P4T	1/1

Version Ex9MD4N up to 630 A, $I_{cu} = 50$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112733	Ex9MD4N TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112734	Ex9MD4N TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112735	Ex9MD4N TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112736	Ex9MD4N TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112737	Ex9MD4N TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112738	Ex9MD4N TM 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD4Q up to 630 A, $I_{cu} = 70 \text{ kA}$

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70 \text{ kA}$ at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112739	Ex9M4Q TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112740	Ex9M4Q TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112741	Ex9M4Q TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112742	Ex9M4Q TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112743	Ex9M4Q TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112744	Ex9M4Q TM 630 4P4T	1/1

Version Ex9MD4H up to 630 A, $I_{cu} = 100 \text{ kA}$

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112745	Ex9MD4H TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112746	Ex9MD4H TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112747	Ex9MD4H TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112748	Ex9MD4H TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112749	Ex9MD4H TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112750	Ex9MD4H TM 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD5B up to 800 A, $I_{cu} = 25$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 25$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112751	Ex9MD5B TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112752	Ex9MD5B TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112753	Ex9MD5B TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112754	Ex9MD5B TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112755	Ex9MD5B TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112756	Ex9MD5B TM 800 4P4T	1/1

Version Ex9MD5S up to 800 A, $I_{cu} = 36$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112757	Ex9MD5S TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112758	Ex9MD5S TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112759	Ex9MD5S TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112760	Ex9MD5S TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112761	Ex9MD5S TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112762	Ex9MD5S TM 800 4P4T	1/1

Version Ex9MD5N up to 800 A, $I_{cu} = 50$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112763	Ex9MD5N TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112764	Ex9MD5N TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112765	Ex9MD5N TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112766	Ex9MD5N TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112767	Ex9MD5N TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112768	Ex9MD5N TM 800 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9MD5Q up to 800 A, $I_{cu} = 70$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112769	Ex9MD5Q TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112770	Ex9MD5Q TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112771	Ex9MD5Q TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112772	Ex9MD5Q TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112773	Ex9MD5Q TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112774	Ex9MD5Q TM 800 4P4T	1/1

Version Ex9MD5H up to 800 A, $I_{cu} = 100$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	441-630 A	3150-6300 A	112775	Ex9MD5H TM 630 3P	1/1
3	700 A	490-700 A	3500-7000 A	112776	Ex9MD5H TM 700 3P	1/1
3	800 A	560-800 A	4000-8000 A	112777	Ex9MD5H TM 800 3P	1/1
4	630 A	441-630 A	3150-6300 A	112778	Ex9MD5H TM 630 4P4T	1/1
4	700 A	490-700 A	3500-7000 A	112779	Ex9MD5H TM 700 4P4T	1/1
4	800 A	560-800 A	4000-8000 A	112780	Ex9MD5H TM 800 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M SU20L**



- DIP switches parameter setting version
- SU20L Basic smart unit
- Frame sizes M2-M6
- Rated operating current up to 1600 A
- 3 and 4-pole versions
- Rated ultimate short circuit breaking capacity $I_{cu} = I_{cs}$ up to 150 kA
- Rated voltage 415 / 690 V AC
- High tripping accuracy, reliable operation, less sensibility to ambient temperature

Moulded Case Circuit Breakers **Ex9M SU20L**

Moulded Case Circuit Breakers Ex9M with SU20L type of smart unit are intended for applications in power distribution mainly. Testing according to IEC / EN 60947-2 standards ensures the functionality and reliability for wide variety of applications including isolation.

The electronic controller with DIP switches allows a fast and easy commission of the device for the installation requirements. Electronic technology improves the stability of the device on applications with significant mechanical stress.

These breakers are offered with breaking capacities from 36 kA up to extreme 150 kA. Rated impulse withstand voltage U_{imp} up to 12 kV makes it possible to use them even in system with occurrences of transient over-voltage waves of high intensity, e.g. in heavy industry.

Utilization category A and B circuit breakers.

Type Key

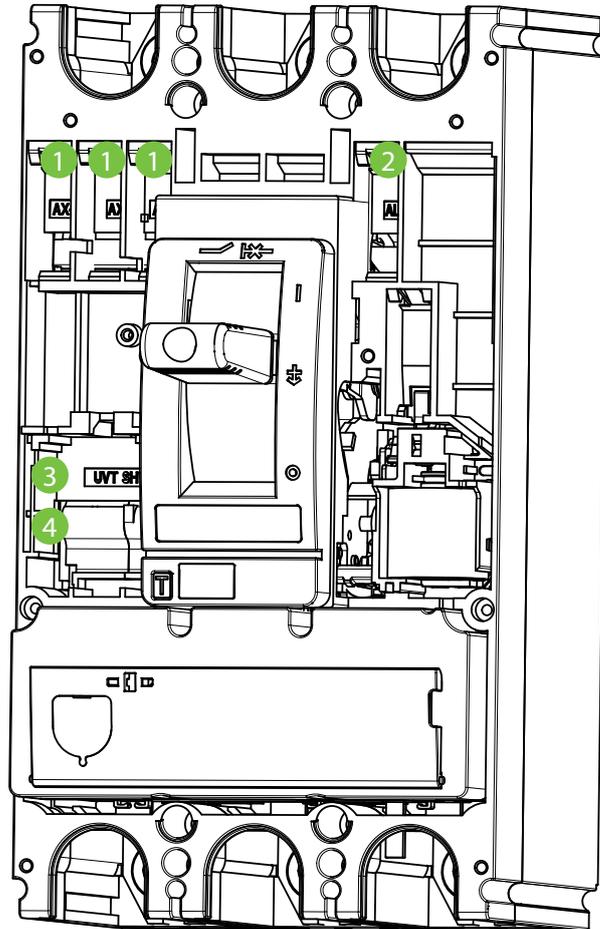
Ex9M	2	S	SU20L	250	3P	-	-
Product family	Frame size	Breaking capacity	Release technology	Rated current	Poles	Mechanism	MOD voltage
Ex9M	2: to 250 A 3: to 400 A / 630 A 4: to 630 A 5: to 800 A 6: to 1600 A	S: 36 kA N: 50 kA Q: 70 kA H: 100 kA P: 150 kA	SU20L: basic type electronic power distribution unit	M2: 250 A M3: 630 A M4: 630 A M5: 800 A M6: 1600 A	3P: 3-pole 4P4T: 4-pole with protected N-pole	- : Manual type MOD: Motor operated (M6)	- : Manual type AC 230 V AC 400 V DC 24 V DC 110 V DC 220 V

Certification marks



Moulded Case Circuit Breakers **Ex9M SU20L**

Internal accessories



1

Auxiliary contact
AX21/M

2

Signal contact
AL21/M

3

Shunt trip release
SHT2i
1 unit or UVT2i

4

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21/M

Signal contact AL21/M

Shunt trip releases SHT2i

Undervoltage release UVT2i

All internal accessories for the frame sizes M2+M3 and M4+M5 are identical.

Moulded Case Circuit Breakers **Ex9M SU20L**

External accessories Ex9M2-M5 SU20L



Phase barriers
PHS2i



Terminal cover, short
TCV2i



Terminal cover, long
TCE2i



Remote operator
MOD2i



Direct rotary handle
RHD2i



Extended rotary handle
ERH2i

Phase barriers PHS2i

Terminal cover, short TCV2i

Terminal cover, long TCE2i

Remote operators MOD2i

Direct rotary handle RHD2i

Extended rotary handle ERH2i

Moulded Case Circuit Breakers **Ex9M SU20L**

External accessories Ex9M2-M5 SU20L



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Box terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i

Tunnel terminals MC2i W

Mounting depth spacers WG i

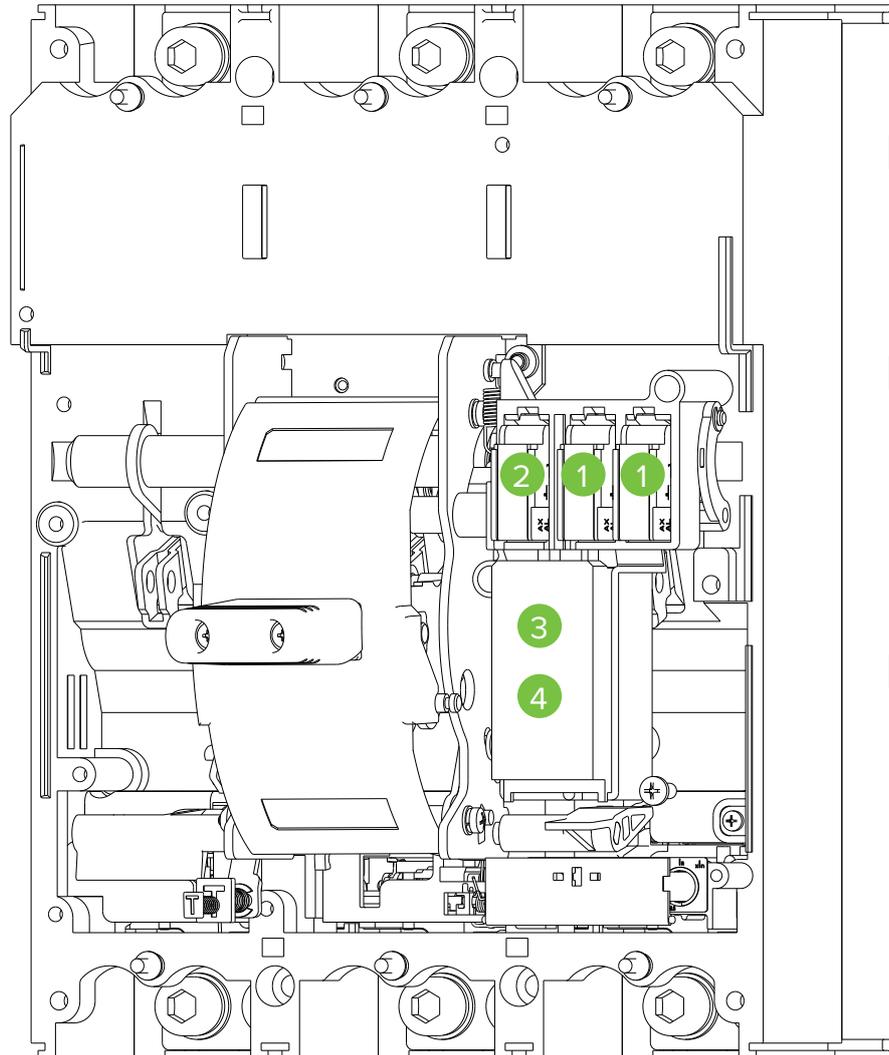
Box terminals MC2i

Screw terminals MCS2i

Din rail adapter DRA2i

Moulded Case Circuit Breakers **Ex9M SU20L**

Internal accessories Ex9M6 SU20L



Moulded Case Circuit
Breakers **Ex9M SU20L**

1

Auxiliary contact
AX21M

2

Signal contact
AL21M

3

Shunt trip release
SHT26
1 unit or UVT2i

4

Undervoltage release
UVT26
1 unit or SHT2i

Auxiliary contact AX21M

Signal contact AL21M

Shunt trip release SHT26

Undervoltage release UVT26

Only M6 MOD allows UVT+SHT+XF

Moulded Case Circuit Breakers **Ex9M SU20L**

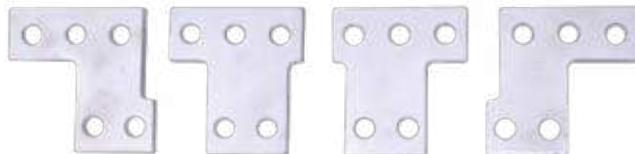
External accessories Ex9M6 SU20L



Extended rotatory handle
ERH26



Extended handle
LHD26



Front connection plate
JP26

Extended rotatory handles ERH26

Extended handles LHD26

Front connection plate JP26

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M2S up to 250 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13–32 A	64–384 A	111177	Ex9M2S SU20L 32 3P	1/8
3	63 A	25–63 A	126–756 A	111178	Ex9M2S SU20L 63 3P	1/8
3	100 A	40–100 A	200–1200 A	111179	Ex9M2S SU20L 100 3P	1/8
3	160 A	64–160 A	320–1920 A	111180	Ex9M2S SU20L 160 3P	1/8
3	250 A	100–250 A	500–3000 A	111181	Ex9M2S SU20L 250 3P	1/8
4	32 A	13–32 A	64–384 A	111182	Ex9M2S SU20L 32 4P4T	1/8
4	63 A	25–63 A	126–756 A	111183	Ex9M2S SU20L 63 4P4T	1/8
4	100 A	40–100 A	200–1200 A	111184	Ex9M2S SU20L 100 4P4T	1/8
4	160 A	64–160 A	320–1920 A	111185	Ex9M2S SU20L 160 4P4T	1/8
4	250 A	100–250 A	500–3000 A	111186	Ex9M2S SU20L 250 4P4T	1/8

Version Ex9M2N up to 250 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13–32 A	64–384 A	111187	Ex9M2N SU20L 32 3P	1/8
3	63 A	25–63 A	126–756 A	111188	Ex9M2N SU20L 63 3P	1/8
3	100 A	40–100 A	200–1200 A	111189	Ex9M2N SU20L 100 3P	1/8
3	160 A	64–160 A	320–1920 A	111190	Ex9M2N SU20L 160 3P	1/8
3	250 A	100–250 A	500–3000 A	111191	Ex9M2N SU20L 250 3P	1/8
4	32 A	13–32 A	64–384 A	111192	Ex9M2N SU20L 32 4P4T	1/8
4	63 A	25–63 A	126–756 A	111193	Ex9M2N SU20L 63 4P4T	1/8
4	100 A	40–100 A	200–1200 A	111194	Ex9M2N SU20L 100 4P4T	1/8
4	160 A	64–160 A	320–1920 A	111195	Ex9M2N SU20L 160 4P4T	1/8
4	250 A	100–250 A	500–3000 A	111196	Ex9M2N SU20L 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M2Q up to 250 A, $I_{cu} = 70$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13–32 A	64–384 A	111197	Ex9M2Q SU20L 32 3P	1/8
3	63 A	25–63 A	126–756 A	111198	Ex9M2Q SU20L 63 3P	1/8
3	100 A	40–100 A	200–1200 A	111199	Ex9M2Q SU20L 100 3P	1/8
3	160 A	64–160 A	320–1920 A	111200	Ex9M2Q SU20L 160 3P	1/8
3	250 A	100–250 A	500–3000 A	111201	Ex9M2Q SU20L 250 3P	1/8
4	32 A	13–32 A	64–384 A	111202	Ex9M2Q SU20L 32 4P4T	1/8
4	63 A	25–63 A	126–756 A	111203	Ex9M2Q SU20L 63 4P4T	1/8
4	100 A	40–100 A	200–1200 A	111204	Ex9M2Q SU20L 100 4P4T	1/8
4	160 A	64–160 A	320–1920 A	111205	Ex9M2Q SU20L 160 4P4T	1/8
4	250 A	100–250 A	500–3000 A	111206	Ex9M2Q SU20L 250 4P4T	1/8

Version Ex9M2H up to 250 A, $I_{cu} = 100$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13–32 A	64–384 A	111207	Ex9M2H SU20L 32 3P	1/8
3	63 A	25–63 A	126–756 A	111208	Ex9M2H SU20L 63 3P	1/8
3	100 A	40–100 A	200–1200 A	111209	Ex9M2H SU20L 100 3P	1/8
3	160 A	64–160 A	320–1920 A	111210	Ex9M2H SU20L 160 3P	1/8
3	250 A	100–250 A	500–3000 A	111211	Ex9M2H SU20L 250 3P	1/8
4	32 A	13–32 A	64–384 A	111212	Ex9M2H SU20L 32 4P4T	1/8
4	63 A	25–63 A	126–756 A	111213	Ex9M2H SU20L 63 4P4T	1/8
4	100 A	40–100 A	200–1200 A	111214	Ex9M2H SU20L 100 4P4T	1/8
4	160 A	64–160 A	320–1920 A	111215	Ex9M2H SU20L 160 4P4T	1/8
4	250 A	100–250 A	500–3000 A	111216	Ex9M2H SU20L 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M2P up to 250 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13–32 A	64–384 A	111217	Ex9M2P SU20L 32 3P	1/8
3	63 A	25–63 A	126–756 A	111218	Ex9M2P SU20L 63 3P	1/8
3	100 A	40–100 A	200–1200 A	111219	Ex9M2P SU20L 100 3P	1/8
3	160 A	64–160 A	320–1920 A	111220	Ex9M2P SU20L 160 3P	1/8
3	250 A	100–250 A	500–3000 A	111221	Ex9M2P SU20L 250 3P	1/8
4	32 A	13–32 A	64–384 A	111222	Ex9M2P SU20L 32 4P4T	1/8
4	63 A	25–63 A	126–756 A	111223	Ex9M2P SU20L 63 4P4T	1/8
4	100 A	40–100 A	200–1200 A	111224	Ex9M2P SU20L 100 4P4T	1/8
4	160 A	64–160 A	320–1920 A	111225	Ex9M2P SU20L 160 4P4T	1/8
4	250 A	100–250 A	500–3000 A	111226	Ex9M2P SU20L 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M3S up to 630 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100–250 A	500–3000 A	111227	Ex9M3S SU20L 250 3P	1/2
3	400 A	160–400 A	800–4800 A	111228	Ex9M3S SU20L 400 3P	1/2
3	630 A	252–630 A	1260–7560 A	111229	Ex9M3S SU20L 630 3P	1/2
4	250 A	100–250 A	500–3000 A	111230	Ex9M3S SU20L 250 4P4T	1/2
4	400 A	160–400 A	800–4800 A	111231	Ex9M3S SU20L 400 4P4T	1/2
4	630 A	252–630 A	1260–7560 A	111232	Ex9M3S SU20L 630 4P4T	1/2

Version Ex9M3N up to 630 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100–250 A	500–3000 A	111233	Ex9M3N SU20L 250 3P	1/2
3	400 A	160–400 A	800–4800 A	111234	Ex9M3N SU20L 400 3P	1/2
3	630 A	252–630 A	1260–7560 A	111235	Ex9M3N SU20L 630 3P	1/2
4	250 A	100–250 A	500–3000 A	111236	Ex9M3N SU20L 250 4P4T	1/2
4	400 A	160–400 A	800–4800 A	111237	Ex9M3N SU20L 400 4P4T	1/2
4	630 A	252–630 A	1260–7560 A	111238	Ex9M3N SU20L 630 4P4T	1/2

Version Ex9M3Q up to 630 A, $I_{cu} = 70 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100–250 A	500–3000 A	111239	Ex9M3Q SU20L 250 3P	1/2
3	400 A	160–400 A	800–4800 A	111240	Ex9M3Q SU20L 400 3P	1/2
3	630 A	252–630 A	1260–7560 A	111241	Ex9M3Q SU20L 630 3P	1/2
4	250 A	100–250 A	500–3000 A	111242	Ex9M3Q SU20L 250 4P4T	1/2
4	400 A	160–400 A	800–4800 A	111243	Ex9M3Q SU20L 400 4P4T	1/2
4	630 A	252–630 A	1260–7560 A	111244	Ex9M3Q SU20L 630 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M3H up to 630 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100–250 A	500–3000 A	111245	Ex9M3H SU20L 250 3P	1/2
3	400 A	160–400 A	800–4800 A	111246	Ex9M3H SU20L 400 3P	1/2
3	630 A	252–630 A	1260–7560 A	111247	Ex9M3H SU20L 630 3P	1/2
4	250 A	100–250 A	500–3000 A	111248	Ex9M3H SU20L 250 4P4T	1/2
4	400 A	160–400 A	800–4800 A	111249	Ex9M3H SU20L 400 4P4T	1/2
4	630 A	252–630 A	1260–7560 A	111250	Ex9M3H SU20L 630 4P4T	1/2

Version Ex9M3P up to 630 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100–250 A	500–3000 A	111251	Ex9M3P SU20L 250 3P	1/2
3	400 A	160–400 A	800–4800 A	111252	Ex9M3P SU20L 400 3P	1/2
3	630 A	252–630A	1260–7560 A	111253	Ex9M3P SU20L 630 3P	1/2
4	250 A	100–250 A	500–3000 A	111254	Ex9M3P SU20L 250 4P4T	1/2
4	400 A	160–400 A	800–4800 A	111255	Ex9M3P SU20L 400 4P4T	1/2
4	630 A	252–630 A	1260–7560 A	111256	Ex9M3P SU20L 630 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M4S 630 A, $I_{cu} = 36$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252–630 A	1260–7560 A	111257	Ex9M4S SU20L 630 3P	1/1
4	630 A	252–630 A	1260–7560 A	111258	Ex9M4S SU20L 630 4P4T	1/1

Version Ex9M4N 630 A, $I_{cu} = 50$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252–630 A	1260–7560 A	111259	Ex9M4N SU20L 630 3P	1/1
4	630 A	252–630 A	1260–7560 A	111260	Ex9M4N SU20L 630 4P4T	1/1

Version Ex9M4Q 630 A, $I_{cu} = 70$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252–630 A	1260–7560 A	111261	Ex9M4Q SU20L 630 3P	1/1
4	630 A	252–630 A	1260–7560 A	111262	Ex9M4Q SU20L 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M4H 630 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252–630 A	1260–7560 A	111263	Ex9M4H SU20L 630 3P	1/1
4	630 A	252–630 A	1260–7560 A	111264	Ex9M4H SU20L 630 4P4T	1/1

Version Ex9M4P 630 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252–630 A	1260–7560 A	111265	Ex9M4P SU20L 630 3P	1/1
4	630 A	252–630 A	1260–7560 A	111266	Ex9M4P SU20L 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9M5S 800 A, $I_{cu} = 36$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	111267	Ex9M5S SU20L 800 3P	1/1
4	800 A	320—800 A	1600—9600 A	111268	Ex9M5S SU20L 800 4P4T	1/1

Version Ex9M5N 800 A, $I_{cu} = 50$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	111269	Ex9M5N SU20L 800 3P	1/1
4	800 A	320—800 A	1600—9600 A	111270	Ex9M5N SU20L 800 4P4T	1/1

Version Ex9M5Q 800 A, $I_{cu} = 70$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	111271	Ex9M5Q SU20L 800 3P	1/1
4	800 A	320—800 A	1600—9600 A	111272	Ex9M5Q SU20L 800 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M DC TM**

Version Ex9M5H 800 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320–800 A	1600–9600 A	111273	Ex9M5H SU20L 800 3P	1/1
4	800 A	320–800 A	1600–9600 A	111274	Ex9M5H SU20L 800 4P4T	1/1

Version Ex9M5P 800 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320–800 A	1600–9600 A	111275	Ex9M5P SU20L 800 3P	1/1
4	800 A	320–800 A	1600–9600 A	111276	Ex9M5P SU20L 800 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M6N up to 1600 A, $I_{cu} = 50$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320–800 A	1600–9600 A	110340	Ex9M6N SU20L 800 3P	1/1
3	1000 A	400–1000 A	2000–12000 A	110341	Ex9M6N SU20L 1000 3P	1/1
3	1250 A	500–1250 A	2500–15000 A	110342	Ex9M6N SU20L 1250 3P	1/1
3	1600 A	640–1600 A	3200–19200 A	110343	Ex9M6N SU20L 1600 3P	1/1
4	800 A	320–800 A	1600–9600 A	110344	Ex9M6N SU20L 800 4P	1/1
4	1000 A	400–1000 A	2000–12000 A	110345	Ex9M6N SU20L 1000 4P	1/1
4	1250 A	500–1250 A	2500–15000 A	110346	Ex9M6N SU20L 1250 4P	1/1
4	1600 A	640–1600 A	3200–19200 A	110347	Ex9M6N SU20L 1600 4P	1/1

Version Ex9M6Q up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320–800 A	1600–9600 A	110348	Ex9M6Q SU20L 800 3P	1/1
3	1000 A	400–1000 A	2000–12000 A	110349	Ex9M6Q SU20L 1000 3P	1/1
3	1250 A	500–1250 A	2500–15000 A	110350	Ex9M6Q SU20L 1250 3P	1/1
3	1600 A	640–1600 A	3200–19200 A	110351	Ex9M6Q SU20L 1600 3P	1/1
4	800 A	320–800 A	1600–9600 A	110352	Ex9M6Q SU20L 800 4P	1/1
4	1000 A	400–1000 A	2000–12000 A	110353	Ex9M6Q SU20L 1000 4P	1/1
4	1250 A	500–1250 A	2500–15000 A	110354	Ex9M6Q SU20L 1250 4P	1/1
4	1600 A	640–1600 A	3200–19200 A	110355	Ex9M6Q SU20L 1600 4P	1/1

Version Ex9M6H up to 1600 A, $I_{cu} = 100$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = 70$ kA, $I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320–800 A	1600–9600 A	110356	Ex9M6H SU20L 800 3P	1/1
3	1000 A	400–1000 A	2000–12000 A	110357	Ex9M6H SU20L 1000 3P	1/1
3	1250 A	500–1250 A	2500–15000 A	110358	Ex9M6H SU20L 1250 3P	1/1
3	1600 A	640–1600 A	3200–19200 A	110359	Ex9M6H SU20L 1600 3P	1/1
4	800 A	320–800 A	1600–9600 A	110360	Ex9M6H SU20L 800 4P	1/1
4	1000 A	400–1000 A	2000–12000 A	110361	Ex9M6H SU20L 1000 4P	1/1
4	1250 A	500–1250 A	2500–15000 A	110362	Ex9M6H SU20L 1250 4P	1/1
4	1600 A	640–1600 A	3200–19200 A	110363	Ex9M6H SU20L 1600 4P	1/1

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M6N MOD AC230V up to 1600 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110364	Ex9M6N SU20L 800 3P MOD AC230	1/1
3	1000 A	400—1000 A	2000—12000 A	110365	Ex9M6N SU20L 1000 3P MOD AC230	1/1
3	1250 A	500—1250 A	2500—15000 A	110366	Ex9M6N SU20L 1250 3P MOD AC230	1/1
3	1600 A	640—1600 A	3200—19200 A	110367	Ex9M6N SU20L 1600 3P MOD AC230	1/1
4	800 A	320—800 A	1600—9600 A	110368	Ex9M6N SU20L 800 4P MOD AC230	1/1
4	1000 A	400—1000 A	2000—12000 A	110369	Ex9M6N SU20L 1000 4P MOD AC230	1/1
4	1250 A	500—1250 A	2500—15000 A	110370	Ex9M6N SU20L 1250 4P MOD AC230	1/1
4	1600 A	640—1600 A	3200—19200 A	110371	Ex9M6N SU20L 1600 4P MOD AC230	1/1

Version Ex9M6N MOD AC400V up to 1600 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110372	Ex9M6N SU20L 800 3P MOD AC400	1/1
3	1000 A	400—1000 A	2000—12000 A	110373	Ex9M6N SU20L 1000 3P MOD AC400	1/1
3	1250 A	500—1250 A	2500—15000 A	110374	Ex9M6N SU20L 1250 3P MOD AC400	1/1
3	1600 A	640—1600 A	3200—19200 A	110375	Ex9M6N SU20L 1600 3P MOD AC400	1/1
4	800 A	320—800 A	1600—9600 A	110376	Ex9M6N SU20L 800 4P MOD AC400	1/1
4	1000 A	400—1000 A	2000—12000 A	110377	Ex9M6N SU20L 1000 4P MOD AC400	1/1
4	1250 A	500—1250 A	2500—15000 A	110378	Ex9M6N SU20L 1250 4P MOD AC400	1/1
4	1600 A	640—1600 A	3200—19200 A	110379	Ex9M6N SU20L 1600 4P MOD AC400	1/1

Moulded Case Circuit Breakers Ex9M SU20L

Version Ex9M6N MOD DC24V up to 1600 A, $I_{cu} = 50$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 415 V AC
- I_r can be set in steps $(0.4-0.5-0.6-0.7-0.8-0.9-1.0) \times I_n$
- I_i can be set in steps $(2-3-4-6-8-10-12) \times I_n$
- Mounting screws and phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320–800 A	1600–9600 A	117318	Ex9M6N SU20L 800 3P MOD DC24V	1/1
3	1000 A	400–1000 A	2000–12000 A	117319	Ex9M6N SU20L 1000 3P MOD DC24V	1/1
3	1250 A	500–1250 A	2500–15000 A	117320	Ex9M6N SU20L 1250 3P MOD DC24V	1/1
3	1600 A	640–1600 A	3200–19200 A	117321	Ex9M6N SU20L 1600 3P MOD DC24V	1/1
4	800 A	320–800 A	1600–9600 A	117322	Ex9M6N SU20L 800 4P MOD DC24V	1/1
4	1000 A	400–1000 A	2000–12000 A	117323	Ex9M6N SU20L 1000 4P MOD DC24V	1/1
4	1250 A	500–1250 A	2500–15000 A	117324	Ex9M6N SU20L 1250 4P MOD DC24V	1/1
4	1600 A	640–1600 A	3200–19200 A	117325	Ex9M6N SU20L 1600 4P MOD DC24V	1/1

Version Ex9M6N MOD DC110V up to 1600 A, $I_{cu} = 50$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320–800 A	1600–9600 A	110380	Ex9M6N SU20L 800 3P MOD DC110	1/1
3	1000 A	400–1000 A	2000–12000 A	110381	Ex9M6N SU20L 1000 3P MOD DC110	1/1
3	1250 A	500–1250 A	2500–15000 A	110382	Ex9M6N SU20L 1250 3P MOD DC110	1/1
3	1600 A	640–1600 A	3200–19200 A	110383	Ex9M6N SU20L 1600 3P MOD DC110	1/1
4	800 A	320–800 A	1600–9600 A	110384	Ex9M6N SU20L 800 4P MOD DC110	1/1
4	1000 A	400–1000 A	2000–12000 A	110385	Ex9M6N SU20L 1000 4P MOD DC110	1/1
4	1250 A	500–1250 A	2500–15000 A	110386	Ex9M6N SU20L 1250 4P MOD DC110	1/1
4	1600 A	640–1600 A	3200–19200 A	110387	Ex9M6N SU20L 1600 4P MOD DC110	1/1

Version Ex9M6N MOD DC220V up to 1600 A, $I_{cu} = 50$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320–800 A	1600–9600 A	110388	Ex9M6N SU20L 800 3P MOD DC220	1/1
3	1000 A	400–1000 A	2000–12000 A	110389	Ex9M6N SU20L 1000 3P MOD DC220	1/1
3	1250 A	500–1250 A	2500–15000 A	110390	Ex9M6N SU20L 1250 3P MOD DC220	1/1
3	1600 A	640–1600 A	3200–19200 A	110391	Ex9M6N SU20L 1600 3P MOD DC220	1/1
4	800 A	320–800 A	1600–9600 A	110392	Ex9M6N SU20L 800 4P MOD DC220	1/1
4	1000 A	400–1000 A	2000–12000 A	110393	Ex9M6N SU20L 1000 4P MOD DC220	1/1
4	1250 A	500–1250 A	2500–15000 A	110394	Ex9M6N SU20L 1250 4P MOD DC220	1/1
4	1600 A	640–1600 A	3200–19200 A	110395	Ex9M6N SU20L 1600 4P MOD DC220	1/1

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M6Q MOD AC230V up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110396	Ex9M6Q SU20L 800 3P MOD AC230	1/1
3	1000 A	400—1000 A	2000—12000 A	110397	Ex9M6Q SU20L 1000 3P MOD AC230	1/1
3	1250 A	500—1250 A	2500—15000 A	110398	Ex9M6Q SU20L 1250 3P MOD AC230	1/1
3	1600 A	640—1600 A	3200—19200 A	110399	Ex9M6Q SU20L 1600 3P MOD AC230	1/1
4	800 A	320—800 A	1600—9600 A	110400	Ex9M6Q SU20L 800 4P MOD AC230	1/1
4	1000 A	400—1000 A	2000—12000 A	110401	Ex9M6Q SU20L 1000 4P MOD AC230	1/1
4	1250 A	500—1250 A	2500—15000 A	110402	Ex9M6Q SU20L 1250 4P MOD AC230	1/1
4	1600 A	640—1600 A	3200—19200 A	110403	Ex9M6Q SU20L 1600 4P MOD AC230	1/1

Version Ex9M6Q MOD AC400V up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110404	Ex9M6Q SU20L 800 3P MOD AC400	1/1
3	1000 A	400—1000 A	2000—12000 A	110405	Ex9M6Q SU20L 1000 3P MOD AC400	1/1
3	1250 A	500—1250 A	2500—15000 A	110406	Ex9M6Q SU20L 1250 3P MOD AC400	1/1
3	1600 A	640—1600 A	3200—19200 A	110407	Ex9M6Q SU20L 1600 3P MOD AC400	1/1
4	800 A	320—800 A	1600—9600 A	110408	Ex9M6Q SU20L 800 4P MOD AC400	1/1
4	1000 A	400—1000 A	2000—12000 A	110409	Ex9M6Q SU20L 1000 4P MOD AC400	1/1
4	1250 A	500—1250 A	2500—15000 A	110410	Ex9M6Q SU20L 1250 4P MOD AC400	1/1
4	1600 A	640—1600 A	3200—19200 A	110411	Ex9M6Q SU20L 1600 4P MOD AC400	1/1

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M6Q MOD DC24V up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in steps $(0.4-0.5-0.6-0.7-0.8-0.9-1.0) \times I_n$
- I_i can be set in steps $(2-3-4-6-8-10-12) \times I_n$
- Mounting screws and phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	117326	Ex9M6Q SU20L 800 3P MOD DC24V	1/1
3	1000 A	400—1000 A	2000—12000 A	117327	Ex9M6Q SU20L 1000 3P MOD DC24V	1/1
3	1250 A	500—1250 A	2500—15000 A	117328	Ex9M6Q SU20L 1250 3P MOD DC24V	1/1
3	1600 A	640—1600 A	3200—19200 A	117329	Ex9M6Q SU20L 1600 3P MOD DC24V	1/1
4	800 A	320—800 A	1600—9600 A	117330	Ex9M6Q SU20L 800 4P MOD DC24V	1/1
4	1000 A	400—1000 A	2000—12000 A	117331	Ex9M6Q SU20L 1000 4P MOD DC24V	1/1
4	1250 A	500—1250 A	2500—15000 A	117332	Ex9M6Q SU20L 1250 4P MOD DC24V	1/1
4	1600 A	640—1600 A	3200—19200 A	117333	Ex9M6Q SU20L 1600 4P MOD DC24V	1/1

Version Ex9M6Q MOD DC110V up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110412	Ex9M6Q SU20L 800 3P MOD DC110	1/1
3	1000 A	400—1000 A	2000—12000 A	110413	Ex9M6Q SU20L 1000 3P MOD DC110	1/1
3	1250 A	500—1250 A	2500—15000 A	110414	Ex9M6Q SU20L 1250 3P MOD DC110	1/1
3	1600 A	640—1600 A	3200—19200 A	110415	Ex9M6Q SU20L 1600 3P MOD DC110	1/1
4	800 A	320—800 A	1600—9600 A	110416	Ex9M6Q SU20L 800 4P MOD DC110	1/1
4	1000 A	400—1000 A	2000—12000 A	110417	Ex9M6Q SU20L 1000 4P MOD DC110	1/1
4	1250 A	500—1250 A	2500—15000 A	110418	Ex9M6Q SU20L 1250 4P MOD DC110	1/1
4	1600 A	640—1600 A	3200—19200 A	110419	Ex9M6Q SU20L 1600 4P MOD DC110	1/1

Version Ex9M6Q MOD DC220V up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110420	Ex9M6Q SU20L 800 3P MOD DC220	1/1
3	1000 A	400—1000 A	2000—12000 A	110421	Ex9M6Q SU20L 1000 3P MOD DC220	1/1
3	1250 A	500—1250 A	2500—15000 A	110422	Ex9M6Q SU20L 1250 3P MOD DC220	1/1
3	1600 A	640—1600 A	3200—19200 A	110423	Ex9M6Q SU20L 1600 3P MOD DC220	1/1
4	800 A	320—800 A	1600—9600 A	110424	Ex9M6Q SU20L 800 4P MOD DC220	1/1
4	1000 A	400—1000 A	2000—12000 A	110425	Ex9M6Q SU20L 1000 4P MOD DC220	1/1
4	1250 A	500—1250 A	2500—15000 A	110426	Ex9M6Q SU20L 1250 4P MOD DC220	1/1
4	1600 A	640—1600 A	3200—19200 A	110427	Ex9M6Q SU20L 1600 4P MOD DC220	1/1

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M6H MOD AC230V up to 1600 A, $I_{cu} = 100$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = 70$ kA $I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110428	Ex9M6H SU20L 800 3P MOD AC230	1/1
3	1000 A	400—1000 A	2000—12000 A	110429	Ex9M6H SU20L 1000 3P MOD AC230	1/1
3	1250 A	500—1250 A	2500—15000 A	110430	Ex9M6H SU20L 1250 3P MOD AC230	1/1
3	1600 A	640—1600 A	3200—19200 A	110431	Ex9M6H SU20L 1600 3P MOD AC230	1/1
4	800 A	320—800 A	1600—9600 A	110432	Ex9M6H SU20L 800 4P MOD AC230	1/1
4	1000 A	400—1000 A	2000—12000 A	110433	Ex9M6H SU20L 1000 4P MOD AC230	1/1
4	1250 A	500—1250 A	2500—15000 A	110434	Ex9M6H SU20L 1250 4P MOD AC230	1/1
4	1600 A	640—1600 A	3200—19200 A	110435	Ex9M6H SU20L 1600 4P MOD AC230	1/1

Version Ex9M6H MOD AC400V up to 1600 A, $I_{cu} = 100$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = 70$ kA $I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110436	Ex9M6H SU20L 800 3P MOD AC400	1/1
3	1000 A	400—1000 A	2000—12000 A	110437	Ex9M6H SU20L 1000 3P MOD AC400	1/1
3	1250 A	500—1250 A	2500—15000 A	110438	Ex9M6H SU20L 1250 3P MOD AC400	1/1
3	1600 A	640—1600 A	3200—19200 A	110439	Ex9M6H SU20L 1600 3P MOD AC400	1/1
4	800 A	320—800 A	1600—9600 A	110440	Ex9M6H SU20L 800 4P MOD AC400	1/1
4	1000 A	400—1000 A	2000—12000 A	110441	Ex9M6H SU20L 1000 4P MOD AC400	1/1
4	1250 A	500—1250 A	2500—15000 A	110442	Ex9M6H SU20L 1250 4P MOD AC400	1/1
4	1600 A	640—1600 A	3200—19200 A	110443	Ex9M6H SU20L 1600 4P MOD AC400	1/1

Moulded Case Circuit Breakers **Ex9M SU20L**

Version Ex9M6H MOD DC24V up to 1600 A, $I_{cu} = 100$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = 70$ kA $I_{cu} = 100$ kA at 415 V AC
- I_r can be set in steps $(0.4-0.5-0.6-0.7-0.8-0.9-0.95-1.0) \times I_n$
- I_i can be set in steps $(2-3-4-6-8-10-12) \times I_n$
- Mounting screws and phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	117334	Ex9M6H SU20L 800 3P MOD DC24V	1/1
3	1000 A	400—1000 A	2000—12000 A	117335	Ex9M6H SU20L 1000 3P MOD DC24V	1/1
3	1250 A	500—1250 A	2500—15000 A	117336	Ex9M6H SU20L 1250 3P MOD DC24V	1/1
3	1600 A	640—1600 A	3200—19200 A	117337	Ex9M6H SU20L 1600 3P MOD DC24V	1/1
4	800 A	320—800 A	1600—9600 A	117338	Ex9M6H SU20L 800 4P MOD DC24V	1/1
4	1000 A	400—1000 A	2000—12000 A	117339	Ex9M6H SU20L 1000 4P MOD DC24V	1/1
4	1250 A	500—1250 A	2500—15000 A	117340	Ex9M6H SU20L 1250 4P MOD DC24V	1/1
4	1600 A	640—1600 A	3200—19200 A	117341	Ex9M6H SU20L 1600 4P MOD DC24V	1/1

Version Ex9M6H MOD DC110V up to 1600 A, $I_{cu} = 100$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = 70$ kA $I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110444	Ex9M6H SU20L 800 3P MOD DC110	1/1
3	1000 A	400—1000 A	2000—12000 A	110445	Ex9M6H SU20L 1000 3P MOD DC110	1/1
3	1250 A	500—1250 A	2500—15000 A	110446	Ex9M6H SU20L 1250 3P MOD DC110	1/1
3	1600 A	640—1600 A	3200—19200 A	110447	Ex9M6H SU20L 1600 3P MOD DC110	1/1
4	800 A	320—800 A	1600—9600 A	110448	Ex9M6H SU20L 800 4P MOD DC110	1/1
4	1000 A	400—1000 A	2000—12000 A	110449	Ex9M6H SU20L 1000 4P MOD DC110	1/1
4	1250 A	500—1250 A	2500—15000 A	110450	Ex9M6H SU20L 1250 4P MOD DC110	1/1
4	1600 A	640—1600 A	3200—19200 A	110451	Ex9M6H SU20L 1600 4P MOD DC110	1/1

Version Ex9M6H MOD DC220V up to 1600 A, $I_{cu} = 100$ kA

- 3 and 4-pole Electronic Moulded Case Circuit Breakers
- $I_{cs} = 70$ kA $I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(2 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery
- 2x AX, 1x AL, 1x SHT26, 1x XF26 with same operative voltage are pre-mounted (customizable under request)



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320—800 A	1600—9600 A	110452	Ex9M6H SU20L 800 3P MOD DC220	1/1
3	1000 A	400—1000 A	2000—12000 A	110453	Ex9M6H SU20L 1000 3P MOD DC220/1	1/1
3	1250 A	500—1250 A	2500—15000 A	110454	Ex9M6H SU20L 1250 3P MOD DC220/1	1/1
3	1600 A	640—1600 A	3200—19200 A	110455	Ex9M6H SU20L 1600 3P MOD DC220/1	1/1
4	800 A	320—800 A	1600—9600 A	110456	Ex9M6H SU20L 800 4P MOD DC220	1/1
4	1000 A	400—1000 A	2000—12000 A	110457	Ex9M6H SU20L 1000 4P MOD DC220/1	1/1
4	1250 A	500—1250 A	2500—15000 A	110458	Ex9M6H SU20L 1250 4P MOD DC220/1	1/1
4	1600 A	640—1600 A	3200—19200 A	110459	Ex9M6H SU20L 1600 4P MOD DC220/1	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**



- LCD display version
- SU20S Standard type smart unit controller
- Frame sizes M2-M6
- Rated operating current up to 1600 A
- 3 and 4-pole versions
- Rated ultimate short circuit breaking capacity $I_{cu} = I_{cs}$ up to 150 kA
- Rated voltage 415 / 690 V AC
- High tripping accuracy, reliable operation, less sensibility to ambient temperature

Moulded Case Circuit Breakers **Ex9M SU20S**

Moulded Case Circuit Breakers Ex9M with SU20S type of smart unit are intended for applications in power distribution mainly. Testing according to IEC / EN 60947-2 standards ensures the functionality and reliability for wide variety of applications including isolation.

The electronic controller with LCD display allows a detailed and accurate commission of the device for the installation requirements. Electronic technology improves the stability of the device on applications with significant mechanical stress.

These breakers are offered with breaking capacities from 36 kA up to extreme 150 kA. Rated impulse withstand voltage U_{imp} up to 12 kV makes it possible to use them even in system with occurrences of transient over-voltage waves of high intensity, e.g. in heavy industry.

Utilization category A and B circuit breakers.

Type Key

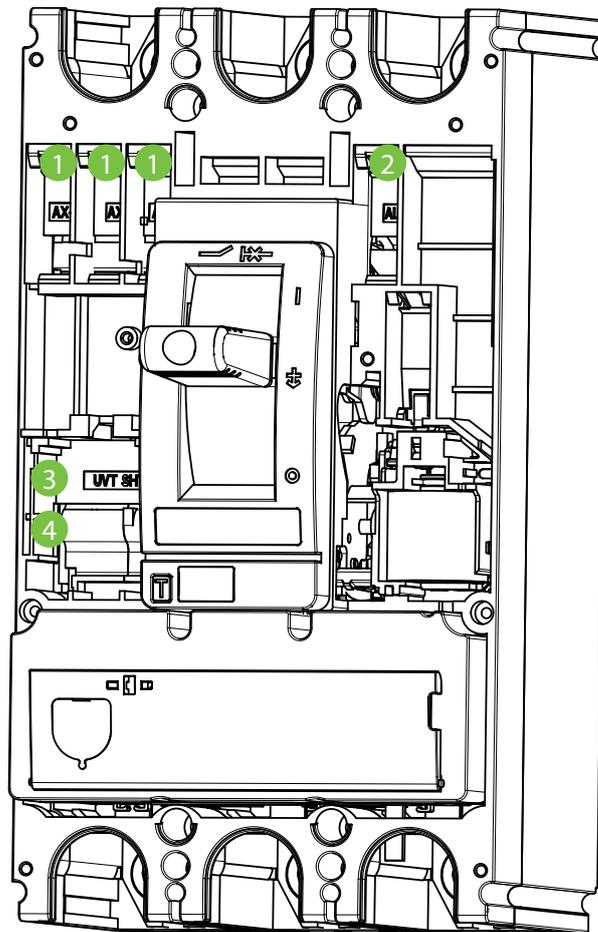
Ex9M	2	S	SU20S	250	3P	-	-
Product family	Frame size	Breaking capacity	Release technology	Rated current	Poles	Mechanism	MOD voltage
Ex9M	2: to 250 A 3: to 400 A / 630 A 4: to 630 A 5: to 800 A 6: to 1600 A	S: 36 kA N: 50 kA Q: 70 kA H: 100 kA P: 150 kA	SU20S: standard type electronic power distribution unit	M2: 250 A M3: 630 A M4: 630 A M5: 800 A M6: 1600 A	3P: 3-pole 4P4T: 4-pole with protected N-pole	_ : Manual type MOD: Motor operated (M6)	_ : Manual type AC 230 V AC 400 V DC 110 V DC 220 V

Certification marks



Moulded Case Circuit Breakers **Ex9M SU20S**

Internal accessories



1

Auxiliary contact
AX21/M

2

Signal contact
AL21/M

3

Shunt trip release
SHT2i
1 unit or UVT2i

4

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21/M

Signal contact AL21/M

Shunt trip release SHT2i

Undervoltage release UVT2i

All internal accessories for the frame sizes M2+M3 and M4+M5 are identical.

Moulded Case Circuit Breakers **Ex9M SU20S**

External accessories Ex9M2-M5 SU20S



Phase barriers
PHS2i



Terminal cover, short
TCV2i



Terminal cover, long
TCE2i



Remote operator
MOD2i



Direct rotary handle
RHD2i



Extended rotary handle
ERH2i

Phase barriers PHS2i

Terminal cover, short TCV2i

Terminal cover, long TCE2i

Remote operators MOD2i

Direct rotary handles RHD2i

Extended rotary handles ERH2i

Moulded Case Circuit Breakers **Ex9M SU20S**

External accessories Ex9M2-M5 SU20S



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Box terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i

Tunnel terminals MC2i W

Mounting depth spacers WG i

Box terminals MC2i

Screw terminals MCS2i

Din rail adapter DRA2i

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M2S up to 250 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13-32 A	48-384 A	111277	Ex9M2S SU20S 32 3P	1/8
3	63 A	25-63 A	95-756 A	111278	Ex9M2S SU20S 63 3P	1/8
3	100 A	40-100 A	150-1200 A	111279	Ex9M2S SU20S 100 3P	1/8
3	160 A	64-160 A	240-1920 A	111280	Ex9M2S SU20S 160 3P	1/8
3	250 A	100-250 A	375-3000 A	111281	Ex9M2S SU20S 250 3P	1/8
4	32 A	13-32 A	48-384 A	111282	Ex9M2S SU20S 32 4P4T	1/8
4	63 A	25-63 A	95-756 A	111283	Ex9M2S SU20S 63 4P4T	1/8
4	100 A	40-100 A	150-1200 A	111284	Ex9M2S SU20S 100 4P4T	1/8
4	160 A	64-160 A	240-1920 A	111285	Ex9M2S SU20S 160 4P4T	1/8
4	250 A	100-250 A	375-3000 A	111286	Ex9M2S SU20S 250 4P4T	1/8

Version Ex9M2N up to 250 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13-32 A	48-384 A	111287	Ex9M2N SU20S 32 3P	1/8
3	63 A	25-63 A	95-756 A	111288	Ex9M2N SU20S 63 3P	1/8
3	100 A	40-100 A	150-1200 A	111289	Ex9M2N SU20S 100 3P	1/8
3	160 A	64-160 A	240-1920 A	111290	Ex9M2N SU20S 160 3P	1/8
3	250 A	100-250 A	375-3000 A	111291	Ex9M2N SU20S 250 3P	1/8
4	32 A	13-32 A	48-384 A	111292	Ex9M2N SU20S 32 4P4T	1/8
4	63 A	25-63 A	95-756 A	111293	Ex9M2N SU20S 63 4P4T	1/8
4	100 A	40-100 A	150-1200 A	111294	Ex9M2N SU20S 100 4P4T	1/8
4	160 A	64-160 A	240-1920 A	111295	Ex9M2N SU20S 160 4P4T	1/8
4	250 A	100-250 A	375-3000 A	111296	Ex9M2N SU20S 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M2Q up to 250 A, $I_{cu} = 70$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13-32 A	48-384 A	111297	Ex9M2Q SU20S 32 3P	1/8
3	63 A	25-63 A	95-756 A	111298	Ex9M2Q SU20S 63 3P	1/8
3	100 A	40-100 A	150-1200 A	111299	Ex9M2Q SU20S 100 3P	1/8
3	160 A	64-160 A	240-1920 A	111300	Ex9M2Q SU20S 160 3P	1/8
3	250 A	100-250 A	375-3000 A	111301	Ex9M2Q SU20S 250 3P	1/8
4	32 A	13-32 A	48-384 A	111302	Ex9M2Q SU20S 32 4P4T	1/8
4	63 A	25-63 A	95-756 A	111303	Ex9M2Q SU20S 63 4P4T	1/8
4	100 A	40-100 A	150-1200 A	111304	Ex9M2Q SU20S 100 4P4T	1/8
4	160 A	64-160 A	240-1920 A	111305	Ex9M2Q SU20S 160 4P4T	1/8
4	250 A	100-250 A	375-3000 A	111306	Ex9M2Q SU20S 250 4P4T	1/8

Version Ex9M2H up to 250 A, $I_{cu} = 100$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13-32 A	48-384 A	111307	Ex9M2H SU20S 32 3P	1/8
3	63 A	25-63 A	95-756 A	111308	Ex9M2H SU20S 63 3P	1/8
3	100 A	40-100 A	150-1200 A	111309	Ex9M2H SU20S 100 3P	1/8
3	160 A	64-160 A	240-1920 A	111310	Ex9M2H SU20S 160 3P	1/8
3	250 A	100-250 A	375-3000 A	111311	Ex9M2H SU20S 250 3P	1/8
4	32 A	13-32 A	48-384 A	111312	Ex9M2H SU20S 32 4P4T	1/8
4	63 A	25-63 A	95-756 A	111313	Ex9M2H SU20S 63 4P4T	1/8
4	100 A	40-100 A	150-1200 A	111314	Ex9M2H SU20S 100 4P4T	1/8
4	160 A	64-160 A	240-1920 A	111315	Ex9M2H SU20S 160 4P4T	1/8
4	250 A	100-250 A	375-3000 A	111316	Ex9M2H SU20S 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M2P up to 250 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	32 A	13-32 A	48-384 A	111317	Ex9M2P SU20S 32 3P	1/8
3	63 A	25-63 A	95-756 A	111318	Ex9M2P SU20S 63 3P	1/8
3	100 A	40-100 A	150-1200 A	111319	Ex9M2P SU20S 100 3P	1/8
3	160 A	64-160 A	240-1920 A	111320	Ex9M2P SU20S 160 3P	1/8
3	250 A	100-250 A	375-3000 A	111321	Ex9M2P SU20S 250 3P	1/8
4	32 A	13-32 A	48-384 A	111322	Ex9M2P SU20S 32 4P4T	1/8
4	63 A	25-63 A	95-756 A	111323	Ex9M2P SU20S 63 4P4T	1/8
4	100 A	40-100 A	150-1200 A	111324	Ex9M2P SU20S 100 4P4T	1/8
4	160 A	64-160 A	240-1920 A	111325	Ex9M2P SU20S 160 4P4T	1/8
4	250 A	100-250 A	375-3000 A	111326	Ex9M2P SU20S 250 4P4T	1/8

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M3S up to 630 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100-250 A	375-3000 A	111327	Ex9M3S SU20S 250 3P	1/2
3	400 A	160-400 A	600-4800 A	111328	Ex9M3S SU20S 400 3P	1/2
3	630 A	252-630 A	945-7560 A	111329	Ex9M3S SU20S 630 3P	1/2
4	250 A	100-250 A	375-3000 A	111330	Ex9M3S SU20S 250 4P4T	1/2
4	400 A	160-400 A	600-4800 A	111331	Ex9M3S SU20S 400 4P4T	1/2
4	630 A	252-630 A	945-7560 A	111332	Ex9M3S SU20S 630 4P4T	1/2

Version Ex9M3N up to 630 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100-250 A	375-3000 A	111333	Ex9M3N SU20S 250 3P	1/2
3	400 A	160-400 A	600-4800 A	111334	Ex9M3N SU20S 400 3P	1/2
3	630 A	252-630 A	630-7560 A	111335	Ex9M3N SU20S 630 3P	1/2
4	250 A	100-250 A	375-3000 A	111336	Ex9M3N SU20S 250 4P4T	1/2
4	400 A	160-400 A	600-4800 A	111337	Ex9M3N SU20S 400 4P4T	1/2
4	630 A	252-630 A	630-7560 A	111338	Ex9M3N SU20S 630 4P4T	1/2

Version Ex9M3Q up to 630 A, $I_{cu} = 70 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100-250 A	375-3000 A	111339	Ex9M3Q SU20S 250 3P	1/2
3	400 A	160-400 A	600-4800 A	111340	Ex9M3Q SU20S 400 3P	1/2
3	630 A	252-630 A	945-7560 A	111341	Ex9M3Q SU20S 630 3P	1/2
4	250 A	100-250 A	375-3000 A	111342	Ex9M3Q SU20S 250 4P4T	1/2
4	400 A	160-400 A	600-4800 A	111343	Ex9M3Q SU20S 400 4P4T	1/2
4	630 A	252-630 A	945-7560 A	111344	Ex9M3Q SU20S 630 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M3H up to 630 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100-250 A	375-3000 A	111345	Ex9M3H SU20S 250 3P	1/2
3	400 A	160-400 A	600-4800 A	111346	Ex9M3H SU20S 400 3P	1/2
3	630 A	252-630 A	945-7560 A	111347	Ex9M3H SU20S 630 3P	1/2
4	250 A	100-250 A	375-3000 A	111348	Ex9M3H SU20S 250 4P4T	1/2
4	400 A	160-400 A	600-4800 A	111349	Ex9M3H SU20S 400 4P4T	1/2
4	630 A	252-630 A	945-7560 A	111350	Ex9M3H SU20S 630 4P4T	1/2

Version Ex9M3P up to 630 A, $I_{cu} = 150 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	250 A	100-250 A	375-3000 A	111351	Ex9M3P SU20S 250 3P	1/2
3	400 A	160-400 A	600-4800 A	111352	Ex9M3P SU20S 400 3P	1/2
3	630 A	252-630 A	945-7560 A	111353	Ex9M3P SU20S 630 3P	1/2
4	250 A	100-250 A	375-3000 A	111354	Ex9M3P SU20S 250 4P4T	1/2
4	400 A	160-400 A	600-4800 A	111355	Ex9M3P SU20S 400 4P4T	1/2
4	630 A	252-630 A	945-7560 A	111356	Ex9M3P SU20S 630 4P4T	1/2

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M4S 630 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252-630 A	945-7560 A	111357	Ex9M4S SU20S 630 3P	1/1
4	630 A	252-630 A	945-7560 A	111358	Ex9M4S SU20S 630 4P4T	1/1

Version Ex9M4N 630 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252-630 A	945-7560 A	111359	Ex9M4N SU20S 630 3P	1/1
4	630 A	252-630 A	945-7560 A	111360	Ex9M4N SU20S 630 4P4T	1/1

Version Ex9M4Q 630 A, $I_{cu} = 70 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252-630 A	945-7560 A	111361	Ex9M4Q SU20S 630 3P	1/1
4	630 A	252-630 A	945-7560 A	111362	Ex9M4Q SU20S 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M4H 630 A, $I_{cu} = 100$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252-630 A	945-7560 A	111363	Ex9M4H SU20S 630 3P	1/1
4	630 A	252-630 A	945-7560 A	111364	Ex9M4H SU20S 630 4P4T	1/1

Version Ex9M4P 630 A, $I_{cu} = 150$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	630 A	252-630 A	945-7560 A	111365	Ex9M4P SU20S 630 3P	1/1
4	630 A	252-630 A	945-7560 A	111366	Ex9M4P SU20S 630 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M5S 800 A, $I_{cu} = 36 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320-800 A	1200-9600 A	111367	Ex9M5S SU20S 800 3P	1/1
4	800 A	320-800 A	1200-9600 A	111368	Ex9M5S SU20S 800 4P4T	1/1

Version Ex9M5N 800 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320-800 A	1200-9600 A	111369	Ex9M5N SU20S 800 3P	1/1
4	800 A	320-800 A	1200-9600 A	111370	Ex9M5N SU20S 800 4P4T	1/1

Version Ex9M5Q 800 A, $I_{cu} = 70 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320-800 A	1200-9600 A	111371	Ex9M5Q SU20S 800 3P	1/1
4	800 A	320-800 A	1200-9600 A	111372	Ex9M5Q SU20S 800 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M5H 800 A, $I_{cu} = 100$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320-800 A	1200-9600 A	111373	Ex9M5H SU20S 800 3P	1/1
4	800 A	320-800 A	1200-9600 A	111374	Ex9M5H SU20S 800 4P4T	1/1

Version Ex9M5P 800 A, $I_{cu} = 150$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 150$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320-800 A	1200-9600 A	111375	Ex9M5P SU20S 800 3P	1/1
4	800 A	320-800 A	1200-9600 A	111376	Ex9M5P SU20S 800 4P4T	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M6N up to 1600 A, $I_{cu} = 50$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116131	Ex9M6N SU20S 800 3P EU	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116132	Ex9M6N SU20S 1000 3P EU	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116133	Ex9M6N SU20S 1250 3P EU	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116134	Ex9M6N SU20S 1600 3P EU	1/1
4	800 A	320 - 800 A	1200-9600 A	116135	Ex9M6N SU20S 800 4P EU	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116136	Ex9M6N SU20S 1000 4P EU	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116137	Ex9M6N SU20S 1250 4P EU	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116138	Ex9M6N SU20S 1600 4P EU	1/1

Version Ex9M6Q up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116139	Ex9M6Q SU20S 800 3P EU	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116140	Ex9M6Q SU20S 1000 3P EU	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116141	Ex9M6Q SU20S 1250 3P EU	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116142	Ex9M6Q SU20S 1600 3P EU	1/1
4	800 A	320 - 800 A	1200-9600 A	116143	Ex9M6Q SU20S 800 4P EU	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116144	Ex9M6Q SU20S 1000 4P EU	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116145	Ex9M6Q SU20S 1250 4P EU	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116146	Ex9M6Q SU20S 1600 4P EU	1/1

Version Ex9M6H up to 1600 A, $I_{cu} = 100$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116147	Ex9M6H SU20S 800 3P EU	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116148	Ex9M6H SU20S 1000 3P EU	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116149	Ex9M6H SU20S 1250 3P EU	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116150	Ex9M6H SU20S 1600 3P EU	1/1
4	800 A	320 - 800 A	1200-9600 A	116151	Ex9M6H SU20S 800 4P EU	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116152	Ex9M6H SU20S 1000 4P EU	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116153	Ex9M6H SU20S 1250 4P EU	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116154	Ex9M6H SU20S 1600 4P EU	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M6N MOD AC230 up to 1600 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116155	Ex9M6N SU20S 800 3P MOD AC230	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116156	Ex9M6N SU20S 1000 3P MOD AC230	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116157	Ex9M6N SU20S 1250 3P MOD AC230	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116158	Ex9M6N SU20S 1600 3P MOD AC230	1/1
4	800 A	320 - 800 A	1200-9600 A	116159	Ex9M6N SU20S 800 4P MOD AC230	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116160	Ex9M6N SU20S 1000 4P MOD AC230	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116161	Ex9M6N SU20S 1250 4P MOD AC230	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116162	Ex9M6N SU20S 1600 4P MOD AC230	1/1

Version Ex9M6N MOD AC400 up to 1600 A, $I_{cu} = 50 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116163	Ex9M6N SU20S 800 3P MOD AC400	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116164	Ex9M6N SU20S 1000 3P MOD AC400	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116165	Ex9M6N SU20S 1250 3P MOD AC400	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116166	Ex9M6N SU20S 1600 3P MOD AC400	1/1
4	800 A	320 - 800 A	1200-9600 A	116167	Ex9M6N SU20S 800 4P MOD AC400	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116168	Ex9M6N SU20S 1000 4P MOD AC400	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116169	Ex9M6N SU20S 1250 4P MOD AC400	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116170	Ex9M6N SU20S 1600 4P MOD AC400	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M6N MOD DC110 up to 1600 A, $I_{cu} = 50$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116171	Ex9M6N SU20S 800 3P MOD DC110	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116172	Ex9M6N SU20S 1000 3P MOD DC110	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116173	Ex9M6N SU20S 1250 3P MOD DC110	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116174	Ex9M6N SU20S 1600 3P MOD DC110	1/1
4	800 A	320 - 800 A	1200-9600 A	116175	Ex9M6N SU20S 800 4P MOD DC110	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116176	Ex9M6N SU20S 1000 4P MOD DC110	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116177	Ex9M6N SU20S 1250 4P MOD DC110	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116178	Ex9M6N SU20S 1600 4P MOD DC110	1/1

Version Ex9M6N MOD DC220 up to 1600 A, $I_{cu} = 50$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116179	Ex9M6N SU20S 800 3P MOD DC220	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116180	Ex9M6N SU20S 1000 3P MOD DC220	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116181	Ex9M6N SU20S 1250 3P MOD DC220	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116182	Ex9M6N SU20S 1600 3P MOD DC220	1/1
4	800 A	320 - 800 A	1200-9600 A	116183	Ex9M6N SU20S 800 4P MOD DC220	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116184	Ex9M6N SU20S 1000 4P MOD DC220	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116185	Ex9M6N SU20S 1250 4P MOD DC220	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116186	Ex9M6N SU20S 1600 4P MOD DC220	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M6Q MOD AC230 up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116187	Ex9M6Q SU20S 800 3P MOD AC230	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116188	Ex9M6Q SU20S 1000 3P MOD AC230	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116189	Ex9M6Q SU20S 1250 3P MOD AC230	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116190	Ex9M6Q SU20S 1600 3P MOD AC230	1/1
4	800 A	320 - 800 A	1200-9600 A	116191	Ex9M6Q SU20S 800 4P MOD AC230	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116192	Ex9M6Q SU20S 1000 4P MOD AC230	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116193	Ex9M6Q SU20S 1250 4P MOD AC230	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116194	Ex9M6Q SU20S 1600 4P MOD AC230	1/1

Version Ex9M6Q MOD AC400 up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116195	Ex9M6Q SU20S 800 3P MOD AC400	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116196	Ex9M6Q SU20S 1000 3P MOD AC400	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116197	Ex9M6Q SU20S 1250 3P MOD AC400	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116198	Ex9M6Q SU20S 1600 3P MOD AC400	1/1
4	800 A	320 - 800 A	1200-9600 A	116199	Ex9M6Q SU20S 800 4P MOD AC400	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116200	Ex9M6Q SU20S 1000 4P MOD AC400	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116201	Ex9M6Q SU20S 1250 4P MOD AC400	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116202	Ex9M6Q SU20S 1600 4P MOD AC400	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M6Q MOD DC110 up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116203	Ex9M6Q SU20S 800 3P MOD DC110	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116204	Ex9M6Q SU20S 1000 3P MOD DC110	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116205	Ex9M6Q SU20S 1250 3P MOD DC110	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116206	Ex9M6Q SU20S 1600 3P MOD DC110	1/1
4	800 A	320 - 800 A	1200-9600 A	116207	Ex9M6Q SU20S 800 4P MOD DC110	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116208	Ex9M6Q SU20S 1000 4P MOD DC110	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116209	Ex9M6Q SU20S 1250 4P MOD DC110	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116210	Ex9M6Q SU20S 1600 4P MOD DC110	1/1

Version Ex9M6Q MOD DC220 up to 1600 A, $I_{cu} = 70$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 70$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116211	Ex9M6Q SU20S 800 3P MOD DC220	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116212	Ex9M6Q SU20S 1000 3P MOD DC220	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116213	Ex9M6Q SU20S 1250 3P MOD DC220	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116214	Ex9M6Q SU20S 1600 3P MOD DC220	1/1
4	800 A	320 - 800 A	1200-9600 A	116215	Ex9M6Q SU20S 800 4P MOD DC220	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116216	Ex9M6Q SU20S 1000 4P MOD DC220	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116217	Ex9M6Q SU20S 1250 4P MOD DC220	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116218	Ex9M6Q SU20S 1600 4P MOD DC220	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M6H MOD AC230 up to 1600 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116219	Ex9M6H SU20S 800 3P MOD AC230	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116220	Ex9M6H SU20S 1000 3P MOD AC230	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116221	Ex9M6H SU20S 1250 3P MOD AC230	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116222	Ex9M6H SU20S 1600 3P MOD AC230	1/1
4	800 A	320 - 800 A	1200-9600 A	116223	Ex9M6H SU20S 800 4P MOD AC230	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116224	Ex9M6H SU20S 1000 4P MOD AC230	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116225	Ex9M6H SU20S 1250 4P MOD AC230	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116226	Ex9M6H SU20S 1600 4P MOD AC230	1/1

Version Ex9M6H MOD AC400 up to 1600 A, $I_{cu} = 100 \text{ kA}$

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100 \text{ kA}$ at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116227	Ex9M6H SU20S 800 3P MOD AC400	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116228	Ex9M6H SU20S 1000 3P MOD AC400	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116229	Ex9M6H SU20S 1250 3P MOD AC400	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116230	Ex9M6H SU20S 1600 3P MOD AC400	1/1
4	800 A	320 - 800 A	1200-9600 A	116231	Ex9M6H SU20S 800 4P MOD AC400	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116232	Ex9M6H SU20S 1000 4P MOD AC400	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116233	Ex9M6H SU20S 1250 4P MOD AC400	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116234	Ex9M6H SU20S 1600 4P MOD AC400	1/1

Moulded Case Circuit Breakers **Ex9M SU20S**

Version Ex9M6H MOD DC110 up to 1600 A, $I_{cu} = 100$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116235	Ex9M6H SU20S 800 3P MOD DC110	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116236	Ex9M6H SU20S 1000 3P MOD DC110	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116237	Ex9M6H SU20S 1250 3P MOD DC110	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116238	Ex9M6H SU20S 1600 3P MOD DC110	1/1
4	800 A	320 - 800 A	1200-9600 A	116239	Ex9M6H SU20S 800 4P MOD DC110	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116240	Ex9M6H SU20S 1000 4P MOD DC110	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116241	Ex9M6H SU20S 1250 4P MOD DC110	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116242	Ex9M6H SU20S 1600 4P MOD DC110	1/1

Version Ex9M6H MOD DC220 up to 1600 A, $I_{cu} = 100$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 415 V AC
- I_r can be set in range $(0.4 - 1.0) \times I_n$
- I_i can be set in range $(1.5 - 12) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant release I_i	Article No.	Type	Packing
3	800 A	320 - 800 A	1200-9600 A	116243	Ex9M6H SU20S 800 3P MOD DC220	1/1
3	1000 A	400 - 1000 A	1500-12000 A	116244	Ex9M6H SU20S 1000 3P MOD DC220	1/1
3	1250 A	500 - 1250 A	1875-15000 A	116245	Ex9M6H SU20S 1250 3P MOD DC220	1/1
3	1600 A	640 - 1600 A	2400-19200 A	116246	Ex9M6H SU20S 1600 3P MOD DC220	1/1
4	800 A	320 - 800 A	1200-9600 A	116247	Ex9M6H SU20S 800 4P MOD DC220	1/1
4	1000 A	400 - 1000 A	1500-12000 A	116248	Ex9M6H SU20S 1000 4P MOD DC220	1/1
4	1250 A	500 - 1250 A	1875-15000 A	116249	Ex9M6H SU20S 1250 4P MOD DC220	1/1
4	1600 A	640 - 1600 A	2400-19200 A	116250	Ex9M6H SU20S 1600 4P MOD DC220	1/1

AC MCCB Switch Disconnectors **Ex9MSD**



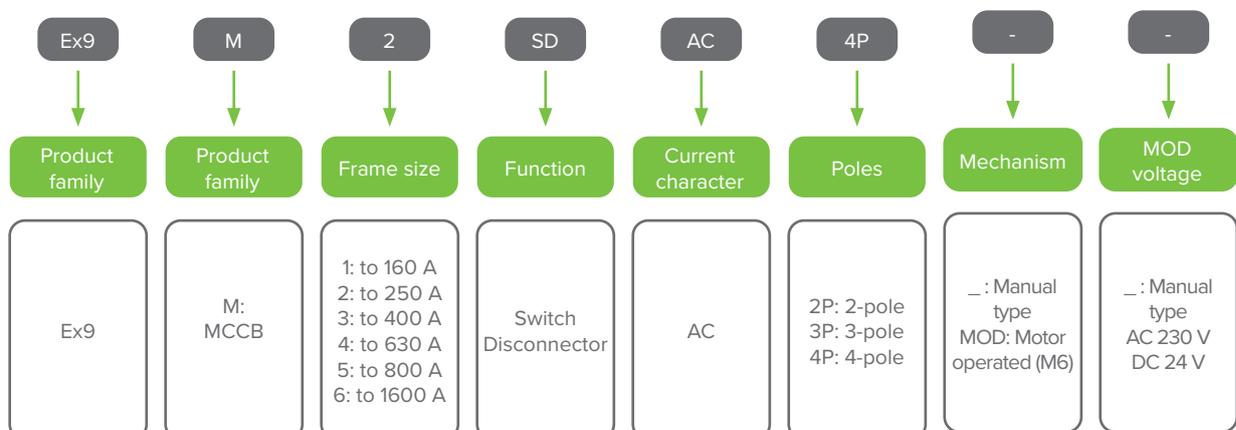
- AC MCCB Switch Disconnectors
- Frame sizes M1-M6
- Rated operating current up to 1 600 A
- Tested according to EN 60947-3
- AC current character
- 2, 3 and 4-pole versions
- Rated operating voltage U_e up to 690 V AC

AC MCCBS Switch Disconnectors **Ex9MSD**

AC versions of MCCB based Switch Disconnectors Ex9MSD are used as a main switch in many various circuits. They are intended primarily for applications in power distribution. Testing according to IEC / EN 60947-3 standards ensures functions and reliability for wide variety of applications.

These switch disconnectors follows the same design pattern than their circuit breaker equivalents. Therefore there is possibility to use the fully compatible range of external and internal accessories including extended rotary handles, auxiliary contacts, tripping units and many others.

Type Key

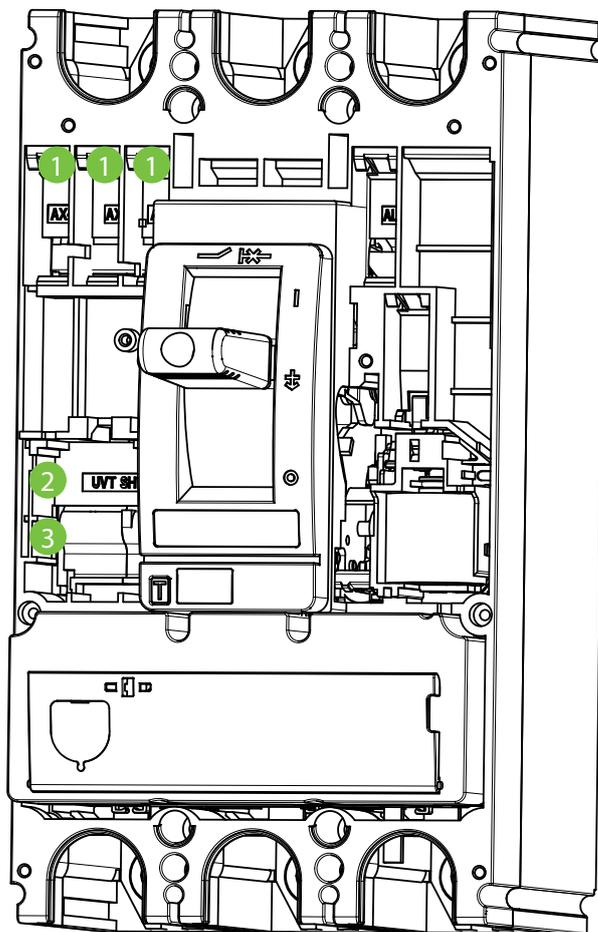


Certification marks



AC MCCB Switch Disconnectors **Ex9MSD**

Internal accessories Ex9M1-M5 AC SD



1

Auxiliary contact
AX21M

2

Shunt trip release
SHT2i
1 unit or UVT2i

3

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21M

Shunt trip releases SHT2i

Undervoltage release UVT2i

1 Pole version does not have internal accessories

2 Pole version can be install with 1 AX

AC MCCB Switch Disconnectors **Ex9MSD**

External accessories Ex9M1-M5 AC SD



Phase barriers
PB2i



Terminal cover set, short
TCV2i



Terminal cover set, long
TCE2i



Remote operator
MOD2i



Direct rotary handle
RHD2i



Extended rotary handle
ERH2i

Phase barriers PHS2i

Terminal cover, short TCV2i

Terminal cover, long TCE2i

Remote operators MOD2i

Direct rotary handles RHD2i

Extended rotary handles ERH2i

AC MCCB Switch Disconnectors **Ex9MSD**

External accessories Ex9M1-M5 AC SD



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Box terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i



Front plate connection
JP 2i



Rear connection plate
RCP 2i



Off position toggle key
lock
KLK 2i



Mechanical interlock
MIT 2i

Tunnel terminals MC2i W

Mounting depth spacers WG i

Box terminals MC2i

Screw terminals MCS2i

Din rail adapter DRA2i

Front plate connection JP 2i

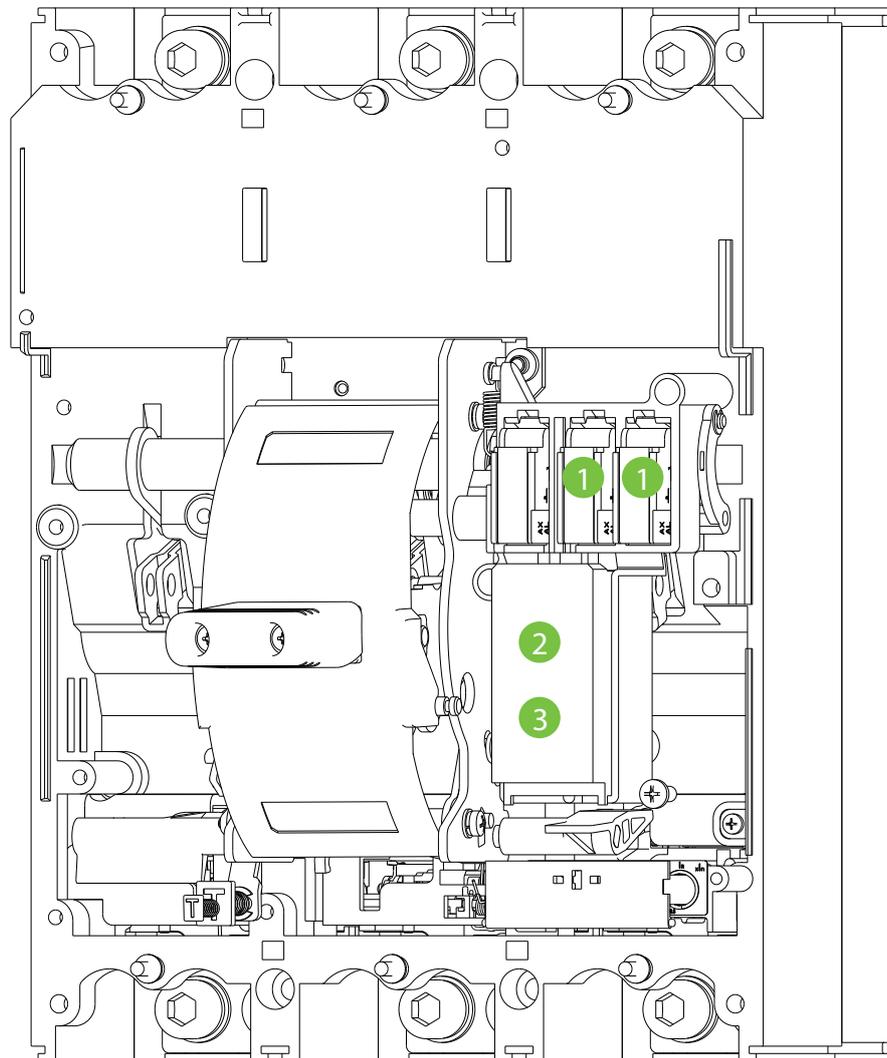
Rear connection plate RCP 2i

Off position toggle key lock KLK 2i

Mechanical interlock MIT 2i

AC MCCB Switch Disconnectors **Ex9M6SD**

Internal accessories Ex9M6 AC SD



AC MCCBS Switch
Disconnectors **Ex9M6SD**

1

Auxiliary contact
AX21M

2

Shunt trip release
SHT26
1 unit or UVT2i

3

Undervoltage release
UVT26
1 unit or SHT2i

Auxiliary contact AX21M

Shunt trip releases SHT26

Undervoltage release UVT26

AC MCCB Switch Disconnectors **Ex9M6SD**

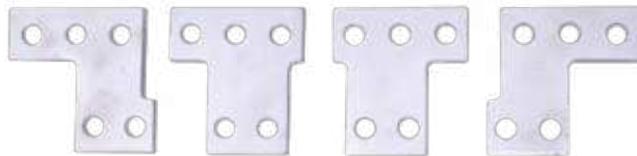
External accessories Ex9M6 AC SD



Extended rotatory handle
ERH26



Extended handle
LHD26



Front connection plate
JP26

Extended rotary handles ERH26

Extended handles LHD26

Front connection plate JP26

AC MCCB Switch Disconnectors **Ex9MSD**

2-pole versions

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / I_n	Frame size	Article No.	Type	Packing
160 A	M1	114205	Ex9M1SD AC 2P	1/8
250 A	M2	114206	Ex9M2SD AC 2P	1/8

3-pole versions

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / I_n	Frame size	Article No.	Type	Packing
160 A	M1	112797	Ex9M1SD AC 3P	1/8
250 A	M2	112801	Ex9M2SD AC 3P	1/8
400 A	M3	112805	Ex9M3SD AC 3P	1/2
630 A	M4	112809	Ex9M4SD AC 3P	1
800 A	M5	112813	Ex9M5SD AC 3P	1
800 A	M6	112823	Ex9M6SD AC800 3P	1
1 000 A	M6	112817	Ex9M6SD AC1000 3P	1
1 250 A	M6	112819	Ex9M6SD AC1250 3P	1
1 600 A	M6	112821	Ex9M6SD AC1600 3P	1

AC MCCB Switch
Disconnectors **Ex9MSD**

4-pole versions

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / I_n	Frame size	Article No.	Type	Packing
160 A	M1	112798	Ex9M1SD AC 4P	1/8
250 A	M2	112802	Ex9M2SD AC 4P	1/8
400 A	M3	112806	Ex9M3SD AC 4P	1/2
630 A	M4	112810	Ex9M4SD AC 4P	1
800 A	M5	112814	Ex9M5SD AC 4P	1
800 A	M6	112824	Ex9M6SD AC800 4P	1
1 000 A	M6	112818	Ex9M6SD AC1000 4P	1
1 250 A	M6	112820	Ex9M6SD AC1250 4P	1
1 600 A	M6	112822	Ex9M6SD AC1600 4P	1

AC MCCB Switch Disconnectors **Ex9M6SD MOD**

3-pole versions

Ex9M6SD AC 3P MOD AC230V up to 1600 A

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
800 A	M6	116251	Ex9M6SD AC800 3P MOD AC230 EU	1
1 000 A	M6	116252	Ex9M6SD AC1000 3P MOD AC230 EU	1
1 250 A	M6	116253	Ex9M6SD AC1250 3P MOD AC230 EU	1
1 600 A	M6	116254	Ex9M6SD AC1600 3P MOD AC230 EU	1

4-pole versions

Ex9M6SD AC 4P MOD AC230V up to 1600 A

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
800 A	M6	116255	Ex9M6SD AC800 4P MOD AC230 EU	1
1 000 A	M6	116256	Ex9M6SD AC1000 4P MOD AC230 EU	1
1 250 A	M6	116257	Ex9M6SD AC1250 4P MOD AC230 EU	1
1 600 A	M6	116258	Ex9M6SD AC1600 4P MOD AC230 EU	1

3-pole versions

Ex9M6SD AC 3P MOD DC24V up to 1600 A

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
800 A	M6	117302	Ex9M6SD AC800 3P MOD DC24 EU	1
1 000 A	M6	117303	Ex9M6SD AC1000 3P MOD DC24 EU	1
1 250 A	M6	117304	Ex9M6SD AC1250 3P MOD DC24 EU	1
1 600 A	M6	117305	Ex9M6SD AC1600 3P MOD DC24 EU	1

4-pole versions

Ex9M6SD AC 4P MOD DC24V up to 1600 A

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
800 A	M6	117306	Ex9M6SD AC800 4P MOD DC24 EU	1
1 000 A	M6	117307	Ex9M6SD AC1000 4P MOD DC24 EU	1
1 250 A	M6	117308	Ex9M6SD AC1250 4P MOD DC24 EU	1
1 600 A	M6	117309	Ex9M6SD AC1600 4P MOD DC24 EU	1

DC MCCB Switch Disconnectors **Ex9MSD**



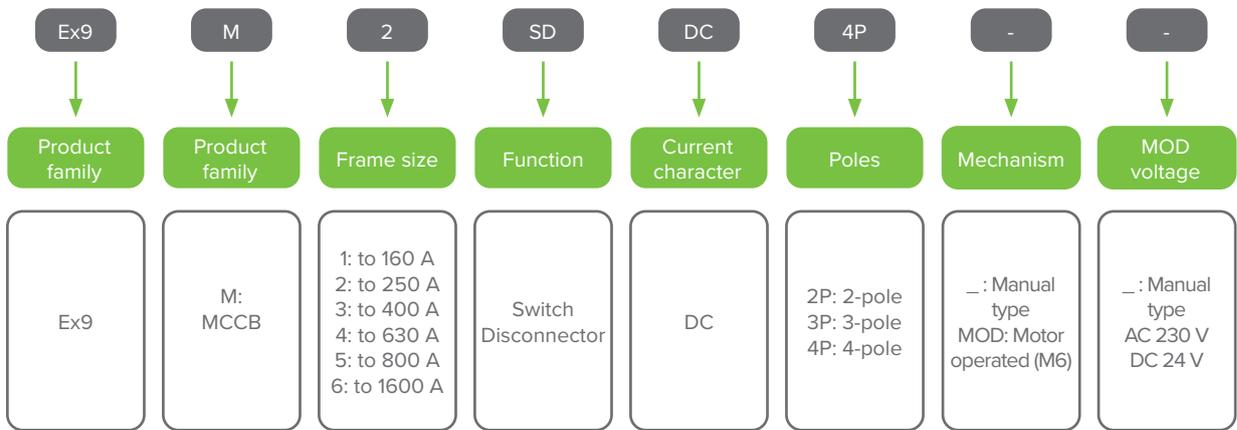
- DC MCCB Switch Disconnectors
- Frame sizes M1-M6
- Rated operating current up to 1600 A
- Tested according to EN 60947-3
- DC current character
- 2, 3 and 4-pole versions
- Rated voltage 500 V DC (2-pole), 750 V DC (3-pole) and 1000 V DC (4-pole) for Ex9M1SD to Ex9M5SD
- Rated voltage 750 V DC (3-pole) and 1500 V DC (4-pole) for Ex9M6SD

DC versions of MCCB based Switch Disconnectors Ex9MSD are used as a main switch in DC applications, such as PV installations. Testing according to IEC / EN 60947-3 standards ensures functions and reliability for wide variety of applications.

These switch disconnectors follows the same design pattern than their circuit breaker equivalents. Therefore there is possibility to use the fully compatible range of external and internal accessories including extended rotary handles, auxiliary contacts, tripping units and many others.

DC MCCBS Switch Disconnectors **Ex9MSD**

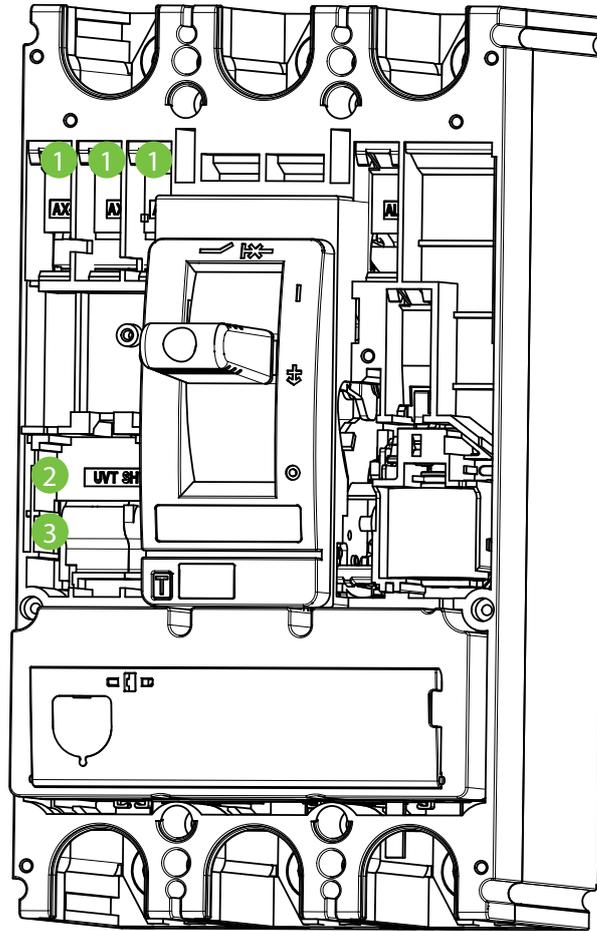
Type Key



Certification marks



Internal accessories Ex9M1-M5 DC SD



1

Auxiliary contact
AX21M

2

Shunt trip release
SHT2i
1 unit or UVT2i

3

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21M

Shunt trip release SHT2i

Undervoltage release UVT2i

1 Pole version does not have internal accessories

2 Pole version can be equipped with 1 AX

DC MCCB Switch Disconnectors **Ex9MSD**

External accessories Ex9M1-M5 DC SD



Phase barriers
PB2i



Terminal cover set, short
TCV2i



Terminal cover set, long
TCE2i



Remote operator
MOD2i



Direct rotary handle
RHD2i



Extended rotary handle
ERH2i

Phase barriers PHS2i

Terminal cover, short TCV2i

Terminal cover, long TCE2i

Remote operators MOD2i

Direct rotary handles RHD2i

Extended rotary handles ERH2i

DC MCCB Switch Disconnectors **Ex9MSD**

External accessories Ex9M1-M5 DC SD



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Box terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i



Front plate connection
JP 2i



Rear connection plate
RCP 2i



Off position toggle key
lock
KLK 2i



Mechanical interlock
MIT 2i

Tunnel terminals MC2i W

Mounting depth spacers WG i

Box terminals MC2i

Screw terminals MCS2i

Din rail adapter DRA2i

Front plate connection JP 2i

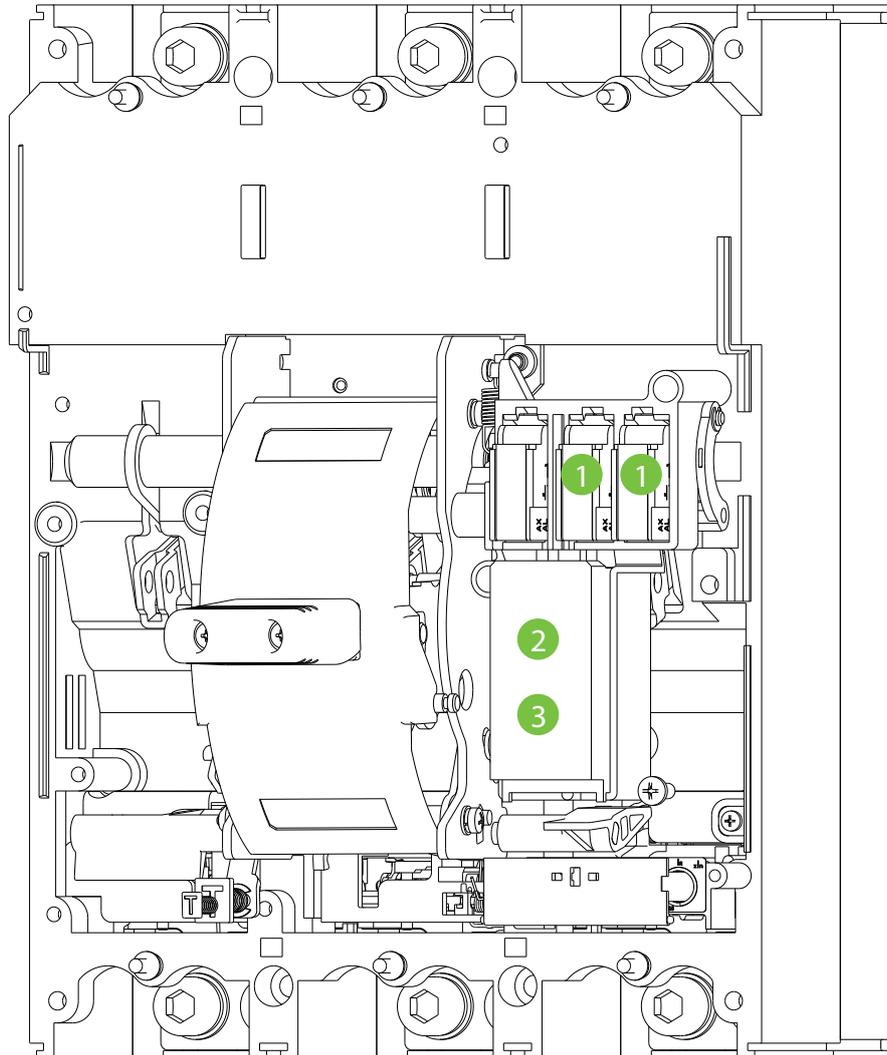
Rear connection plate RCP 2i

Off position toggle key lock KLK 2i

Mechanical interlock MIT 2i

DC MCCB Switch Disconnectors **Ex9M6SD**

Internal accessories Ex9M6 DC SD



1

Auxiliary contact
AX21M

2

Shunt trip release
SHT26
1 unit or UVT2i

3

Undervoltage release
UVT26
1 unit or SHT2i

Auxiliary contact AX21M

Shunt trip release SHT26

Undervoltage release UVT26

DC MCCB Switch Disconnectors **Ex9M6SD**

External accessories Ex9M6 DC SD



Extended rotatory handle
ERH26



Extended handle
LHD26



Front connection plate
JP26

Extended rotatory handle ERH26

Extended handle LHD26

Front connection plate JP26

DC MCCB Switch Disconnectors **Ex9MSD**

2-pole versions

- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
160 A	M1	114207	Ex9M1SD DC 2P	1/8
250 A	M2	114208	Ex9M2SD DC 2P	1/8

3-pole versions

- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
160 A	M1	112799	Ex9M1SD DC 3P	1/8
250 A	M2	112803	Ex9M2SD DC 3P	1/8
400 A	M3	112807	Ex9M3SD DC 3P	1/2
630 A	M4	112811	Ex9M4SD DC 3P	1
800 A	M5	112815	Ex9M5SD DC 3P	1
800 A	M6	112831	Ex9M6SD DC800 3P	1
1 000 A	M6	112825	Ex9M6SD DC1000 3P	1
1 250 A	M6	112827	Ex9M6SD DC1250 3P	1
1 600 A	M6	112829	Ex9M6SD DC1600 3P	1

4-pole versions

- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
160 A	M1	112800	Ex9M1SD DC 4P	1/8
250 A	M2	112804	Ex9M2SD DC 4P	1/8
400 A	M3	112808	Ex9M3SD DC 4P	1/2
630 A	M4	112812	Ex9M4SD DC 4P	1
800 A	M5	112816	Ex9M5SD DC 4P	1
800 A	M6	112832	Ex9M6SD DC800 4P	1
1 000 A	M6	112826	Ex9M6SD DC1000 4P	1
1 250 A	M6	112828	Ex9M6SD DC1250 4P	1
1 600 A	M6	112830	Ex9M6SD DC1600 4P	1

DC MCCB Switch Disconnectors **Ex9MSD**

3-pole versions

Ex9M6SD DC 3P MOD AC230V up to 1600 A

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
800 A	M6	116259	Ex9M6SD DC800 3P MOD AC230 EU	1
1 000 A	M6	116260	Ex9M6SD DC1000 3P MOD AC230 EU	1
1 250 A	M6	116261	Ex9M6SD DC1250 3P MOD AC230 EU	1
1 600 A	M6	116262	Ex9M6SD DC1600 3P MOD AC230 EU	1

4-pole versions

Ex9M6SD DC 4P MOD AC230V up to 1600 A

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
800 A	M6	116263	Ex9M6SD DC800 4P MOD AC230 EU	1
1 000 A	M6	116264	Ex9M6SD DC1000 4P MOD AC230 EU	1
1 250 A	M6	116265	Ex9M6SD DC1250 4P MOD AC230 EU	1
1 600 A	M6	116266	Ex9M6SD DC1600 4P MOD AC230 EU	1

3-pole versions

Ex9M6SD DC 3P MOD DC24V up to 1600 A

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
800 A	M6	117310	Ex9M6SD DC800 3P MOD DC24 EU	1
1 000 A	M6	117311	Ex9M6SD DC1000 3P MOD DC24 EU	1
1 250 A	M6	117312	Ex9M6SD DC1250 3P MOD DC24 EU	1
1 600 A	M6	117313	Ex9M6SD DC1600 3P MOD DC24 EU	1

4-pole versions

Ex9M6SD DC 4P MOD DC24V up to 1600 A

■ Mounting screws as well as phase barriers in the scope of delivery



Rated current / _n	Frame size	Article No.	Type	Packing
800 A	M6	117314	Ex9M6SD DC800 4P MOD DC24 EU	1
1 000 A	M6	117315	Ex9M6SD DC1000 4P MOD DC24 EU	1
1 250 A	M6	117316	Ex9M6SD DC1250 4P MOD DC24 EU	1
1 600 A	M6	117317	Ex9M6SD DC1600 4P MOD DC24 EU	1

Moulded Case Circuit Breakers

Ex9MHV AC M



- Tested according to IEC/EN 60947-2
- Magnetic only tripping unit for power distribution
- Frame sizes M2-M3
- Rated operating current from 63 A up to 630 A
- 3 pole versions
- Rated ultimate short circuit breaking capacity I_{cu} up to 50 kA
- Rated voltage 690 / 800 / 1000 / 1140V AC

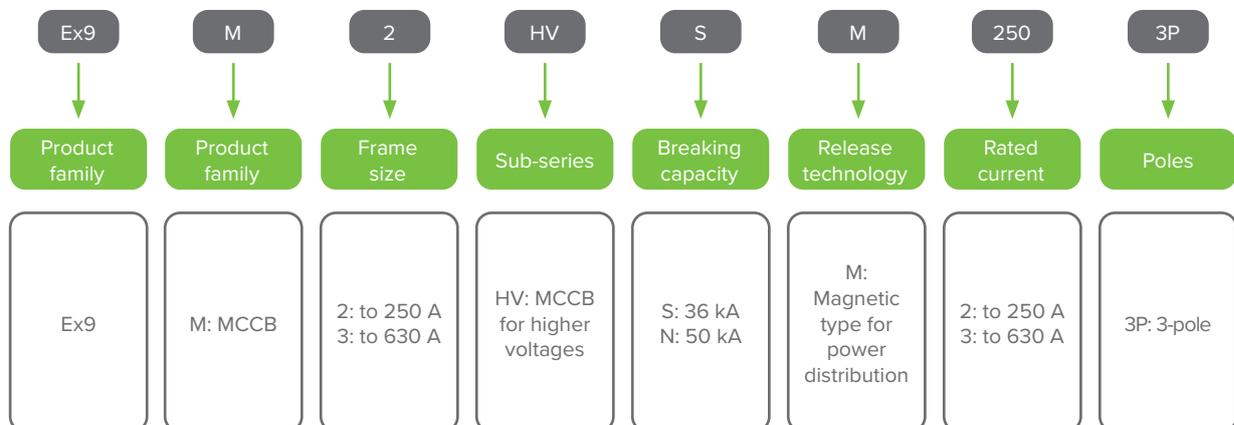
Moulded Case Circuit Breakers Ex9MHV Magnetic (M) type are intended for applications in power distribution with nominal voltages up to 1140V AC. These breakers are based on the regular Ex9M series and are developed to provide all the required protections to installation with an unusual higher voltage, for example: 800V AC photovoltaic installations.

Testing according to IEC/EN 60947-2 standards ensures the functionality and reliability for wide variety of applications including isolation.

These breakers are offered with breaking capacities from 36 kA up to 50 kA at 800V AC. High rated impulse withstand voltage makes it possible to use them even in system with occurrences of transient overvoltage waves of high intensity, e.g. in heavy industry.

Utilization category A circuit breakers.

Type Key

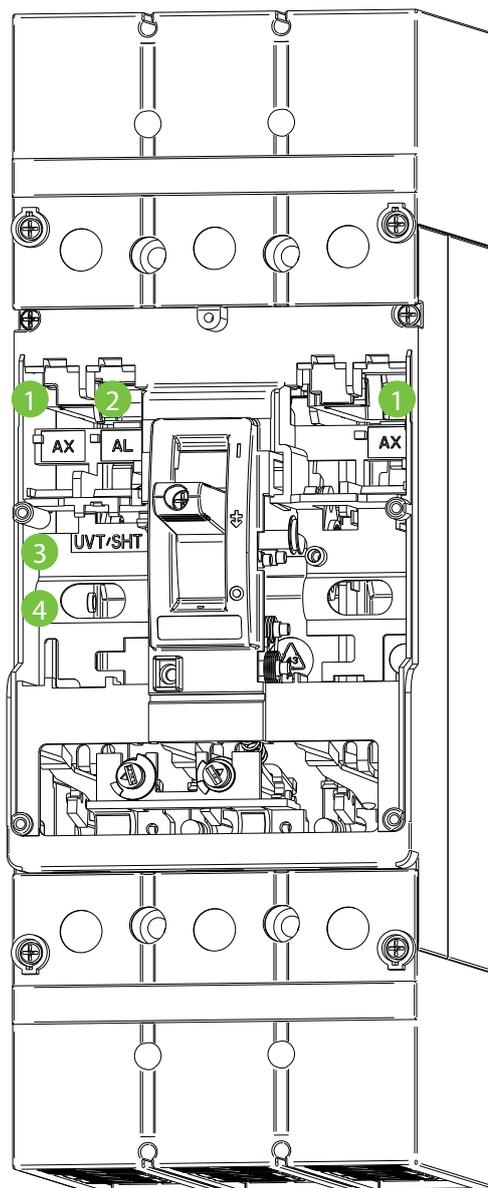


Certification marks



Moulded Case Circuit Breakers **Ex9MHV AC M**

Internal accessories



1

Auxiliary contact
AX21/M

2

Signal contact
AL21/M

3

Shunt trip release
SHT2i-HV
1 unit or UVT2i-HV

4

Undervoltage release
UVT2i-HV
1 unit or SHT2i-HV

Auxiliary contact AX21/M

Signal contact AL21/M

Shunt trip releases SHT2i-HV

Undervoltage releases UVT2i-HV

Internal accessories for the frame sizes M2+M3 are different.

Moulded Case Circuit Breakers **Ex9MHV AC M**

External accessories **Ex9M2HV-M3HV AC M**



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Box terminals
MC2i



Screw terminals
MCS2i

Tunnel terminals *MC2i W*

Mounting depth spacers *WG i*

Box terminals *MC2i*

Screw terminals *MCS2i*

Moulded Case Circuit Breakers **Ex9MHV AC M**

Version Ex9M2HV-S up to 250 A, $I_{cu} = 36 \text{ kA}$

- 3 pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 800 V AC
- I_f fixed at $12 \times I_n$ for devices from 63 A up to 100 A
- I_f can be set in range $(9 - 14) \times I_n$ for the devices from 125 A to 250 A
- Mounting screws, terminal covers, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_f	Article No.	Type	Packing
3	63 A	756 A	113685	Ex9M2HV S M 63 3P	1/8
3	80 A	960 A	113686	Ex9M2HV S M 80 3P	1/8
3	100 A	1200 A	113687	Ex9M2HV S M 100 3P	1/8
3	125 A	1125-1750 A	113688	Ex9M2HV S M 125 3P	1/8
3	160 A	1440-2240 A	113689	Ex9M2HV S M 160 3P	1/8
3	180 A	1620-2520 A	113690	Ex9M2HV S M 180 3P	1/8
3	200 A	1800-2800 A	113691	Ex9M2HV S M 200 3P	1/8
3	225 A	2025-3150 A	113692	Ex9M2HV S M 225 3P	1/8
3	250 A	2250-3500 A	113693	Ex9M2HV S M 250 3P	1/8

Version Ex9M2HV-N up to 250 A, $I_{cu} = 50 \text{ kA}$

- 3 pole Moulded Case Circuit Breakers
- $I_{cs} = 36 \text{ kA}$, $I_{cu} = 50 \text{ kA}$ at 800 V AC
- I_f fixed at $12 \times I_n$ for devices from 63 A up to 100 A
- I_f can be set in range $(9 - 14) \times I_n$ for the devices from 125 A to 250 A
- Mounting screws, terminal covers, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_f	Article No.	Type	Packing
3	63 A	756 A	113694	Ex9M2HV N M 63 3P	1/8
3	80 A	960 A	113695	Ex9M2HV N M 80 3P	1/8
3	100 A	1200 A	113696	Ex9M2HV N M 100 3P	1/8
3	125 A	1125-1750 A	113697	Ex9M2HV N M 125 3P	1/8
3	160 A	1440-1750 A	113698	Ex9M2HV N M 160 3P	1/8
3	180 A	1620-2520 A	113699	Ex9M2HV N M 180 3P	1/8
3	200 A	1800-2800 A	113700	Ex9M2HV N M 200 3P	1/8
3	225 A	2025-3150 A	113701	Ex9M2HV N M 225 3P	1/8
3	250 A	2250-3500 A	113702	Ex9M2HV N M 250 3P	1/8

Moulded Case Circuit Breakers **Ex9MHV AC M**

Version Ex9M3HV-S up to 630 A, $I_{cu} = 36 \text{ kA}$

- 3 pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 800 V AC
- I_j can be set in range $(9 - 14) \times I_n$
- Mounting screws, terminal covers, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	250 A	2250-3500 A	113703	Ex9M3HV S M 250 3P	1/2
3	315 A	2835-4410 A	113704	Ex9M3HV S M 315 3P	1/2
3	350 A	3150-4900 A	113705	Ex9M3HV S M 350 3P	1/2
3	400 A	3600-5600 A	113706	Ex9M3HV S M 400 3P	1/2
3	500 A	4500-7000 A	113707	Ex9M3HV S M 500 3P	1/2
3	630 A	5670-8820 A	113708	Ex9M3HV S M 630 3P	1/2

Version Ex9M3HV-N up to 630 A, $I_{cu} = 50 \text{ kA}$

- 3 pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 800 V AC
- I_j can be set in range $(9 - 14) \times I_n$
- Mounting screws, terminal covers, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Instant. release I_i	Article No.	Type	Packing
3	250 A	2250-3500 A	113709	Ex9M3HV N M 250 3P	1/2
3	315 A	2835-4410 A	113710	Ex9M3HV N M 315 3P	1/2
3	350 A	3150-4900 A	113711	Ex9M3HV N M 350 3P	1/2
3	400 A	3600-5600 A	113712	Ex9M3HV N M 400 3P	1/2
3	500 A	4500-5600 A	113713	Ex9M3HV N M 500 3P	1/2
3	630 A	5670-8820 A	113714	Ex9M3HV N M 630 3P	1/2

NOTES

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Moulded Case Circuit Breakers

Ex9MHV AC TM



- Tested according to IEC/EN 60947-2
- Thermo-magnetic only tripping unit for power distribution
- Frame sizes M2-M3
- Rated operating current from 63 A up to 630 A
- 3 pole versions
- Rated ultimate short circuit breaking capacity I_{cu} up to 50 kA
- Rated voltage 690 / 800 / 1000 / 1140V AC

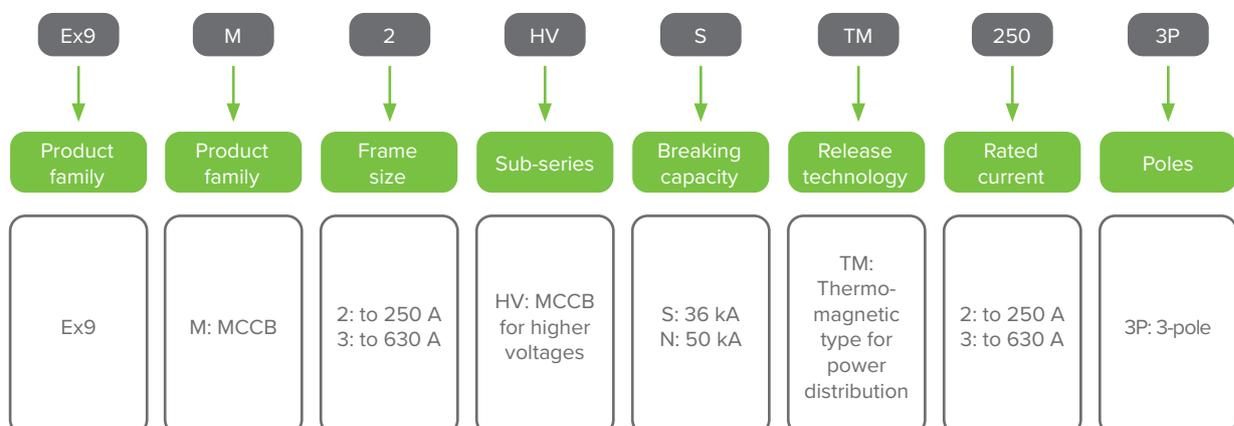
Moulded Case Circuit Breakers Ex9MHV Thermo-magnetic (TM) type are intended for applications in power distribution with nominal voltages up to 1140V AC. These breakers are based on the regular Ex9M series and are developed to provide all the required protections to installation with an unusual higher voltage, for example: 800V AC photovoltaic installations.

Testing according to IEC/EN 60947-2 standards ensures the functionality and reliability for wide variety of applications including isolation.

These breakers are offered with breaking capacities from 36 kA up to 50 kA at 800V AC. High rated impulse withstand voltage makes it possible to use them even in system with occurrences of transient overvoltage waves of high intensity, e.g. in heavy industry.

Utilization category A circuit breakers.

Type Key

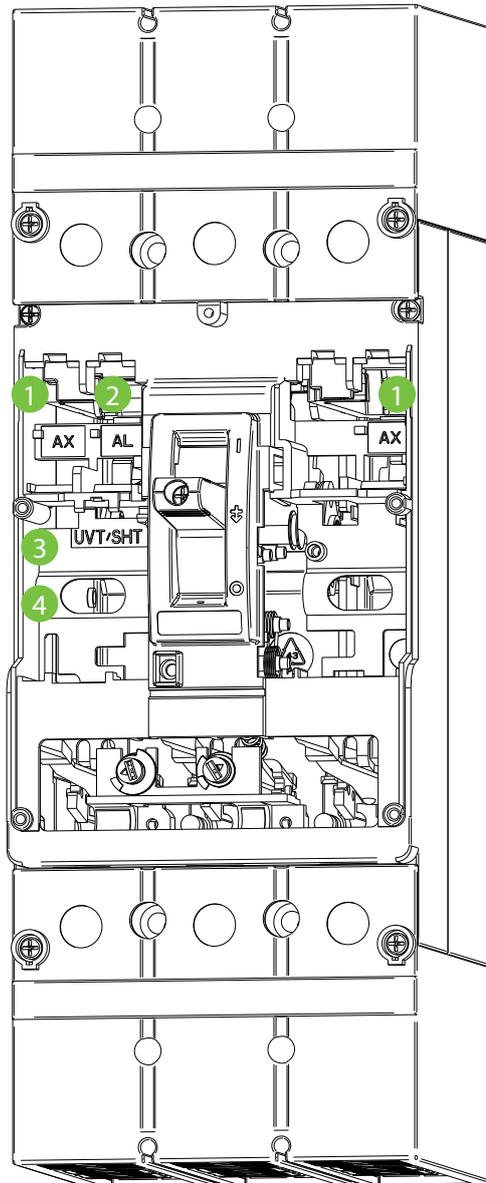


Certification marks



Moulded Case Circuit Breakers **Ex9MHV AC TM**

Internal accessories



1

Auxiliary contact
AX21/M

2

Signal contact
AL21/M

3

Shunt trip release
SHT2i-HV
1 unit or UVT2i

4

Undervoltage release
UVT2i-HV
1 unit or SHT2i

Auxiliary contact AX21/M

Signal contact AL21/M

Shunt trip releases SHT2i-HV

Undervoltage releases UVT2i-HV

All internal accessories for the frame sizes M2+M3 are identical.

Moulded Case Circuit Breakers **Ex9MHV AC TM**

External accessories **Ex9M2HV-M3HV AC TM**



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Box terminals
MC2i



Screw terminals
MCS2i

Tunnel terminals **MC2i W**

Mounting depth spacers **WG i**

Box terminals **MC2i**

Screw terminals **MCS2i**

Moulded Case Circuit Breakers **Ex9MHV AC TM**

Version Ex9M2HV-S up to 250 A, $I_{cu} = 36 \text{ kA}$

- 3 pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 800 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i fixed at $10 \times I_n$ for devices from 63 A up to 100 A
- I_i can be set in range $(7 - 12) \times I_n$ for the devices 125 A and 160 A
- I_i can be set in range $(5 - 10) \times I_n$ for devices from 180 A up to 250 A
- Mounting screws, terminal covers, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	63 A	44-63 A	630 A	113655	Ex9M2HV S TM 63 3P	1/8
3	80 A	56-80 A	800 A	113656	Ex9M2HV S TM 80 3P	1/8
3	100 A	70-100 A	1000 A	113657	Ex9M2HV S TM 100 3P	1/8
3	125 A	87-125 A	875-1500 A	113658	Ex9M2HV S TM 125 3P	1/8
3	160 A	112-160 A	1120-1920 A	113659	Ex9M2HV S TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	113660	Ex9M2HV S TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	113661	Ex9M2HV S TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	113662	Ex9M2HV S TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	113663	Ex9M2HV S TM 250 3P	1/8

Version Ex9M2HV-N up to 250 A, $I_{cu} = 50 \text{ kA}$

- 3 pole Moulded Case Circuit Breakers
- $I_{cs} = 36 \text{ kA}$, $I_{cu} = 50 \text{ kA}$ at 800 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i fixed at $10 \times I_n$ for devices from 63 A up to 100 A
- I_i can be set in range $(7 - 12) \times I_n$ for the devices 125 A and 160 A
- I_i can be set in range $(5 - 10) \times I_n$ for devices from 180 A up to 250 A
- Mounting screws, terminal covers, box terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	Instant. release I_i	Article No.	Type	Packing
3	63 A	44-63 A	630 A	113664	Ex9M2HV N TM 63 3P	1/8
3	80 A	56-80 A	800 A	113665	Ex9M2HV N TM 80 3P	1/8
3	100 A	70-100 A	1000 A	113666	Ex9M2HV N TM 100 3P	1/8
3	125 A	87-125 A	875-1500 A	113667	Ex9M2HV N TM 125 3P	1/8
3	160 A	112-160 A	1120-1920 A	113668	Ex9M2HV N TM 160 3P	1/8
3	180 A	126-180 A	900-1800 A	113669	Ex9M2HV N TM 180 3P	1/8
3	200 A	140-200 A	1000-2000 A	113670	Ex9M2HV N TM 200 3P	1/8
3	225 A	158-225 A	1125-2250 A	113671	Ex9M2HV N TM 225 3P	1/8
3	250 A	175-250 A	1250-2500 A	113672	Ex9M2HV N TM 250 3P	1/8

Moulded Case Circuit Breakers **Ex9MHV AC TM**

Version Ex9M3HV-S up to 630 A, $I_{cu} = 36 \text{ kA}$

- 3 pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36 \text{ kA}$ at 800 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, terminal covers, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	113673	Ex9M3HV S TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	113674	Ex9M3HV S TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	113675	Ex9M3HV S TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	113676	Ex9M3HV S TM 400 3P	1/2
3	500 A	350-500 A	2500-5000 A	113677	Ex9M3HV S TM 500 3P	1/2
3	630 A	441-630 A	3150-6300 A	113678	Ex9M3HV S TM 630 3P	1/2

Version Ex9M3HV-N up to 630 A, $I_{cu} = 50 \text{ kA}$

- 3 pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 800 V AC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, terminal covers, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	instant. release I_i	Article No.	Type	Packing
3	250 A	175-250 A	1250-2500 A	113679	Ex9M3HV N TM 250 3P	1/2
3	315 A	220-315 A	1575-3150 A	113680	Ex9M3HV N TM 315 3P	1/2
3	350 A	245-350 A	1750-3500 A	113681	Ex9M3HV N TM 350 3P	1/2
3	400 A	280-400 A	2000-4000 A	113682	Ex9M3HV N TM 400 3P	1/2
3	500 A	350-500 A	2500-5000 A	113683	Ex9M3HV N TM 500 3P	1/2
3	630 A	441-630 A	3150-6300 A	113684	Ex9M3HV N TM 630 3P	1/2

NOTES

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RCD module for MCCBs

Ex9ML



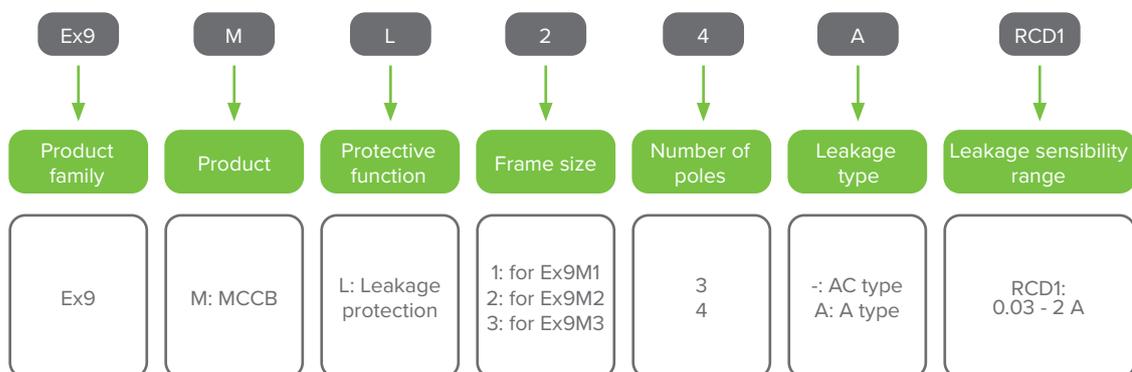
- Voltage dependent Residual Current Device
- Tested according IEC / EN 60947-2
- Up to frame size Ex9M3
- 3 and 4-pole versions
- AC and A sensibility type
- Adjustable leakage current range
- Adjustable time delay
- Electronic and TM MCCBs compatible

Electronic RCD modules for Ex9M series are intended for applications mainly in power distribution. It is designed to provide an additional residual current protection to the moulded case circuit breaker on which it is installed.

Testing according to IEC / EN 60947-2 standards ensures functions and reliability of the device, the compatibility with electronic and thermomagnetic circuit breakers and the significant variety of adjustable settings, makes this series suitable for a wide range of applications.

RCD module for MCCBs Ex9ML

Type Key

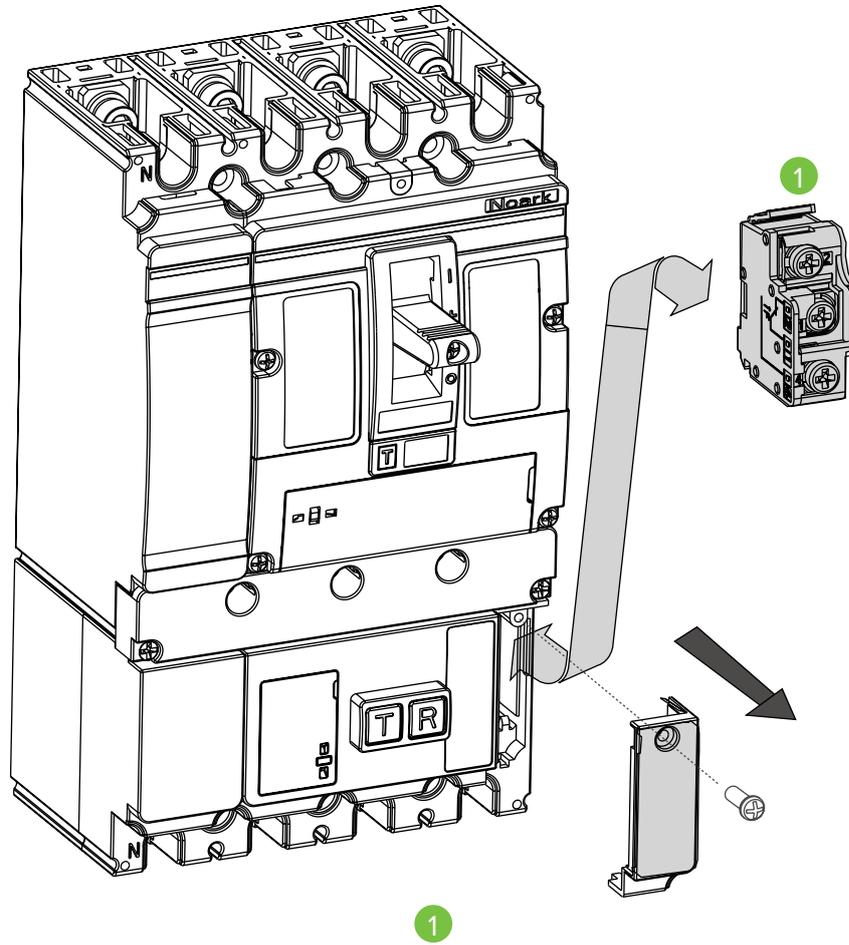


Certification marks



RCD module for MCCBs **Ex9ML**

Internal accessories



Signal contact
AL21
up to 1 unit

Signal contact AL21

RCD module for MCCBs Ex9ML

RCD module for Ex9M1

- 3 and 4-pole Electronic RCD module for MCCBs
- AC and A type modules
- Rated residual making and breaking capacity $I_{\Delta m} = 0.25 \times I_{cu}$
- $I_{\Delta n}$ can be set in 8 step: 0.03 A, 0.05 A, 0.1 A, 0.2 A, 0.3 A, 0.5 A, 1 A, 2 A
- non-actuating time Δt can be set in 6 steps: 0, 60, 200, 500, 1000, 2000 ms
- If $I_{\Delta n} = 0.03$ A, non-actuation time Δt must be set to 0 ms
- Mounting screws in the scope of delivery



Poles	Applicable MCCB	Leakage type	Leakage sensibility	Article No.	Type	Packing
3	Ex9M1	AC	0.03A-2 A	114681	Ex9ML1 3P RCD1	1/1
4	Ex9M1	AC	0.03A-2 A	114682	Ex9ML1 4P RCD1	1/1
3	Ex9M1	A	0.03A-2 A	114687	Ex9ML1 3P A RCD1	1/1
4	Ex9M1	A	0.03A-2 A	114688	Ex9ML1 4P A RCD1	1/1

RCD module for Ex9M2

- 3 and 4-pole Electronic RCD module for MCCBs
- AC and A type modules
- Rated residual making and breaking capacity $I_{\Delta m} = 0.25 \times I_{cu}$
- $I_{\Delta n}$ can be set in 8 step: 0.03 A, 0.05 A, 0.1 A, 0.2 A, 0.3 A, 0.5 A, 1 A, 2 A
- non-actuating time Δt can be set in 6 steps: 0, 60, 200, 500, 1000, 2000 ms
- If $I_{\Delta n} = 0.03$ A, non-actuation time Δt must be set to 0 ms
- Mounting screws in the scope of delivery



Poles	Applicable MCCB	Leakage type	Leakage sensibility	Article No.	Type	Packing
3	Ex9M2	AC	0.03A-2 A	114683	Ex9ML2 3P RCD1	1/1
4	Ex9M2	AC	0.03A-2 A	114684	Ex9ML2 4P RCD1	1/1
3	Ex9M2	A	0.03A-2 A	114689	Ex9ML2 3P A RCD1	1/1
4	Ex9M2	A	0.03A-2 A	114690	Ex9ML2 4P A RCD1	1/1

RCD module for Ex9M3

- 3 and 4-pole Electronic RCD module for MCCBs
- AC and A type modules
- Rated residual making and breaking capacity $I_{\Delta m} = 0.25 \times I_{cu}$
- $I_{\Delta n}$ can be set in 8 step: 0.03 A, 0.05 A, 0.1 A, 0.2 A, 0.3 A, 0.5 A, 1 A, 2 A
- non-actuating time Δt can be set in 6 steps: 0, 60, 200, 500, 1000, 2000 ms
- If $I_{\Delta n} = 0.03$ A, non-actuation time Δt must be set to 0 ms
- Mounting screws in the scope of delivery



Poles	Applicable MCCB	Leakage type	Leakage sensibility	Article No.	Type	Packing
3	Ex9M3	AC	0.03A-2 A	114685	Ex9ML3 3P RCD1	1/1
4	Ex9M3	AC	0.03A-2 A	114686	Ex9ML3 4P RCD1	1/1
3	Ex9M3	A	0.03A-2 A	114691	Ex9ML3 3P A RCD1	1/1
4	Ex9M3	A	0.03A-2 A	114692	Ex9ML3 4P A RCD1	1/1

NOTES

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Accessories for MCCB **Ex9M**



- Accessories for Ex9M line devices
- Auxiliary contacts synchronous with main contacts
- Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)
- Shunt trip and undervoltage releases
- Remote operators
- Rotary handles
- Connection terminals and covers
- Mounting depth spacers and adaptors

Accessories suitable for Moulded Case Circuit Breakers Ex9M. It is possible to supplement or modify functions of a basic circuit breaker by installing of suitable accessories.

Circuit breakers can be equipped with auxiliary contacts AX21M (up to 2 units even for M1 frame size) and one unit of signal contact AL21M. AX21M and AL21M are mounted into different positions, a use of one type of the contact does not limit a number of the second type. AX21M and AL21M can be used regardless the frame size of the circuit breaker.

One unit of undervoltage release UVT2i or one unit of shunt trip relase SHT2i can be installed in the breaker. Different versions for different frame sizes allow to optimise power consumption of these units.

The circuit breakers can also be equipped with different accesories for operation of the toggle. There are available direct rotary handle, rotary handle with extended shaft e.g. for door coupling and a motor operator.

Mounting of the device onto plate can be done directly with the screws which are included in the scope of delivery. Or in case of M1 and M2 devices there is possibility to use adaptors DRA for mounting onto DIN-rail 35 mm. If it is requested to place devices of different frame size side by side, it is possible to use for compensation of differences in height mounting depth spacers WG which assure the same position of front panel towards front plate.

For connection of conductors there are available various types of box and tunnel terminals MC.

Accessories for MCCB Ex9M

Auxiliary and signal contact units

- Contact units for auxiliary and signal contact functions are suitable for all frame sizes
- Auxiliary contacts synchronous with main contacts of the circuit breaker
- Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)
- It is possible to use 1 unit AL21 plus up to four units of AX21 in one MCCBs (depends on frame size)



Function	Frame size	Contacts	Article No.	Type	Packing
Auxiliary	all	1 CO	112071	AX21M	1/24
Signal	all	1 CO	112072	AL21M	1/24

Shunt trip releases

- It is possible to use one unit of shunt trip release SHT2*i* or one unit of undervoltage release UVT2*i*



Frame size	Operating Voltage	Article No.	Type	Packing
M1	110V AC	101398	SHT21 AC110V	1/24
M1	220-240V AC	101399	SHT21 AC220-240V	1/24
M1	380-415V AC	101400	SHT21 AC380-415V	1/24
M1	24V DC	101401	SHT21 DC24V	1/24
M1	220V DC	101405	SHT21 DC220V	1/24
M2, M3	110V AC	101417	SHT22 AC110V	1/24
M2, M3	220-240V AC	101418	SHT22 AC220-240V	1/24
M2, M3	380-415V AC	101419	SHT22 AC380-415V	1/24
M2, M3	24V DC	101420	SHT22 DC24V	1/24
M2, M3	220V DC	101424	SHT22 DC220V	1/24
M4, M5	110V AC	103723	SHT24 AC110V	1/12
M4, M5	220-240V AC	103724	SHT24 AC220-240V	1/12
M4, M5	380-415V AC	103725	SHT24 AC380-415V	1/12
M4, M5	24V DC	103729	SHT24 DC24V	1/12
M6	110V AC	110465	SHT26 AC110V	1/3
M6	220 - 240V AC	110466	SHT26 AC220-240V	1/3
M6	380 - 415V AC	110467	SHT26 AC380-415V	1/3
M6	48V AC	110464	SHT26 AC48V	1/3
M6	110V DC	110462	SHT26 DC110V	1/3
M6	220V DC	110463	SHT26 DC220V	1/3
M6	24V DC	110460	SHT26 DC24V	1/3
M6	48V DC	110461	SHT26 DC48V	1/3

Accessories for MCCB Ex9M

Undervoltage releases

■ It is possible to use one unit of undervoltage release UVT2i or one unit of shunt trip release SHT2i



Aux. cont.	Frame size	Operating Voltage	Article No.	Type	Packing
-	M1	110V AC	108814	UVT21 AC110V	1/24
-	M1	220-240V AC	101406	UVT21 220-240V AC	1/24
-	M1	380-415V AC	101407	UVT21 380-415V AC	1/24
-	M1	24V DC	110705	UVT21 24V DC	1/24
-	M1	110-120V DC	108817	UVT21 DC110-120V	1/24
-	M1	220V DC	108818	UVT21 DC220V	1/24
-	M2, M3	110V AC	108820	UVT22 AC110V	1/24
-	M2, M3	220-240V AC	101425	UVT22 220-240V AC	1/24
-	M2, M3	380-415V AC	101426	UVT22 380-415V AC	1/24
-	M2, M3	24V DC	110706	UVT22 DC24V	1/24
-	M2, M3	110-120V DC	108823	UVT22 DC110-120V	1/24
-	M2, M3	220V DC	108824	UVT22 DC220V	1/24
-	M4, M5	110V AC	103733	UVT24 AC110V	1/12
-	M4, M5	220-240V AC	103734	UVT24 AC220-240V	1/12
-	M4, M5	380-415V AC	103735	UVT24 AC380-415V	1/12
-	M4, M5	24V DC	103738	UVT24 DC24V	1/12
-	M4, M5	110-120V DC	103736	UVT24 DC110-120V	1/12
-	M4, M5	220V DC	103737	UVT24 DC220V	1/12
-	M6	220 - 240 V AC	110468	UVT26 AC220-240V	1/3
-	M6	380 - 415 V AC	110469	UVT26 AC380-415V	1/3
-	M6	48V AC	112073	UVT 26 AC48V EU	1/3
-	M6	110V AC	112074	UVT 26 AC110V EU	1/3
-	M6	24V DC	112075	UVT 26 DC24V EU	1/3
-	M6	110-120V DC	112077	UVT 26 DC110-120V EU	1/3
-	M6	220V DC	112078	UVT 26 DC220V EU	1/3

Accessories for MCCB Ex9M

Phase barriers

- Phase barriers to avoid short circuit due to ionised gas during tripping off of the breaker when unisolated busbars are used for its connection
- In the scope of delivery of MCCBs, separately orderable as a spare part
- Set consists of appropriate number of barriers suitable for both sides MCCB



Frame size	Poles	Article No.	Type	Packing
M1	3	101441	PB21 3P	1 set
M2	3	101444	PB22 3P	1 set
M3	3	101491	PB23 3P	1 set
M4, M5	3	103751	PB24 3P	1 set
M1	4	104852	PB21 4P	1 set
M2	4	104853	PB22 4P	1 set
M3	4	104854	PB23 4P	1 set
M4, M5	4	104856	PB24 4P	1 set

Remote operators

- Motor drives for electrical and remote control of MCCBs
- Available for M1-M5



Frame size	Operating Voltage	Article No.	Type	Packing
M1	380-415 V AC	112079	MOD 21 AC380-415V	1/8
M1	220-240 V AC / 220 V DC	101411	MOD 21 AC220-240V/DC220V	1/8
M1	110 V AC / 110-120 V DC	101412	MOD 21 AC110/DC110-120V	1/8
M1	24 V DC	101415	MOD 21 DC24V	1/8
M2	380-415 V AC	112080	MOD 22 AC380-415V	1/8
M2	220-240 V AC / 220 V DC	101430	MOD 22 AC220-240V/DC220V	1/8
M2	110 V AC / 110-120 V DC	101431	MOD 22 AC110/DC110-120V	1/8
M2	24 V DC	101434	MOD 22 DC24V	1/8
M3	380-415 V AC	112081	MOD 23 AC380-415V	1/4
M3	220-240 V AC / 220 V DC	101484	MOD 23 AC220-240V/DC220V	1/4
M3	110 V AC / 110-120 V DC	101485	MOD 23 AC110/DC110-120V	1/4
M3	24 V DC	101488	MOD 23 DC24V	1/4
M4, M5	380-415 V AC	112082	MOD 24 AC380-415V	1/2
M4, M5	220-240 V AC / 220 V DC	112873	MOD 24 AC220-240V/DC220V	1/2
M4, M5	110 V AC / 110-120 V DC	112874	MOD 24 AC110/DC110-120V	1/2
M4, M5	24 V DC	103747	MOD 24 DC24V	1/2

Key lock devices

- Scope of delivery: mechanism block
- Can be locked in OFF position with up to three padlocks (not in a scope of delivery)
- Compatible with padlocks with diameters of 5 up to 8mm



Frame size	Function	Article No.	Type	Packing
M1	Toggle position lock	108852	KLK 21	1/50
M2	Toggle position lock	108853	KLK 22	1/50
M3	Toggle position lock	108854	KLK 23	1/50

Accessories for MCCB Ex9M

Mechanical interlocks

- Scope of delivery: mechanical interlock
- Installation in front toggles of the MCCBs, is not possible to install with other front mounted accessories i.e. ERH, MOD, RHD
- Suitable for mechanical interconnection of two pieces of MCCBs from the same frame size



Frame size	Function	Article No.	Type	Packing
M1	Avoids simultaneous connection	108855	MIT 21	1/50
M2	Avoids simultaneous connection	108856	MIT 22	1/50
M3	Avoids simultaneous connection	108857	MIT 23	1/50
M4, M5	Avoids simultaneous connection	108858	MIT 24	1/50

Direct rotary handles

- Rotary handle for direct mounting onto breaker
- Scope of delivery: mechanism block, rotary handle
- Indication of connected breaker status ON-OFF-TRIP
- Degree of protection IP40, IK07
- Can be locked in ON and OFF position with up to three padlocks (not in a scope of delivery)



Frame size	Colour	Article No.	Type	Packing
M1	Grey	101410	RHD 21	1/36
M2	Grey	101429	RHD 22	1/18
M3	Grey	101483	RHD 23	1/9
M4, M5	Grey	103742	RHD 24	1/6

Extended rotary handles

- Rotary handle with extension shaft (extension shaft can be shortened)
- Possibility of longer extension shaft 500 mm (only the shaft as separated item)
- Scope of delivery: mechanism block, extension shaft, rotary handle
- Indication of connected breaker status ON-OFF-TRIP
- Degree of protection IP54, IK08
- Can be locked in ON and OFF position with up to three padlocks (not in a scope of delivery)



Frame size	Length	Colour	Article No.	Type	Packing
M1	300 mm	Grey	101409	ERH 21	1/6
M2	300 mm	Grey	101428	ERH 22	1/6
M3	300 mm	Grey	101482	ERH 23	1/6
M4, M5	300 mm	Grey	103741	ERH 24	1/4
All (only the shaft)	500 mm	-	110189	ERH2x ES 500mm	1/50

Extended handle

- For easier operation of the toggle
- Only for frame size M6 (not compatible with MOD version)



Suitable MCCB	Colour	Article No.	Type	Packing
Ex9M6/SD	Grey	110698	LHD26	1/20

Accessories for MCCB Ex9M

Connection accessories

- Connection terminals for MCCBs of all frame sizes
- Box and tunnel terminal versions
- For connecting with Al or Cu wires (box terminals only for Cu wires)
- Packed separately (for 3P connection, it is necessary to order 3pcs of terminal)
- Box terminals newly in the scope of delivery of AC devices M1, M2
- Front connection plates for frame sizes from M1 until M3
- Rear connection plates for frame sizes from M1 until M5



Box terminals

Frame size	Version	Terminals	Max. terminal capacity	Article No.	Type	Packing
M1	box	1	4-95 mm ²	103705	MC21	1
M2	box	1	10-120 mm ²	103709	MC22	1
M3	box	1	120-240 mm ²	103715	MC23	1
M3	box	1	120-240 mm ²	103717	MC23 UL	1



Tunnel terminals

Frame size	Version	Terminals	Max. terminal capacity	Article No.	Type	Packing
M1	tunnel	1	16-95 mm ²	103707	MC21 W	1
M2	tunnel	1	35-240 mm ²	103869	MC22 W	1
M2	tunnel	2	35-120 mm ²	103711	MC22 W2	1
M2	tunnel	6	10-35 mm ²	103713	MC22 W6	1
M3	tunnel	2	120-240 mm ²	103719	MC23 W2	1
M3	tunnel	2	120-240 mm ²	103871	MC23 W2 UL	1
M3	tunnel	4	35-95 mm ²	103721	MC23 W4	1
M4, M5	tunnel	2	120-240 mm ²	106314	MC24 W2	1
M6	tunnel	3	120-240 mm ²	112091	MC26 W3	1
M6	tunnel	4	120-240 mm ²	112092	MC26 W4	1



Screw terminals

Frame size	Version	Terminals	Screw size	Article No.	Type	Packing
M1	screw	1	M6	107873	MCS21	1
M2	screw	1	M8	107874	MCS22	1

Front connection plates



Frame size	Thickness (mm)	Plates per set	Busbar width (mm)	Article No.	Type	Packing
M1	4	3	15	108859	JP21 3P	1 set
M1	4	4	15	108865	JP21 4P	1 set
M2	5	3	20	108860	JP22 3P	1 set
M2	5	4	20	108866	JP22 4P	1 set
M3	8	3	30	108861	JP23 3P	1 set
M3	8	4	30	108867	JP23 4P	1 set
M6	10	3		110694	JP26 3P 800-1250	1 set
M6	20	3		110695	JP26 3P 1600	1 set
M6	10	4		110696	JP26 4P 800-1250	1 set
M6	20	4		110697	JP26 4P 1600	1 set

Rear connection plates



Frame size	Thickness (mm)	Plates per set	Busbar width (mm)	Article No.	Type	Packing
M1	3.5	6	12.5	108871	RCP21 3P	1 set
M1	3.5	8	12.5	108875	RCP21 4P	1 set
M2	6	6	18	108872	RCP22 3P	1 set
M2	6	8	18	108876	RCP22 4P	1 set
M3	8	6	30	108873	RCP23 3P	1 set
M3	8	8	30	108877	RCP23 4P	1 set
M4, M5	8	6	40	108874	RCP24 3P	1 set
M4, M5	8	8	40	108878	RCP24 4P	1 set

Accessories for MCCB Ex9M

Plug-in bases

- Suitable for circuit breakers of frame sizes from M1 until M3
- Offered with front type and back type of terminals
- In scope of delivery the tripping mechanism, phase barriers, MCCB plug-in terminals, mounting screws and the plug-in base.



Frame size	Connection type	Poles	Article No.	Type	Packing
M1 TM	Front	3	112875	PIA 21F 3P	1/4
M1 TM	Front	4	112876	PIA 21F 4P	1/4
M2 TM	Front	3	112877	PIA 22F 3P	1/2
M2 TM	Front	4	112878	PIA 22F 4P	1/2
M2 SU	Front	3	112093	PIA 22F 3P SU20	1/2
M2 SU	Front	4	112094	PIA 22F 4P SU20	1/2
M3 TM	Front	3	112879	PIA 23F 3P	1/1
M3 TM	Front	4	112880	PIA 23F 4P	1/1
M3 SU	Front	3	112095	PIA 23F 3P SU20 EU	1/1
M3 SU	Front	4	112096	PIA 23F 4P SU20 EU	1/1
M1 TM	Back	3	112881	PIA 21B 3P EU	1/4
M1 TM	Back	4	112882	PIA 21B 4P EU	1/4
M2 TM	Back	3	112883	PIA 22B 3P EU	1/2
M2 TM	Back	4	112884	PIA 22B 4P EU	1/2
M2 SU	Back	3	112097	PIA 22B 3P SU20 EU	1/2
M2 SU	Back	4	112098	PIA 22B 4P SU20 EU	1/2
M3 TM	Back	3	112885	PIA 23B 3P EU	1/1
M3 TM	Back	4	112886	PIA 23B 4P EU	1/1
M3 SU	Back	3	112099	PIA 23B 3P SU20 EU	1/1
M3 SU	Back	4	112100	PIA 23B 4P SU20 EU	1/1

Draw-out bases

- Suitable for circuit breakers of frame sizes from M3 to M5
- Offered with front type and back type of terminals
- In scope of delivery the tripping mechanism, base position indicators, phase barriers, MCCB plug-in terminals, auxiliary terminals for the cassette, mounting screws, phase barriers and the draw-out base.



Frame size	Connection type	Poles	Article No.	Type	Packing
M3 TM	Front	3	108887	DOB 23F 3P CO (400A)	1
M3 TM	Front	4	108899	DOB 23F 4P CO (400A)	1
M3 TM	Front	3	108889	DOB 23F 3P CO (630A)	1
M3 TM	Front	4	108901	DOB 23F 4P CO (630A)	1
M3 SU	Front	3	112101	DOB 23F 3P CO SU20(400A)	1
M3 SU	Front	4	112102	DOB 23F 4P CO SU20(400A)	1
M3 SU	Front	3	112105	DOB 23F 3P CO SU20(630A)	1
M3 SU	Front	4	112106	DOB 23F 4P CO SU20(630A)	1
M4, M5 TM / SU	Front	3	108891	DOB 24F 3P CO	1
M4, M5 TM / SU	Front	4	108903	DOB 24F 4P CO	1
M3 TM	Back	3	108893	DOB 23B 3P CO (400A)	1
M3 TM	Back	4	108905	DOB 23B 4P CO (400A)	1
M3 TM	Back	3	108895	DOB 23B 3P CO (630A)	1
M3 TM	Back	4	108907	DOB 23B 4P CO (630A)	1
M3 SU	Back	3	112103	DOB 23B 3P CO SU20(400A)	1
M3 SU	Back	4	112104	DOB 23B 4P CO SU20(400A)	1
M3 SU	Back	3	112107	DOB 23B 3P CO SU20(630A)	1
M3 SU	Back	4	112108	DOB 23B 4P CO SU20(630A)	1
M4, M5 TM / SU	Back	3	108897	DOB 24B 3P CO	1
M4, M5 TM / SU	Back	4	108909	DOB 24B 4P CO	1

Accessories for MCCB Ex9M

Terminal covers, short

- Terminal covers to increase touch protection of terminals



Frame size	Poles	Article No.	Type	Packing
M1	3	101439	TCV21 3P	1
M2	3	101442	TCV22 3P	1
M3	3	101489	TCV23 3P	1
M4, M5	3	103748	TCV24 3P	1
M1	4	102372	TCV21 4P	1
M2	4	102374	TCV22 4P	1
M3	4	102376	TCV23 4P	1
M4, M5	4	103750	TCV24 4P	1

Terminal covers, long

- Terminal covers to increase touch protection of terminals



Frame size	Poles	Article No.	Type	Packing
M1	3	101440	TCE21 3P	1
M2	3	101443	TCE22 3P	1
M3	3	101490	TCE23 3P	1
M4, M5	3	103749	TCE24 3P	1
M1	4	102373	TCE21 4P	1
M2	4	102375	TCE22 4P	1
M3	4	102377	TCE23 4P	1
M4, M5	4	104855	TCE24 4P	1

DIN-rail adaptors

- Adaptors for mounting of MCCBs onto DIN-rail 35 mm
- Suitable for all variants of MCCBs and MCCB Switch Disconnectors of given frame size



Frame size	Poles	Article No.	Type	Packing
M1	3, 4	106319	DRA21	1
M2	3, 4	106320	DRA22	1

Mounting depth spacers

- Set of mounting depth spacers for compensation of differences in height between frame sizes
- Assures the same position of front panel towards front plate
- Two variants with height 10 and 13 mm
- For compensation of heights please use these configuration:
 - M1 -> M2 = 1x WG10
 - M1 -> M3 = 1x WG10 + 2x WG13
 - M1 -> M4, M5 = 1x WG10 + 3x WG13
 - M2 -> M3 = 2x WG13
 - M2 -> M4, M5 = 3x WG13
 - M3 -> M4, M5 = 1x WG13



Frame size	Height	Article No.	Type	Packing
M1	10 mm	106321	WG 10	1 set
M2, M3, M4, M5	13 mm	106362	WG 13	1 set

Accessories for MCCB Ex9M

Battery box

- Battery box for smart unit's power supply
- Applicable to SU20S moulded case circuit breaker



Frame sizes	Article No.	Type	Packing
M2-M6	115642	BAB22	1

Communication module

- Communication module for electronic type moulded case circuit breaker
- Communication protocol through Modbus



Frame size	Cable length	Current	Article No.	Type	Packing
M2-M6	3m	AC	117286	COM22 AC230V 3M	1
M2-M6	1.5m	AC	117285	COM22 AC230V 1.5M	1
M2-M6	0.5m	AC	117284	COM22 AC230V 0.5M	1
M2-M6	3m	DC	117289	COM22 DC24V 3M	1
M2-M6	1.5m	DC	117288	COM22 DC24V 1.5M	1
M2-M6	0.5m	DC	117287	COM22 DC24V 0.5M	1

NOTES

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Accessories for MCCBs Ex9MHV



- Accessories for Ex9MHV line devices
- Auxiliary contacts synchronous with main contacts
- Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)
- Shunt trip and undervoltage releases
- Remote operators
- Rotary handles
- Tunnel terminals (1 conductor) and covers
- Mounting depth spacers and adaptors

Accessories suitable for Moulded Case Circuit Breakers Ex9MHV. It is possible to supplement or modify functions of a basic circuit breaker by installing of suitable accessories.

Circuit breakers can be equipped with auxiliary contacts AX21M (up to 2 units even for M1 frame size) and one unit of signal contact AL21M. AX21M and AL21M are mounted into different positions, a use of one type of the contact does not limit a number of the second type. AX21M and AL21M can be used regardless the frame size of the circuit breaker.

One unit of undervoltage release UVT2i or one unit of shunt trip relase SHT2i can be installed in the breaker. Different versions for different frame sizes allow to optimise power consumption of these units.

The circuit breakers can also be equipped with different accesories for operation of the toggle. There are available direct rotary handle, rotary handle with extended shaft e.g. for door coupling and a motor operator.

Mounting of the device onto plate can be done directly with the screws which are included in the scope of delivery. If it is requested to place devices of different frame size side by side, it is possible to use for compensation of differences in height mounting depth spacers WG which assure the same position of front panel towards front plate.

For connection of conductors there are available terminal types of box and tunnel terminals MC.

Accessories for MCCBs **Ex9MHV**

Distribution map of Ex9MHV accessories

Ex9M frame size	Ex9M2HV (22HV)	Ex9M3HV (23HV)
Accessory		
Auxiliary contacts AX	112071 AX21M	
Signal contacts AL	112072 AL21M	
Shunt trip release SHT-HV (remote OFF)	114832 SHT22HV AC110V 114833 SHT22HV AC220-240V 114834 SHT22HV AC380-415V 114835 SHT22HV DC24V 114836 SHT22HV DC110-120V 114837 SHT22HV DC220V	114844 SHT23HV AC110V 114845 SHT23HV AC220-240V 114846 SHT23HV AC380-415V 114847 SHT23HV DC24V 114848 SHT23HV DC110-120V 114849 SHT23HV DC220V
Undervoltage release UVT-HV (remote OFF inverse logic)	114838 UVT22HV AC110V 114839 UVT22HV AC220-240V 114840 UVT22HV AC380-415V 114841 UVT22HV DC24V 114842 UVT22HV DC110-120V 114843 UVT22HV DC220V	114850 UVT23HV AC110V 114851 UVT23HV AC220-240V 114852 UVT23HV AC380-415V 114853 UVT23HV DC24V 114854 UVT23HV DC110-120V 114855 UVT23HV DC220V
Extended rotary handle ERH-HV	114856 ERH22HV 3P	114857 ERH23HV 3P
Extended toggle handle LHD	—	114858 LHD23HV
Tunnel terminals MC	103869 MC22 W	103715 MC23
Mounting depth spacers WG	106321 WG 10 106362 WG 13	
Remote operators MOD	117414 MOD22HV AC110/DC110-120V EU 117415 MOD22HV AC220-240V/DC220V EU 117416 MOD22HV AC380-415V EU 117417 MOD22HV DC24V EU	117418 MOD23HV AC110/DC110-120V EU 117419 MOD23HV AC220-240V/DC220V EU 117420 MOD23HV AC380-415V EU 117421 MOD23HV DC24V EU

Accessories for MCCBs Ex9MHV

Auxiliary and signal contact units

- Contact units for auxiliary and signal contact functions are suitable for all frame sizes
- Auxiliary contacts synchronous with main contacts of the circuit breaker
- Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)
- It is possible to use 1 unit AL21M plus up to three units of AX21M in one MCCBs (depends on frame size)



Function	Frame size	Contacts	Article No.	Type	Packing
Auxiliary	all	1 CO	112071	AX21M	1/24
Signal	all	1 CO	112072	AL21M	1/24

Shunt trip releases

- It is possible to use one unit of shunt trip release SHT2i or one unit of undervoltage release UVT2i



Aux. cont.	Frame size	Operating Voltage	Article No.	Type	Packing
-	M2HV	110 V AC	114832	SHT22HV AC110V	1/24
-	M2HV	220-240 V AC	114833	SHT22HV AC220-240V	1/24
-	M2HV	380-415 V AC	114834	SHT22HV AC380-415V	1/24
-	M2HV	24 V DC	114835	SHT22HV DC24V	1/24
-	M2HV	110-120 V DC	114836	SHT22HV DC110-120V	1/24
-	M2HV	220 V DC	114837	SHT22HV DC220V	1/24
-	M3HV	110 V AC	114844	SHT23HV AC110V	1/24
-	M3HV	220-240 V AC	114845	SHT23HV AC220-240V	1/24
-	M3HV	380-415 V AC	114846	SHT23HV AC380-415V	1/24
-	M3HV	24 V DC	114847	SHT23HV DC24V	1/24
-	M3HV	110-120 V DC	114848	SHT23HV DC110-120V	1/24
-	M3HV	220 V DC	114849	SHT23HV DC220V	1/24

Undervoltage releases

- It is possible to use one unit of undervoltage release UVT2i or one unit of shunt trip release SHT2i



Aux. cont.	Frame size	Operating Voltage	Article No.	Type	Packing
-	M2HV	110 V AC	114838	UVT22HV AC110V	1/24
-	M2HV	220-240 V AC	114839	UVT22HV 220-240V AC	1/24
-	M2HV	380-415 V AC	114840	UVT22HV 380-415V AC	1/24
-	M2HV	24 V DC	114841	UVT22HV 24V DC	1/24
-	M2HV	110-120 V DC	114842	UVT22HV DC110-120V	1/24
-	M2HV	220 V DC	114843	UVT22HV DC220V	1/24
-	M3HV	110 V AC	114850	UVT23HV AC110V	1/24
-	M3HV	220-240 V AC	114851	UVT23HV 220-240V AC	1/24
-	M3HV	380-415 V AC	114852	UVT23HV 380-415V AC	1/24
-	M3HV	24 V DC	114853	UVT23HV DC24V	1/24
-	M3HV	110-120 V DC	114854	UVT23HV DC110-120V	1/24
-	M3HV	220 V DC	114855	UVT23HV DC220V	1/24

Accessories for MCCBs **Ex9MHV**

Extended rotary handles

- Rotary handle with extension shaft (extension shaft can be shortened)
- Possibility of longer extension shaft 500 mm (only the shaft as separated item)
- Scope of delivery: mechanism block, extension shaft, rotary handle
- Indication of connected breaker status ON-OFF-TRIP
- Degree of protection IP54, IK08
- Can be locked in ON and OFF position with up to three padlocks (not in a scope of delivery)



Frame size	Length	Colour	Article No.	Type	Packing
M2HV	300 mm	Grey	114856	ERH22HV 3P	1/6
M3HV	300 mm	Grey	114857	ERH23HV 3P	1/6

Extended handle

- For easier operation of the toggle



Suitable MCCB	Colour	Article No.	Type	Packing
Ex9M3HV	Grey	114858	LHD23HV	1/20

Mounting depth spacers

- Set of mounting depth spacers for compensation of differences in height between frame sizes
- Assures the same position of front panel towards front plate
- For compensation of heights please use these configuration:
M2HV -> M3HV = 1x WG13



Frame size	Height	Article No.	Type	Packing
M2HV	13 mm	106362	WG 13	1 set

Accessories for MCCBs **Ex9MHV**

Connection accessories

- Box and tunnel terminal versions
- For connecting with Al or Cu wires (box terminals only for Cu wires)
- Packed separately (for 3P connection, it is necessary to order 3pcs of terminal)
- Box terminals in the scope of delivery of breakers of frame size M2HV
- Front connection plates for frame sizes M2HV and M3HV

Tunnel terminals



Frame size	Version	Terminals	Max. terminal capacity	Article No.	Type	Packing
M2HV	tunnel	1	35-240 mm ²	103869	MC22 W	1 pc

Screw terminals



Frame size	Version	Terminals	Screw size	Article No.	Type	Packing
M2	screw	1	M8	107874	MCS22	1 pc

Front connection plates



Frame size	Thickness (mm)	Plates per set	Busbar width (mm)	Article No.	Type	Packing
M2HV	5	3	20	108860	JP22 3P	1 set
M3HV	8	3	30	108861	JP23 3P	1 set

Remote operators

- Motor drives for electrical and remote control of 800V MCCBs
- Available for M2HV-M3HV



Frame size	Operating Voltage	Article No.	Type	Packing
M2	110 V AC / 110-120 V DC	117414	MOD22HV AC110/DC110-120V EU	1/8
M2	220-240 V AC / 220 V DC	117415	MOD22HV AC220-240V/DC220V EU	1/8
M2	380-415 V AC	117416	MOD22HV AC380-415V EU	1/8
M2	24 V DC	117417	MOD22HV DC24V EU	1/8
M3	110 V AC / 110-120 V DC	117418	MOD23HV AC110/DC110-120V EU	1/4
M3	220-240 V AC / 220 V DC	117419	MOD23HV AC220-240V/DC220V EU	1/4
M3	380-415 V AC	117420	MOD23HV AC380-415V EU	1/4
M3	24 V DC	117421	MOD23HV DC24V EU	1/4

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Technical Data Ex9M1 AC TM

AC TM Moulded Case Circuit Breakers up to 160 A

General parameters

Suitable for commercial as well as industrial applications

I_r (1.0) Not adjustable (1 Pole)

I_r can be set in range $(0.7 - 1.0) \times I_n$

I_i (10) range not adjustable (1 Pole)

I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types (3 and 4 Pole), otherwise is fixed at $10 \times I_n$

I_{iN} fixed at $10 \times I_n$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT21	101397 - 101405
Undervoltage releases	UVT21	101406 - 101407

Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT21 or UVT21)

External accessories

Direct rotary handle	RHD21	101410
Extended rotary handle	ERH21	101409
Remote motor operators	MOD21	101411, 101412, 112079, 101425
Terminal cover, short	TCV21 3P, 4P	101439, 102372
Terminal cover, long	TCE21 3P, 4P	101440, 102373
Phase barrier	PHS21	112110
Box terminals	MC21	103705
Screw Terminal	MCS21	107873
Tunnel terminal	MC21 W	103707
DIN-rail adapter	DRA21	106319
Plug-in base	PIA 21	112875, 112876, 112881, 112882
Off position toggle key lock	KLK21	108852
Front plate connection	JP21	108859, 108865
Rear connection plate	RCP21	108871, 108875
Mechanical interlock	MIT21	108855
Mounting depth spacers	WG10, WG13	106131, 106132

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]					
	16 - 50 A	63 A	80 A	100 A	125 A	160

Technical Data Ex9M1 AC TM

AC TM Moulded Case Circuit Breakers up to 160 A

Electrical parameters

	Ex9M1S	Ex9M1N	Ex9M1Q	Ex9M1H	Ex9M1P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	8 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated current	16 / 20 / 25 / 32 / 40 / 50 / 63 / 80 / 100 / 125 / 160 A				
Utilization category	A				
Mechanical service life	15 000 operation cycles				
Electrical service life	8 000 operation cycles / 415 V AC 2 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]										
	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
-40	22.5	28	35	45	56	70	88	112	140	175	224
-35	22	27.5	34	44	55	68.5	86.5	110	137	172	220
-25	20.5	26.5	33	42	53	66	83	106	132	165	212
-15	20	25.5	32	41	51	64	80	102	127	159	204
-5	19.5	24.5	30.5	39	49	61	77	98	122	153	196
0	19	24	30	38	48	60	75	96	120	150	192
10	18.5	23	28	37	46	57.5	72	92	115	144	184
20	17.5	22	27	35	44	55	69	88	110	137	176
30	17	21	26	33	42	52.5	66	84	105	131	168
40	16	20	25	32	40	50	63	80	100	125	160
50	15	19.5	24	30.5	37	47.5	58.5	74.5	93	116	149
60	14.5	18.5	22.5	29	33.5	45	53	67	84	105	135
70	14	18	22	28	29	40	46	56	80	91	117

Power dissipation characteristics

I_n	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
Pole resistance (mΩ)	8.8	8.8	5.2	4.5	2.6	1.8	1.7	1.3	0.88	0.8	0.8
Pole power dissipation (W)	2.3	3.5	3.3	4.6	4.2	4.5	6.7	8.3	8.8	12.5	20.5

Technical Data **Ex9M1 AC TM**

AC TM Moulded Case Circuit Breakers up to 160 A

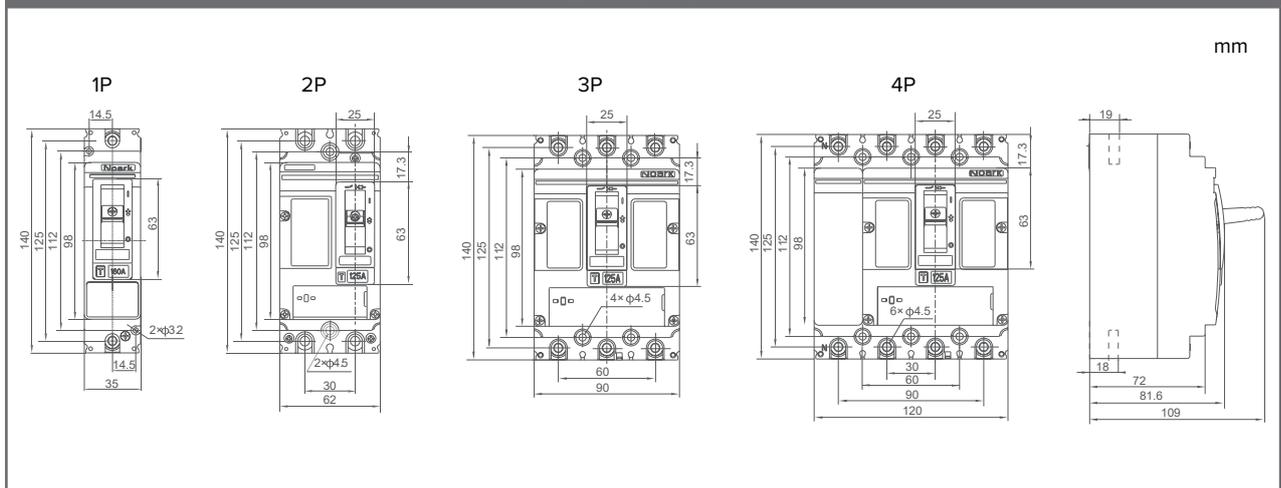
Mechanical parameters

Device width 1P / 2P / 3P / 4P	35 mm / 62 mm / 90 mm / 120 mm
Device height	140 mm
Device depth	81.6 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	4 — 95 mm ²
Fastening torque of terminals	8 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 1P / 2P / 3P / 4P	0.5 kg / 0.9 kg / 1.2 kg / 1.7 kg
Mounting position	vertical, can be rotated by 90° in each axis

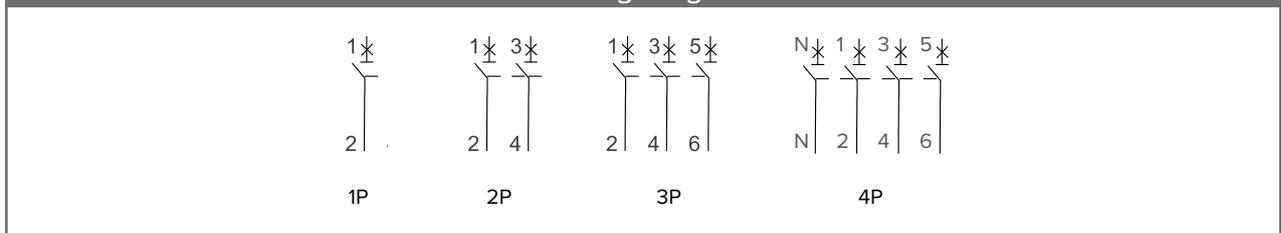
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I _n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U _e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U _i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U _{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties (U _{imp} = 8 kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

Dimensions



Wiring diagram

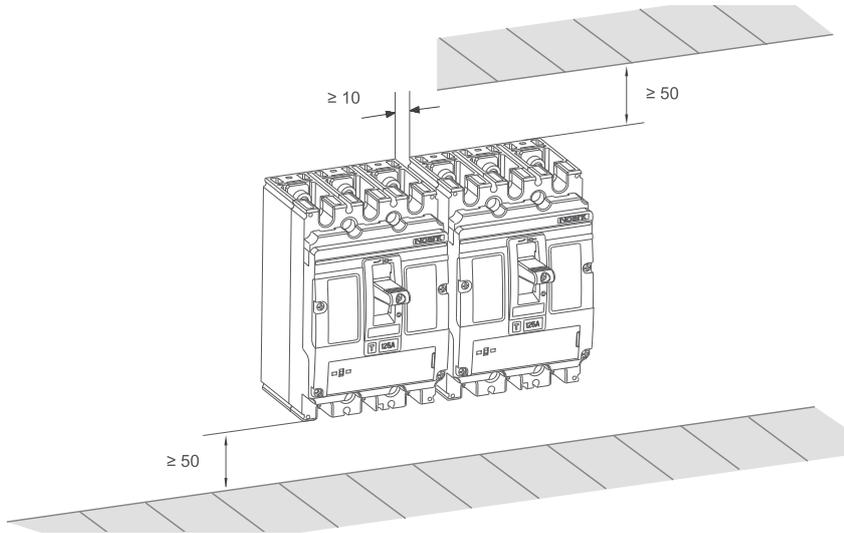


Technical Data Ex9M1 AC TM

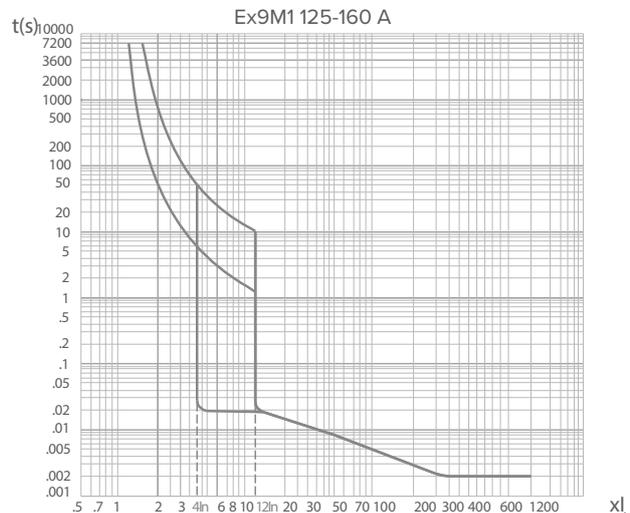
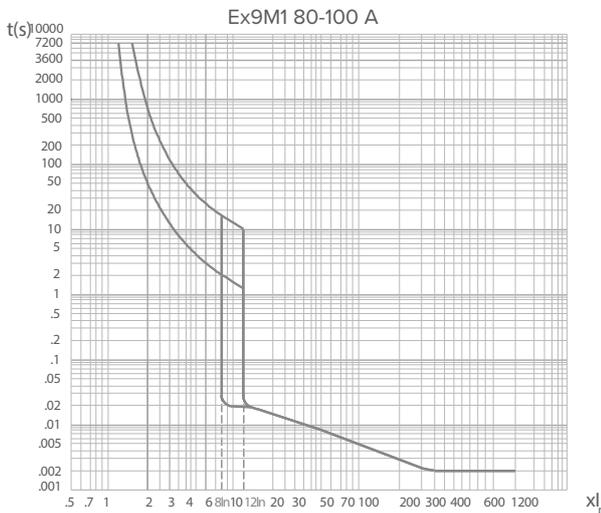
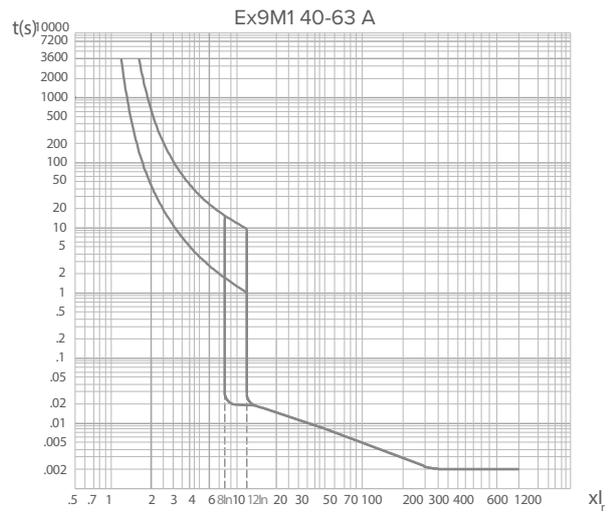
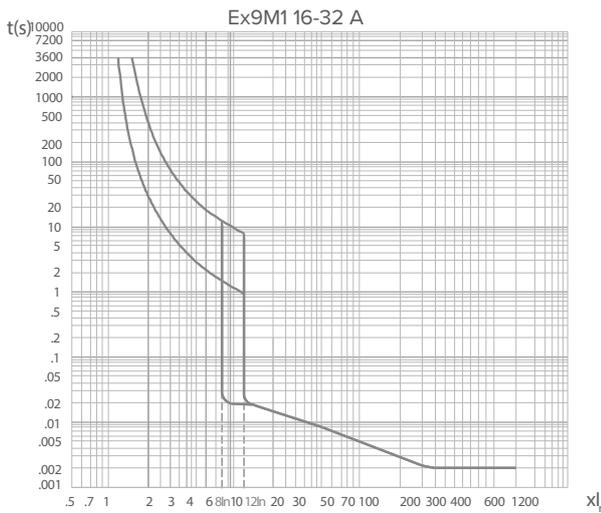
AC TM Moulded Case Circuit Breakers up to 160 A

Installation space

mm



Tripping characteristics



Technical Data Ex9M2 AC TM

AC TM Moulded Case Circuit Breakers up to 250 A

General parameters

Suitable for commercial as well as industrial applications

I_r (1.0) Not adjustable (1 Pole)

I_r can be set in range $(0.7 - 1.0) \times I_n$

I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A

$I_{IN} = I_i$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426

Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)

External accessories

Direct rotary handle	RHD22	101429
Extended rotary handle	ERH22	101428
Remote motor operators	MOD22	101430, 101431, 112080, 101443
Terminal cover, short	TCV22 3P, 4P	101442, 102374
Terminal cover, long	TCE22 3P, 4P	101443, 102375
Phase barrier	PHS22	112111
Box terminals	MC22	103709
Screw Terminal	MCS22	107874
Tunnel terminal	MC22 W	103869, 103711, 103713
DIN-rail adapter	DRA22	106320
Plug-in base	PIA 22	112877, 112878, 112883, 112884
Off position toggle key lock	KLK22	108853
Front plate connection	JP22	108860, 108866
Rear connection plate	RCP22	108872, 108876
Mechanical interlock	MIT22	108856
Mounting depth spacers	WG10, WG13	106131, 106132

Mounting screws, box terminals as well as phase barriers in the scope of delivery

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]					
	125 A	160 A	180 A	200 A	225 A	250 A
PIA 22	1	1	1	0.95	0.95	0.95

Technical Data Ex9M2 AC TM

AC TM Moulded Case Circuit Breakers up to 250 A

Electrical parameters

	Ex9M2S	Ex9M2N	Ex9M2Q	Ex9M2H	Ex9M2P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	8 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated current	125 / 160 / 180 / 200 / 225 / 250 A				
Utilization category	A				
Mechanical service life	15 000 operation cycles				
Electrical service life	5 000 operation cycles / 415 V AC 2 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]					
	125 A	160 A	180 A	200 A	225 A	250 A
-40	175	224	252	280	315	35
-35	172	220	247	275	309	343
-25	165	212	238	265	300	332
-15	159	204	229	255	288	319
-5	153	196	220	245	276	306
0	150	192	212	240	270	300
10	144	184	207	230	259	287
20	137	176	198	220	247	275
30	131	168	189	210	236	262
40	125	160	180	200	225	250
50	118	152	171	190	213	237
60	106	136	157	175	196	218
70	96	120	144	166	180	207

Power dissipation characteristics

I_n	125 A	160 A	180 A	200 A	225 A	250 A
Pole resistance (mΩ)	0.7	0.55	0.55	0.55	0.4	0.4
Pole power dissipation (W)	10.9	14.1	17.8	22	20.3	25

Technical Data Ex9M2 AC TM

AC TM Moulded Case Circuit Breakers up to 250 A

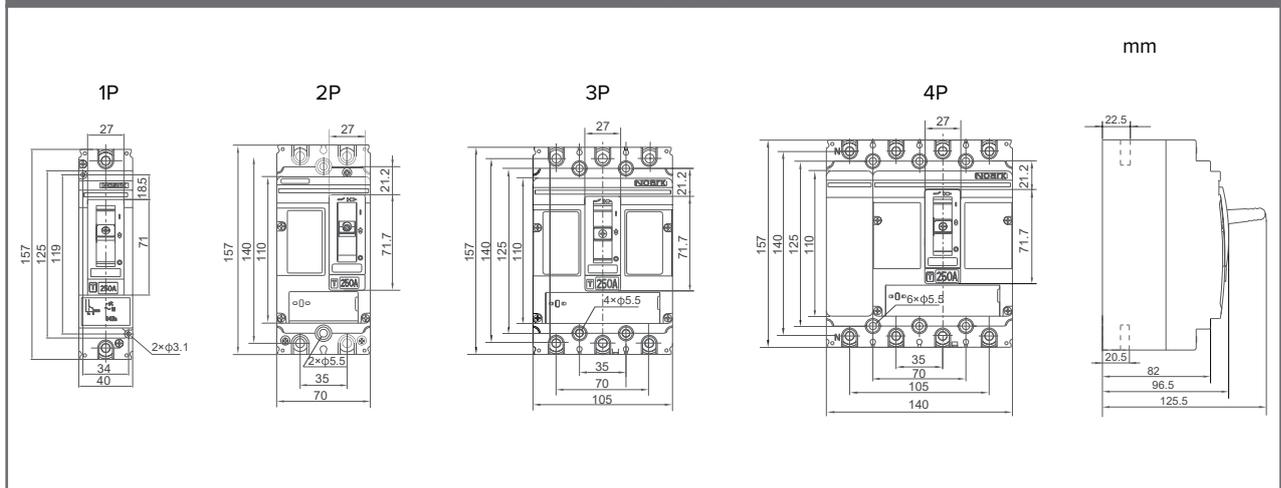
Mechanical parameters

Device width 1P / 2P / 3P / 4P	40 mm / 70 mm / 105 mm / 140 mm
Device height	157 mm
Device depth	96.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	10 – 120 mm ²
Fastening torque of terminals	25 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 1P / 2P / 3P / 4P	0.75 kg / 1.3 kg / 1.85 kg / 2.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

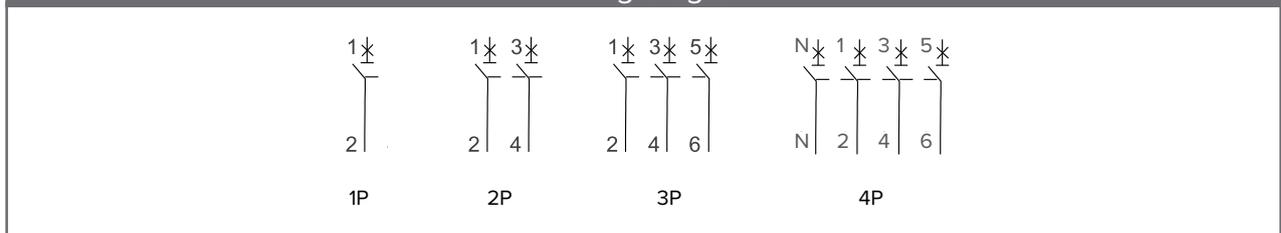
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I _n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U _e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U _i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U _{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties (U _{imp} = 8 kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

Dimensions



Wiring diagram

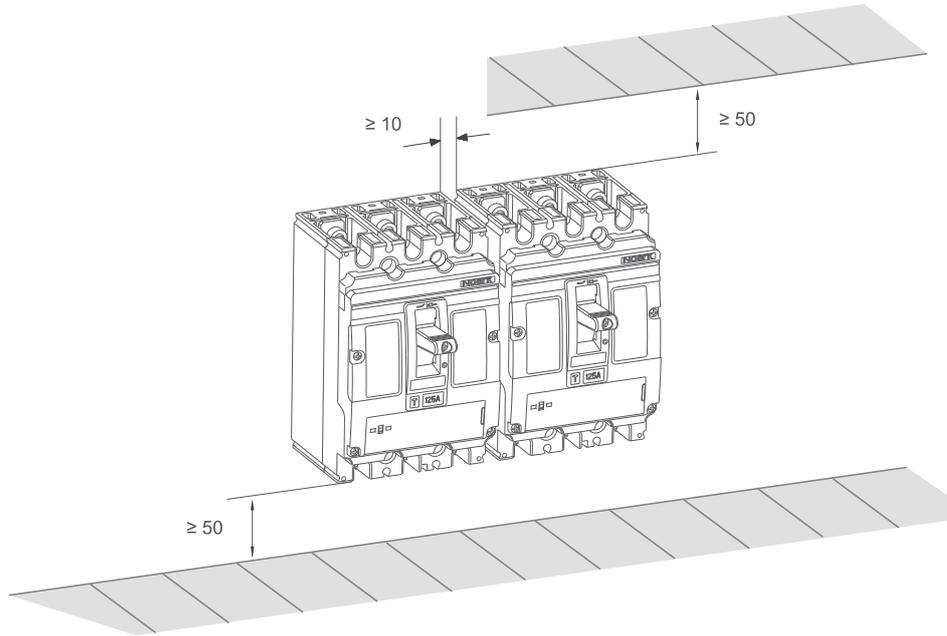


Technical Data Ex9M2 AC TM

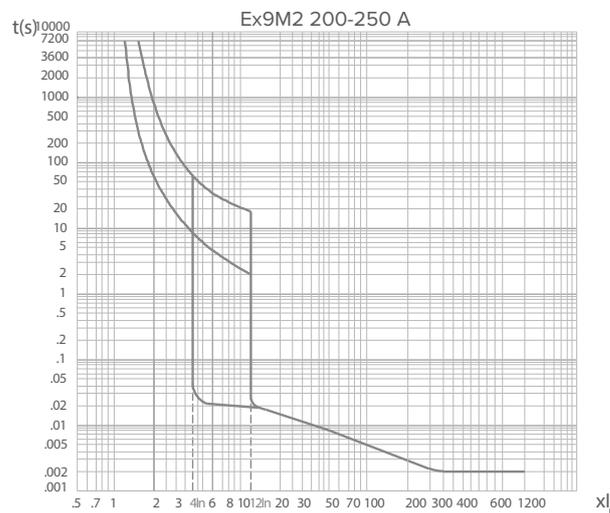
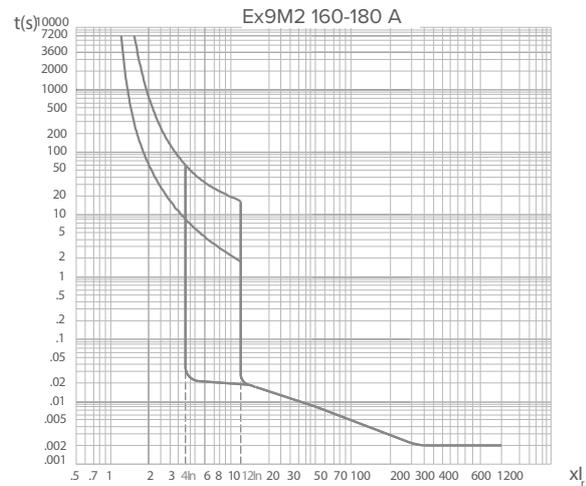
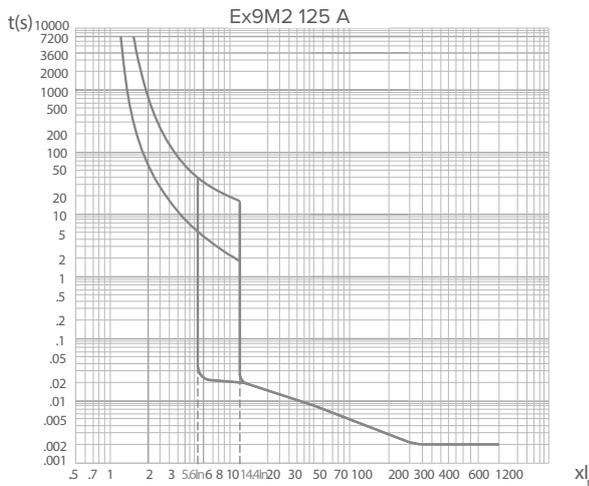
AC TM Moulded Case Circuit Breakers up to 250 A

Installation space

mm



Tripping characteristics



Technical Data **Ex9M3 AC TM**

AC TM Moulded Case Circuit Breakers up to 500 A

General parameters

Suitable for commercial as well as industrial applications

I_r can be set in range $(0.7 - 1.0) \times I_n$

I_i can be set in range $(5 - 10) \times I_n$

$I_{iN} = I_i$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426

Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)

External accessories

Direct rotary handle	RHD23	101483
Extended rotary handle	ERH23	101482
Remote motor operators	MOD23	101484, 101485, 112081, 101488
Terminal cover, short	TCV23 3P, 4P	101489, 102376
Terminal cover, long	TCE23 3P, 4P	101490, 102377
Phase barrier	PHS23	112112
Box terminals	MC23	103715
Tunnel terminal	MC23 W	103719, 103721
Plug-in base	PIA 23	112879, 112880, 112885, 112886
Off position toggle key lock	KLK23	108854
Front plate connection	JP23	108861, 108867
Rear connection plate	RCP23	108873, 108877
Mechanical interlock	MIT23	108857
Draw-Out Base	DOB23	108877, 108899, 108893, 108905, 108889, 108901, 108895, 108907
Mounting depth spacers	WG10, WG13	106131, 106132

Mounting screws, screw type terminals as well as phase barriers in the scope of delivery

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]				
	250 A	315 A	350 A	400 A	500 A
PIA 23	1	1	1	1	0.95
DOB 23	1	1	1	1	1

Technical Data Ex9M3 AC TM

AC TM Moulded Case Circuit Breakers up to 500 A

Electrical parameters

	Ex9M3S	Ex9M3N	Ex9M3Q	Ex9M3H	Ex9M3P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 10 kA / 690 V	50 kA / 415 V 12 kA / 690 V	70 kA / 415 V 12 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 10 kA / 690 V	50 kA / 415 V 12 kA / 690 V	70 kA / 415 V 12 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	250 / 315 / 350 / 400 / 500 A				
Utilization category	A				
Mechanical service life	15 000 operation cycles				
Electrical service life	4 000 operation cycles / 415 V AC 1 500 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]				
	250 A	315 A	350 A	400 A	500 A
-40	350	441	490	560	700
-35	343	433	481	550	687
-25	332	418	465	530	662
-15	319	402	447	510	637
-5	306	386	429	490	612
0	300	378	420	480	600
10	287	362	402	460	575
20	275	346	385	440	550
30	262	331	367	420	525
40	250	315	350	400	500
50	237	300	332	380	450
60	225	286	295	360	406
70	212	271	276	320	360

Power dissipation characteristics

I_n	250 A	315 A	350 A	400 A	500 A
Pole resistance (mΩ)	0.35	0.25	0.25	0.15	0.12
Pole power dissipation (W)	21.9	24.8	30.6	24	30

Technical Data Ex9M3 AC TM

AC TM Moulded Case Circuit Breakers up to 500 A

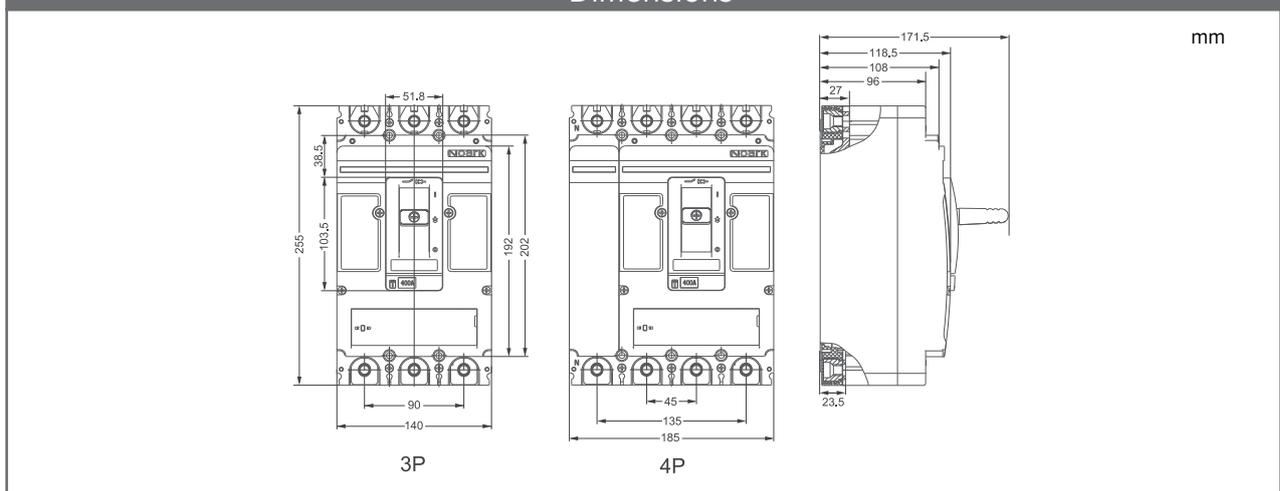
Mechanical parameters

Device width 3P / 4P	140 mm / 185 mm
Device height	255 mm
Device depth	118.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 8 mm
Busbar width	≤ 30 mm
Cable lug width	≤ 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	5.2 kg / 6.7 kg
Mounting position	vertical, can be rotated by 90° in each axis

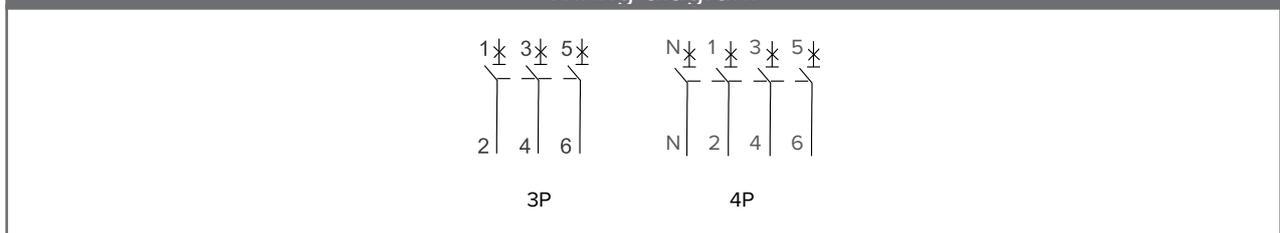
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions



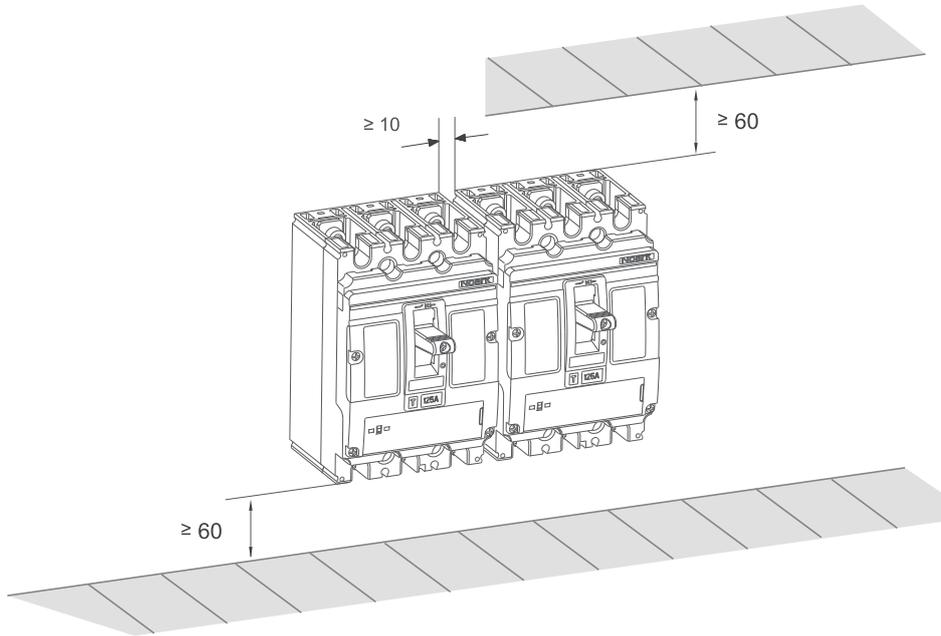
Wiring diagram



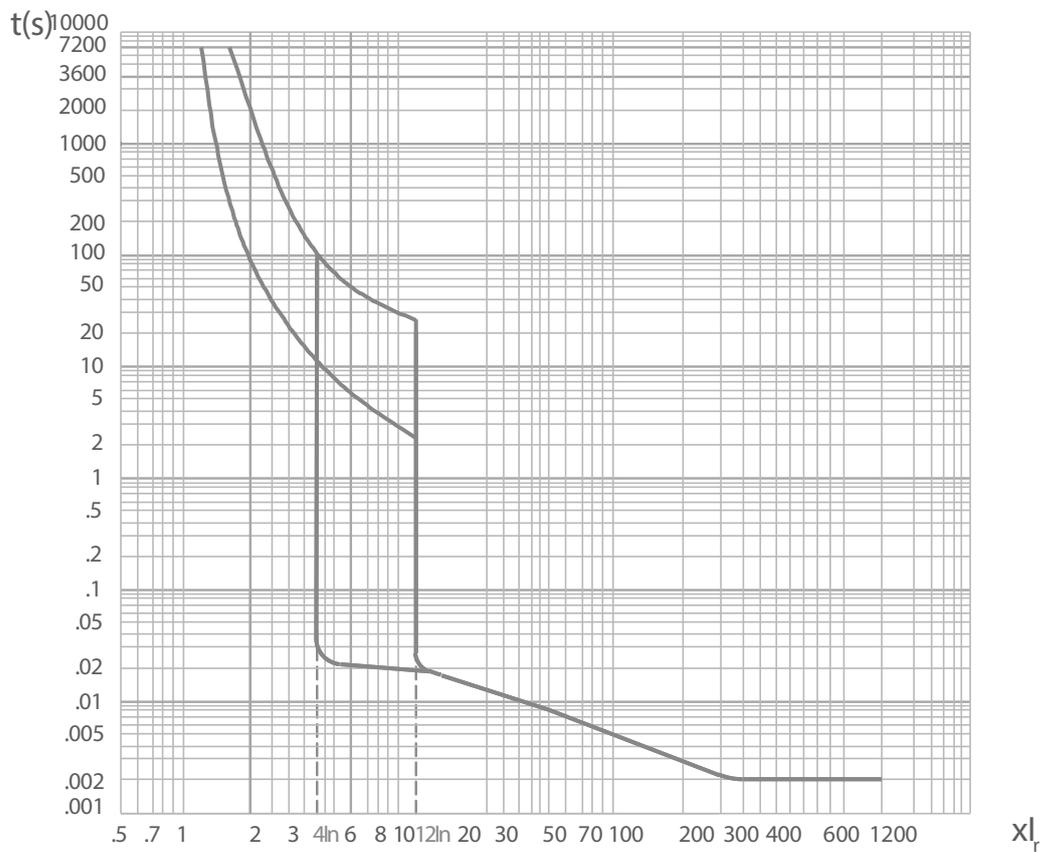
Technical Data Ex9M3 AC TM

AC TM Moulded Case Circuit Breakers up to 500 A

Installation space



Tripping characteristics



Technical Data **Ex9M4 AC TM**

AC TM Moulded Case Circuit Breakers up to 630 A

General parameters

Suitable for commercial as well as industrial applications

I_r can be set in range $(0.7 - 1.0) \times I_n$

I_i can be set in range $(5 - 10) \times I_n$

$I_{IN} = I_i$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740

Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)

External accessories

Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Draw-Out Base	DOB24	118891, 118903, 118897, 118909
Mounting depth spacers	WG10, WG13	106131, 106132

Mounting screws, screw type terminals as well as phase barriers in the scope of delivery

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]		
	400 A	530 A	630 A
DOB 24	0.95	0.95	0.95

Technical Data **Ex9M4 AC TM**

AC TM Moulded Case Circuit Breakers up to 630 A

Electrical parameters

	Ex9M4S	Ex9M4N	Ex9M4Q	Ex9M4H	Ex9M4P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 20 kA / 690 V	150 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	400 / 500 / 630 A				
Utilization category	A				
Mechanical service life	10 000 operation cycles				
Electrical service life	3 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]		
	400 A	500 A	630 A
-40	560	700	882
-35	550	687	866
-25	530	662	836
-15	510	637	804
-5	490	612	772
0	480	600	756
10	460	575	724
20	440	550	693
30	420	525	661
40	400	500	630
50	390	490	580
60	370	460	530
70	320	400	490

Power dissipation characteristics

I_n	400 A	500 A	630 A
Pole resistance (mΩ)	0.08	0.08	0.08
Pole power dissipation (W)	12.8	20	31.8

Technical Data Ex9M4 AC TM

AC TM Moulded Case Circuit Breakers up to 630 A

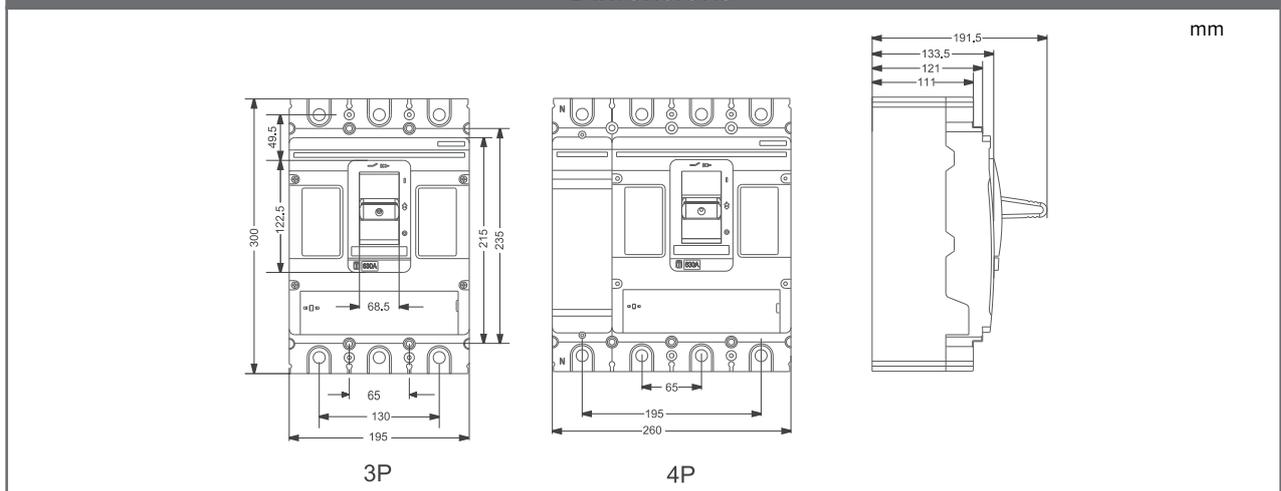
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

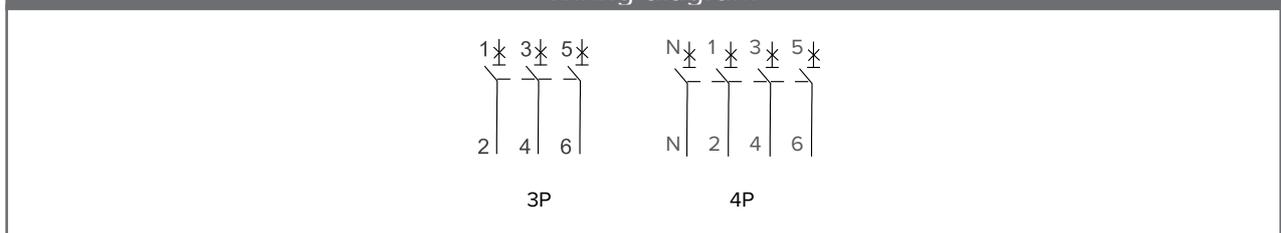
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions



Wiring diagram

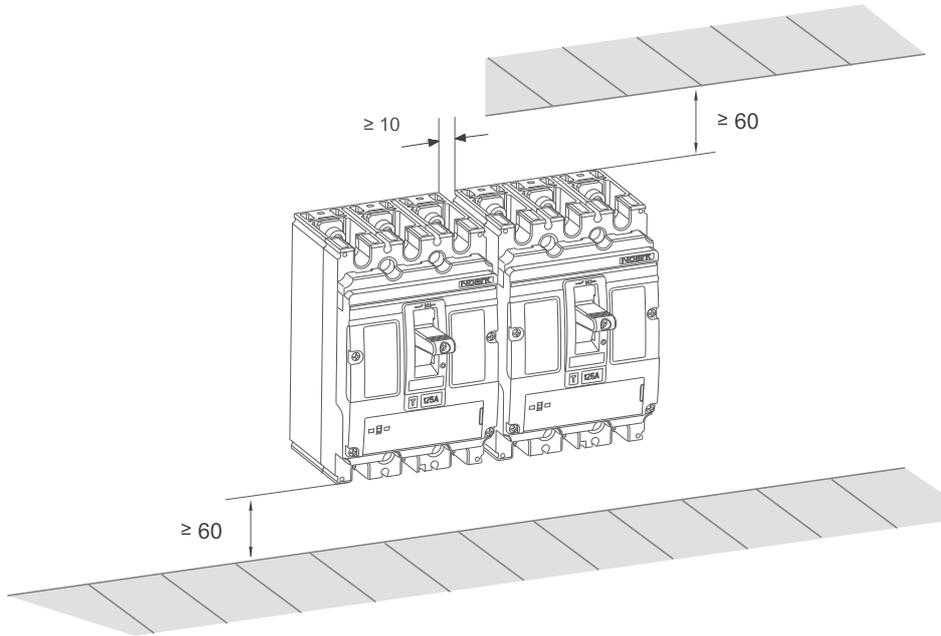


Technical Data **Ex9M4 AC TM**

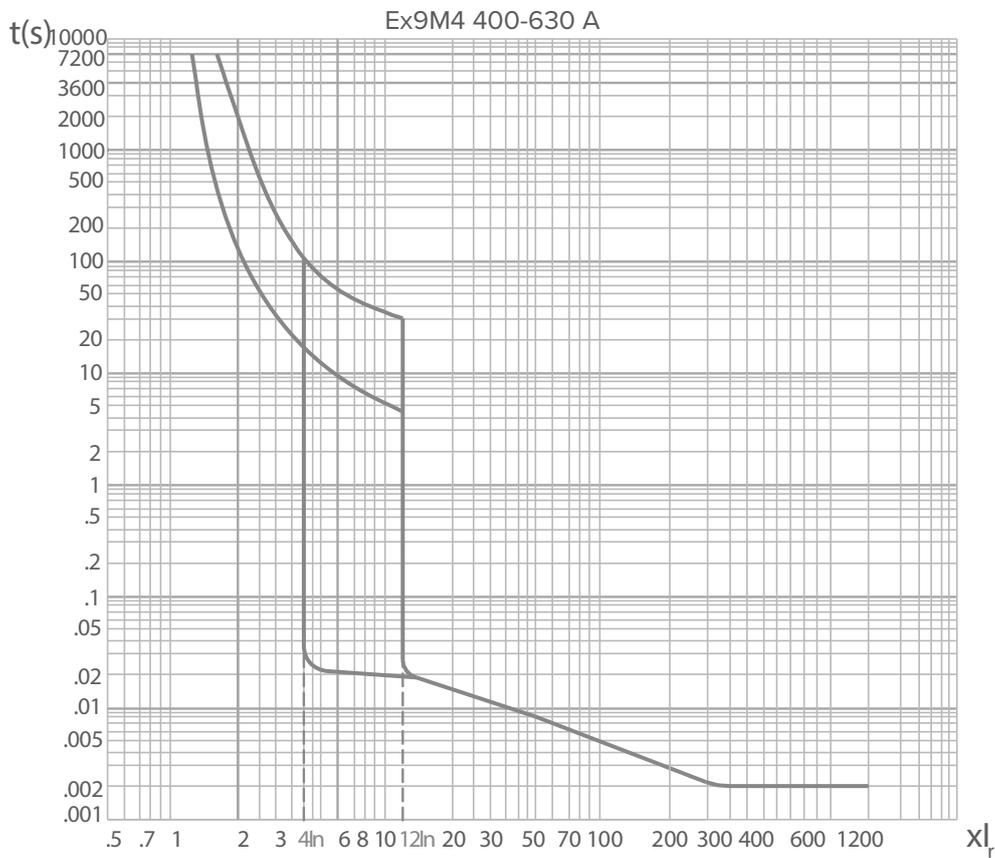
AC TM Moulded Case Circuit Breakers up to 630 A

Installation space

mm



Tripping characteristics



Technical Data **Ex9M5 AC TM**

AC TM Moulded Case Circuit Breakers up to 800 A

General parameters

Suitable for commercial as well as industrial applications

I_r can be set in range $(0.7 - 1.0) \times I_n$

I_i can be set in range $(5 - 10) \times I_n$

$I_{IN} = I_i$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723-103730
Undervoltage releases	UVT24	103722-103740

Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)

External accessories

Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PB24	103751, 104856
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Draw-Out Base	DOB24	118891, 118903, 118897, 118909
Mounting depth spacers	WG10, WG13	106131, 106132

Mounting screws, screw type terminals as well as phase barriers in the scope of delivery

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]		
	630 A	700 A	800 A
DOB 24	0.95	0.95	0.9

Technical Data **Ex9M5 AC TM**

AC TM Moulded Case Circuit Breakers up to 800 A

Electrical parameters

	Ex9M5S	Ex9M5N	Ex9M5Q	Ex9M5H	Ex9M5P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 20 kA / 690 V	150 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	630 / 700 / 800 A				
Utilization category	A				
Mechanical service life	10 000 operation cycles				
Electrical service life	2 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]		
	630 A	700 A	800 A
-40	882	980	1120
-35	866	962	1100
-25	836	927	1060
-15	804	892	1020
-5	772	857	980
0	756	840	960
10	724	805	920
20	693	770	880
30	661	735	840
40	630	700	800
50	580	670	735
60	530	645	670
70	490	575	625

Power dissipation characteristics

I_n	630 A	700 A	800 A
Pole resistance (mΩ)	0.08	0.08	0.08
Pole power dissipation (W)	31.8	39.2	51.2

Technical Data Ex9M5 AC TM

AC TM Moulded Case Circuit Breakers up to 800 A

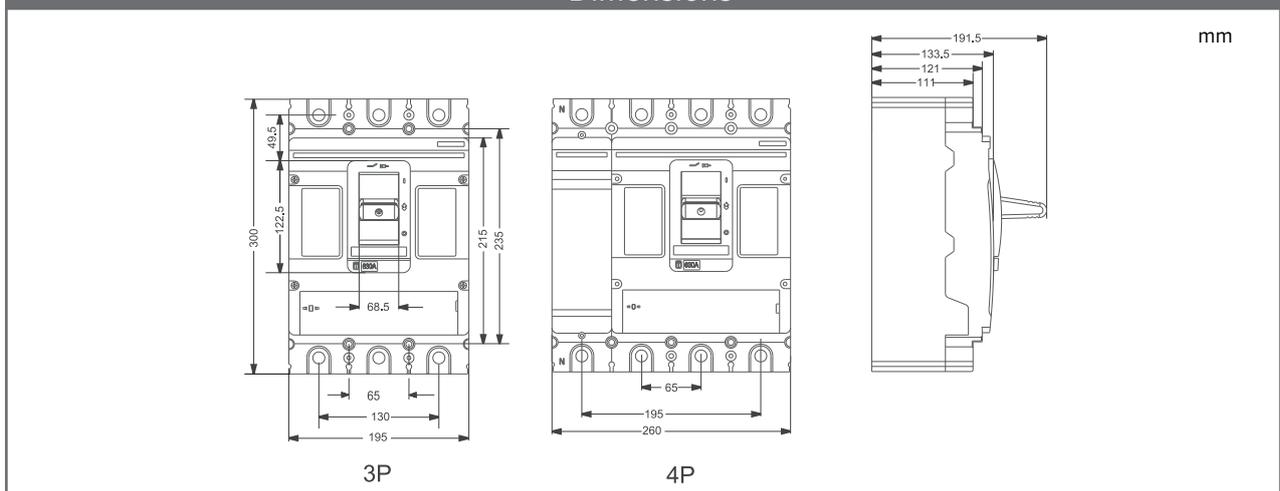
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

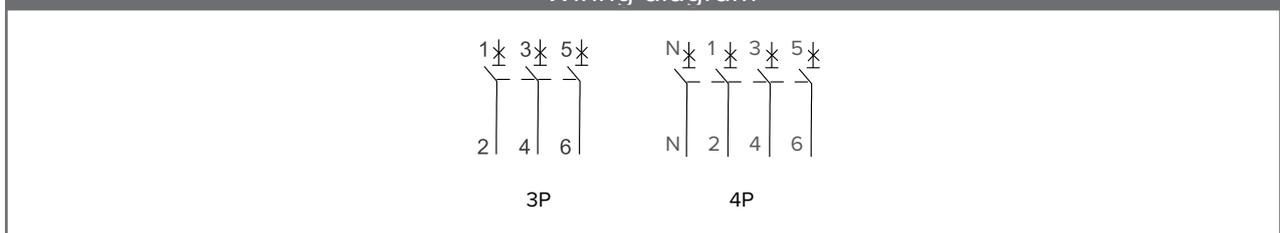
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions



Wiring diagram

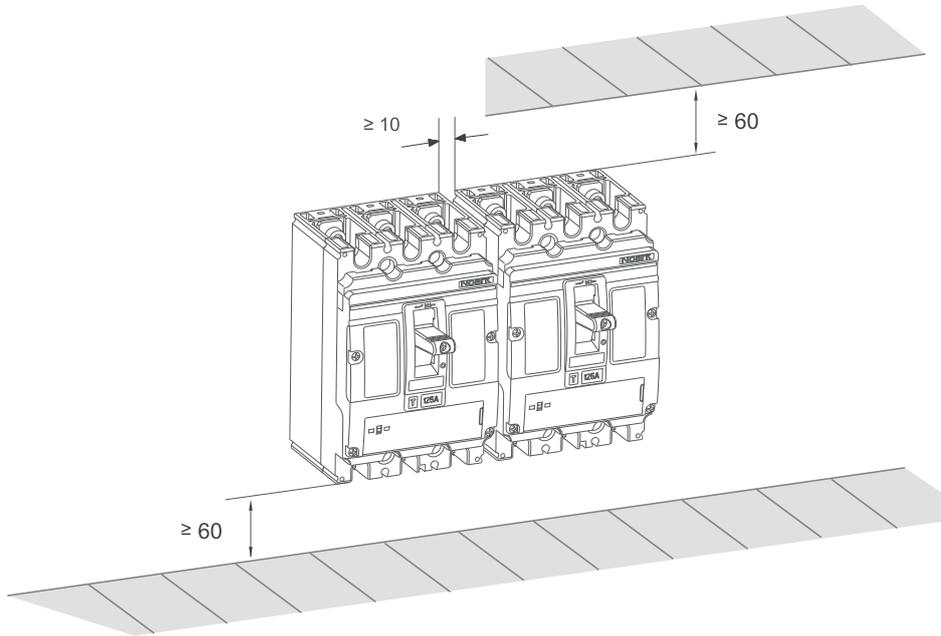


Technical Data Ex9M5 AC TM

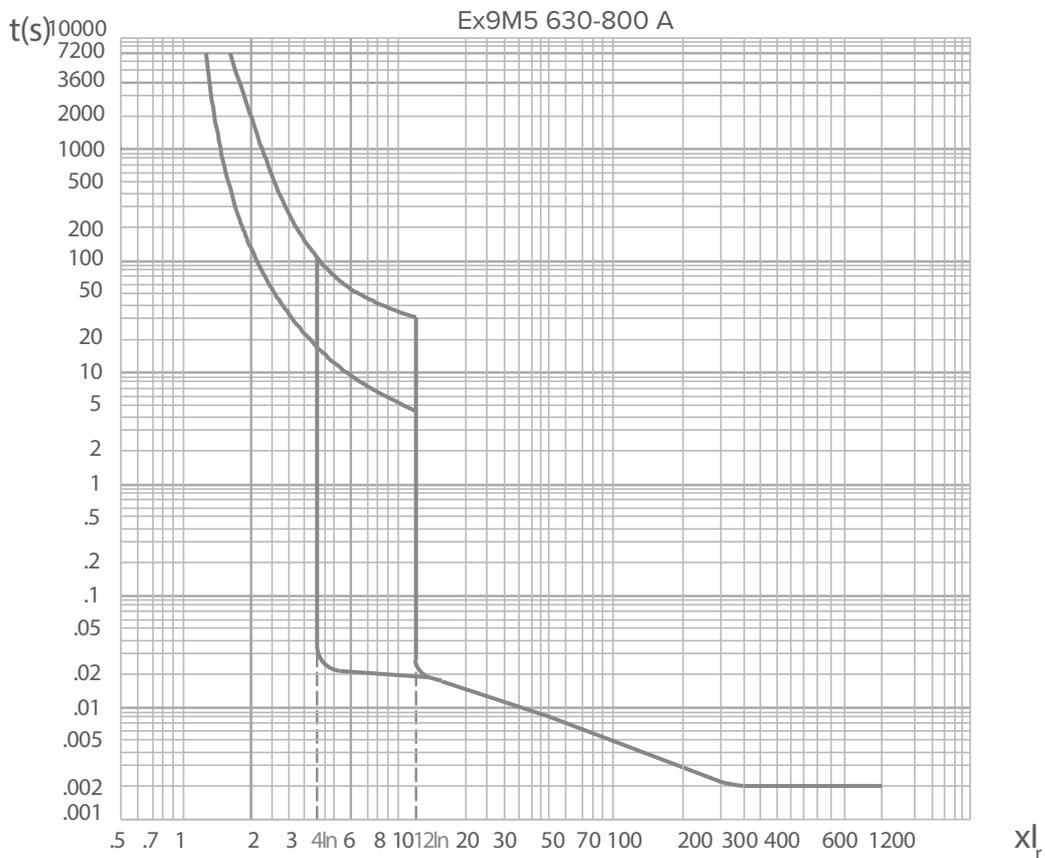
AC TM Moulded Case Circuit Breakers up to 800 A

Installation space

mm



Tripping characteristics



Technical Data **Ex9M1 AC M**

AC M Moulded Case Circuit Breakers up to 160 A

General parameters

Suitable for commercial as well as industrial applications

I_n can be set in range $(9 - 14) \times I_n$ for 125 A and 160 A types (3 and 4 Pole)

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT21	101397 — 101405
Undervoltage releases	UVT21	101406 — 101407

Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT21 or UVT21)

External accessories

Direct rotary handle	RHD21	101410
Extended rotary handle	ERH21	101409
Remote motor operators	MOD21	101411, 101412, 112079, 101425
Terminal cover, short	TCV21 3P, 4P	101439, 102372
Terminal cover, long	TCE21 3P, 4P	101440, 102373
Phase barrier	PHS21	112110
Box terminals	MC21	103705
Screw Terminal	MCS21	107873
Tunnel terminal	MC21 W	103707
DIN-rail adapter	DRA21	106319
Plug-in base	PIA 21	112875, 112876, 112881, 112882
Off position toggle key lock	KLK21	108852
Front plate connection	JP21	108859, 108865
Rear connection plate	RCP21	108871, 108875
Mechanical interlock	MIT21	108855
Mounting depth spacers	WG10, WG13	106131, 106132

Mounting screws, box terminals as well as phase barriers in the scope of delivery

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]					
	16 — 50 A	63 A	80 A	100 A	125 A	160
PIA 21	1	1	1	1	0.95	0.95

Technical Data **Ex9M1 AC M**

AC M Moulded Case Circuit Breakers up to 160 A

Electrical parameters

	Ex9M1S	Ex9M1N	Ex9M1Q	Ex9M1H	Ex9M1P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	8 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated current	16 / 20 / 25 / 32 / 40 / 50 / 63 / 80 / 100 / 125 / 160 A				
Utilization category	A				
Mechanical service life	15 000 operation cycles				
Electrical service life	8 000 operation cycles / 415 V AC 2 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]										
	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
-40	22.5	28	35	45	56	70	88	112	140	175	224
-35	22	27.5	34	44	55	68.5	86.5	110	137	172	220
-25	20.5	26.5	33	42	53	66	83	106	132	165	212
-15	20	25.5	32	41	51	64	80	102	127	159	204
-5	19.5	24.5	30.5	39	49	61	77	98	122	153	196
0	19	24	30	38	48	60	75	96	120	150	192
10	18.5	23	28	37	46	57.5	72	92	115	144	184
20	17.5	22	27	35	44	55	69	88	110	137	176
30	17	21	26	33	42	52.5	66	84	105	131	168
40	16	20	25	32	40	50	63	80	100	125	160
50	15	19.5	24	30.5	37	47.5	58.5	74.5	93	116	149
60	14.5	18.5	22.5	29	33.5	45	53	67	84	105	135
70	14	18	22	28	29	40	46	56	80	91	117

Power dissipation characteristics

I_n	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
Pole resistance (mΩ)	8.8	8.8	5.2	4.5	2.6	1.8	1.7	1.3	0.88	0.8	0.8
Pole power dissipation (W)	2.3	3.5	3.3	4.6	4.2	4.5	6.7	8.3	8.8	12.5	20.5

Technical Data **Ex9M1 AC M**

AC M Moulded Case Circuit Breakers up to 160 A

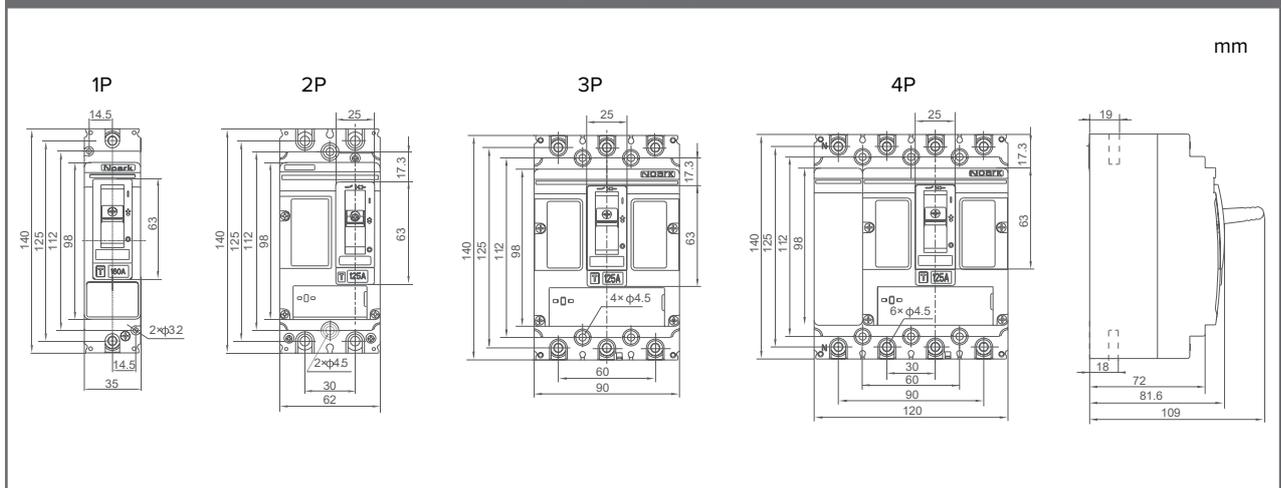
Mechanical parameters

Device width 1P / 2P / 3P / 4P	35 mm / 62 mm / 90 mm / 120 mm
Device height	140 mm
Device depth	81.6 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	4 – 95 mm ²
Fastening torque of terminals	8 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 1P / 2P / 3P / 4P	0.5 kg / 0.9 kg / 1.2 kg / 1.7 kg
Mounting position	vertical, can be rotated by 90° in each axis

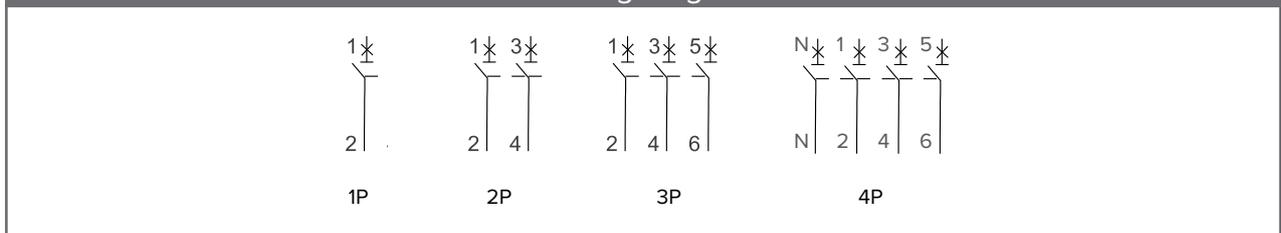
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I _n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U _e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U _i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U _{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties (U _{imp} = 8 kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

Dimensions



Wiring diagram

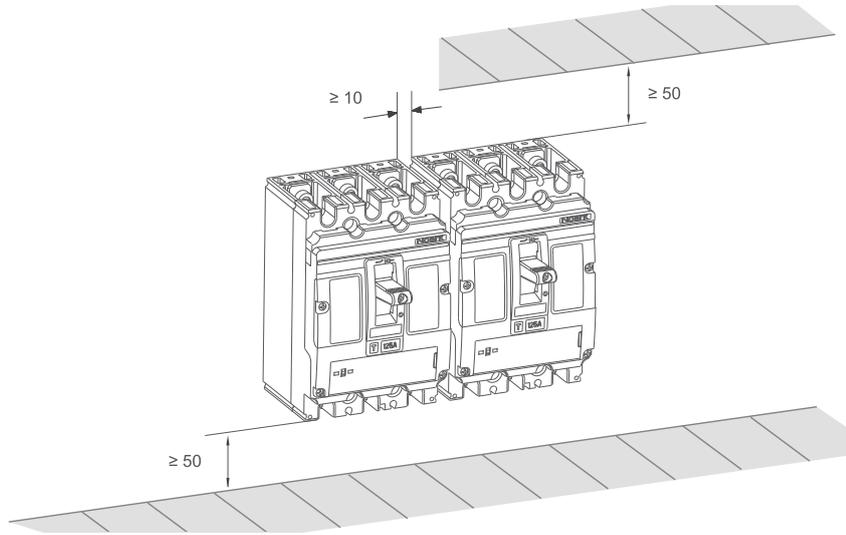


Technical Data **Ex9M1 AC M**

AC M Moulded Case Circuit Breakers up to 160 A

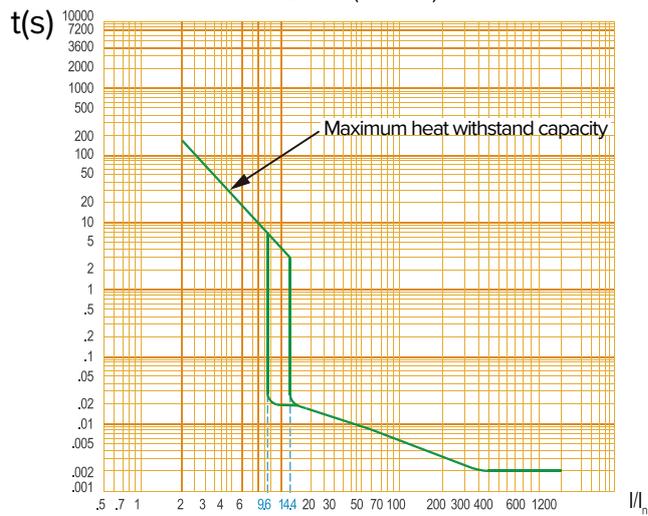
Installation space

mm

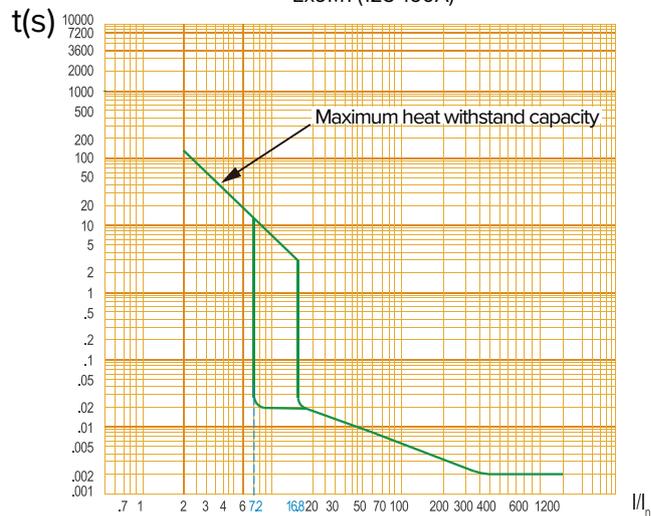


Tripping characteristics

Ex9M1 (16-100A)



Ex9M1 (125-160A)



Technical Data **Ex9M2 AC M**

AC M Moulded Case Circuit Breakers up to 250 A

General parameters		
Suitable for commercial as well as industrial applications		
I_i can be set in range $(9 - 14) \times I_n$		
$I_{IN} = I_i$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD22	101429
Extended rotary handle	ERH22	101428
Remote motor operators	MOD22	101430, 101431, 112080, 101443
Terminal cover, short	TCV22 3P, 4P	101442, 102374
Terminal cover, long	TCE22 3P, 4P	101443, 102375
Phase barrier	PHS22	112111
Box terminals	MC22	103709
Screw Terminal	MCS22	107874
Tunnel terminal	MC22 W	103869, 103711, 103713
DIN-rail adapter	DRA22	106320
Plug-in base	PIA 22	112877, 112878, 112883, 112884
Off position toggle key lock	KLK22	108853
Front plate connection	JP22	108860, 108866
Rear connection plate	RCP22	108872, 108876
Mechanical interlock	MIT22	108856
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, box terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination						
Combined accessory	I_n (T) [A]					
	125 A	160 A	180 A	200 A	225 A	250 A
PIA 22	1	1	1	0.95	0.95	0.95

Technical Data **Ex9M2 AC M**

AC M Moulded Case Circuit Breakers up to 250 A

Electrical parameters

	Ex9M2S	Ex9M2N	Ex9M2Q	Ex9M2H	Ex9M2P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	8 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated current	125 / 160 / 180 / 200 / 225 / 250 A				
Utilization category	A				
Mechanical service life	15 000 operation cycles				
Electrical service life	5 000 operation cycles / 415 V AC 2 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]					
	125 A	160 A	180 A	200 A	225 A	250 A
-40	175	224	252	280	315	35
-35	172	220	247	275	309	343
-25	165	212	238	265	300	332
-15	159	204	229	255	288	319
-5	153	196	220	245	276	306
0	150	192	212	240	270	300
10	144	184	207	230	259	287
20	137	176	198	220	247	275
30	131	168	189	210	236	262
40	125	160	180	200	225	250
50	118	152	171	190	213	237
60	106	136	157	175	196	218
70	96	120	144	166	180	207

Power dissipation characteristics

I_n	125 A	160 A	180 A	200 A	225 A	250 A
Pole resistance (mΩ)	0.7	0.55	0.55	0.55	0.4	0.4
Pole power dissipation (W)	10.9	14.1	17.8	22	20.3	25

Technical Data **Ex9M2 AC M**

AC M Moulded Case Circuit Breakers up to 250 A

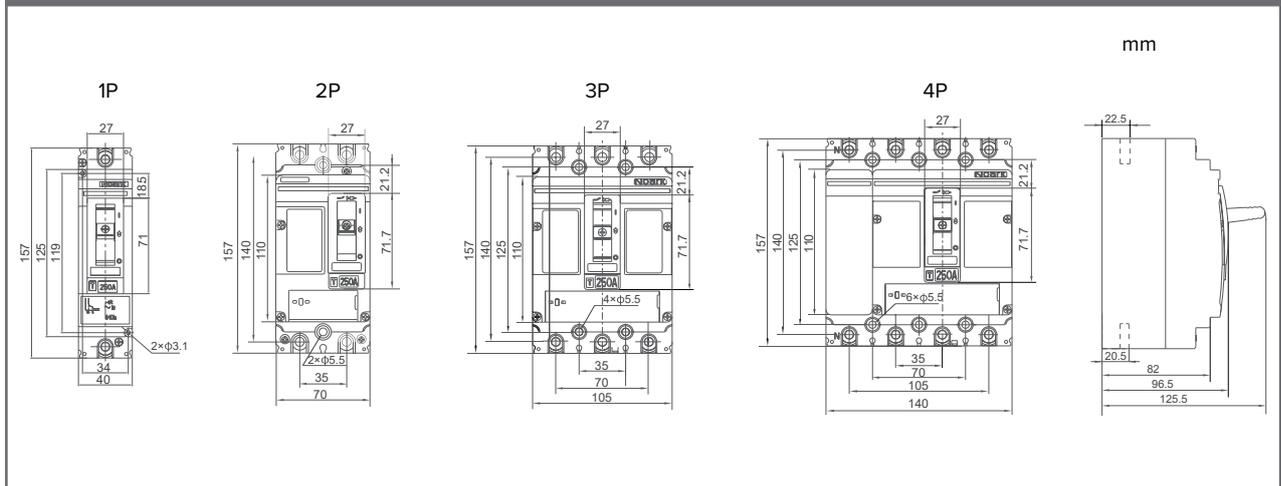
Mechanical parameters

Device width 1P / 2P / 3P / 4P	40 mm / 70 mm / 105 mm / 140 mm
Device height	157 mm
Device depth	96.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	10 – 120 mm ²
Fastening torque of terminals	25 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 1P / 2P / 3P / 4P	0.75 kg / 1.3 kg / 1.85 kg / 2.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

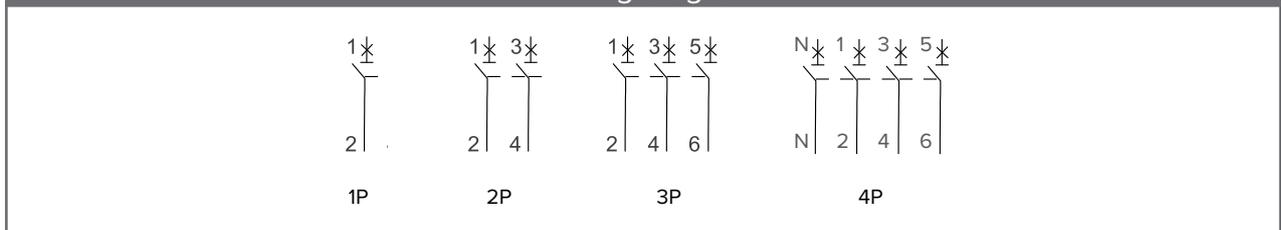
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I _n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U _e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U _i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U _{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties (U _{imp} = 8 kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

Dimensions



Wiring diagram

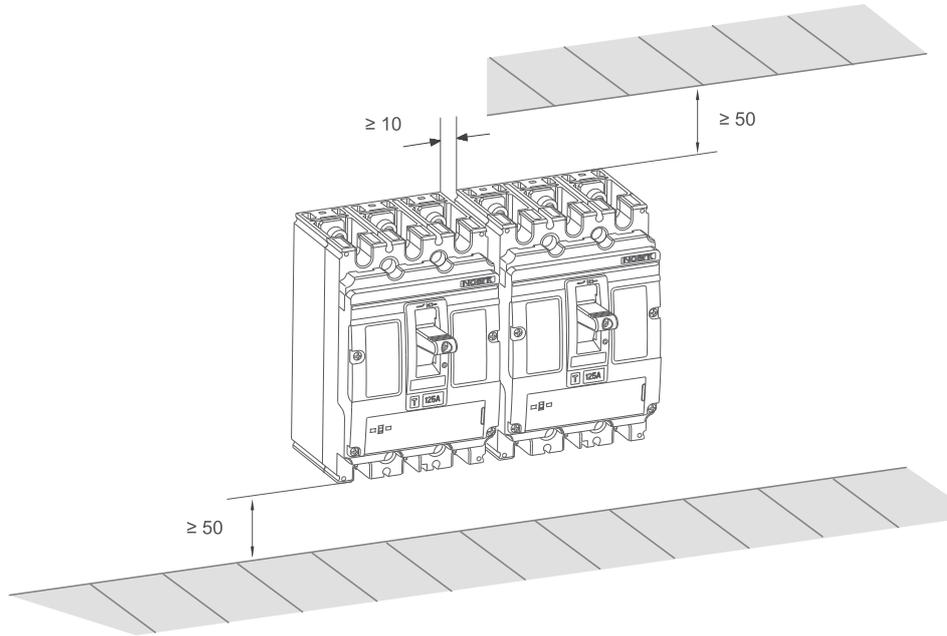


Technical Data **Ex9M2 AC M**

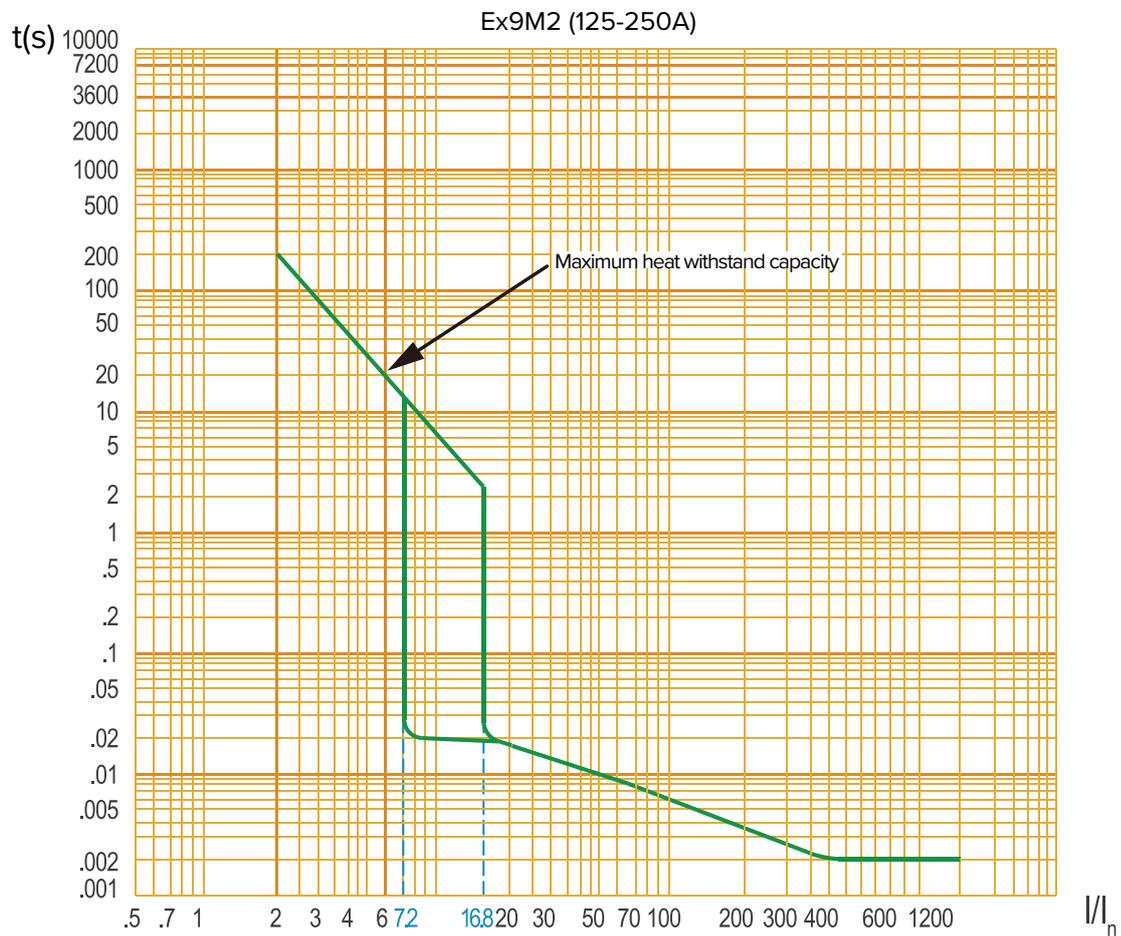
AC M Moulded Case Circuit Breakers up to 250 A

Installation space

mm



Tripping characteristics



Technical Data **Ex9M3 AC M**

AC M Moulded Case Circuit Breakers up to 500 A

General parameters		
Suitable for commercial as well as industrial applications		
I_i can be set in range $(9 - 14) \times I_n$		
$I_{IN} = I_i$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD23	101483
Extended rotary handle	ERH23	101482
Remote motor operators	MOD23	101484, 101485, 112081, 101488
Terminal cover, short	TCV23 3P, 4P	101489, 102376
Terminal cover, long	TCE23 3P, 4P	101490, 102377
Phase barrier	PHS23	112112
Box terminals	MC23	103715
Tunnel terminal	MC23 W	103719, 103721
Plug-in base	PIA 23	112879, 112880, 112885, 112886
Withdrawable base	DOB 23	108887, 108899, 108893, 108905, 108889, 108901, 108895, 108907
Off position toggle key lock	KLK23	108854
Front plate connection	JP23	108861, 108867
Rear connection plate	RCP23	108873, 108877
Mechanical interlock	MIT23	108857
Draw-Out Base	DOB23	108877, 108899, 108893, 108905, 108889, 108901, 108895, 108907
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination					
Combined accessory	I_n (T) [A]				
	250 A	315 A	350 A	400 A	500 A
PIA 23	1	1	1	1	0.95
DOB 23	1	1	1	1	1

Technical Data **Ex9M3 AC M**

AC M Moulded Case Circuit Breakers up to 500 A

Electrical parameters

	Ex9M3S	Ex9M3N	Ex9M3Q	Ex9M3H	Ex9M3P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 10 kA / 690 V	50 kA / 415 V 12 kA / 690 V	70 kA / 415 V 12 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 10 kA / 690 V	50 kA / 415 V 12 kA / 690 V	70 kA / 415 V 12 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	250 / 315 / 350 / 400 / 500 A				
Utilization category	A				
Mechanical service life	15 000 operation cycles				
Electrical service life	4 000 operation cycles / 415 V AC 1 500 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]				
	250 A	315 A	350 A	400 A	500 A
-40	350	441	490	560	700
-35	343	433	481	550	687
-25	332	418	465	530	662
-15	319	402	447	510	637
-5	306	386	429	490	612
0	300	378	420	480	600
10	287	362	402	460	575
20	275	346	385	440	550
30	262	331	367	420	525
40	250	315	350	400	500
50	237	300	332	380	450
60	225	286	295	360	406
70	212	271	276	320	360

Power dissipation characteristics

I_n	250 A	315 A	350 A	400 A	500 A
Pole resistance (mΩ)	0.35	0.25	0.25	0.15	0.12
Pole power dissipation (W)	21.9	24.8	30.6	24	30

Technical Data **Ex9M3 AC M**

AC M Moulded Case Circuit Breakers up to 500 A

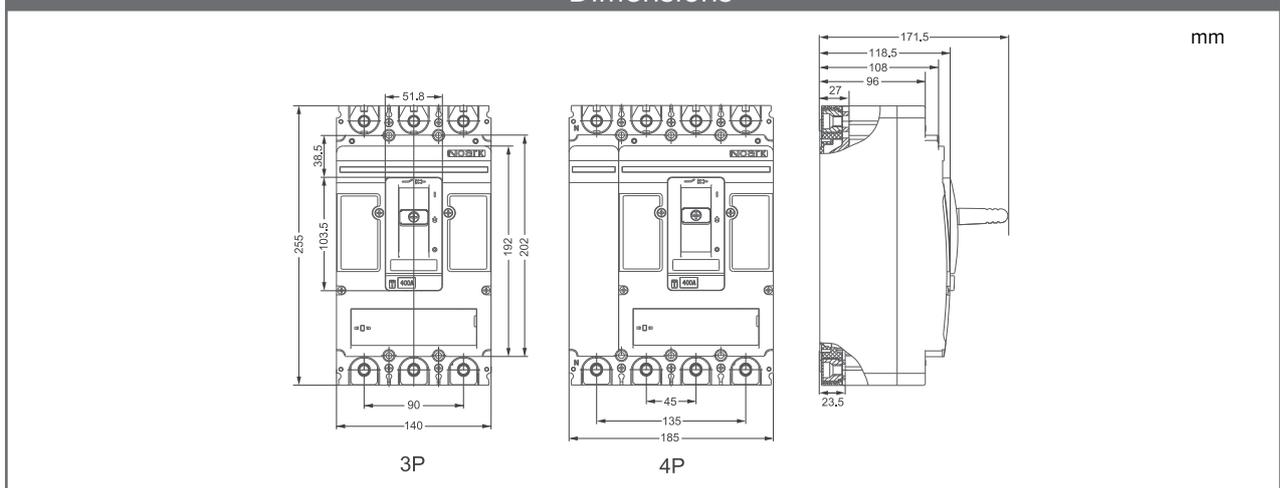
Mechanical parameters

Device width 3P / 4P	140 mm / 185 mm
Device height	255 mm
Device depth	118.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 8 mm
Busbar width	≤ 30 mm
Cable lug width	≤ 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	5.2 kg / 6.7 kg
Mounting position	vertical, can be rotated by 90° in each axis

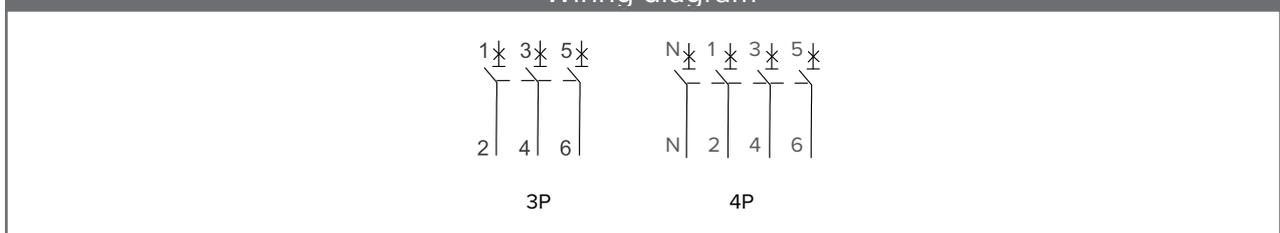
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions



Wiring diagram

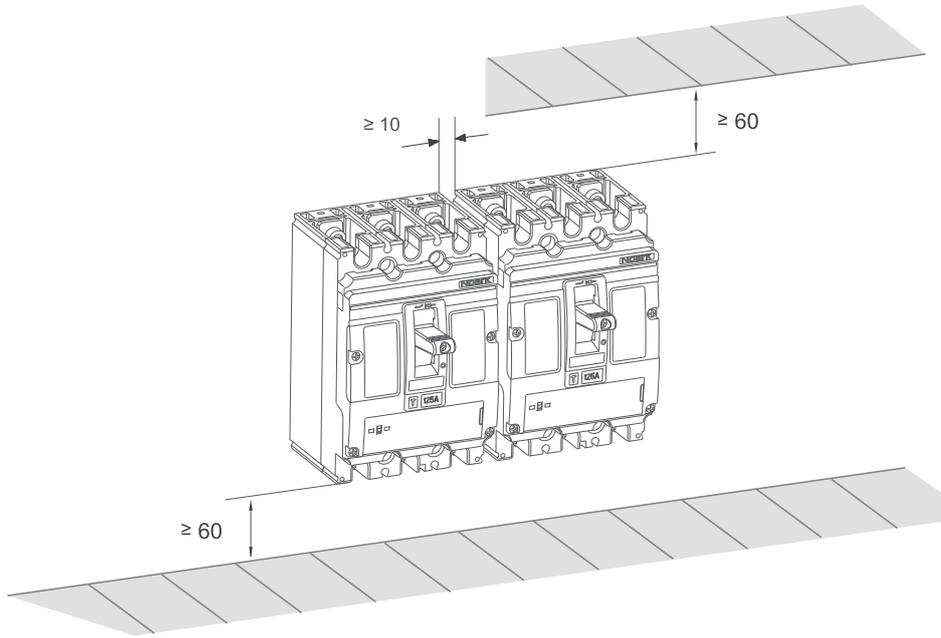


Technical Data **Ex9M3 AC M**

AC M Moulded Case Circuit Breakers up to 500 A

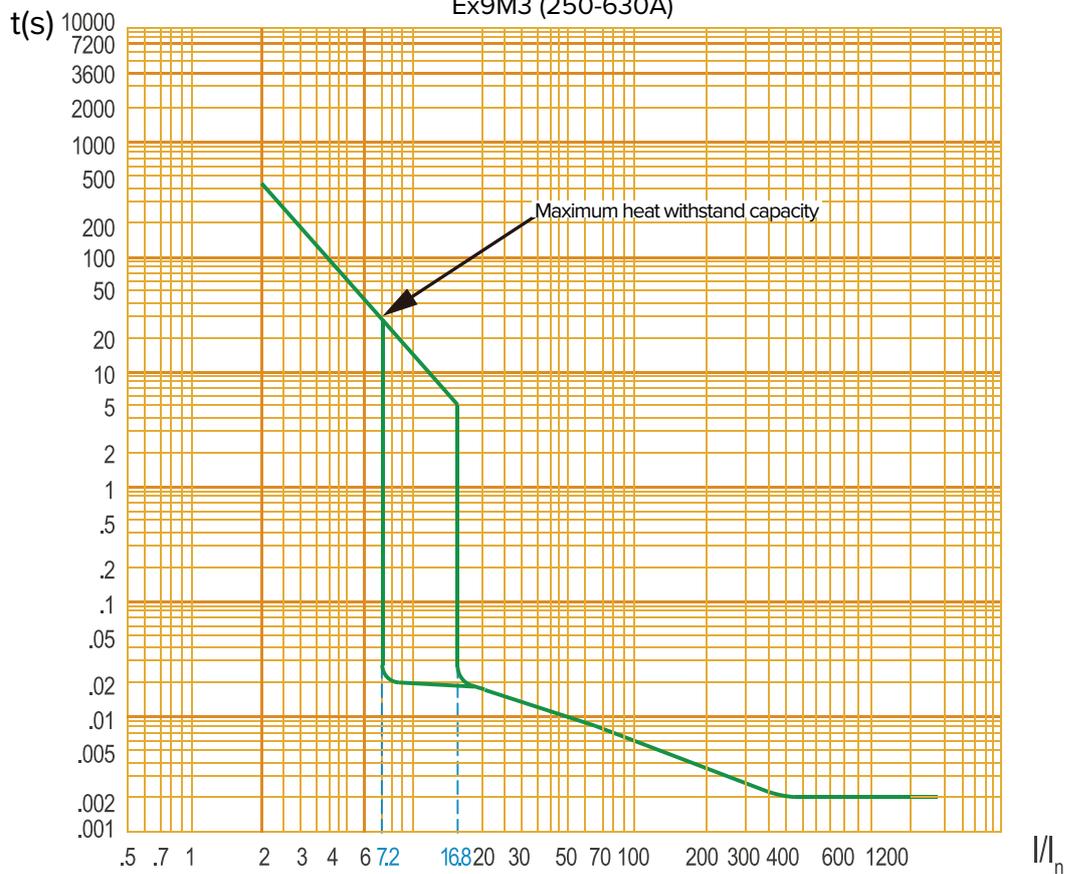
Installation space

mm



Tripping characteristics

Ex9M3 (250-630A)



Technical Data **Ex9M4 AC M**

AC M Moulded Case Circuit Breakers up to 630 A

General parameters		
Suitable for commercial as well as industrial applications		
I_i can be set in range $(9 - 14) \times I_n$		
$I_{IN} = I_i$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Draw-Out Base	DOB24	118891, 118903, 118897, 118909
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination			
Combined accessory	I_n (T) [A]		
	400 A	530 A	630 A
DOB 24	0.95	0.95	0.95

Technical Data **Ex9M4 AC M**

AC M Moulded Case Circuit Breakers up to 630 A

Electrical parameters

	Ex9M4S	Ex9M4N	Ex9M4Q	Ex9M4H	Ex9M4P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 20 kA / 690 V	150 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	400 / 500 / 630 A				
Utilization category	A				
Mechanical service life	10 000 operation cycles				
Electrical service life	3 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]		
	400 A	500 A	630 A
-40	560	700	882
-35	550	687	866
-25	530	662	836
-15	510	637	804
-5	490	612	772
0	480	600	756
10	460	575	724
20	440	550	693
30	420	525	661
40	400	500	630
50	390	490	580
60	370	460	530
70	320	400	490

Power dissipation characteristics

I_n	400 A	500 A	630 A
Pole resistance (mΩ)	0.08	0.08	0.08
Pole power dissipation (W)	12.8	20	31.8

Technical Data Ex9M4 AC M

AC M Moulded Case Circuit Breakers up to 630 A

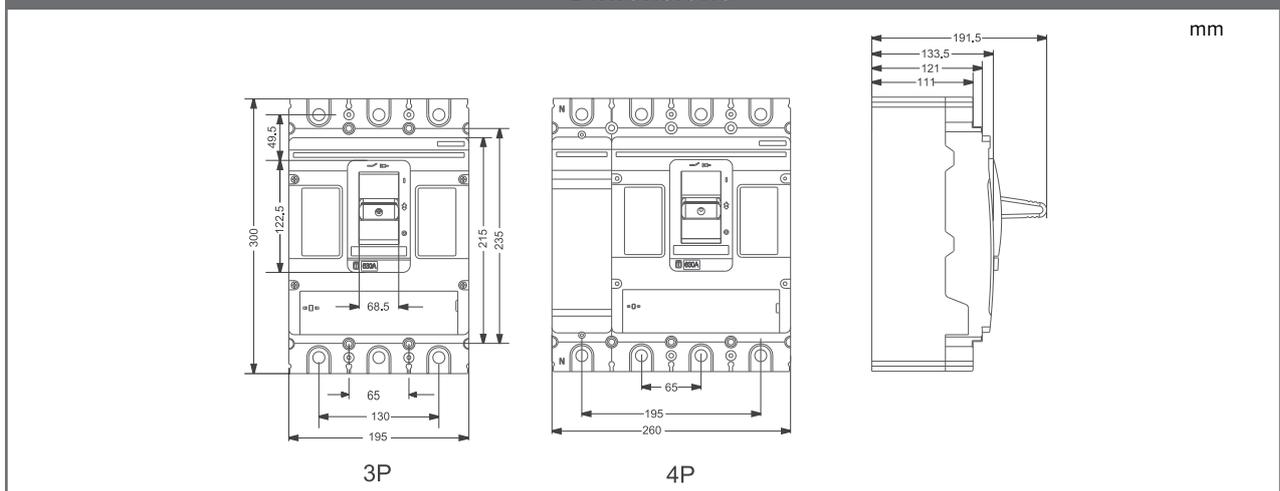
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

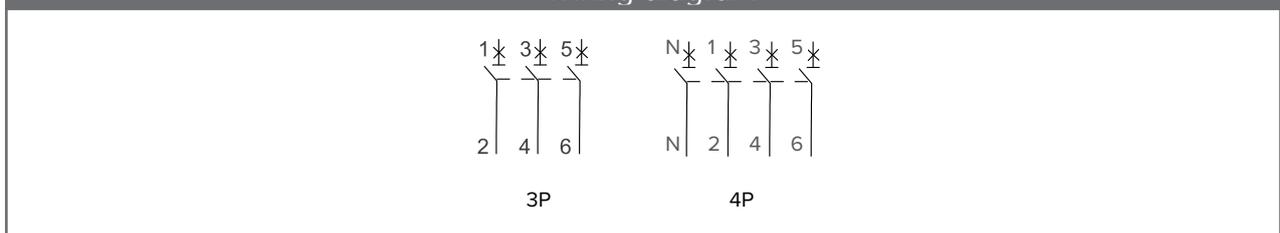
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions



Wiring diagram

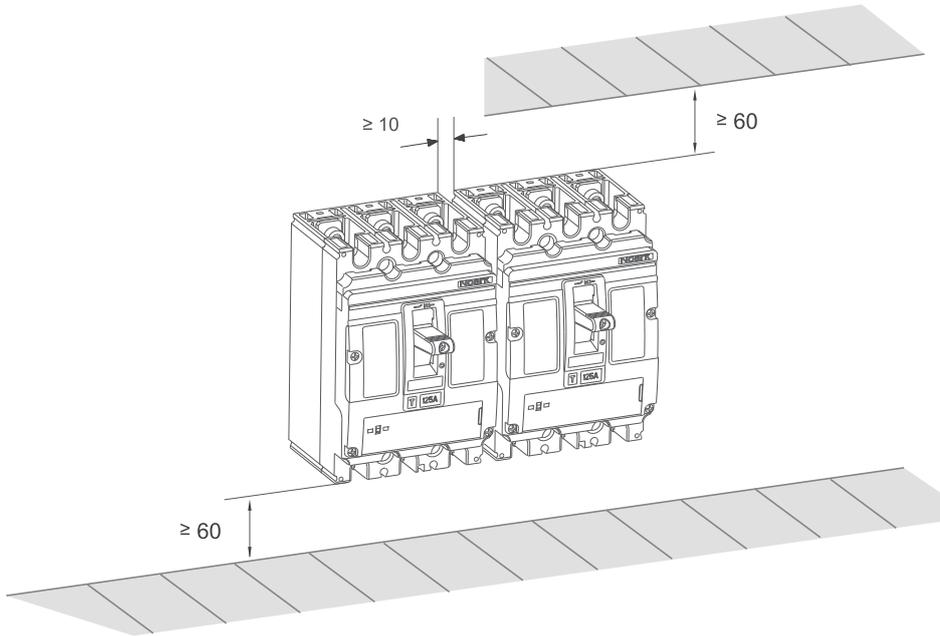


Technical Data **Ex9M4 AC M**

AC M Moulded Case Circuit Breakers up to 630 A

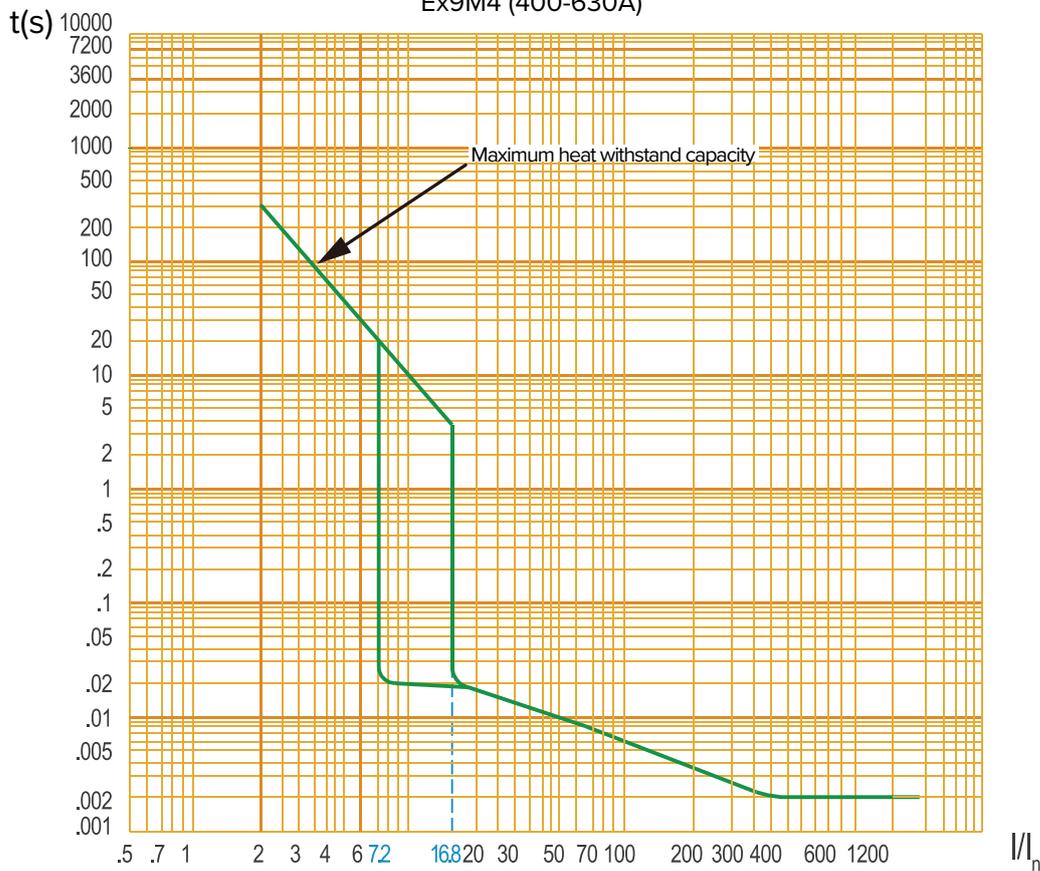
Installation space

mm



Tripping characteristics

Ex9M4 (400-630A)



Technical Data **Ex9M5 AC M**

AC M Moulded Case Circuit Breakers up to 800 A

General parameters		
Suitable for commercial as well as industrial applications		
I_i can be set in range $(9 - 14) \times I_n$		
$I_{iN} = I_i$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723-103730
Undervoltage releases	UVT24	103722-103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PB24	103751, 104856
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Draw-Out Base	DOB24	118891, 118903, 118897, 118909
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination			
Combined accessory	I_n (T) [A]		
	630 A	700 A	800 A
DOB 24	0.95	0.95	0.9

Technical Data **Ex9M5 AC M**

AC M Moulded Case Circuit Breakers up to 800 A

Electrical parameters

	Ex9M5S	Ex9M5N	Ex9M5Q	Ex9M5H	Ex9M5P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 20 kA / 690 V	150 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	630 / 700 / 800 A				
Utilization category	A				
Mechanical service life	10 000 operation cycles				
Electrical service life	2 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]		
	630 A	700 A	800 A
-40	882	980	1120
-35	866	962	1100
-25	836	927	1060
-15	804	892	1020
-5	772	857	980
0	756	840	960
10	724	805	920
20	693	770	880
30	661	735	840
40	630	700	800
50	580	670	735
60	530	645	670
70	490	575	625

Power dissipation characteristics

I_n	630 A	700 A	800 A
Pole resistance (mΩ)	0.08	0.08	0.08
Pole power dissipation (W)	31.8	39.2	51.2

Technical Data **Ex9M5 AC M**

AC M Moulded Case Circuit Breakers up to 800 A

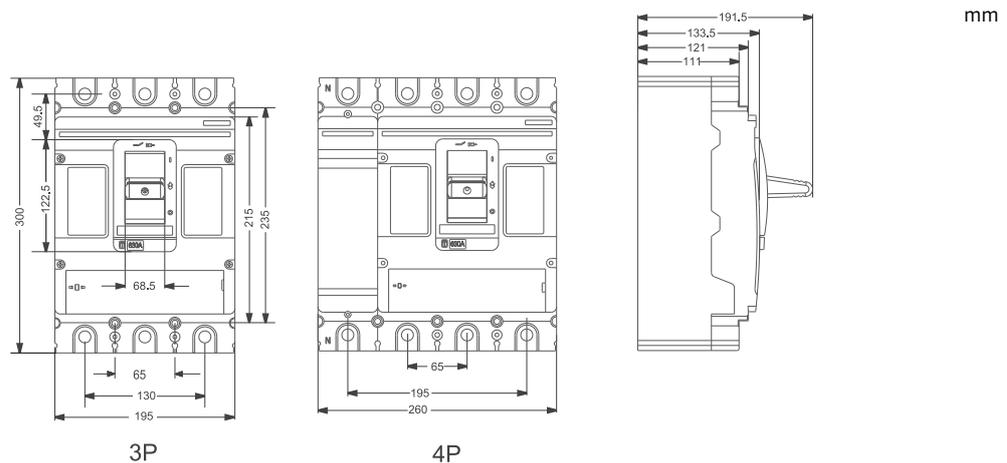
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

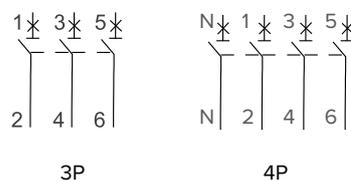
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions



Wiring diagram

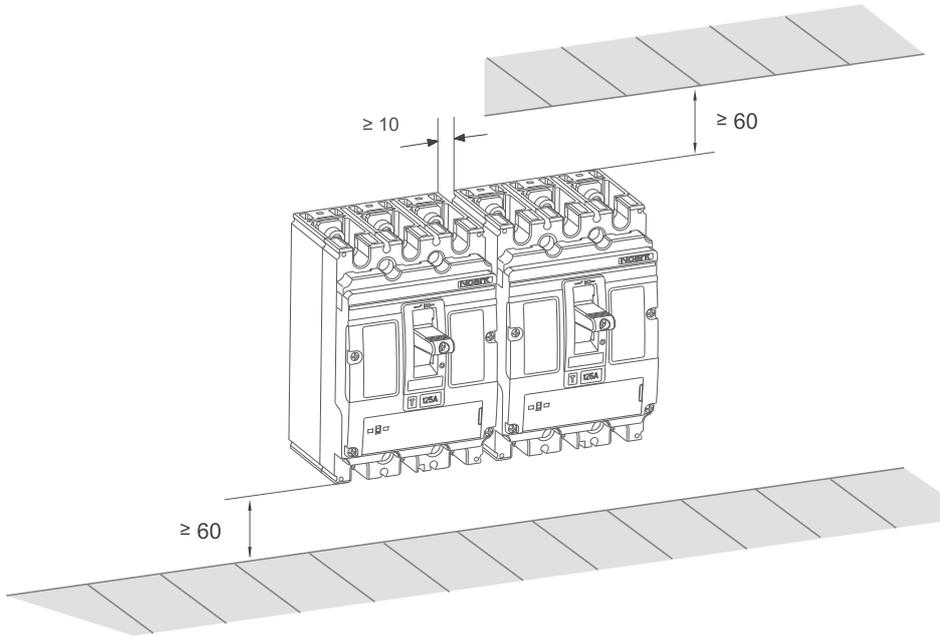


Technical Data **Ex9M5 AC M**

AC M Moulded Case Circuit Breakers up to 800 A

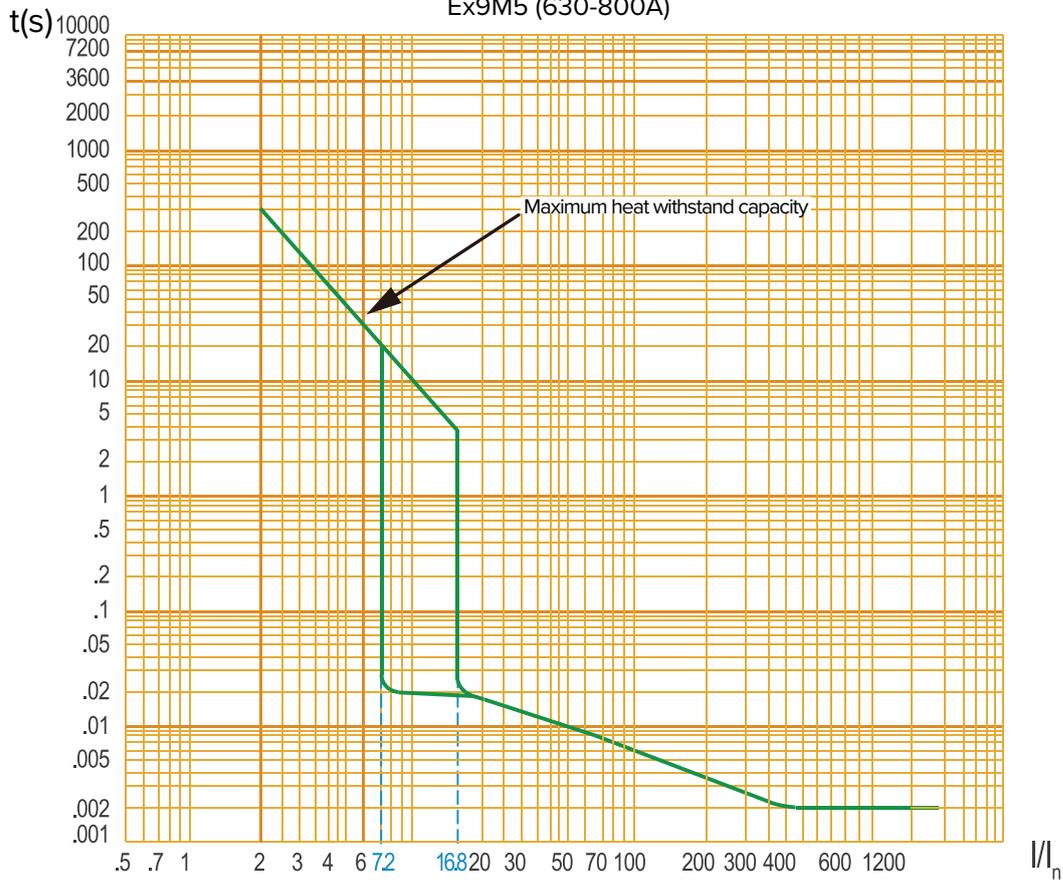
Installation space

mm



Tripping characteristics

Ex9M5 (630-800A)



Technical Data **Ex9M1 DC TM**

DC TM Moulded Case Circuit Breakers up to 160 A

General parameters

Suitable for commercial as well as industrial applications

I_r (1.0) Not adjustable (1 Pole)

I_r can be set in range $(0.7 - 1.0) \times I_n$

I_i (10) range not adjustable (1 Pole)

I_i can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types (3 and 4 Pole), otherwise is fixed at $10 \times I_n$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT21	101397 — 101405
Undervoltage releases	UVT21	101406 — 101407

Max. number of installed internal accessories is 2w pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT21 or UVT21)

External accessories

Direct rotary handle	RHD21	101410
Extended rotary handle	ERH21	101409
Remote motor operators	MOD21	101411, 101412, 112079, 101425
Terminal cover, short	TCV21 3P, 4P	101439, 102372
Terminal cover, long	TCE21 3P, 4P	101440, 102373
Phase barrier	PHS21	112110
Box terminals	MC21	103705
Screw Terminal	MCS21	107873
Tunnel terminal	MC21 W	103707
DIN-rail adapter	DRA21	106319
Plug-in base	PIA 21	112875, 112876, 112881, 112882
Off position toggle key lock	KLK21	108852
Front plate connection	JP21	108859, 108865
Rear connection plate	RCP21	108871, 108875
Mechanical interlock	MIT21	108855
Mounting depth spacers	WG10, WG13	106131, 106132

Mounting screws, box terminals as well as phase barriers in the scope of delivery

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]					
	16 — 50 A	63 A	80 A	100 A	125 A	160
PIA 21	1	1	1	1	0.95	0.95

Technical Data Ex9M1 DC TM

DC TM Moulded Case Circuit Breakers up to 160 A

Electrical parameters

	Ex9M1B	Ex9M1S	Ex9M1N	Ex9M1Q	Ex9M1H
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e 1P / 2P / 3P / 4P	250 / 500 / 750 / 1000 V DC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	8 kV				
Rated frequency	DC				
Rated ultimate short-circuit breaking capacity I_{cu}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated service short-circuit breaking capacity I_{cs}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated current	16 / 20 / 25 / 32 / 40 / 50 / 63 / 80 / 100 / 125 / 160 A				
Utilization category	A				
Mechanical service life	15 000 operation cycles				
Electrical service life	2 000 operation cycles / 1000 V				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]										
	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
-40	22.5	28	35	45	56	70	88	112	140	175	224
-35	22	27.5	34	44	55	68.5	86.5	110	137	172	220
-25	20.5	26.5	33	42	53	66	83	106	132	165	212
-15	20	25.5	32	41	51	64	80	102	127	159	204
-5	19.5	24.5	30.5	39	49	61	77	98	122	153	196
0	19	24	30	38	48	60	75	96	120	150	192
10	18.5	23	28	37	46	57.5	72	92	115	144	184
20	17.5	22	27	35	44	55	69	88	110	137	176
30	17	21	26	33	42	52.5	66	84	105	131	168
40	16	20	25	32	40	50	63	80	100	125	160
50	15	19.5	24	30.5	37	47.5	58.5	74.5	93	116	149
60	14.5	18.5	22.5	29	33.5	45	53	67	84	105	135
70	14	18	22	28	29	40	46	56	80	91	117

Power dissipation characteristics

I_n	16 A	20 A	25 A	32 A	40 A	50 A	63 A	80 A	100 A	125 A	160 A
Pole resistance (mΩ)	8.8	8.8	5.2	4.5	2.6	1.8	1.7	1.3	0.88	0.8	0.8
Pole power dissipation (W)	2.3	3.5	3.3	4.6	4.2	4.5	6.7	8.3	8.8	12.5	20.5

Technical Data Ex9M1 DC TM

DC TM Moulded Case Circuit Breakers up to 160 A

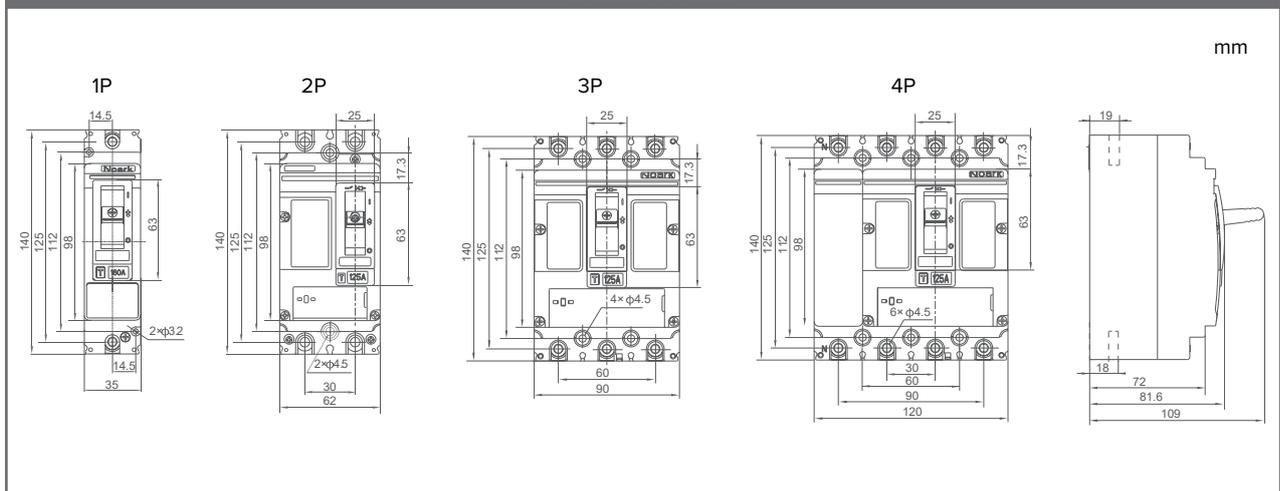
Mechanical parameters

Device width 1P / 2P / 3P / 4P	35 mm / 62 mm / 90 mm / 120 mm
Device height	140 mm
Device depth	81.6 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	screw
Terminal capacity	4 – 95 mm ²
Fastening torque of terminals	8 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 1P / 2P / 3P / 4P	0.5 kg / 0.9 kg / 1.2 kg / 1.7 kg
Mounting position	vertical, can be rotated by 90° in each axis

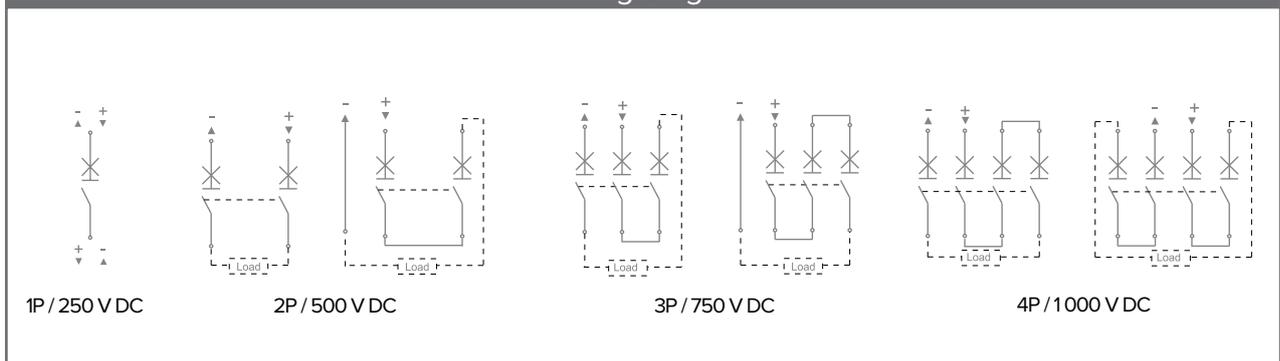
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I _n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U _e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U _i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U _{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties (U _{imp} = 8 kV)	3 110 V DC	2 892 V DC	2 705 V DC	2 488 V DC

Dimensions



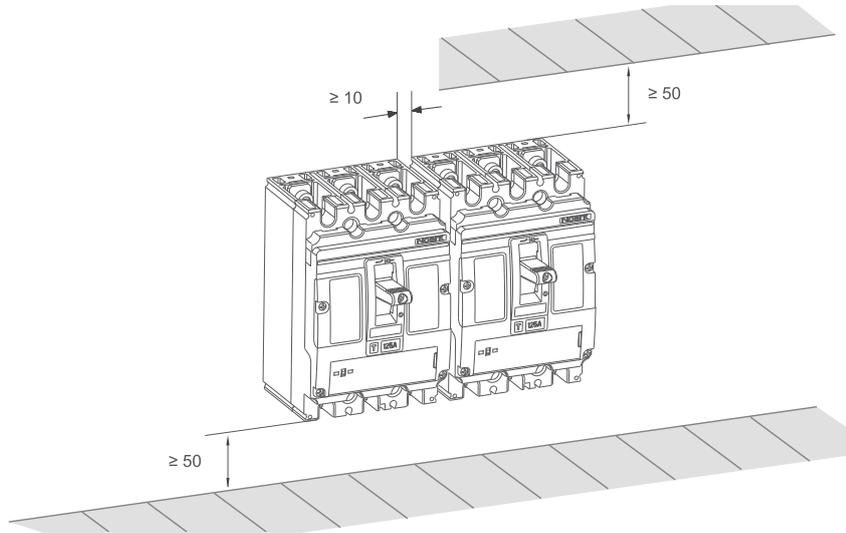
Wiring diagram



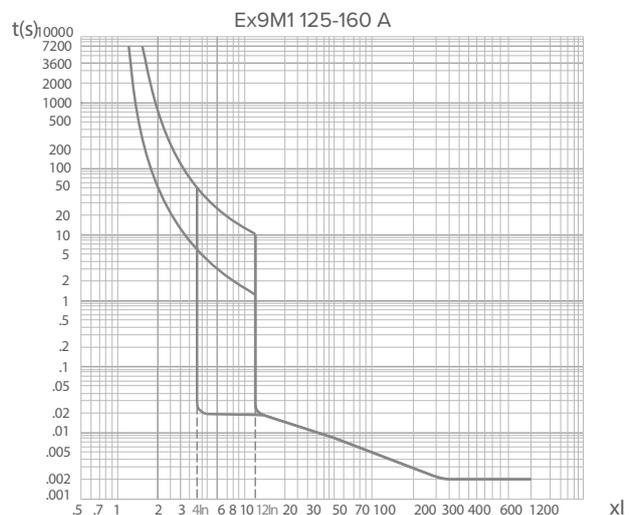
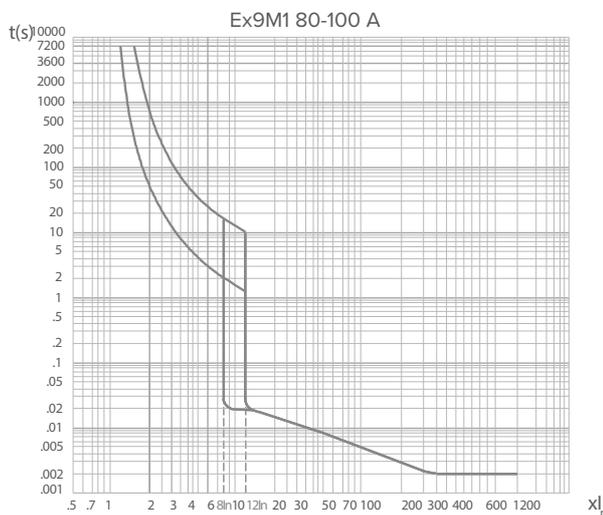
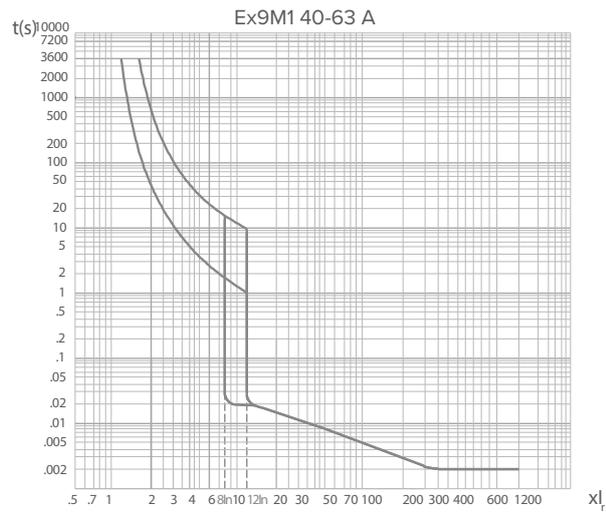
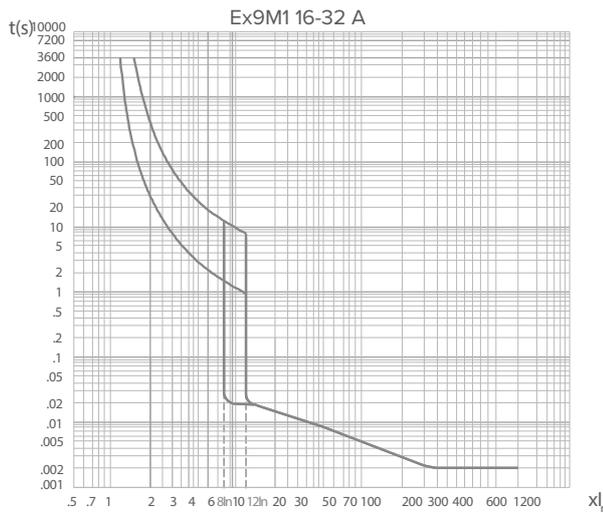
Technical Data Ex9M1 DC TM

DC TM Moulded Case Circuit Breakers up to 160 A

Installation space



Tripping characteristics



Technical Data Ex9M2 DC TM

DC TM Moulded Case Circuit Breakers up to 250 A

General parameters

Suitable for commercial as well as industrial applications

I_r (1.0) Not adjustable (1 Pole)

I_r can be set in range $(0.7 - 1.0) \times I_n$

I_i (10) range not adjustable (1 Pole)

I_i can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		

External accessories

Direct rotary handle	RHD22	101429
Extended rotary handle	ERH22	101428
Remote motor operators	MOD22	101430, 101431, 112080, 101443
Terminal cover, short	TCV22 3P, 4P	101442, 102374
Terminal cover, long	TCE22 3P, 4P	101443, 102375
Phase barrier	PHS22	112111
Box terminals	MC22	103709
Screw Terminal	MCS22	107874
Tunnel terminal	MC22 W	103869, 103711, 103713
DIN-rail adapter	DRA22	106320
Plug-in base	PIA 22	112877, 112878, 112883, 112884
Off position toggle key lock	KLK22	108853
Front plate connection	JP22	108860, 108866
Rear connection plate	RCP22	108872, 108876
Mechanical interlock	MIT22	108856
Mounting depth spacers	WG10, WG13	106131, 106132

Mounting screws, box terminals as well as phase barriers in the scope of delivery

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]					
	125 A	160 A	180 A	200 A	225 A	250 A
PIA 22	1	1	1	0.95	0.95	0.95

Technical Data **Ex9M2 DC TM**

DC TM Moulded Case Circuit Breakers up to 250 A

Electrical parameters

	Ex9M2B	Ex9M2S	Ex9M2N	Ex9M2Q	Ex9M2H
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e 1P / 2P / 3P / 4P	250 / 500 / 750 / 1000 V DC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	8 kV				
Rated frequency	DC				
Rated ultimate short-circuit breaking capacity I_{cu}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated service short-circuit breaking capacity I_{cs}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated current	125 / 160 / 180 / 200 / 225 / 250 A				
Utilization category	A				
Mechanical service life	15 000 operation cycles				
Electrical service life	1 500 operation cycles / 1000 V				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]					
	125 A	160 A	180 A	200 A	225 A	250 A
-40	175	224	252	280	315	35
-35	172	220	247	275	309	343
-25	165	212	238	265	300	332
-15	159	204	229	255	288	319
-5	153	196	220	245	276	306
0	150	192	212	240	270	300
10	144	184	207	230	259	287
20	137	176	198	220	247	275
30	131	168	189	210	236	262
40	125	160	180	200	225	250
50	118	152	171	190	213	237
60	106	136	157	175	196	218
70	96	120	144	166	180	207

Power dissipation characteristics

I_n	125 A	160 A	180 A	200 A	225 A	250 A
Pole resistance (mΩ)	0.7	0.55	0.55	0.55	0.4	0.4
Pole power dissipation (W)	10.9	14.1	17.8	22	20.3	25

Technical Data Ex9M2 DC TM

DC TM Moulded Case Circuit Breakers up to 250 A

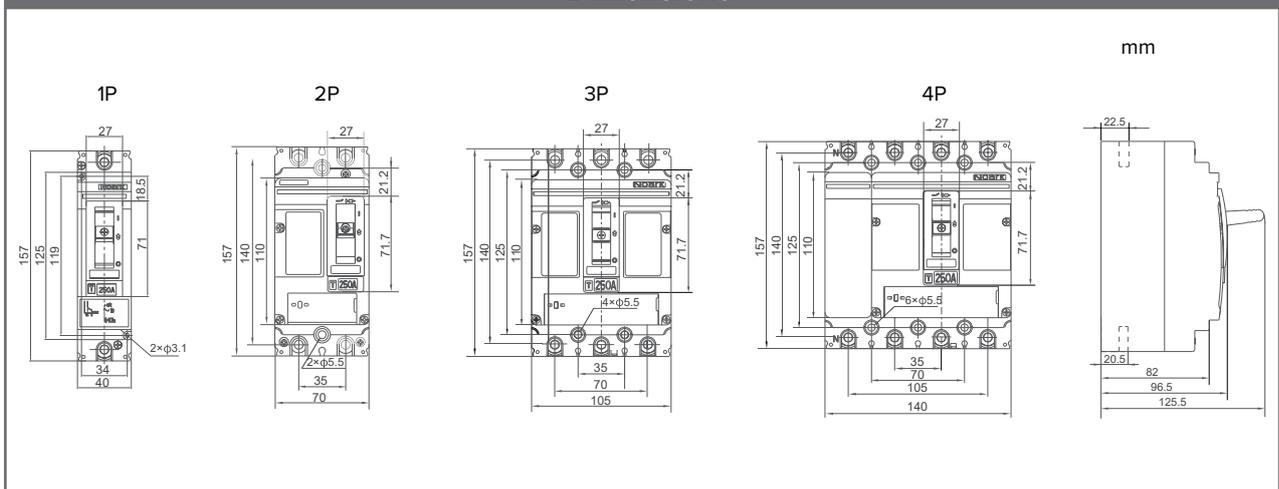
Mechanical parameters

Device width 1P / 2P / 3P / 4P	40 mm / 70 mm / 105 mm / 140 mm
Device height	157 mm
Device depth	96.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	screw
Terminal capacity	10 – 120 mm ²
Fastening torque of terminals	25 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 1P / 2P / 3P / 4P	0.75 kg / 1.3 kg / 1.85 kg / 2.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

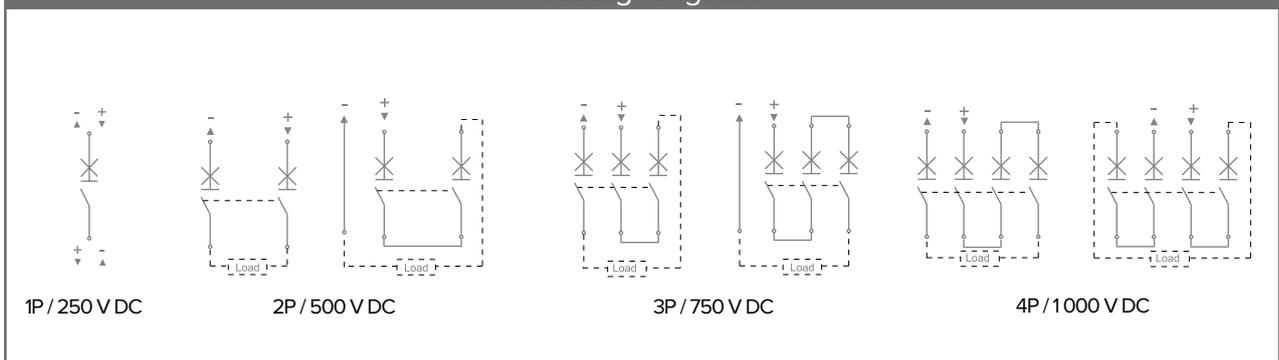
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	3 110 V DC	2 892 V DC	2 705 V DC	2 488 V DC

Dimensions



Wiring diagram

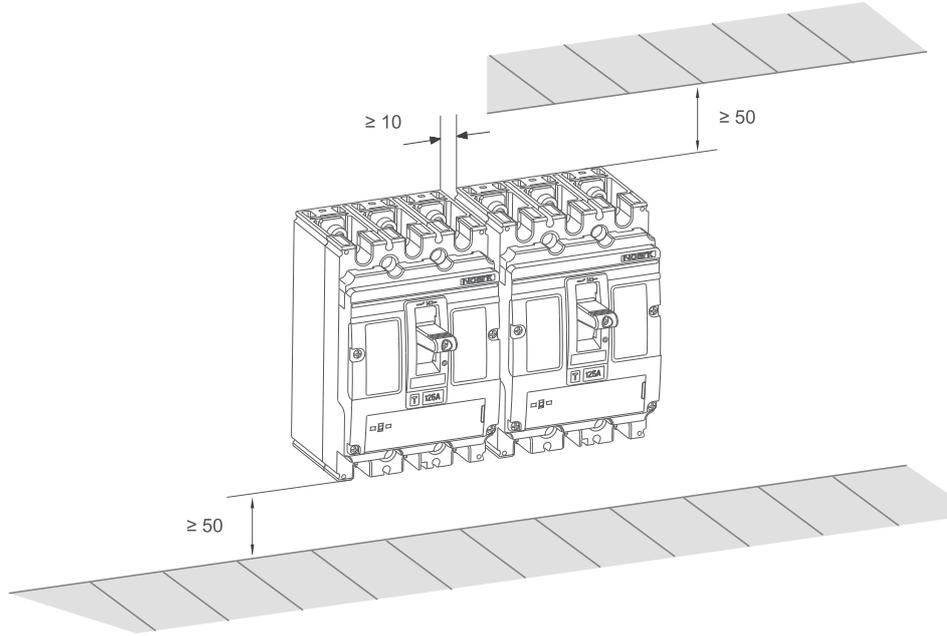


Technical Data Ex9M2 DC TM

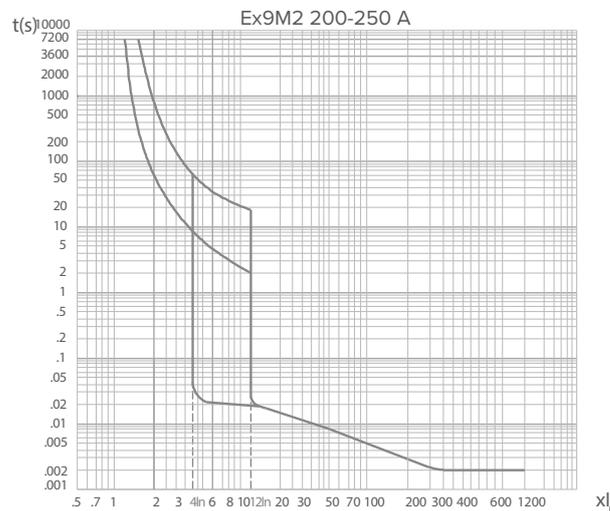
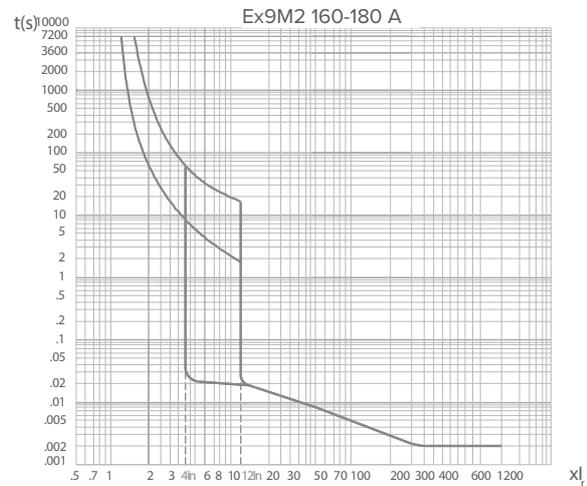
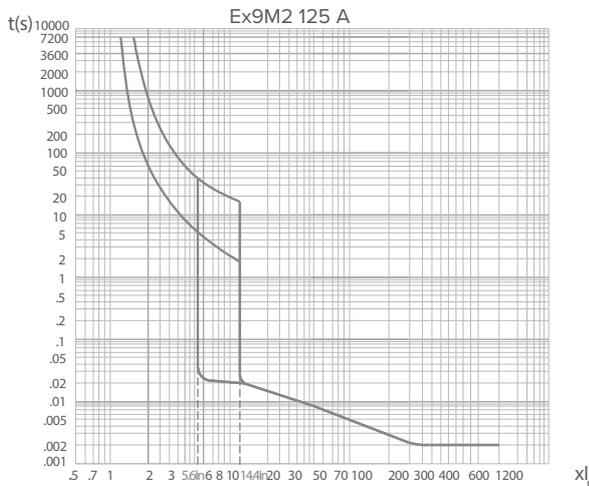
DC TM Moulded Case Circuit Breakers up to 250 A

Installation space

mm



Tripping characteristics



Technical Data **Ex9M3 DC TM**

DC TM Moulded Case Circuit Breakers up to 400 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.7 - 1.0) \times I_n$		
I_i can be set in range $(5 - 10) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD23	101483
Extended rotary handle	ERH23	101482
Remote motor operators	MOD23	101484, 101485, 112081, 101488
Terminal cover, short	TCV23 3P, 4P	101489, 102376
Terminal cover, long	TCE23 3P, 4P	101490, 102377
Phase barrier	PHS23	112112
Box terminals	MC23	103715
Tunnel terminal	MC23 W	103719, 103721
Plug-in base	PIA 23	112879, 112880, 112885, 112886
Off position toggle key lock	KLK23	108854
Front plate connection	JP23	108861, 108867
Rear connection plate	RCP23	108873, 108877
Mechanical interlock	MIT23	108857
Draw-Out Base	DOB23	108877, 108899, 108893, 108905, 108889, 108901, 108895, 108907
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination					
Combined accessory	I_n (T) [A]				
	250 A	315 A	350 A	400 A	500 A
PIA 23	1	1	1	1	0.95
DOB 23	1	1	1	1	1

Technical Data **Ex9M3 DC TM**

DC TM Moulded Case Circuit Breakers up to 400 A

Electrical parameters

	Ex9M3B	Ex9M3S	Ex9M3N	Ex9M3Q	Ex9M3H
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	750 / 1000 V DC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	DC				
Rated ultimate short-circuit breaking capacity I_{cu}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated service short-circuit breaking capacity I_{cs}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated current	250 / 315 / 350 / 400 A				
Utilization category	A				
Mechanical service life	15 000 operation cycles				
Electrical service life	1 500 operation cycles / 1000 V				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]			
	250 A	315 A	350 A	400 A
-40	350	441	490	560
-35	343	433	481	550
-25	332	418	465	530
-15	319	402	447	510
-5	306	386	429	490
0	300	378	420	480
10	287	362	402	460
20	275	346	385	440
30	262	331	367	420
40	250	315	350	400
50	237	300	332	380
60	225	286	295	360
70	212	271	276	320

Power dissipation characteristics

I_n	250 A	315 A	350 A	400 A
Pole resistance (mΩ)	0.35	0.25	0.25	0.15
Pole power dissipation (W)	21.9	24.8	30.6	24

Technical Data Ex9M3 DC TM

DC TM Moulded Case Circuit Breakers up to 400 A

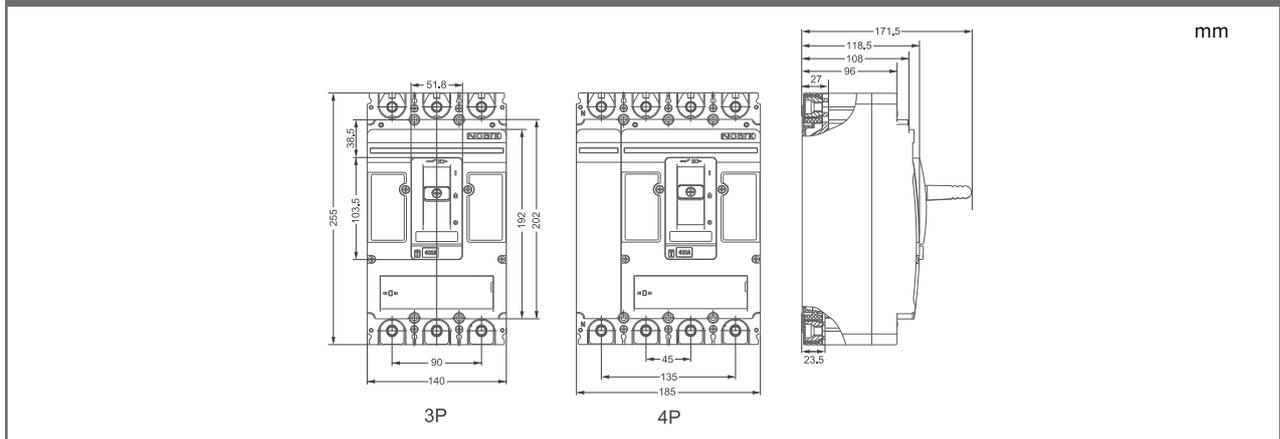
Mechanical parameters

Device width 3P / 4P	140 mm / 185 mm
Device height	255 mm
Device depth	118.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 8 mm
Busbar width	≤ 30 mm
Cable lug width	≤ 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	5.2 kg / 6.7 kg
Mounting position	vertical, can be rotated by 90° in each axis

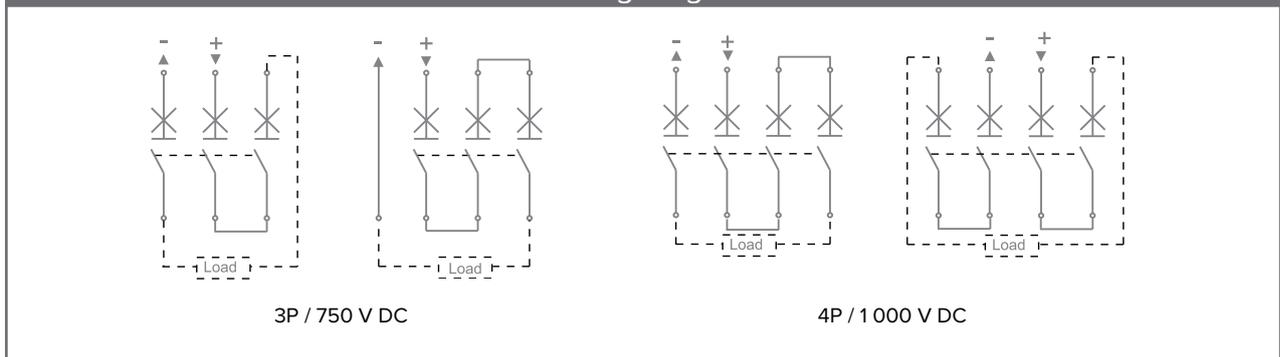
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	3 600 V DC	3 350 V DC	3 110 V DC	2 985 V DC

Dimensions



Wiring diagram

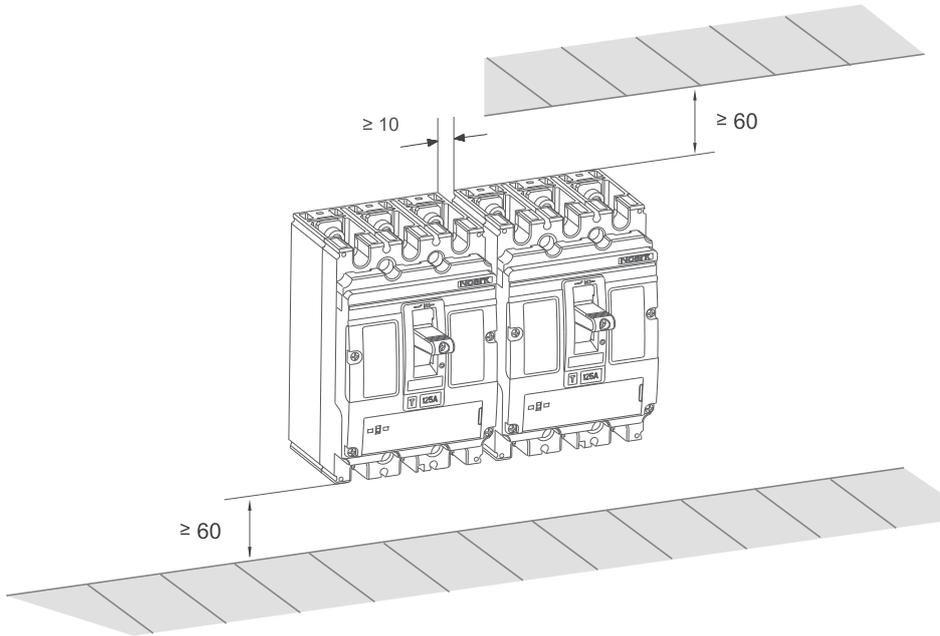


Technical Data **Ex9M3 DC TM**

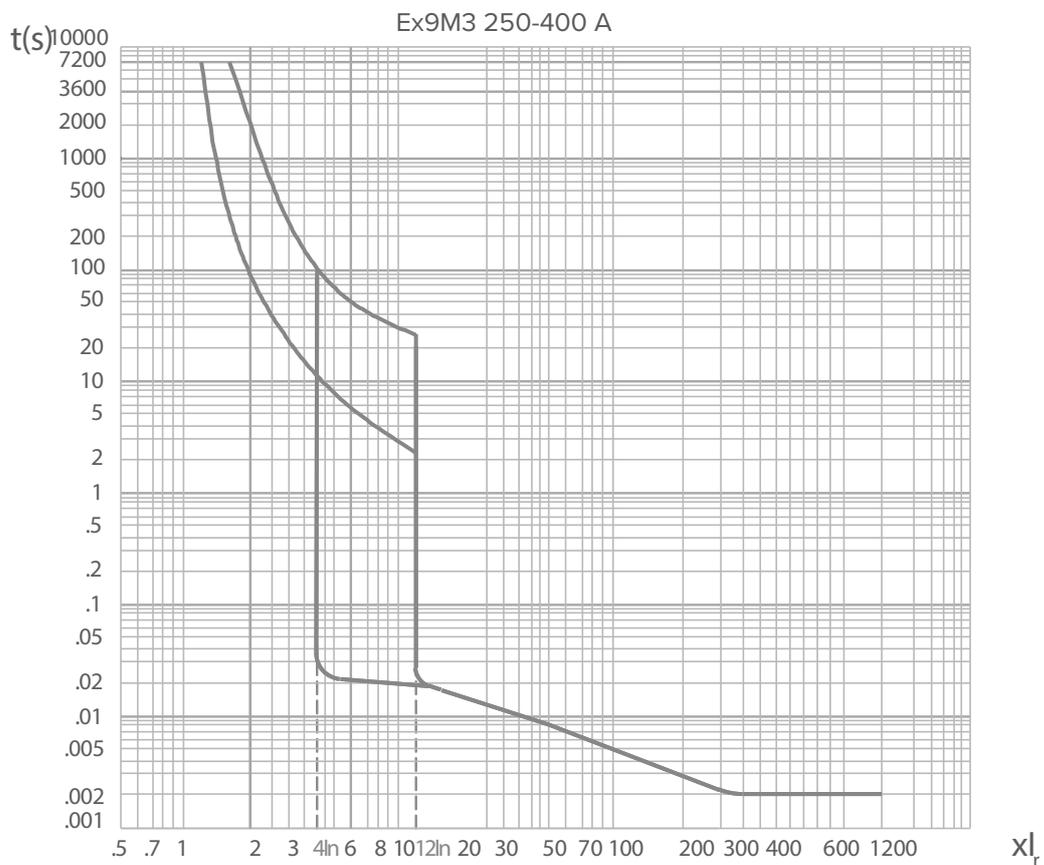
DC TM Moulded Case Circuit Breakers up to 400 A

Installation space

mm



Tripping characteristics



Technical Data **Ex9M4 DC TM**

DC TM Moulded Case Circuit Breakers up to 630 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.7 - 1.0) \times I_n$		
I_i can be set in range $(5 - 10) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Draw-Out Base	DOB24	118891, 118903, 118897, 118909
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination			
Combined accessory	I_n (T) [A]		
	400 A	530 A	630 A
DOB 24	0.95	0.95	0.95

Technical Data **Ex9M4 DC TM**

DC TM Moulded Case Circuit Breakers up to 630 A

Electrical parameters

	Ex9M4B	Ex9M4S	Ex9M4N	Ex9M4Q	Ex9M4H
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	750 / 1000 V DC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	DC				
Rated ultimate short-circuit breaking capacity I_{cu}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated service short-circuit breaking capacity I_{cs}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated current	400 / 500 / 630 A				
Utilization category	A				
Mechanical service life	10 000 operation cycles				
Electrical service life	1 500 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]		
	400 A	500 A	630 A
-40	560	700	882
-35	550	687	866
-25	530	662	836
-15	510	637	804
-5	490	612	772
0	480	600	756
10	460	575	724
20	440	550	693
30	420	525	661
40	400	500	630
50	390	490	580
60	370	460	530
70	320	400	490

Power dissipation characteristics

I_n	400 A	500 A	630 A
Pole resistance (mΩ)	0.08	0.08	0.08
Pole power dissipation (W)	12.8	20	31.8

Technical Data Ex9M4 DC TM

DC TM Moulded Case Circuit Breakers up to 630 A

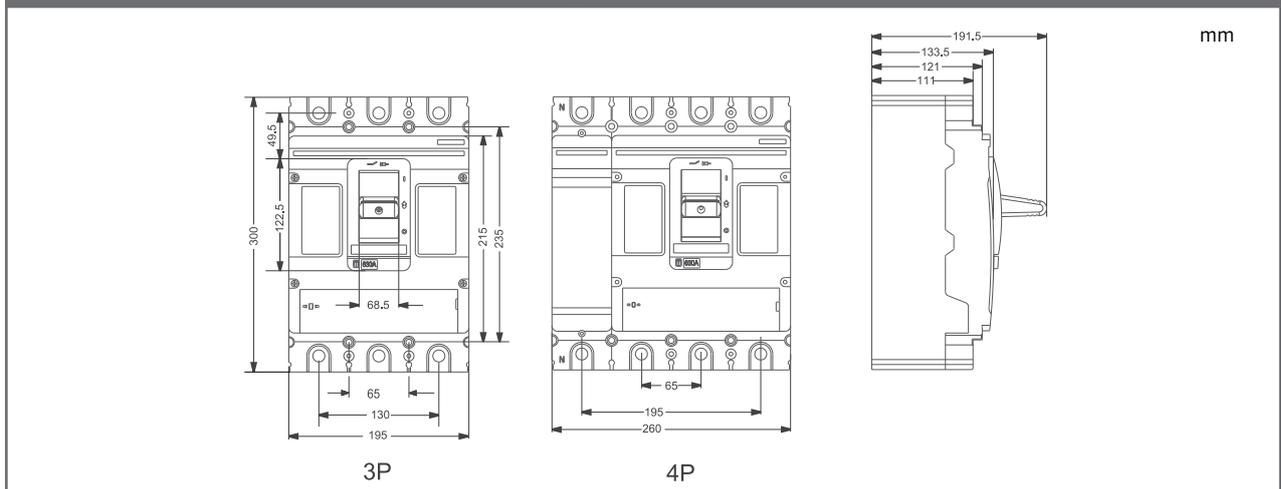
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

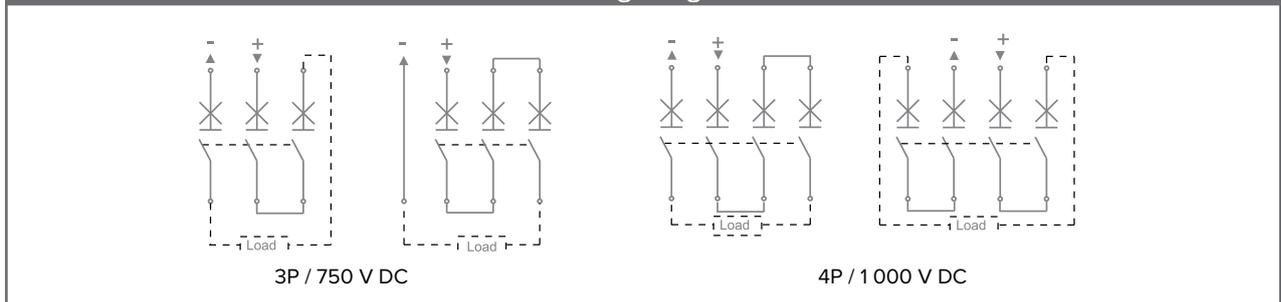
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	3 600 V DC	3 350 V DC	3 110 V DC	2 985 V DC

Dimensions



Wiring diagram

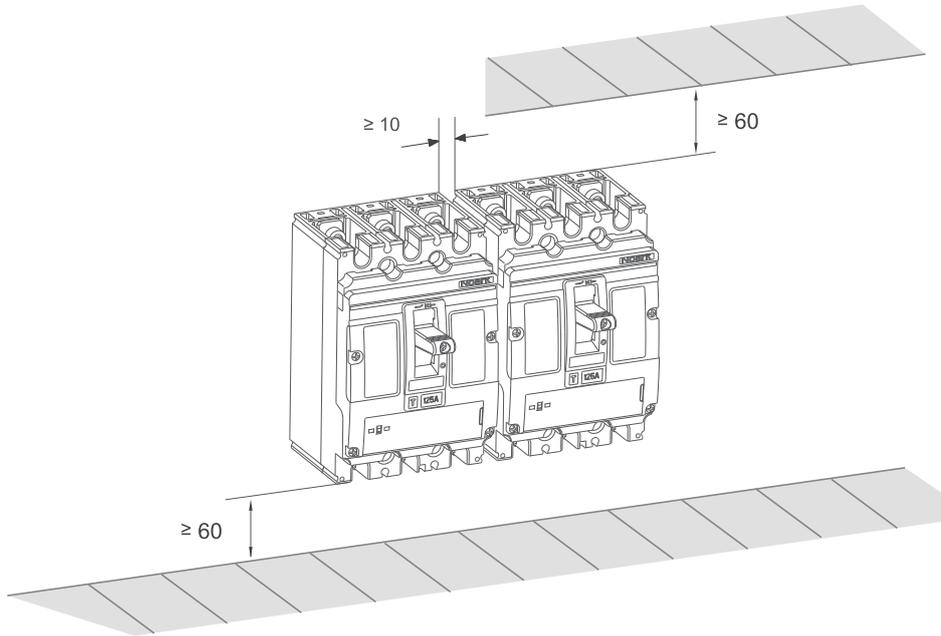


Technical Data **Ex9M4 DC TM**

DC TM Moulded Case Circuit Breakers up to 630 A

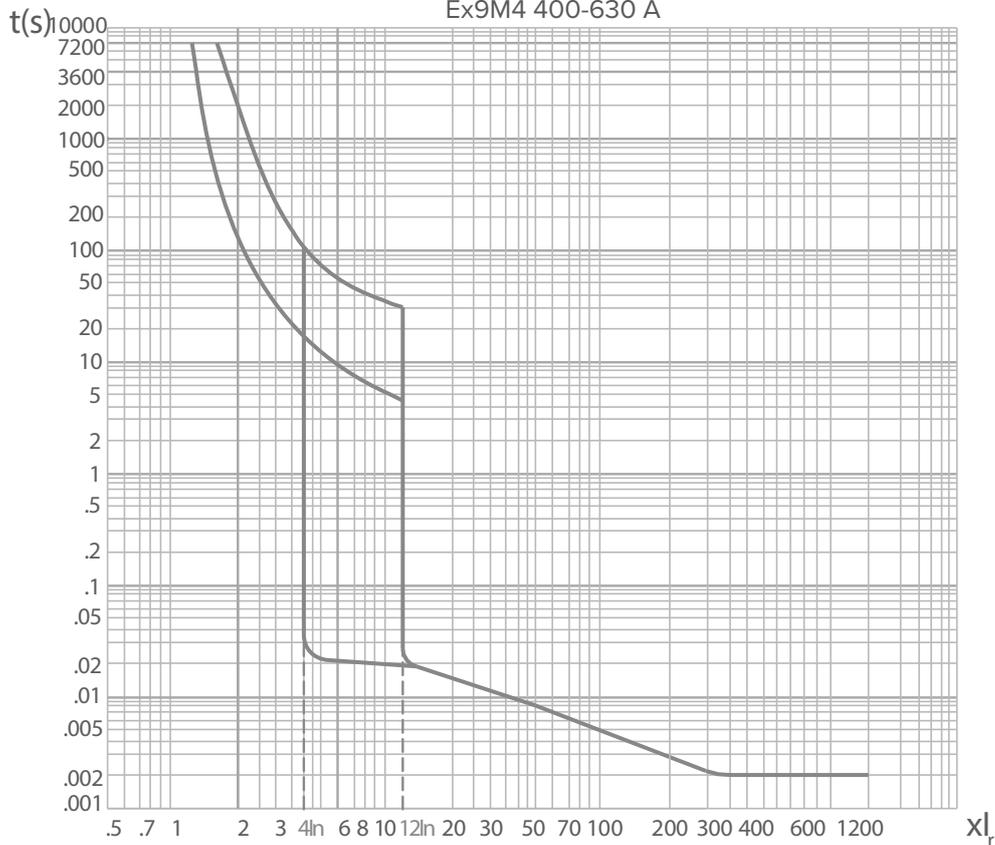
Installation space

mm



Tripping characteristics

Ex9M4 400-630 A



Technical Data **Ex9M5 DC TM**

DC TM Moulded Case Circuit Breakers up to 800 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.7 - 1.0) \times I_n$		
I_i can be set in range $(5 - 10) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723-103730
Undervoltage releases	UVT24	103722-103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PB24	103751, 104856
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Draw-Out Base	DOB24	118891, 118903, 118897, 118909
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination			
Combined accessory	I_n (T) [A]		
	630 A	700 A	800 A
DOB 24	0.95	0.95	0.9

Technical Data **Ex9M5 DC TM**

DC TM Moulded Case Circuit Breakers up to 800 A

Electrical parameters

	Ex9M5B	Ex9M5S	Ex9M5N	Ex9M5Q	Ex9M5H
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	750 / 1000 V DC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	DC				
Rated ultimate short-circuit breaking capacity I_{cu}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated service short-circuit breaking capacity I_{cs}	25 kA / 1000V	36 kA / 1000V	50 kA / 1000V	70 kA / 1000V	100 kA / 1000V
Rated current	630 / 700 / 800 A				
Utilization category	A				
Mechanical service life	10 000 operation cycles				
Electrical service life	1 000 operation cycles / 1000 V DC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]		
	630 A	700 A	800 A
-40	882	980	1120
-35	866	962	1100
-25	836	927	1060
-15	804	892	1020
-5	772	857	980
0	756	840	960
10	724	805	920
20	693	770	880
30	661	735	840
40	630	700	800
50	580	670	735
60	530	645	670
70	490	575	625

Power dissipation characteristics

I_n	630 A	700 A	800 A
Pole resistance (mΩ)	0.08	0.08	0.08
Pole power dissipation (W)	31.8	39.2	51.2

Technical Data Ex9M5 DC TM

DC TM Moulded Case Circuit Breakers up to 800 A

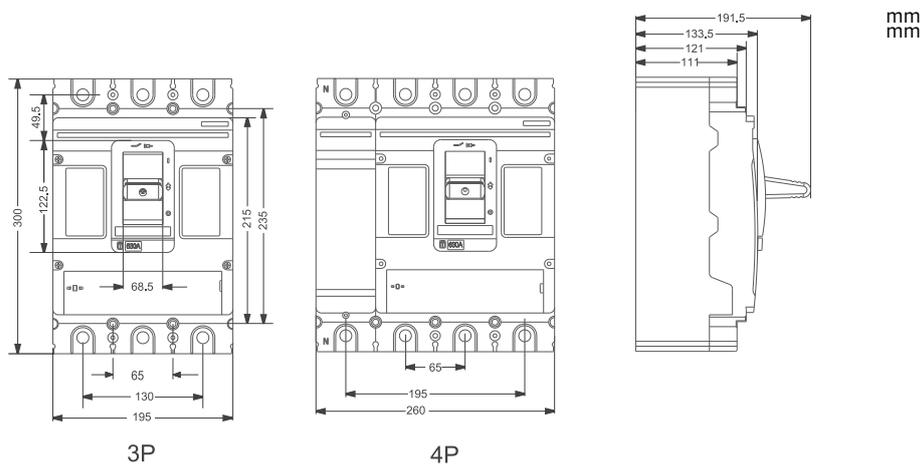
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

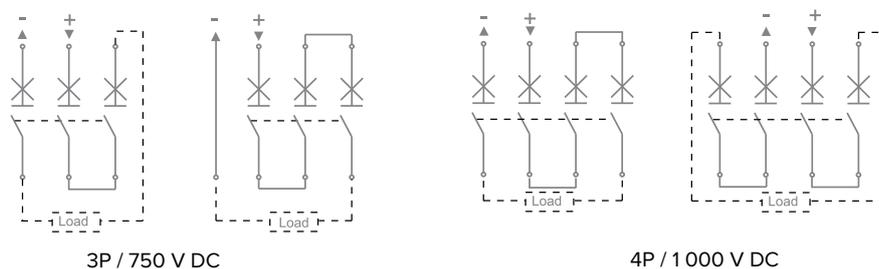
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	3 600 V DC	3 350 V DC	3 110 V DC	2 985 V DC

Dimensions



Wiring diagram

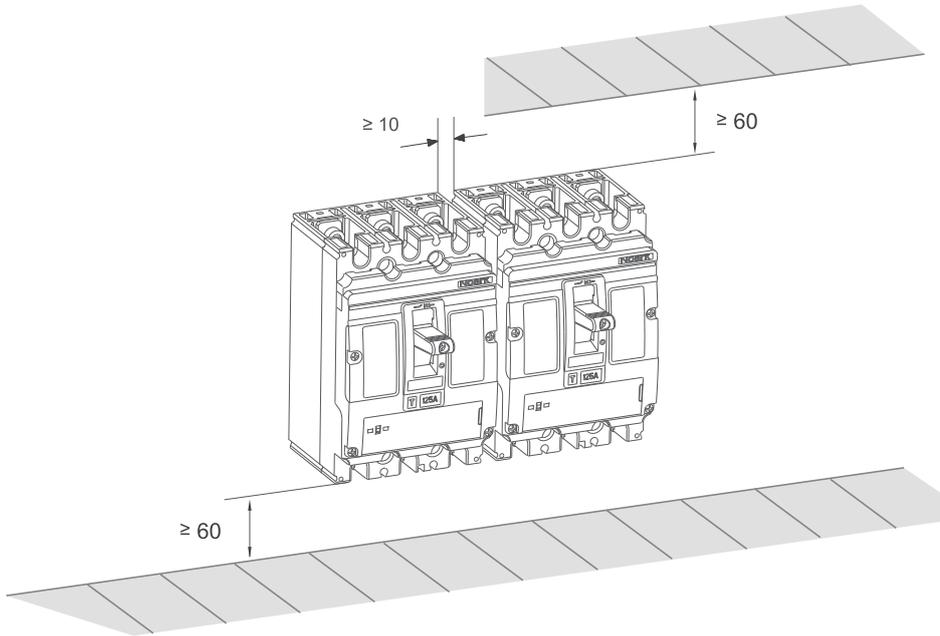


Technical Data Ex9M5 DC TM

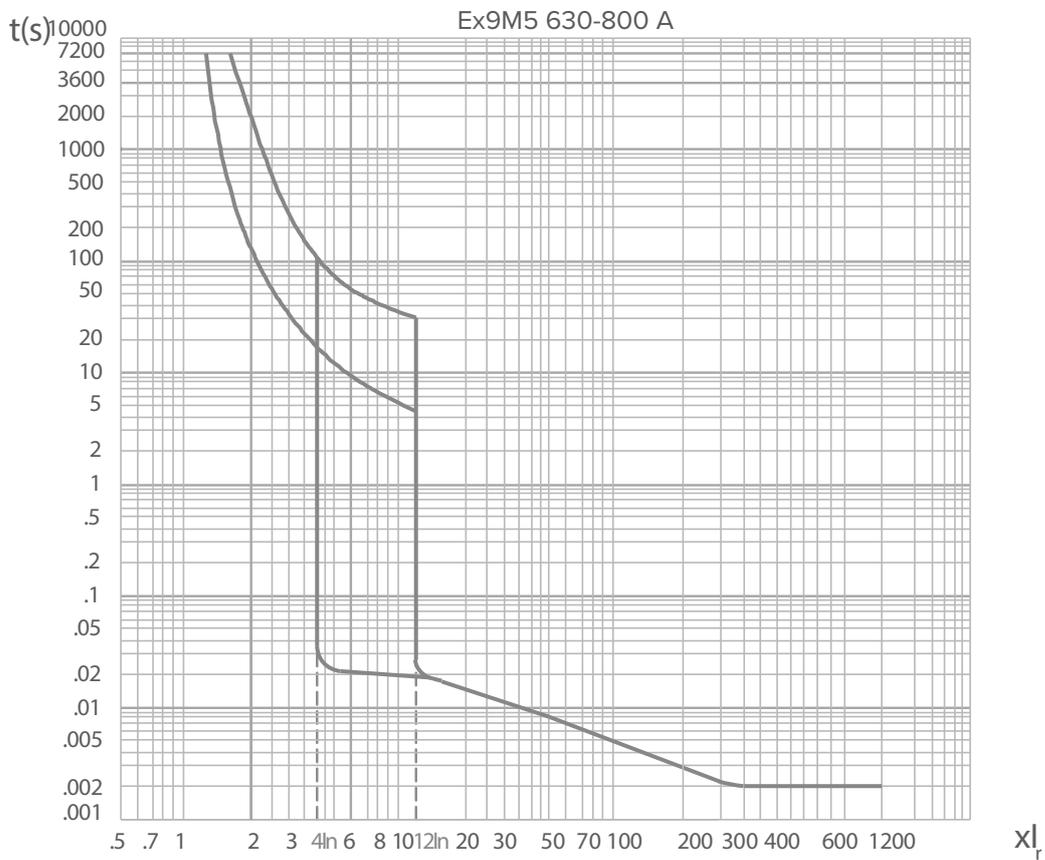
DC TM Moulded Case Circuit Breakers up to 800 A

Installation space

mm



Tripping characteristics



Technical Data **Ex9M2 SU20L**

SU20L Moulded Case Circuit Breakers up to 250 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(2 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD22	101429
Extended rotary handle	ERH22	101428
Remote motor operators	MOD22	101430 — 101434
Terminal cover, short	TCV22 3P, 4P	101442, 102374
Terminal cover, long	TCE22 3P, 4P	101443, 102375
Phase barrier	PHS22	112111
Connection terminals	MC22	103709, 103869, 103711, 103713
DIN-rail adapter	DRA22	106320
Plug-in base	PIA 22 SU20	112093 — 112094
Mounting screws, box terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination					
Combined accessory	I_n (T) [A]				
	32 A	63 A	100 A	160 A	250 A
Ex9ML	1	1	1	1	0.95
PIA 22 SU20	1	1	1	1	0.95

Technical Data Ex9M2 SU20L

SU20L Moulded Case Circuit Breakers up to 250 A

Electrical parameters					
	Ex9M2S	Ex9M2N	Ex9M2Q	Ex9M2H	Ex9M2P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	8 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated current	32 / 63 / 100 / 160 / 250 A				
Utilization category	A				
Rated short-time withstanding current I_{cw} 1s	1 kA (32 — 63 A) 2 kA (80 — 160 A) 3 kA (180 — 250 A)				
Mechanical service life	15 000 operation cycles				
Electrical service life	5 000 operation cycles / 415 V AC 2 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]				
	32 A	63 A	100 A	160 A	250 A
-35	32	63	100	160	250
-25	32	63	100	160	250
-15	32	63	100	160	250
-5	32	63	100	160	250
0	32	63	100	160	250
10	32	63	100	160	250
20	32	63	100	160	250
30	32	63	100	160	250
40	32	63	100	160	250
50	32	63	100	160	240
60	32	63	100	160	225
70	32	63	100	160	213

Power dissipation characteristics

I_n	32 A	63 A	100 A	160 A	250 A
Pole resistance	0.8 mΩ	0.4 mΩ	0.4 mΩ	0.4 mΩ	0.4 mΩ
Pole power dissipation	0.8 W	1.6 W	4.0 W	10.2 W	25 W

Technical Data Ex9M2 SU20L

SU20L Moulded Case Circuit Breakers up to 250 A

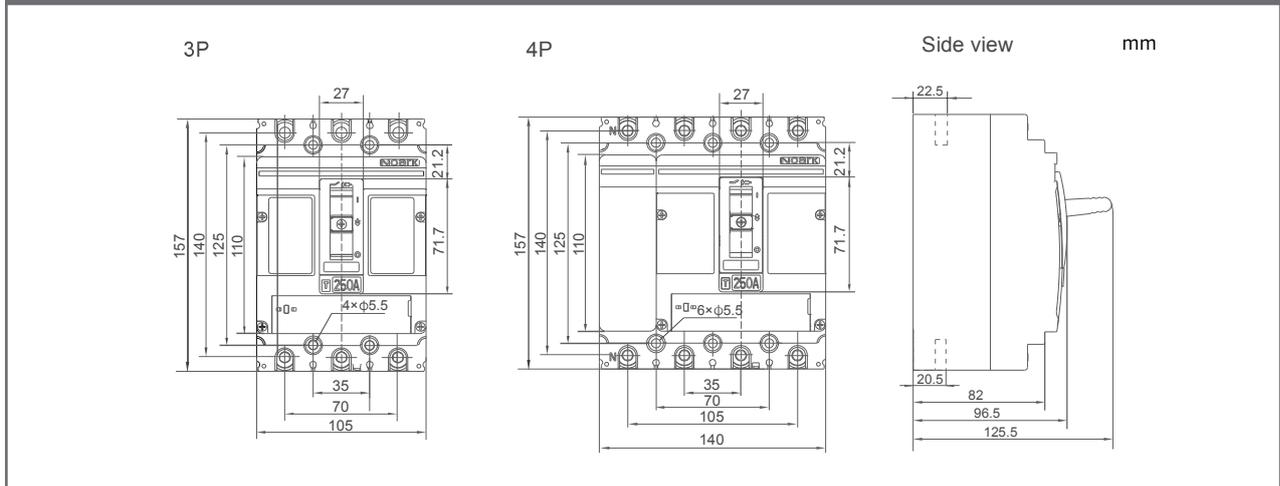
Mechanical parameters

Device width 3P / 4P	105 mm / 140 mm
Device height	157 mm
Device depth	96.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	10 – 120 mm ²
Fastening torque of terminals	25 Nm
Ambient temperature	-35 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	2 kg / 2.65 kg
Mounting position	vertical, can be rotated by 90° in each axis

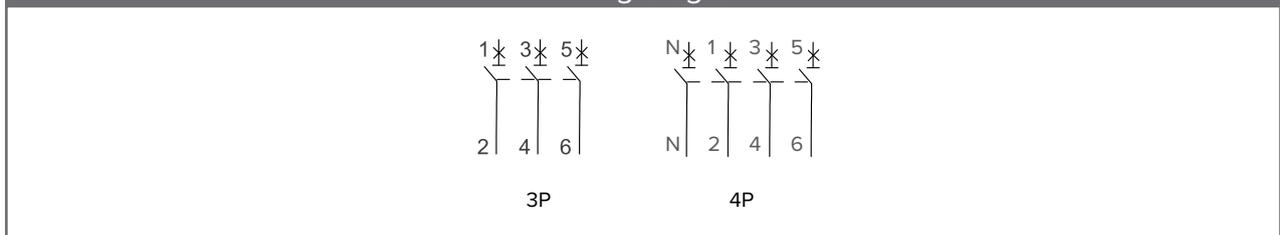
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I _n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U _e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U _i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U _{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties (U _{imp} =8 kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

Dimensions

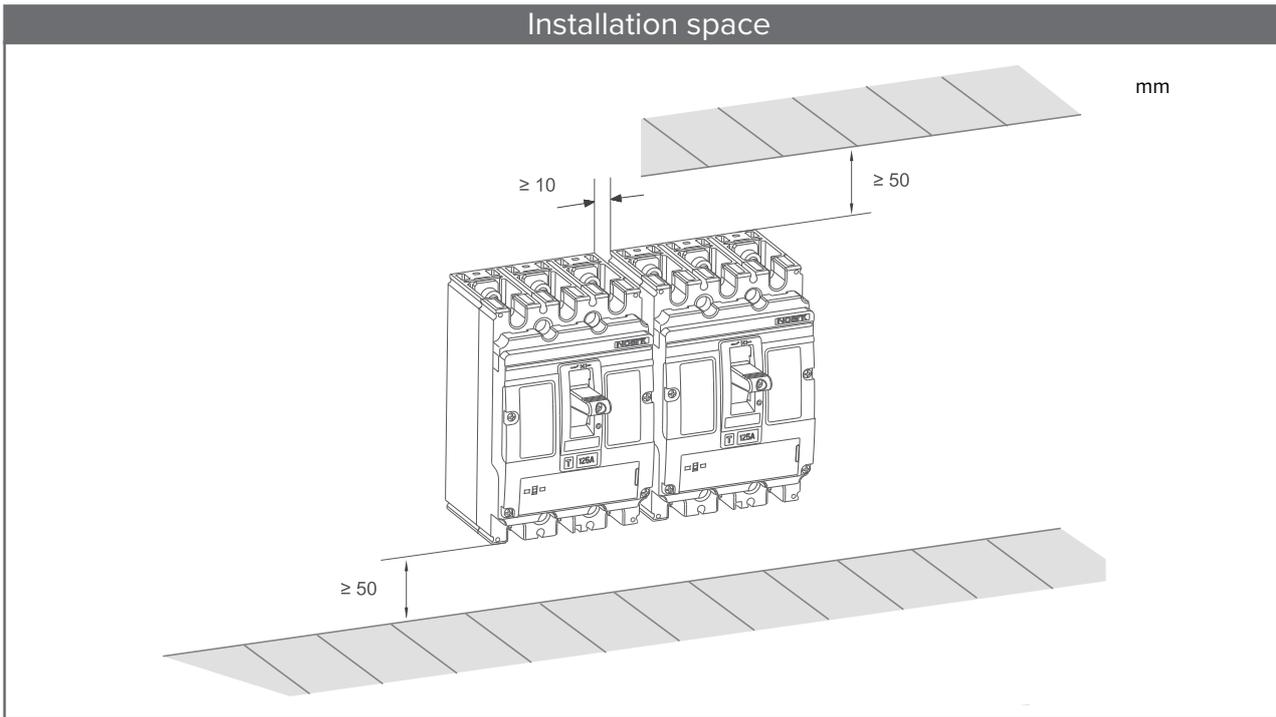


Wiring diagram

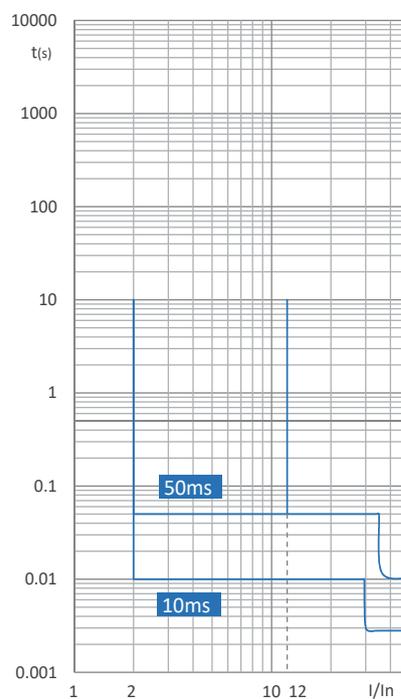
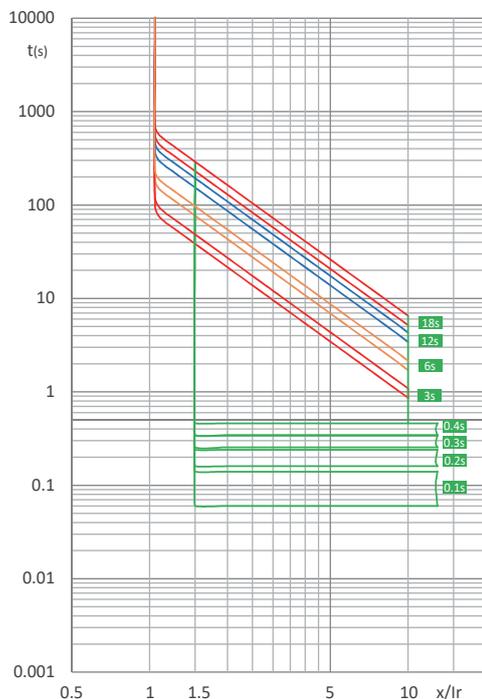


Technical Data Ex9M2 SU20L

SU20L Moulded Case Circuit Breakers up to 250 A



Tripping characteristics



Long time delay:
I_r=
(0.4/0.5/0.6/0.7/
0.8/0.9/0.95/1)
T_r=
(3/6/12/18)s

Short time delay:
I_{sd}=
(OFF/1.5/2/
3/4/6/8/10)I_r
T_{sd}=
(0.1/0.2/0.3/0.4)s

Instantaneous:
I_i=
(OFF/2/3/4/6/8/10/12)

Technical Data **Ex9M3 SU20L**

SU20L Moulded Case Circuit Breakers up to 630 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(2 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD23	101483
Extended rotary handle	ERH23	101482
Remote motor operators	MOD23	101484 — 101488
Terminal cover, short	TCV23 3P, 4P	101489, 102376
Terminal cover, long	TCE23 3P, 4P	101490, 102377
Phase barrier	PHS23	112112
Connection terminals	MC23	103715 — 103722
Plug-in base	PIA 23 SU20	112095 — 112100
Withdrawable base	DOB 23 SU20	112101 — 112108
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination			
Combined accessory	I_n (T) [A]		
	250 A	400 A	630 A
Ex9ML	1	1	0.9
PIA 23 SU20	1	1	0.9 ($\leq 570A$)
DOB 23 SU20	1	1	0.9 ($\leq 570A$)

Technical Data **Ex9M3 SU20L**

SU20L Moulded Case Circuit Breakers up to 630 A

Electrical parameters					
	Ex9M3S	Ex9M3N	Ex9M3Q	Ex9M3H	Ex9M3P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 10 kA / 690 V	50 kA / 415 V 12 kA / 690 V	70 kA / 415 V 12 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 10 kA / 690 V	50 kA / 415 V 12 kA / 690 V	70 kA / 415 V 12 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	250 / 400 / 630 A				
Utilization category	B				
Rated short-time withstanding current I_{cw} 1s	5 kA (250 — 400 A) 8 kA (500 — 630 A)				
Mechanical service life	15 000 operation cycles				
Electrical service life	4 000 operation cycles / 415 V AC 1 500 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]		
	250 A	400 A	630 A
-35	250	400	630
-25	250	400	630
-15	250	400	630
-5	250	400	630
0	250	400	630
10	250	400	630
20	250	400	630
30	250	400	630
40	250	400	630
50	250	380	600
60	250	360	570
70	250	340	540

Power dissipation characteristics

I_n	250 A	400 A	630 A
Pole resistance	0.15 mΩ	0.15 mΩ	0.12 mΩ
Pole power dissipation	9.4 W	24.0 W	47.6 W

Technical Data Ex9M3 SU20L

SU20L Moulded Case Circuit Breakers up to 630 A

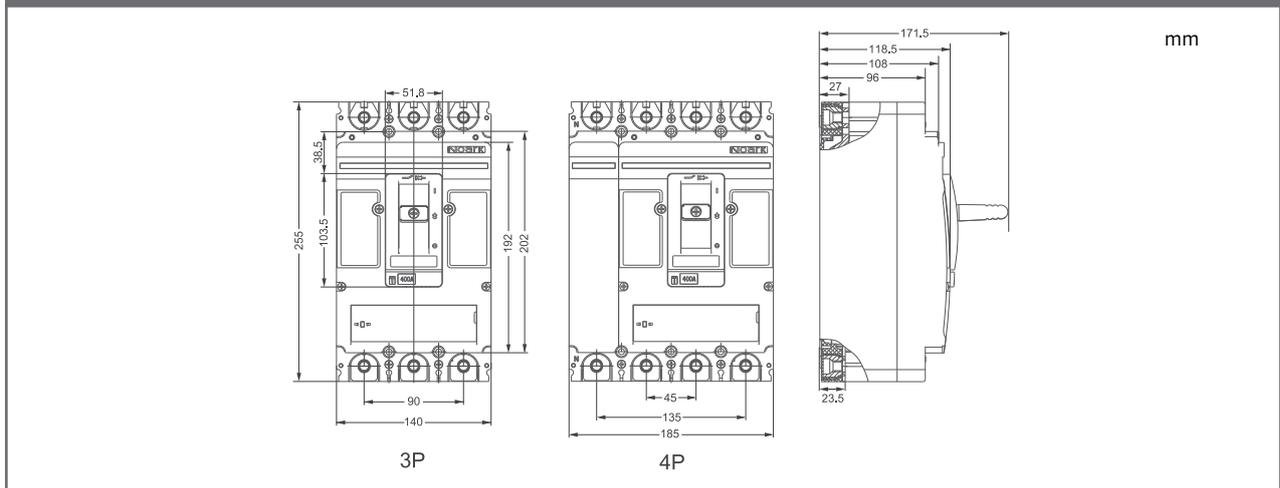
Mechanical parameters

Device width 3P / 4P	140 mm / 185 mm
Device height	255 mm
Device depth	118.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 8 mm
Busbar width	≤ 30 mm
Cable lug width	≤ 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	5.8 kg / 7.8 kg
Mounting position	vertical, can be rotated by 90° in each axis

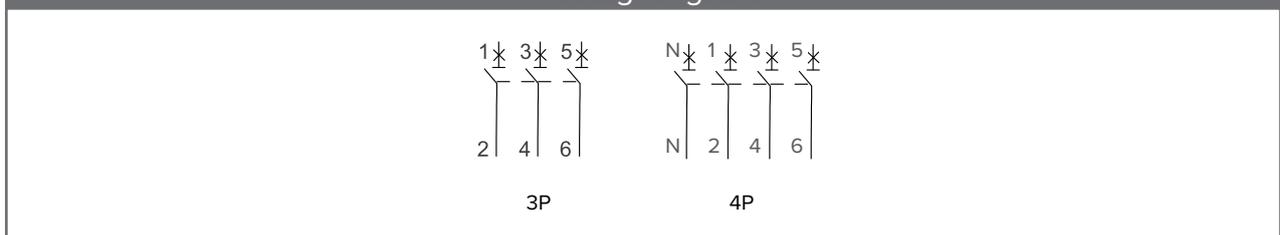
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions



Wiring diagram

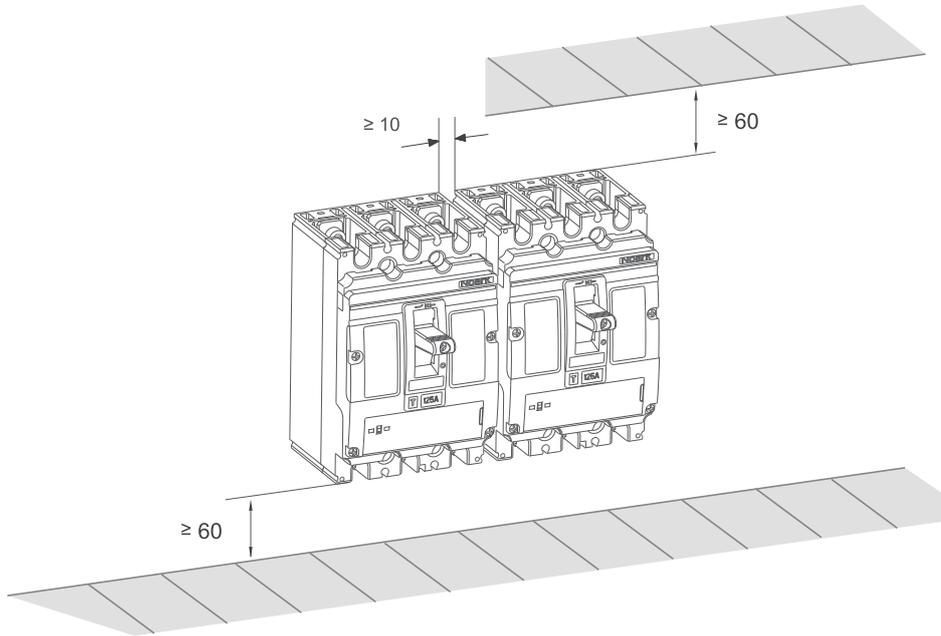


Technical Data Ex9M3 SU20L

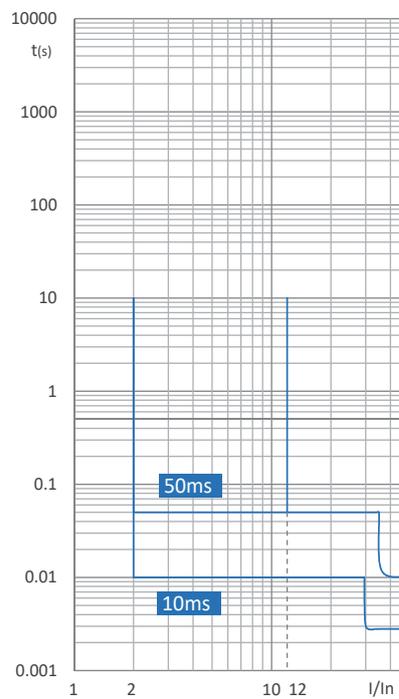
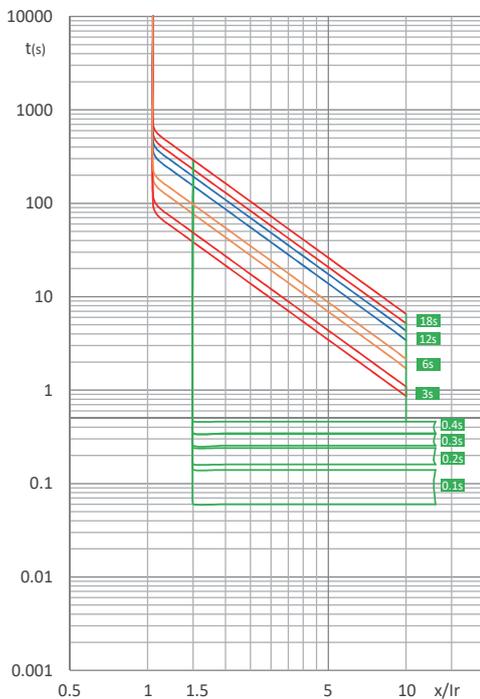
SU20L Moulded Case Circuit Breakers up to 630 A

Installation space

mm



Tripping characteristics



Long time delay:
 $I_r =$
 (0.4/0.5/0.6/0.7/
 0.8/0.9/0.95/1)
 $T_r =$
 (3/6/12/18)s

Short time delay:
 $I_{sd} =$
 (OFF/1.5/2/
 3/4/6/8/10) I_r
 $T_{sd} =$
 (0.1/0.2/0.3/0.4)s

Instantaneous:
 $I_i =$
 (OFF/2/3/4/6/8/10/12)

Technical Data **Ex9M4 SU20L**

SU20L Moulded Case Circuit Breakers up to 630 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(2 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	103743 — 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Connection terminals	MC24 W2	106314
Withdrawable base	DOB24 SU20	108891, 108903, 108897, 108909
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination	
Combined accessory	I_n (T) [A]
	630 A
DOB 24 SU20	0.95

Technical Data Ex9M4 SU20L

SU20L Moulded Case Circuit Breakers up to 630 A

Electrical parameters

	Ex9M4S	Ex9M4N	Ex9M4Q	Ex9M4H	Ex9M4P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 20 kA / 690 V	150 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	630 A				
Utilization category	B				
Rated short-time withstanding current I_{cw} 1s	10 kA				
Mechanical service life	10 000 operation cycles				
Electrical service life	3 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]
	630 A
-35	630
-25	630
-15	630
-5	630
0	630
10	630
20	630
30	630
40	630
50	600
60	570
70	540

Power dissipation characteristics

I_n	630 A
Pole resistance	0.12 mΩ
Pole power dissipation	47.6 W

Technical Data Ex9M4 SU20L

SU20L Moulded Case Circuit Breakers up to 630 A

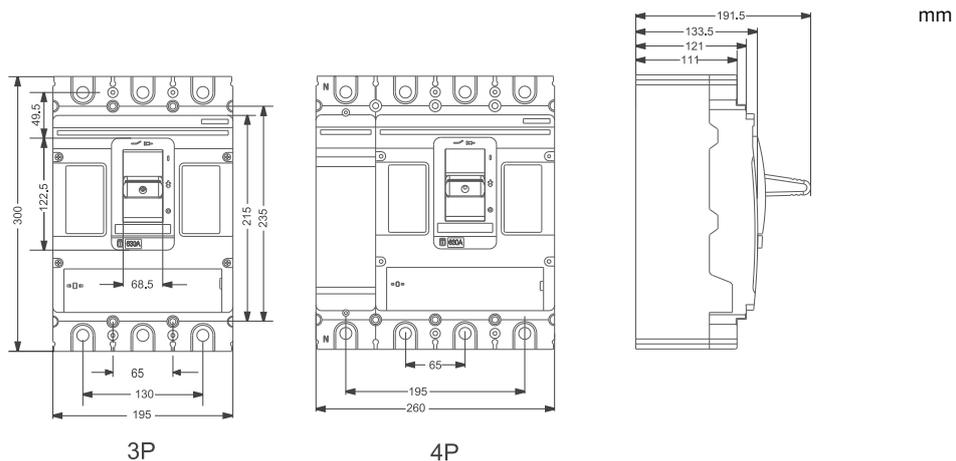
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

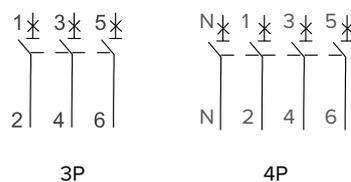
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions



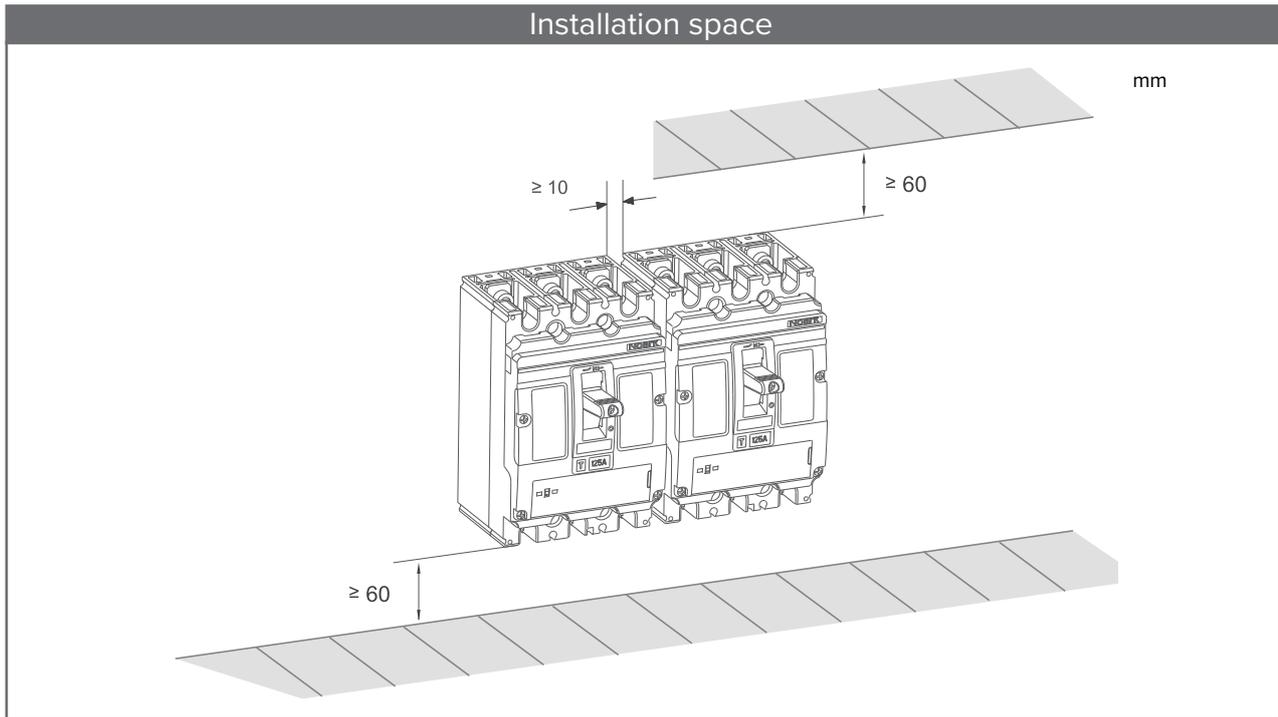
Wiring diagram



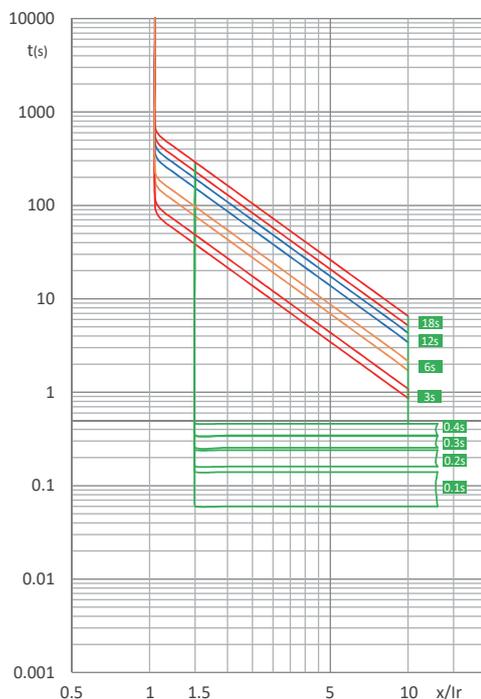
Technical Data Ex9M4 SU20L

SU20L Moulded Case Circuit Breakers up to 630 A

Installation space

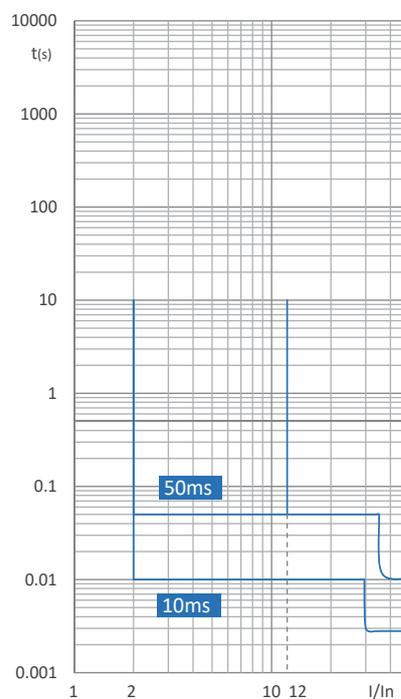


Tripping characteristics



Long time delay:
 $I_r =$
 (0.4/0.5/0.6/0.7/
 0.8/0.9/0.95/1)
 $T_r =$
 (3/6/12/18)s

Short time delay:
 $I_{sd} =$
 (OFF/1.5/2/
 3/4/6/8/10) I_r
 $T_{sd} =$
 (0.1/0.2/0.3/0.4)s



Instantaneous:
 $I_i =$
 (OFF/2/3/4/6/8/10/12)

Technical Data **Ex9M5 SU20L**

SU20L Moulded Case Circuit Breakers up to 800 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(2 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	103743 — 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Connection terminals	MC24 W2	106314
Withdrawable base	DOB24 SU20	108891, 108903, 108897, 108909
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination	
Combined accessory	I_n (T) [A]
	800 A
DOB 24 SU20	0.9

Technical Data **Ex9M5 SU20L**

SU20L Moulded Case Circuit Breakers up to 800 A

Electrical parameters					
	Ex9M5S	Ex9M5N	Ex9M5Q	Ex9M5H	Ex9M5P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 20 kA / 690 V	150 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	800 A				
Utilization category	B				
Rated short-time withstanding current I_{cw} 1s	10 kA				
Mechanical service life	10 000 operation cycles				
Electrical service life	3 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]
	800 A
-35	800
-25	800
-15	800
-5	800
0	800
10	800
20	800
30	800
40	800
50	760
60	720
70	680

Power dissipation characteristics

I_n	800 A
Pole resistance	0.08 mΩ
Pole power dissipation	51.2 W

Technical Data Ex9M5 SU20L

Moulded Case Circuit Breakers up to 800 A

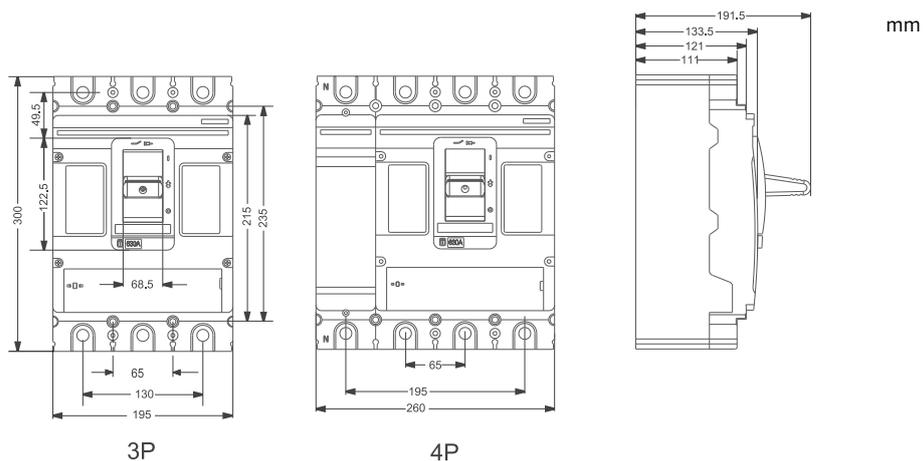
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

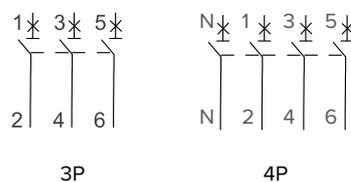
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions

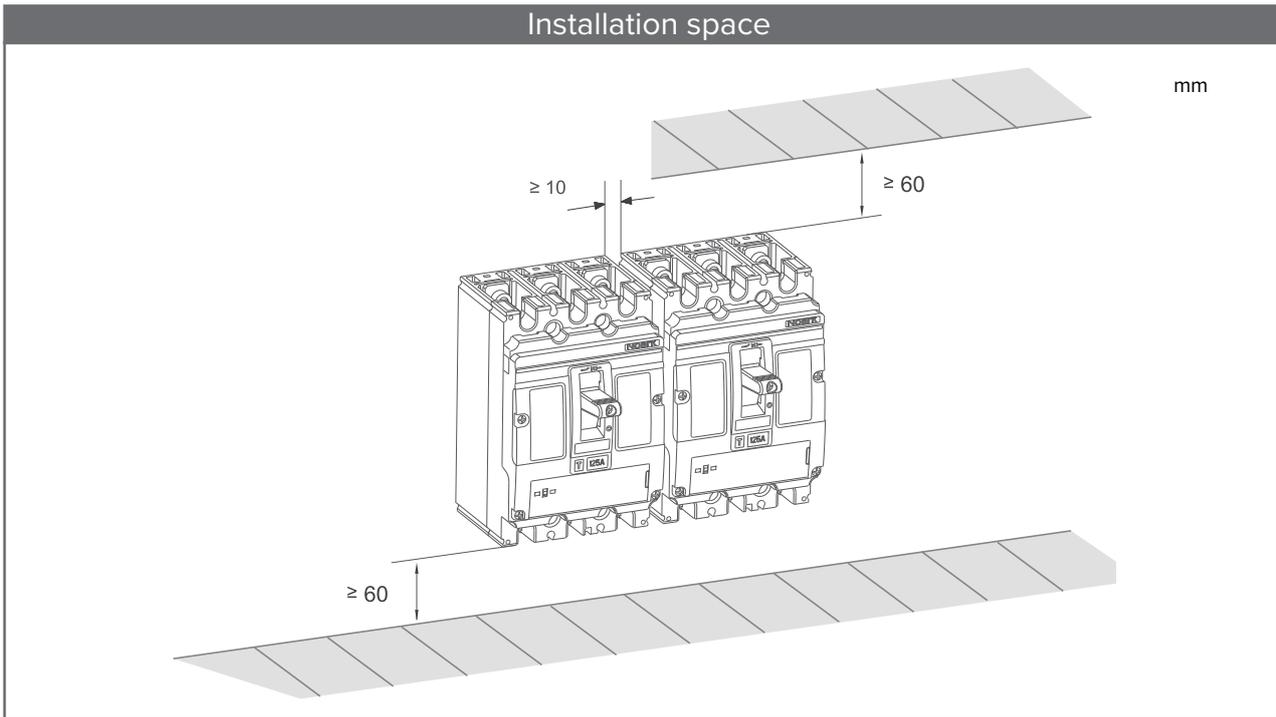


Wiring diagram

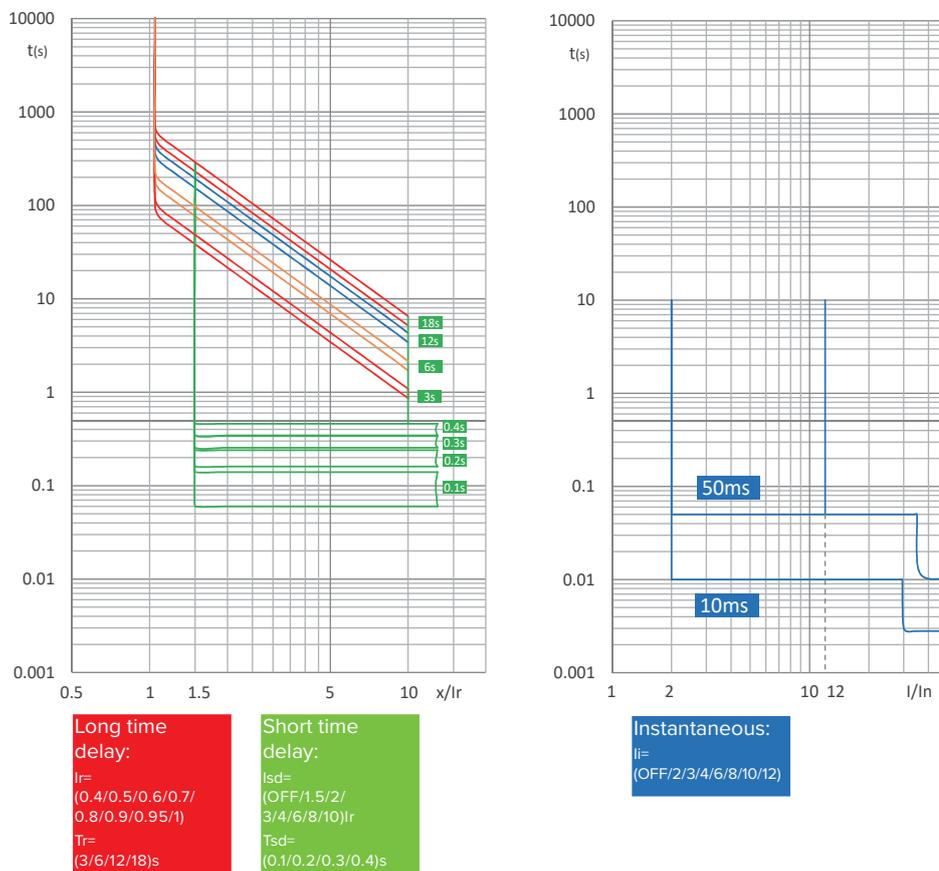


Technical Data Ex9M5 SU20L

Moulded Case Circuit Breakers up to 800 A



Tripping characteristics



Technical Data **Ex9M6 SU20L**

Moulded Case Circuit Breakers up to 1600 A

General parameters		
Suitable for household as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(2 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT26	110460 — 110467
Undervoltage releases	UVT26	110468 — 110469, 112073 — 112078
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT26 or UVT26)		
External accessories		
Extended handle	LHD26	110698
Extended rotary handle	ERH26	110718
Front connection plate	JP26	110694 — 110697
Connection terminals	MC26 W <i>i</i>	112091 / 112092
Phase barrier	PHS26	112114
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data Ex9M6 SU20L

Moulded Case Circuit Breakers up to 1600 A

Electrical parameters			
	Ex9M6N	Ex9M6Q	Ex9M6H
Tested according to	IEC/EN 60947-2		
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC		
Rated insulation voltage U_i	1 000 V		
Rated impulse withstand voltage U_{imp}	12 kV		
Rated frequency	50/60 Hz		
Rated ultimate short-circuit breaking capacity I_{cu}	50 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V	100 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	50 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V
Rated current	800 / 1000 / 1 250 / 1 600 A		
Utilization category	B		
Rated short-time withstanding current I_{cw} 1s	20 kA		
Mechanical service life	6 000 operation cycles		
Electrical service life	1 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC		
Total disconnection time at short circuit	< 10 ms		
Line voltage connection	line voltage on top, load on bottom		

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]			
	800 A	1 000 A	1 250 A	1 600 A
-35	800	1 000 A	1 250 A	1 600 A
-25	800	1 000 A	1 250 A	1 600 A
-15	800	1 000 A	1 250 A	1 600 A
-5	800	1 000 A	1 250 A	1 600 A
0	800	1 000 A	1 250 A	1 600 A
10	800	1 000 A	1 250 A	1 600 A
20	800	1 000 A	1 250 A	1 600 A
30	800	1 000 A	1 250 A	1 600 A
40	800	1 000 A	1 250 A	1 600 A
50	800	1 000 A	1 250 A	1 520 A
60	800	1 000 A	1 250 A	1 440 A
70	800	1 000 A	1 250 A	1 360 A

Power dissipation characteristics

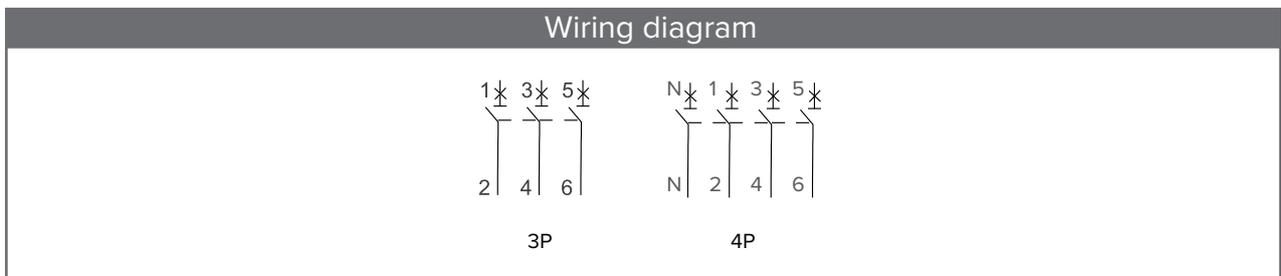
I_n	800 A	1 000 A	1 250 A	1 600 A
Pole resistance	0.08 mΩ	0.08 mΩ	0.04 mΩ	0.04 mΩ
Pole power dissipation	51.2 W	80.0 W	62.5 W	102.4 W

Technical Data **Ex9M6 SU20L**

Moulded Case Circuit Breakers up to 1600 A

Mechanical parameters	
Device width 3P / 4P	210 mm / 280 mm
Device height	286 mm
Device depth	191 (198) mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	25 — 30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	13.5 / 17.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

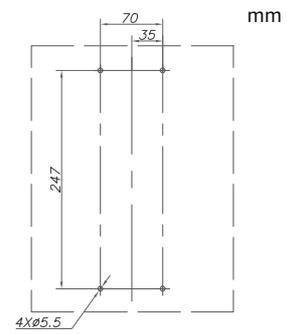
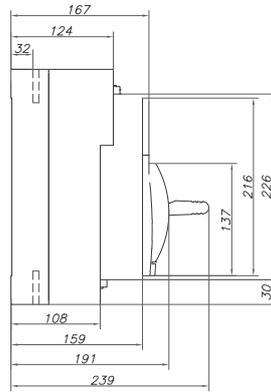
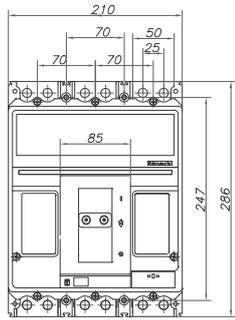


Technical Data Ex9M6 SU20L

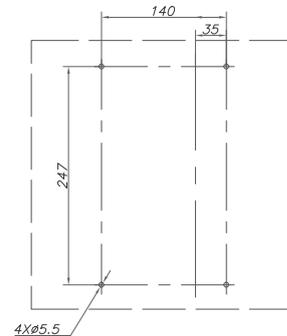
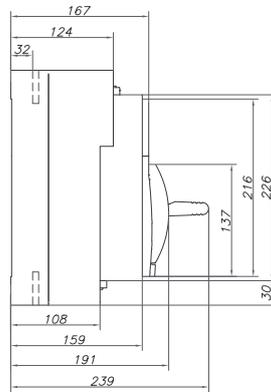
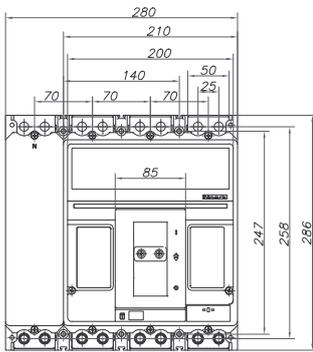
Moulded Case Circuit Breakers up to 1600 A

Dimensions

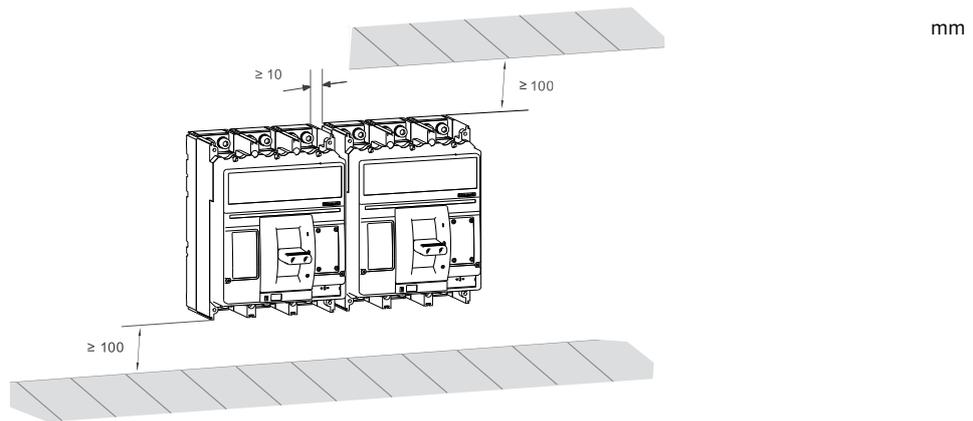
3P



4P



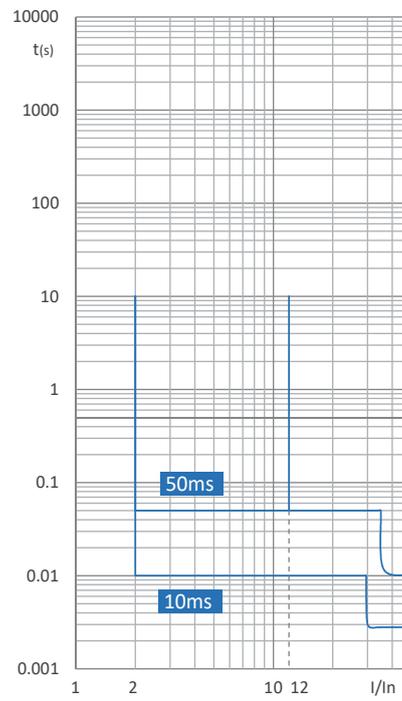
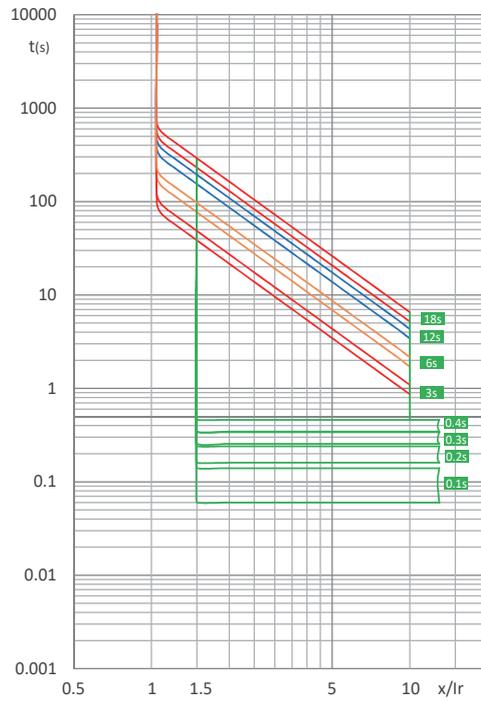
Installation space



Technical Data Ex9M6 SU20L

Moulded Case Circuit Breakers up to 1600 A

Tripping characteristics



Long time delay:
 $I_r =$
 (0.4/0.5/0.6/0.7/
 0.8/0.9/0.95/1)
 $T_r =$
 (3/6/12/18)s

Short time delay:
 $I_{sd} =$
 (OFF/1.5/2/
 3/4/6/8/10) I_r
 $T_{sd} =$
 (0.1/0.2/0.3/0.4)s

Instantaneous:
 $I_i =$
 (OFF/2/3/4/6/8/10/12)

Technical Data **Ex9M6 MOD SU20L**

Moulded Case Circuit Breakers up to 1600 A

General parameters

Suitable for household as well as industrial applications

I_r can be set in range $(0.4 - 1.0) \times I_n$

I_i can be set in range $(2 - 12) \times I_n$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT26	110460 — 110467
Undervoltage releases	UVT26	110468 — 110469, 112073 — 112078

Max. number of installed internal accessories is 2 pcs of AX21, 1 pc of AL21 and 1 pc of a release (SHT26 or UVT26)

External accessories

Front connection plate	JP26	110694 — 110697
Connection terminals	MC26 Wi	112091 — 112092
Phase barrier	PHS26	112114

Mounting screws, screw type terminals as well as phase barriers in the scope of delivery

Technical Data Ex9M6 MOD SU20L

Moulded Case Circuit Breakers up to 1600 A

Electrical parameters			
	Ex9M6N	Ex9M6Q	Ex9M6H
Tested according to	IEC/EN 60947-2		
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC		
Rated insulation voltage U_i	1 000 V		
Rated impulse withstand voltage U_{imp}	12 kV		
Rated frequency	50/60 Hz		
Rated ultimate short-circuit breaking capacity I_{cu}	50 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V	100 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	50 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V
Rated current	800 / 1000 / 1 250 / 1 600 A		
Utilization category	B		
Rated short-time withstanding current $I_{cw} 1s$	20 kA		
Mechanical service life	6 000 operation cycles		
Electrical service life	1 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC		
Total disconnection time at short circuit	< 10 ms		
Line voltage connection	line voltage on top, load on bottom		

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	$I_n(T)$ [A]			
	800 A	1 000 A	1 250 A	1 600 A
-35	800	1 000 A	1 250 A	1 600 A
-25	800	1 000 A	1 250 A	1 600 A
-15	800	1 000 A	1 250 A	1 600 A
-5	800	1 000 A	1 250 A	1 600 A
0	800	1 000 A	1 250 A	1 600 A
10	800	1 000 A	1 250 A	1 600 A
20	800	1 000 A	1 250 A	1 600 A
30	800	1 000 A	1 250 A	1 600 A
40	800	1 000 A	1 250 A	1 600 A
50	800	1 000 A	1 250 A	1 520 A
60	800	1 000 A	1 250 A	1 440 A
70	800	1 000 A	1 250 A	1 360 A

Power dissipation characteristics

I_n	800 A	1 000 A	1 250 A	1 600 A
Pole resistance	0.08 mΩ	0.08 mΩ	0.04 mΩ	0.04 mΩ
Pole power dissipation	51.2 W	80.0 W	62.5 W	102.4 W

Technical Data **Ex9M6 MOD SU20L**

Moulded Case Circuit Breakers up to 1600 A

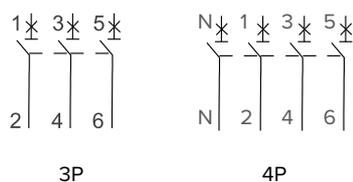
Mechanical parameters

Device width 3P / 4P	210 mm / 280 mm
Device height	286 mm
Device depth	198 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	25 — 30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	16 / 20 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

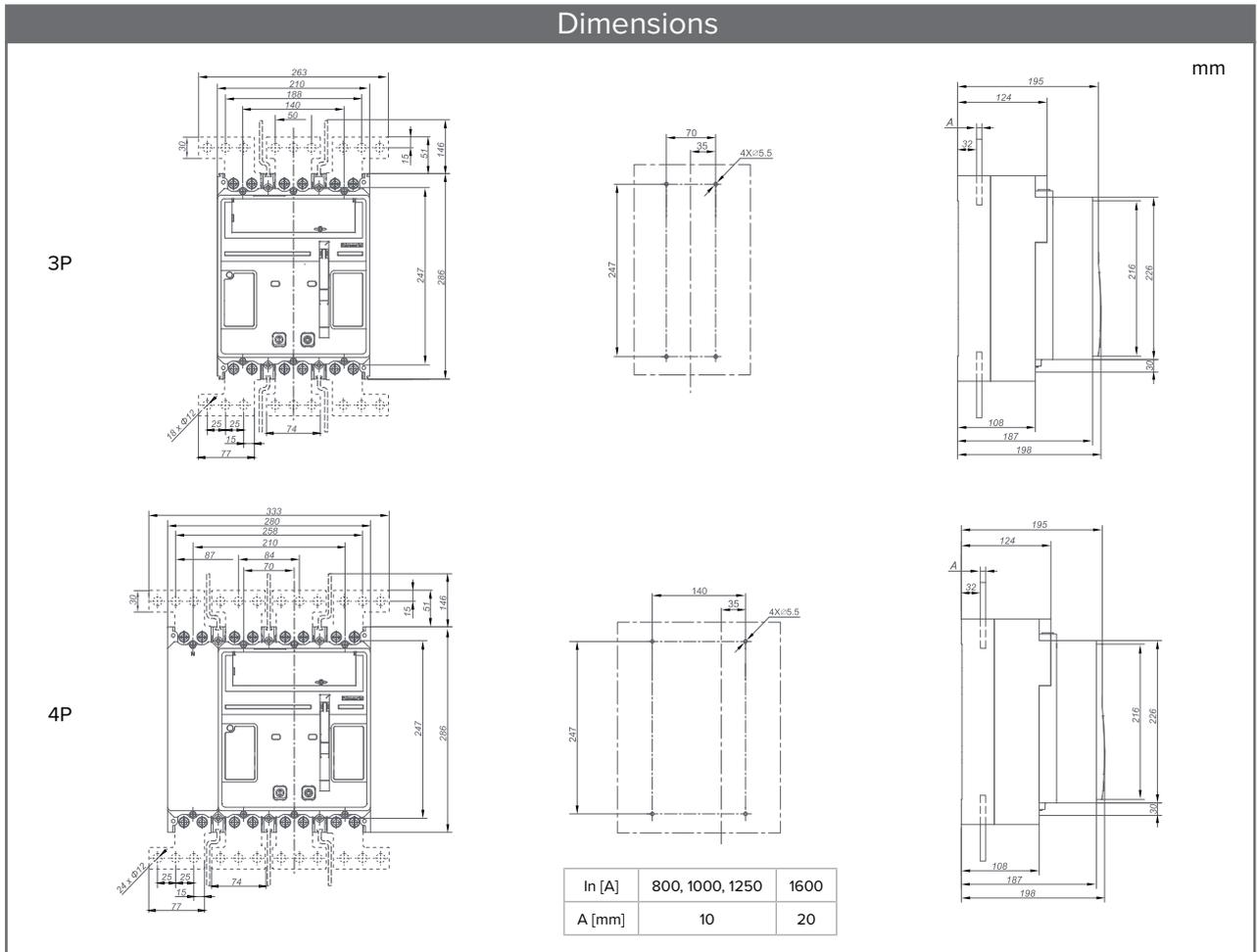
Wiring diagram



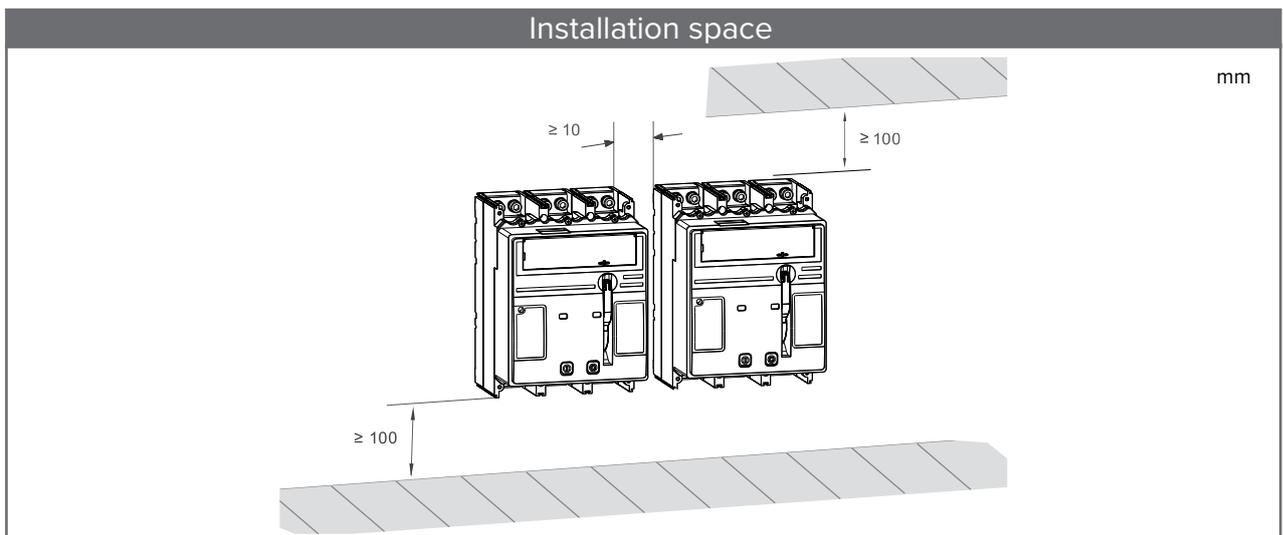
Technical Data Ex9M6 MOD SU20L

Moulded Case Circuit Breakers up to 1600 A

Dimensions



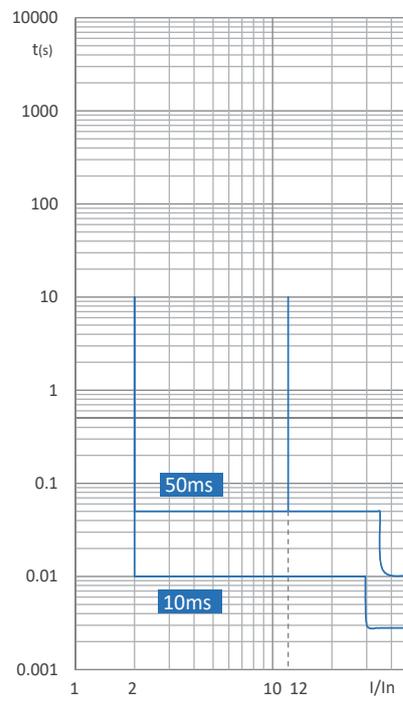
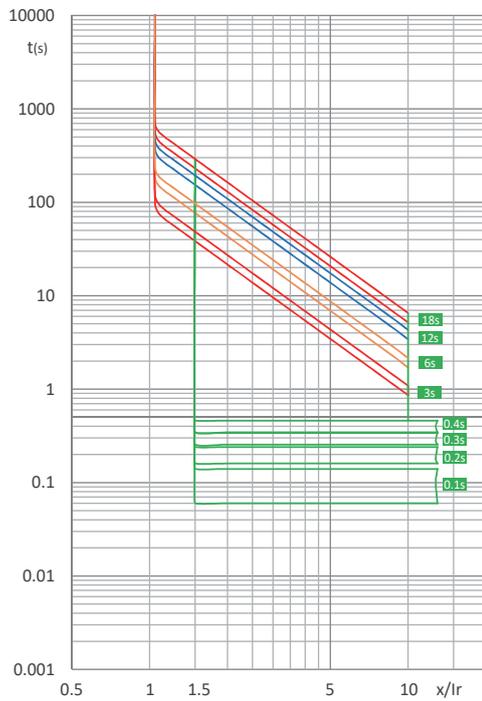
Installation space



Technical Data Ex9M6 MOD SU20L

Moulded Case Circuit Breakers up to 1600 A

Tripping characteristics



Long time delay:
 $I_r =$
 (0.4/0.5/0.6/0.7/
 0.8/0.9/0.95/1)
 $T_r =$
 (3/6/12/18)s

Short time delay:
 $I_{sd} =$
 (OFF/1.5/2/
 3/4/6/8/10) I_r
 $T_{sd} =$
 (0.1/0.2/0.3/0.4)s

Instantaneous:
 $I_i =$
 (OFF/2/3/4/6/8/10/12)

Technical Data **Ex9M6 MOD SU20L**

Motor operated SU20L MCCBs up to 1600 A

Remote motor operator MOD (MOD version only)

General parameters

The electric motor charges the spring mechanism when the circuit breaker is closed

The electric motor MOD is equipped with a limit switch which signals the "charged" position of the mechanism (spring is charged)

The spring-mechanism charging handle can be used when maintaining or without power supply

Electrical parameters

Operating voltage U_e	230 V AC 400 V AC 24 V DC 110 V DC 220 V DC
Operating frequency	1 operating cycle in 3 minutes
Operating threshold	85 — 110% U_e
Power consumption AC DC	40 VA 40 W
Charging time	≤ 4 s
Insulation voltage	400 V
Peak current	$6 \times I_n$

Technical Data **Ex9M6 MOD SU20L**

Motor operated SU20L MCCBs up to 1600 A

Closing releases XF (MOD version only)

General parameters

Remotely close the breaker after the spring has stored energy

Operating voltage range 85 - 110% of nominal value U_e . Maximum allowed control command length 2 s (can be blocked e.g. by means of NC auxiliary contact, see below)

Electrical parameters

Operating voltage U_e	230 V AC 400 V AC 110 V DC 220 V DC
Operating threshold	85 — 110% U_e
Minimum duration of control impuls	0.2 s
Max. allowed duration of control impuls	2 s
Pick-up power time 100ms	
AC	200 VA
DC	200 W
Power consumption	
AC	5 VA
DC	5 W
Circuit breaker closing time	≤ 50 ms
Breaking time	30 ± 10 ms
Insulation voltage	400 V
Peak current	6 × I_n

Technical Data **Ex9M2 SU20S**

SU20S Moulded Case Circuit Breakers up to 250 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(1.5 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD22	101429
Extended rotary handle	ERH22	101428
Remote motor operators	MOD22	101430 — 101434
Terminal cover, short	TCV22 3P, 4P	101442, 102374
Terminal cover, long	TCE22 3P, 4P	101443, 102375
Phase barrier	PHS22	112111
Connection terminals	MC22	103709, 103869, 103711, 103713
DIN-rail adapter	DRA22	106320
Plug-in base	PIA 22 SU20	112093 — 112094
Mounting screws, box terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination					
Combined accessory	I_n (T) [A]				
	32 A	63 A	100 A	160 A	250 A
Ex9ML	1	1	1	1	0.95
PIA 22 SU20	1	1	1	1	0.95

Technical Data Ex9M2 SU20S

SU20S Moulded Case Circuit Breakers up to 250 A

Electrical parameters					
	Ex9M2S	Ex9M2N	Ex9M2Q	Ex9M2H	Ex9M2P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	8 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 6 kA / 690 V	50 kA / 415 V 8 kA / 690 V	70 kA / 415 V 8 kA / 690 V	100 kA / 415 V 10 kA / 690 V	150 kA / 415 V 10 kA / 690 V
Rated current	32 / 63 / 100 / 160 / 250 A				
Utilization category	A				
Rated short-time withstanding current $I_{cw} 1s$	1 kA (32 — 63 A) 2 kA (80 — 160 A) 3 kA (180 — 250 A)				
Mechanical service life	15 000 operation cycles				
Electrical service life	5 000 operation cycles / 415 V AC 2 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]				
	32 A	63 A	100 A	160 A	250 A
-35	32	63	100	160	250
-25	32	63	100	160	250
-15	32	63	100	160	250
-5	32	63	100	160	250
0	32	63	100	160	250
10	32	63	100	160	250
20	32	63	100	160	250
30	32	63	100	160	250
40	32	63	100	160	250
50	32	63	100	160	240
60	32	63	100	160	225
70	32	63	100	160	213

Power dissipation characteristics

I_n	32 A	63 A	100 A	160 A	250 A
Pole resistance	0.8 mΩ	0.4 mΩ	0.4 mΩ	0.4 mΩ	0.4 mΩ
Pole power dissipation	0.8 W	1.6 W	4.0 W	10.2 W	25 W

Technical Data Ex9M2 SU20S

SU20S Moulded Case Circuit Breakers up to 250 A

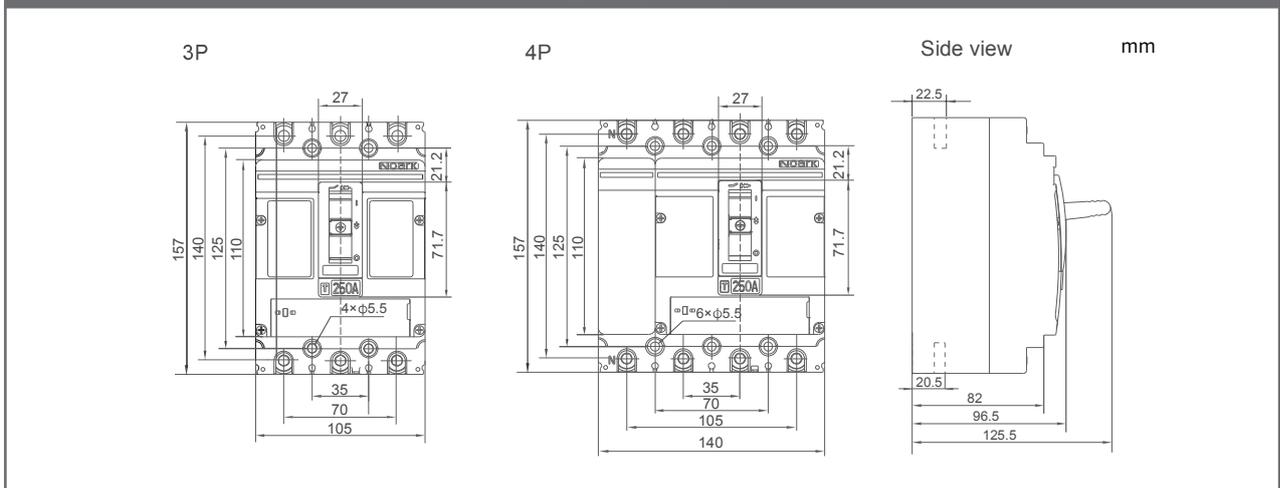
Mechanical parameters

Device width 3P / 4P	105 mm / 140 mm
Device height	157 mm
Device depth	96.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	10 – 120 mm ²
Fastening torque of terminals	25 Nm
Ambient temperature	-35 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	2 kg / 2.65 kg
Mounting position	vertical, can be rotated by 90° in each axis

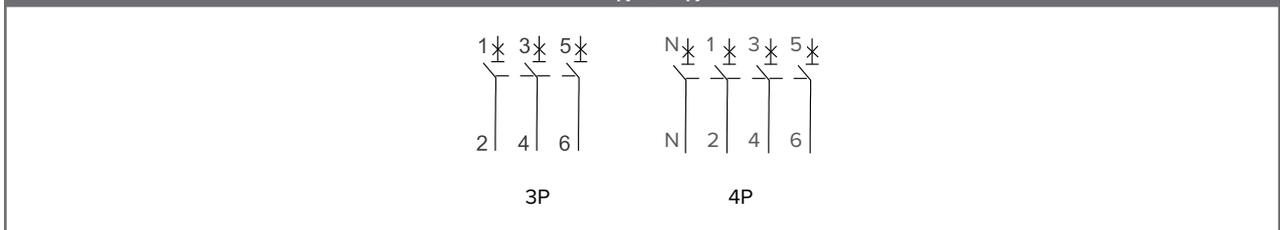
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I _n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U _e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U _i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U _{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties (U _{imp} =8 kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

Dimensions

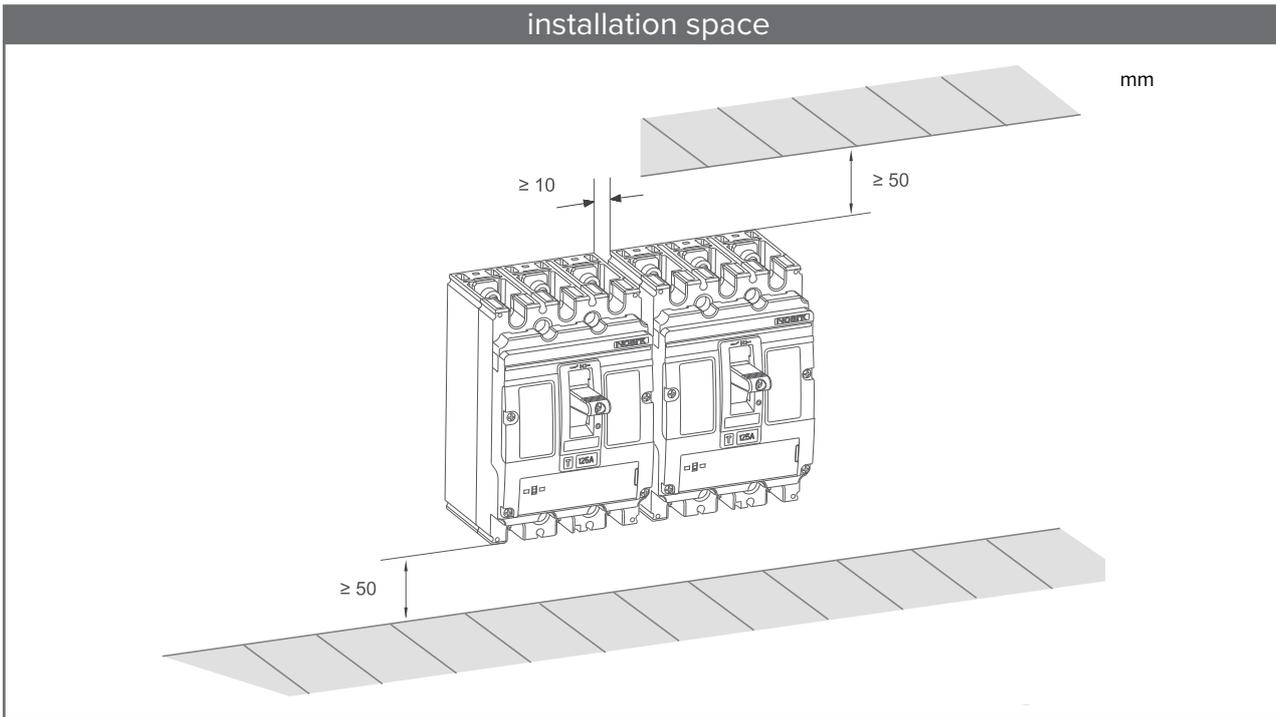


Wiring diagram

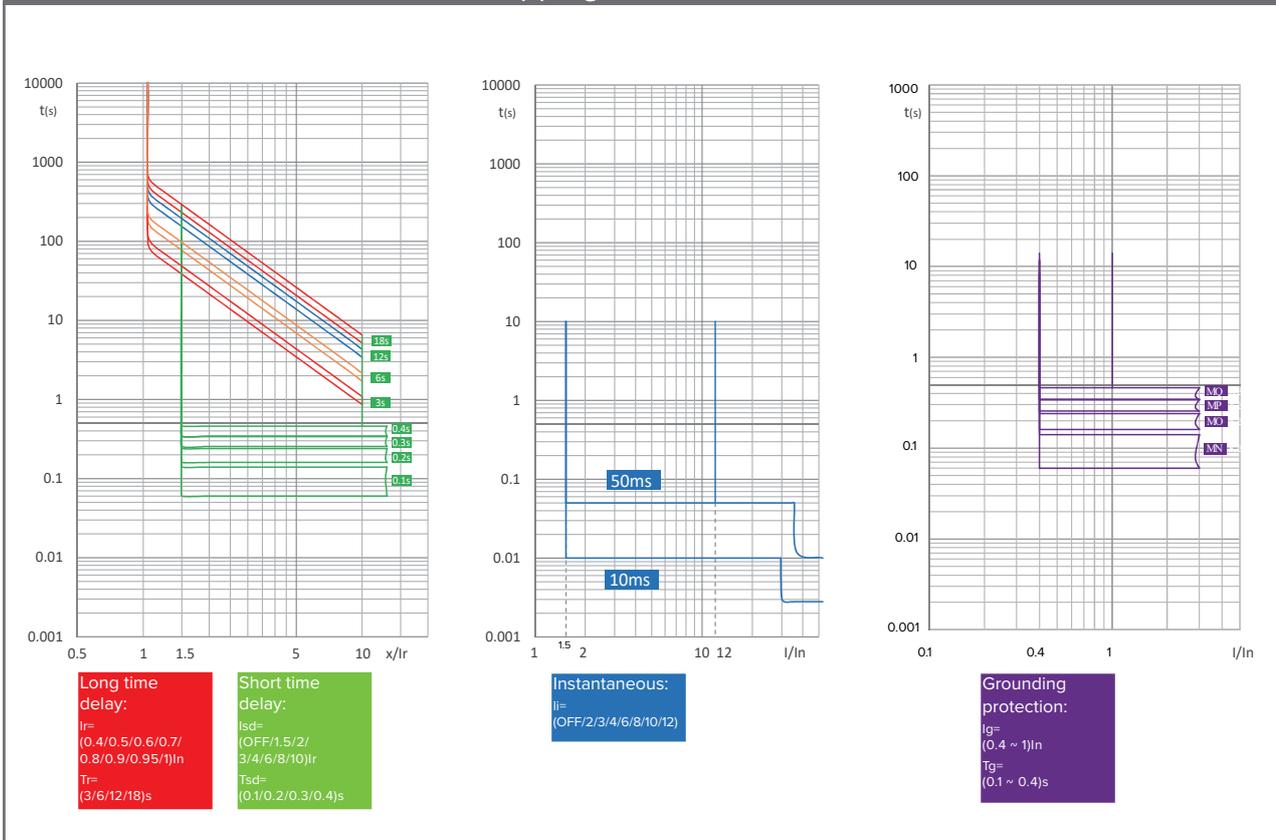


Technical Data Ex9M2 SU20S

SU20S Moulded Case Circuit Breakers up to 250 A



Tripping characteristics



Technical Data **Ex9M3 SU20S**

SU20S Moulded Case Circuit Breakers up to 630 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(1.5 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD23	101483
Extended rotary handle	ERH23	101482
Remote motor operators	MOD23	101484 — 101488
Terminal cover, short	TCV23 3P, 4P	101489, 102376
Terminal cover, long	TCE23 3P, 4P	101490, 102377
Phase barrier	PHS23	112112
Connection terminals	MC23	103715 — 103722
Plug-in base	PIA 23 SU20	112095 — 112100
Withdrawable base	DOB 23 SU20	112101 — 112108
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination			
Combined accessory	I_n (T) [A]		
	250 A	400 A	630 A
Ex9ML	1	1	0.9
PIA 23 SU20	1	1	0.9 ($\leq 570A$)
DOB 23 SU20	1	1	0.9 ($\leq 570A$)

Technical Data **Ex9M3 SU20S**

SU20S Moulded Case Circuit Breakers up to 630 A

Electrical parameters					
	Ex9M3S	Ex9M3N	Ex9M3Q	Ex9M3H	Ex9M3P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 10 kA / 690 V	50 kA / 415 V 12 kA / 690 V	70 kA / 415 V 12 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 10 kA / 690 V	50 kA / 415 V 12 kA / 690 V	70 kA / 415 V 12 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	250 / 400 / 630 A				
Utilization category	B				
Rated short-time withstanding current I_{cw} 1s	5 kA (250 — 400 A) 8 kA (500 — 630 A)				
Mechanical service life	15 000 operation cycles				
Electrical service life	4 000 operation cycles / 415 V AC 1 500 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]		
	250 A	400 A	630 A
-35	250	400	630
-25	250	400	630
-15	250	400	630
-5	250	400	630
0	250	400	630
10	250	400	630
20	250	400	630
30	250	400	630
40	250	400	630
50	250	380	600
60	250	360	570
70	250	340	540

Power dissipation characteristics

I_n	250 A	400 A	630 A
Pole resistance	0.15 mΩ	0.15 mΩ	0.12 mΩ
Pole power dissipation	9.4 W	24.0 W	47.6 W

Technical Data Ex9M3 SU20S

SU20S Moulded Case Circuit Breakers up to 630 A

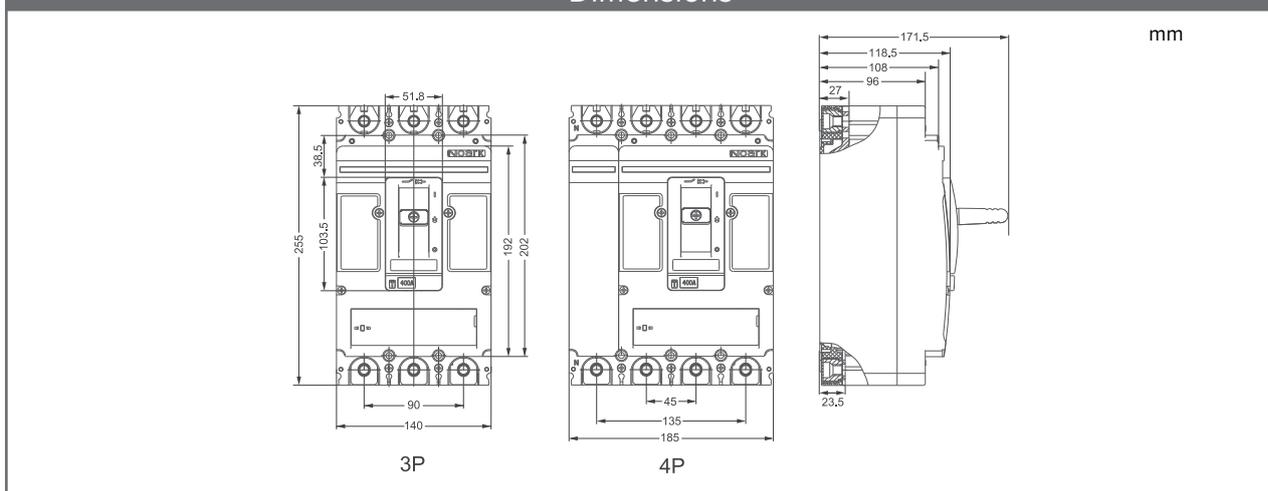
Mechanical parameters

Device width 3P / 4P	140 mm / 185 mm
Device height	255 mm
Device depth	118.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 8 mm
Busbar width	≤ 30 mm
Cable lug width	≤ 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	5.8 kg / 7.8 kg
Mounting position	vertical, can be rotated by 90° in each axis

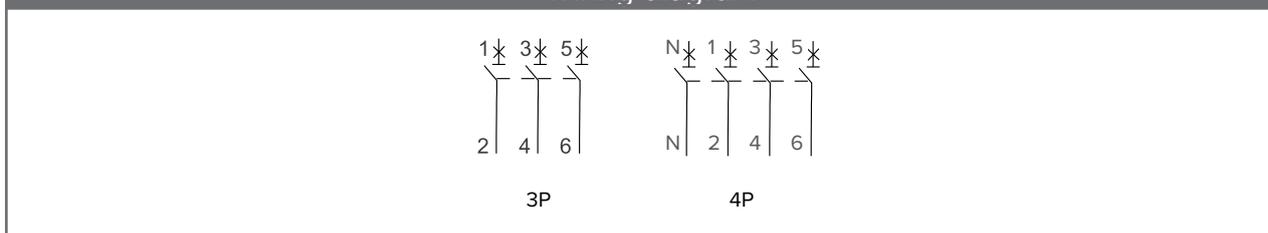
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions

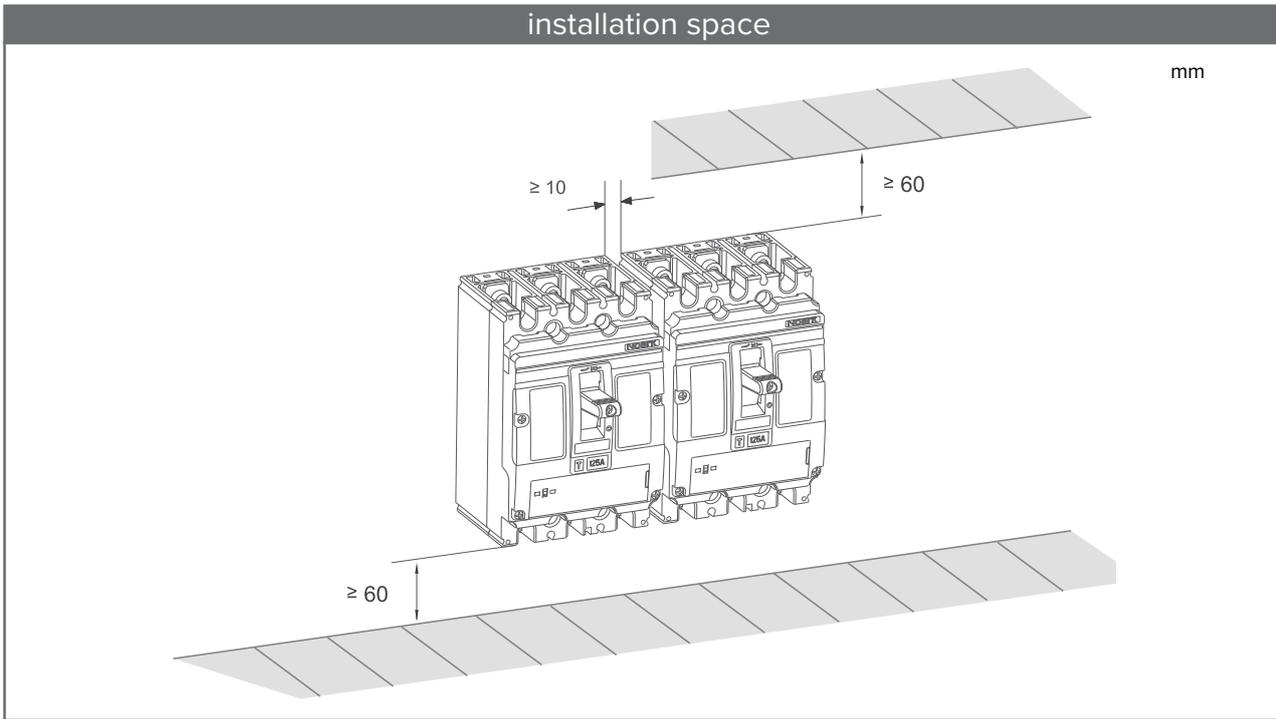


Wiring diagram

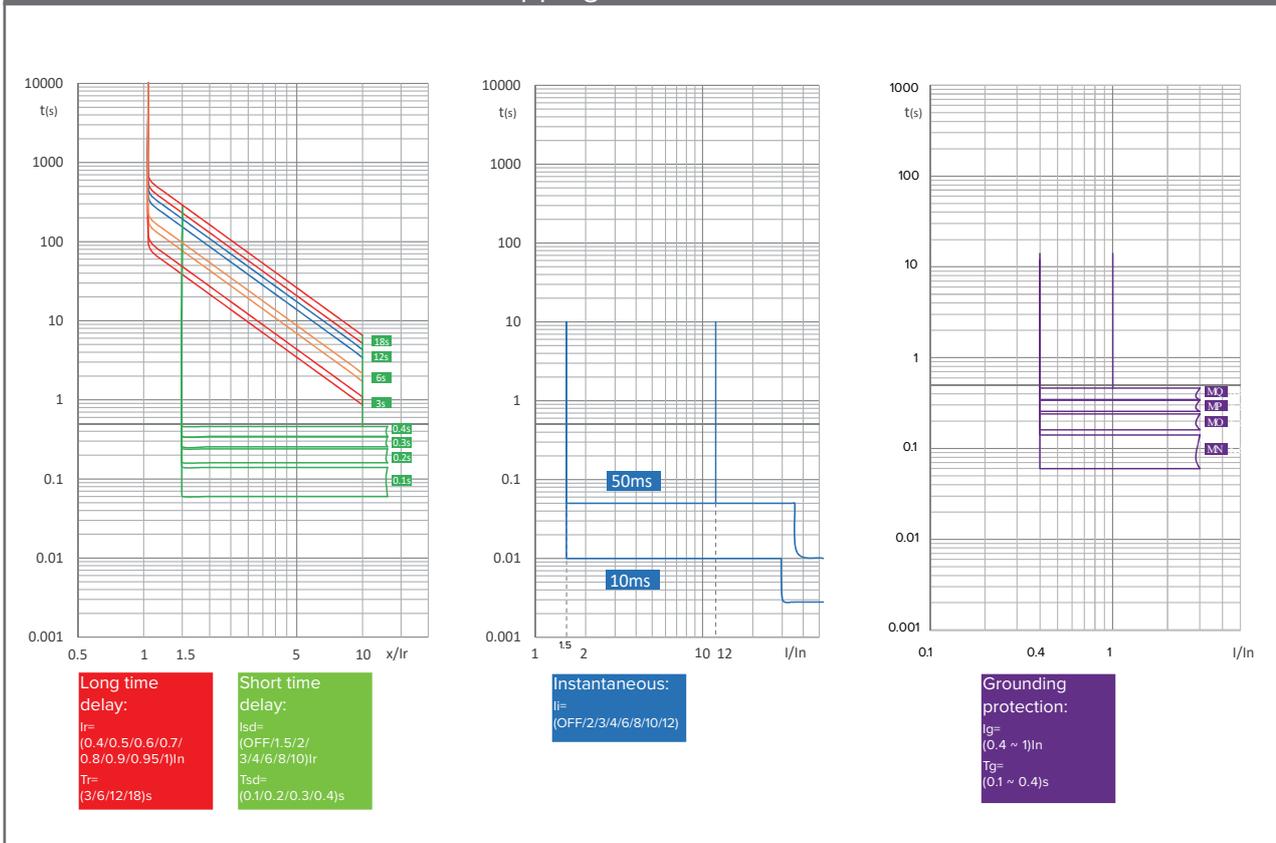


Technical Data Ex9M3 SU20S

SU20S Moulded Case Circuit Breakers up to 630 A



Tripping characteristics



Technical Data **Ex9M4 SU20S**

SU20S Moulded Case Circuit Breakers up to 630 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(1.5 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	103743 — 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Connection terminals	MC24 W2	106314
Withdrawable base	DOB24 SU20	108891, 108903, 108897, 108909
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination	
Combined accessory	I_n (T) [A]
	630 A
DOB 24 SU20	0.95

Technical Data **Ex9M4 SU20S**

SU20S Moulded Case Circuit Breakers up to 630 A

Electrical parameters					
	Ex9M4S	Ex9M4N	Ex9M4Q	Ex9M4H	Ex9M4P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 20 kA / 690 V	150 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	630 A				
Utilization category	B				
Rated short-time withstanding current $I_{cw} 1s$	10 kA				
Mechanical service life	10 000 operation cycles				
Electrical service life	3 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]
	630 A
-35	630
-25	630
-15	630
-5	630
0	630
10	630
20	630
30	630
40	630
50	600
60	570
70	540

Power dissipation characteristics

I_n	630 A
Pole resistance	0.12 mΩ
Pole power dissipation	47.6 W

Technical Data Ex9M4 SU20S

SU20S Moulded Case Circuit Breakers up to 630 A

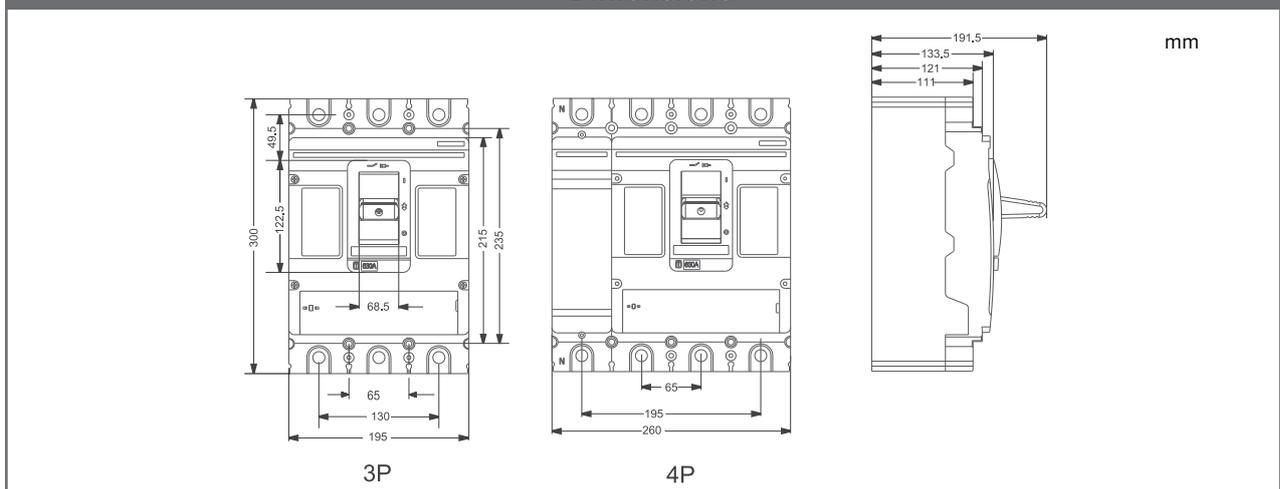
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

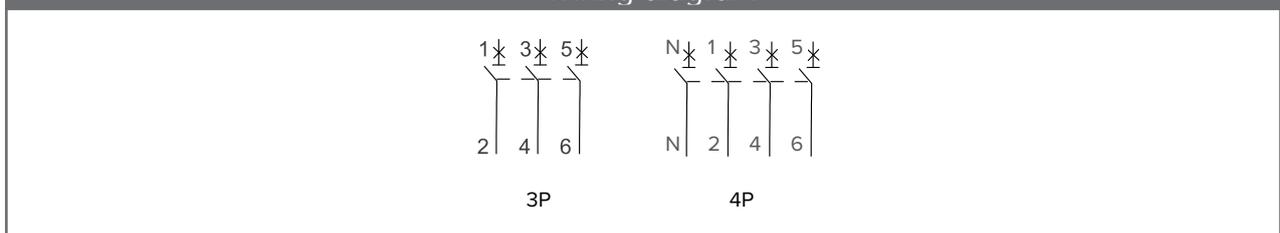
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions

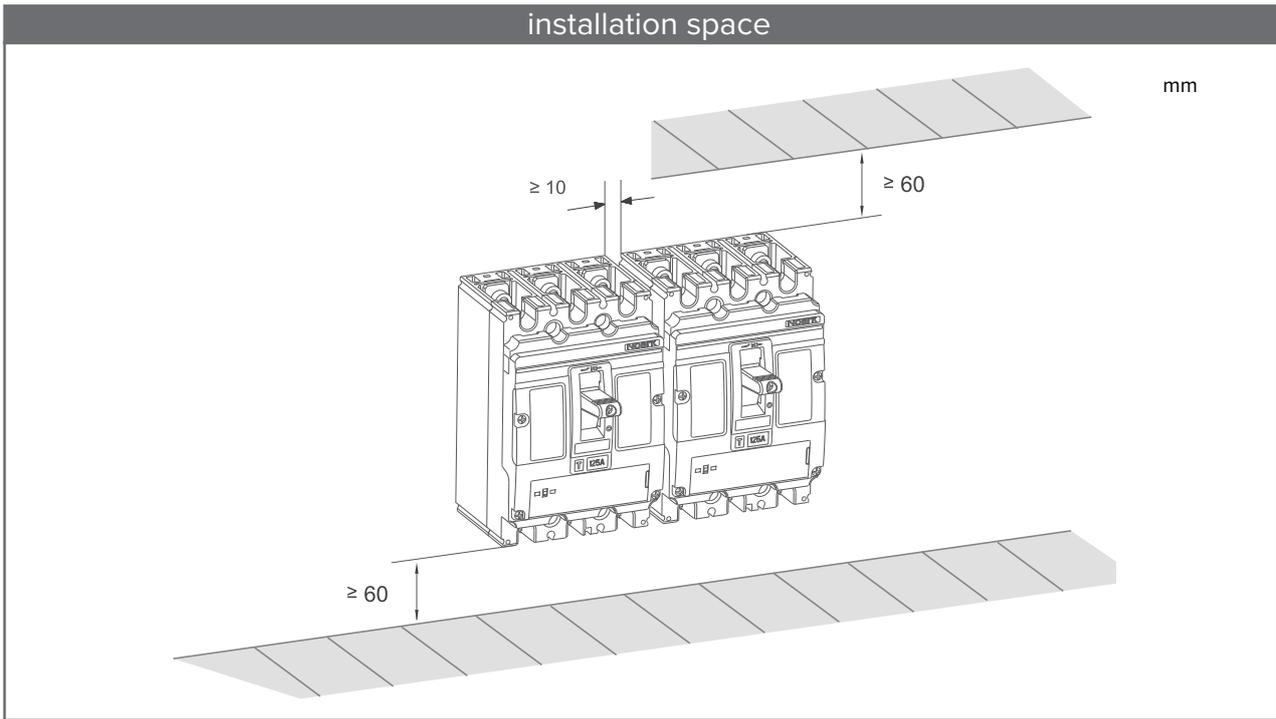


Wiring diagram

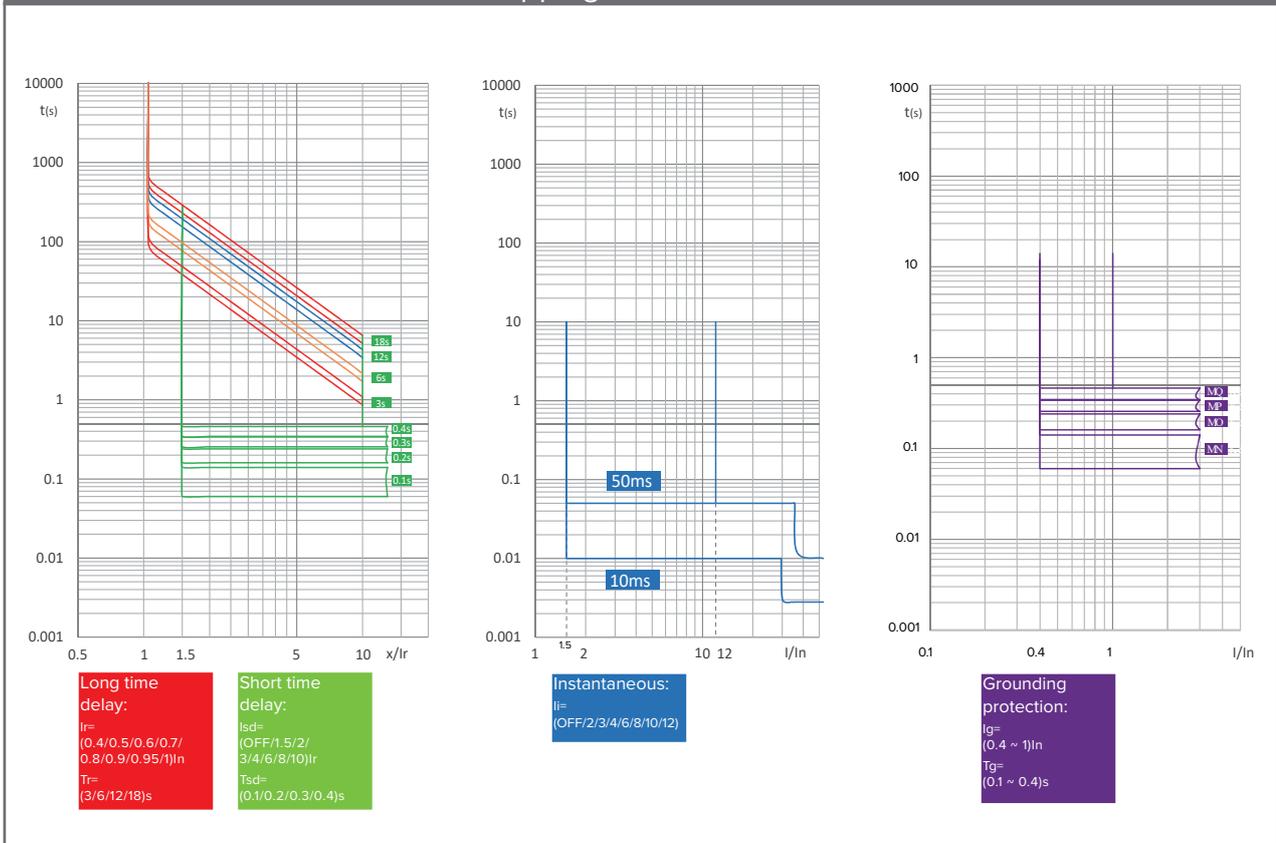


Technical Data Ex9M4 SU20S

SU20S Moulded Case Circuit Breakers up to 630 A



Tripping characteristics



Technical Data **Ex9M5 SU20S**

SU20S Moulded Case Circuit Breakers up to 800 A

General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(1.5 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	103743 — 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Connection terminals	MC24 W2	106314
Withdrawable base	DOB24 SU20	108891, 108903, 108897, 108909
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Derating coefficient of Tripping Characteristics on accessories combination	
Combined accessory	I_n (T) [A]
	800 A
DOB 24 SU20	0.9

Technical Data **Ex9M5 SU20S**

SU20S Moulded Case Circuit Breakers up to 800 A

Electrical parameters					
	Ex9M5S	Ex9M5N	Ex9M5Q	Ex9M5H	Ex9M5P
Tested according to	IEC/EN 60947-2				
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC				
Rated insulation voltage U_i	1 000 V				
Rated impulse withstand voltage U_{imp}	12 kV				
Rated frequency	50/60 Hz				
Rated ultimate short-circuit breaking capacity I_{cu}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 20 kA / 690 V	150 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	36 kA / 415 V 12 kA / 690 V	50 kA / 415 V 15 kA / 690 V	70 kA / 415 V 15 kA / 690 V	100 kA / 415 V 15 kA / 690 V	150 kA / 415 V 15 kA / 690 V
Rated current	800 A				
Utilization category	B				
Rated short-time withstanding current $I_{cw} 1s$	10 kA				
Mechanical service life	10 000 operation cycles				
Electrical service life	3 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC				
Total disconnection time at short circuit	< 2 ms				
Line voltage connection	arbitrary above or below				

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]
	800 A
-35	800
-25	800
-15	800
-5	800
0	800
10	800
20	800
30	800
40	800
50	760
60	720
70	680

Power dissipation characteristics

I_n	800 A
Pole resistance	0.08 mΩ
Pole power dissipation	51.2 W

Technical Data Ex9M5 SU20S

Moulded Case Circuit Breakers up to 800 A

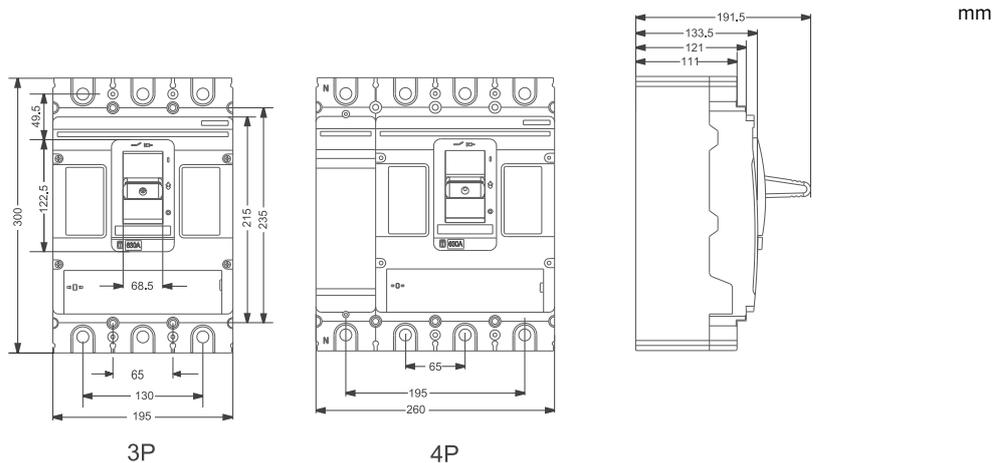
Mechanical parameters

Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	10.5 kg / 13.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

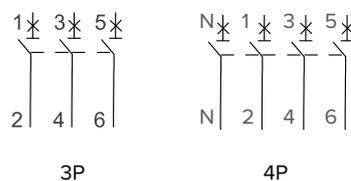
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Dimensions



Wiring diagram



Technical Data **Ex9M6 SU20S**

Moulded Case Circuit Breakers up to 1600 A

General parameters		
Suitable for household as well as industrial applications		
I_r can be set in range $(0.4 - 1.0) \times I_n$		
I_i can be set in range $(2 - 12) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT26	110460 — 110467
Undervoltage releases	UVT26	110468 — 110469, 112073 — 112078
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT26 or UVT26)		
External accessories		
Extended handle	LHD26	110698
Extended rotary handle	ERH26	110718
Front connection plate	JP26	110694 — 110697
Connection terminals	MC26 <i>Wi</i>	112091 / 112092
Phase barrier	PHS26	112114
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data Ex9M6 SU20S

Moulded Case Circuit Breakers up to 1600 A

Electrical parameters			
	Ex9M6N	Ex9M6Q	Ex9M6H
Tested according to	IEC/EN 60947-2		
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC		
Rated insulation voltage U_i	1 000 V		
Rated impulse withstand voltage U_{imp}	12 kV		
Rated frequency	50/60 Hz		
Rated ultimate short-circuit breaking capacity I_{cu}	50 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V	100 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	50 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V
Rated current	800 / 1000 / 1 250 / 1 600 A		
Utilization category	B		
Rated short-time withstanding current $I_{cw} 1s$	20 kA		
Mechanical service life	6 000 operation cycles		
Electrical service life	1 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC		
Total disconnection time at short circuit	< 10 ms		
Line voltage connection	line voltage on top, load on bottom		

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]			
	800 A	1 000 A	1 250 A	1 600 A
-35	800	1 000 A	1 250 A	1 600 A
-25	800	1 000 A	1 250 A	1 600 A
-15	800	1 000 A	1 250 A	1 600 A
-5	800	1 000 A	1 250 A	1 600 A
0	800	1 000 A	1 250 A	1 600 A
10	800	1 000 A	1 250 A	1 600 A
20	800	1 000 A	1 250 A	1 600 A
30	800	1 000 A	1 250 A	1 600 A
40	800	1 000 A	1 250 A	1 600 A
50	800	1 000 A	1 250 A	1 520 A
60	800	1 000 A	1 250 A	1 440 A
70	800	1 000 A	1 250 A	1 360 A

Power dissipation characteristics

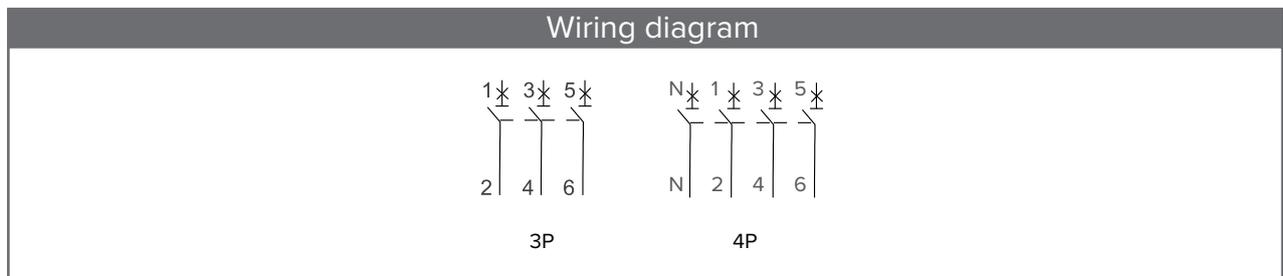
I_n	800 A	1 000 A	1 250 A	1 600 A
Pole resistance	0.08 mΩ	0.08 mΩ	0.04 mΩ	0.04 mΩ
Pole power dissipation	51.2 W	80.0 W	62.5 W	102.4 W

Technical Data **Ex9M6 SU20S**

Moulded Case Circuit Breakers up to 1600 A

Mechanical parameters	
Device width 3P / 4P	210 mm / 280 mm
Device height	286 mm
Device depth	191 (198) mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	25 — 30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	13.5 / 17.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

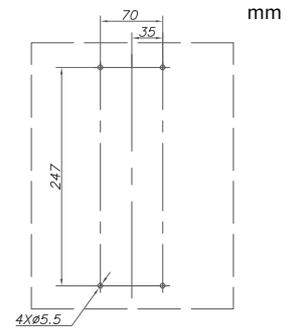
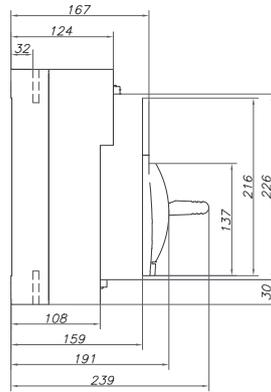
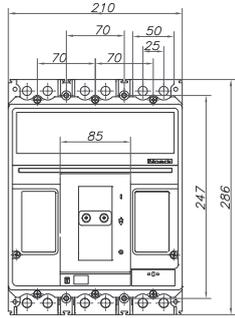


Technical Data Ex9M6 SU20S

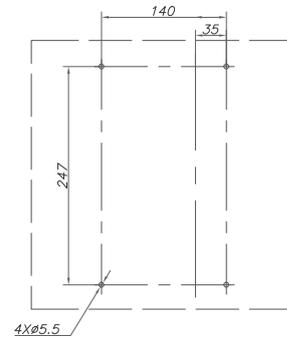
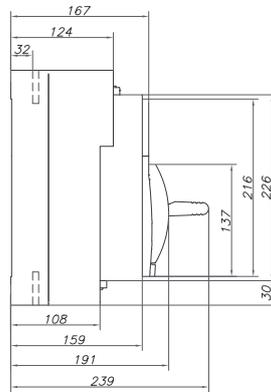
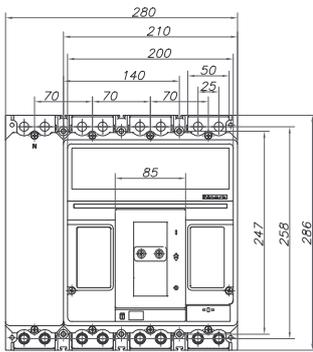
Moulded Case Circuit Breakers up to 1600 A

Dimensions

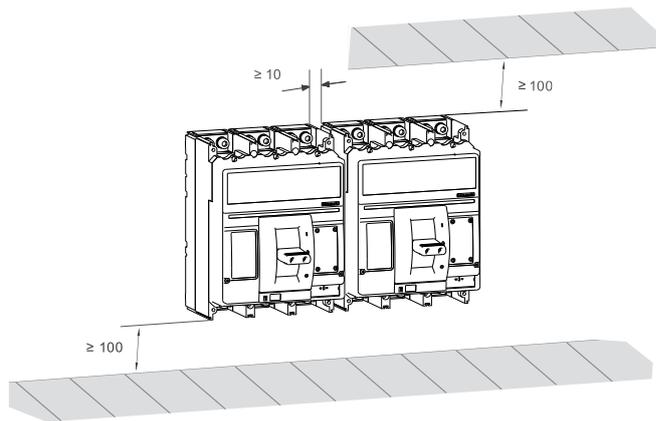
3P



4P



Installation space

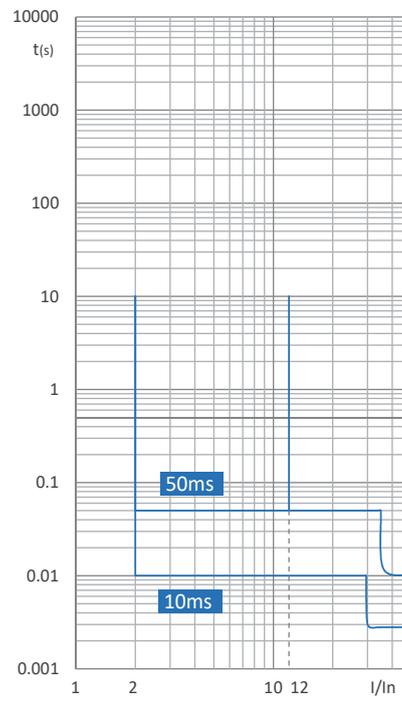
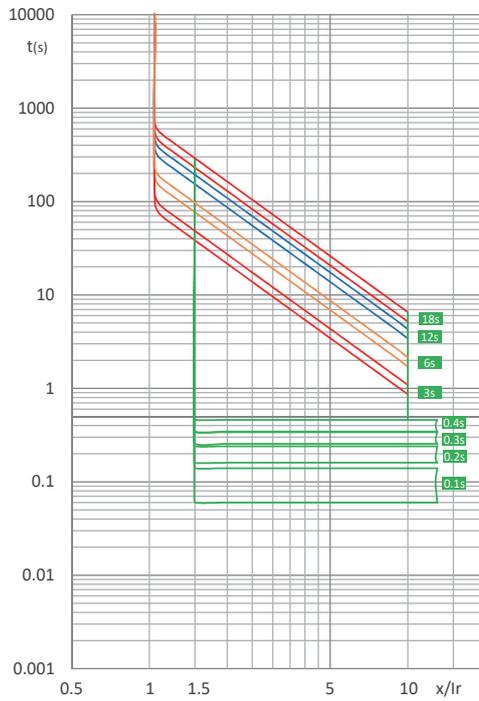


mm

Technical Data Ex9M6 SU20S

Moulded Case Circuit Breakers up to 1600 A

Tripping characteristics



Long time delay:
 $I_r =$
 (0.4/0.5/0.6/0.7/
 0.8/0.9/0.95/1)
 $T_r =$
 (3/6/12/18)s

Short time delay:
 $I_{sd} =$
 (OFF/1.5/2/
 3/4/6/8/10) I_r
 $T_{sd} =$
 (0.1/0.2/0.3/0.4)s

Instantaneous:
 $I_i =$
 (OFF/2/3/4/6/8/10/12)

Technical Data **Ex9M6 MOD SU20S**

Moulded Case Circuit Breakers up to 1600 A

General parameters

Suitable for household as well as industrial applications

I_r can be set in range $(0.4 - 1.0) \times I_n$

I_i can be set in range $(2 - 12) \times I_n$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT26	110460 — 110467
Undervoltage releases	UVT26	110468 — 110469, 112073 — 112078

Max. number of installed internal accessories is 2 pcs of AX21, 1 pc of AL21 and 1 pc of a release (SHT26 or UVT26)

External accessories

Front connection plate	JP26	110694 — 110697
Connection terminals	MC26 Wi	112091 — 112092
Phase barrier	PHS26	112114

Mounting screws, screw type terminals as well as phase barriers in the scope of delivery

Technical Data Ex9M6 MOD SU20S

Moulded Case Circuit Breakers up to 1600 A

Electrical parameters			
	Ex9M6N	Ex9M6Q	Ex9M6H
Tested according to	IEC/EN 60947-2		
Rated op. voltage U_e	380 / 400 / 415, 440, 500, 660 / 690 V AC		
Rated insulation voltage U_i	1 000 V		
Rated impulse withstand voltage U_{imp}	12 kV		
Rated frequency	50/60 Hz		
Rated ultimate short-circuit breaking capacity I_{cu}	50 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V	100 kA / 415 V 30 kA / 690 V
Rated service short-circuit breaking capacity I_{cs}	50 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V	70 kA / 415 V 30 kA / 690 V
Rated current	800 / 1000 / 1 250 / 1 600 A		
Utilization category	B		
Rated short-time withstanding current $I_{cw} 1s$	20 kA		
Mechanical service life	6 000 operation cycles		
Electrical service life	1 000 operation cycles / 415 V AC 1 000 operation cycles / 690 V AC		
Total disconnection time at short circuit	< 10 ms		
Line voltage connection	line voltage on top, load on bottom		

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	$I_n(T)$ [A]			
	800 A	1 000 A	1 250 A	1 600 A
-35	800	1 000 A	1 250 A	1 600 A
-25	800	1 000 A	1 250 A	1 600 A
-15	800	1 000 A	1 250 A	1 600 A
-5	800	1 000 A	1 250 A	1 600 A
0	800	1 000 A	1 250 A	1 600 A
10	800	1 000 A	1 250 A	1 600 A
20	800	1 000 A	1 250 A	1 600 A
30	800	1 000 A	1 250 A	1 600 A
40	800	1 000 A	1 250 A	1 600 A
50	800	1 000 A	1 250 A	1 520 A
60	800	1 000 A	1 250 A	1 440 A
70	800	1 000 A	1 250 A	1 360 A

Power dissipation characteristics

I_n	800 A	1 000 A	1 250 A	1 600 A
Pole resistance	0.08 mΩ	0.08 mΩ	0.04 mΩ	0.04 mΩ
Pole power dissipation	51.2 W	80.0 W	62.5 W	102.4 W

Technical Data **Ex9M6 MOD SU20S**

Moulded Case Circuit Breakers up to 1600 A

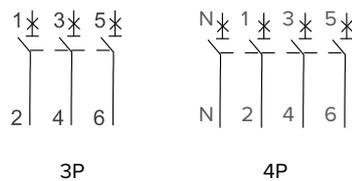
Mechanical parameters

Device width 3P / 4P	210 mm / 280 mm
Device height	286 mm
Device depth	198 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	25 — 30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	16 / 20 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

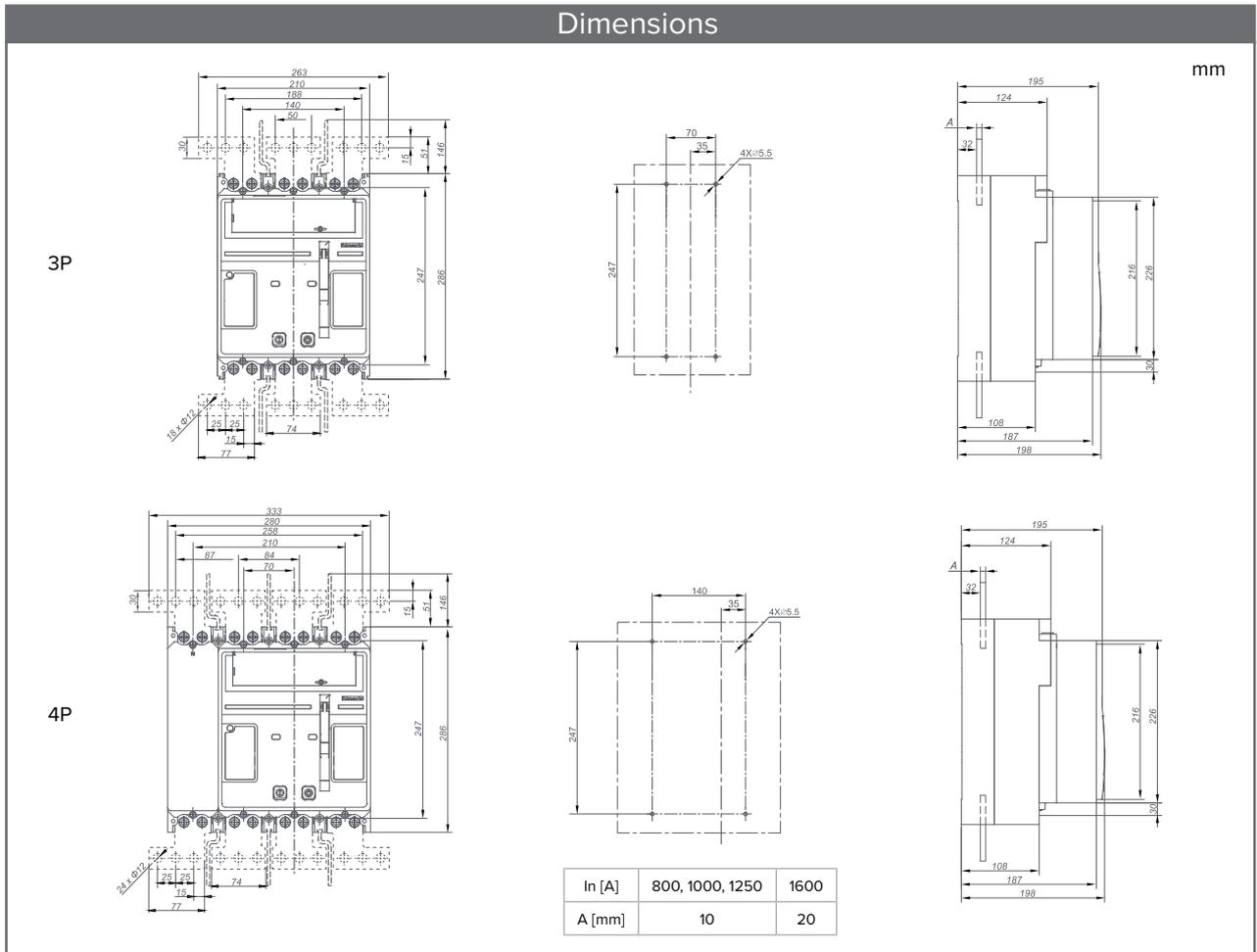
Wiring diagram



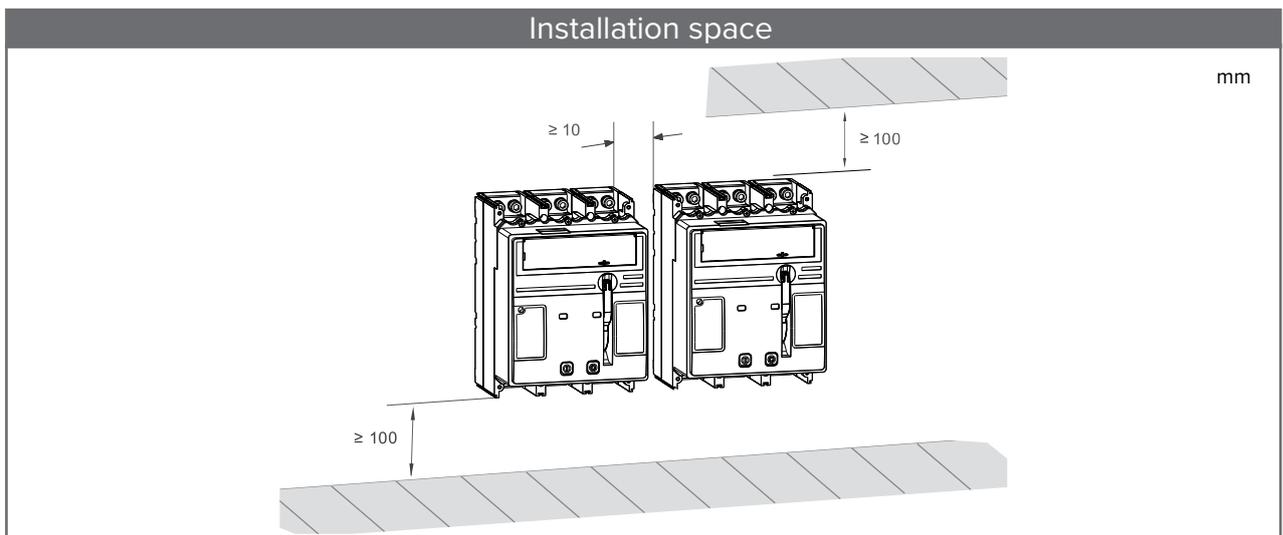
Technical Data Ex9M6 MOD SU20S

Moulded Case Circuit Breakers up to 1600 A

Dimensions



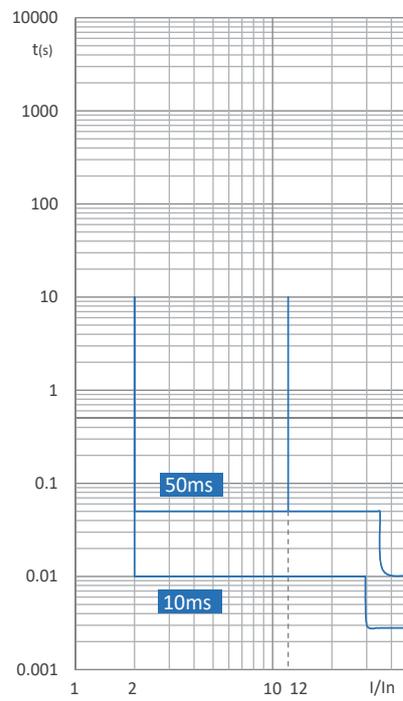
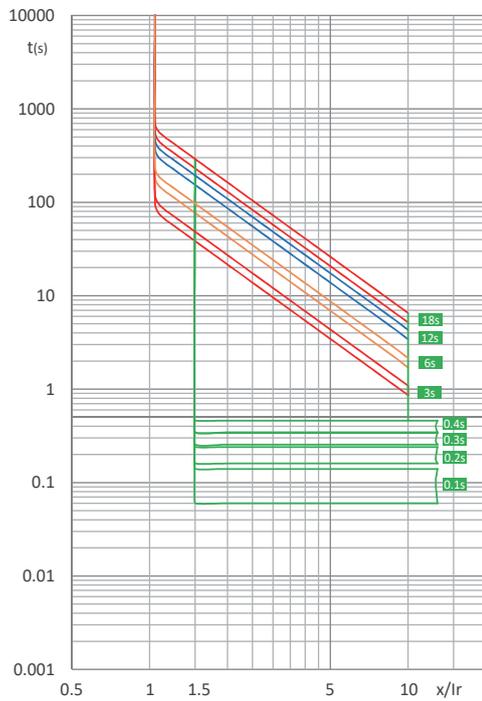
Installation space



Technical Data **Ex9M6 MOD SU20S**

Moulded Case Circuit Breakers up to 1600 A

Tripping characteristics



Long time delay:
 $I_r =$
 (0.4/0.5/0.6/0.7/
 0.8/0.9/0.95/1)
 $T_r =$
 (3/6/12/18)s

Short time delay:
 $I_{sd} =$
 (OFF/1.5/2/
 3/4/6/8/10) I_r
 $T_{sd} =$
 (0.1/0.2/0.3/0.4)s

Instantaneous:
 $I_i =$
 (OFF/2/3/4/6/8/10/12)

Technical Data
Ex9M MOD SU20S

Technical Data **Ex9M6 MOD SU20S**

Motor operated SU20L MCCBs up to 1600 A

Remote motor operator MOD (MOD version only)

General parameters

The electric motor charges the spring mechanism when the circuit breaker is closed

The electric motor MOD is equipped with a limit switch which signals the "charged" position of the mechanism (spring is charged)

The spring-mechanism charging handle can be used when maintaining or without power supply

Electrical parameters

Operating voltage U_e	230 V AC 400 V AC 24 V DC 110 V DC 220 V DC
Operating frequency	1 operating cycle in 3 minutes
Operating threshold	85 — 110% U_e
Power consumption AC DC	40 VA 40 W
Charging time	≤ 4 s
Insulation voltage	400 V
Peak current	$6 \times I_n$

Technical Data **Ex9M6 MOD SU20S**

Motor operated SU20L MCCBs up to 1600 A

Closing releases XF (MOD version only)

General parameters

Remotely close the breaker after the spring has stored energy

Operating voltage range 85 - 110% of nominal value U_e . Maximum allowed control command length 2 s (can be blocked e.g. by means of NC auxiliary contact, see below)

Electrical parameters

Operating voltage U_e	230 V AC 400 V AC 110 V DC 220 V DC
Operating threshold	85 — 110% U_e
Minimum duration of control impuls	0.2 s
Max. allowed duration of control impuls	2 s
Pick-up power time 100ms AC DC	200 VA 200 W
Power consumption AC DC	5 VA 5 W
Circuit breaker closing time	≤ 50 ms
Breaking time	30 ± 10 ms
Insulation voltage	400 V
Peak current	6 × I_n

Technical Data **Ex9M1SD AC**

AC Moulded Case Switch Disconnectors up to 160 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT21	101397 — 101405
Undervoltage releases	UVT21	101406 — 101407
2 Pole version cant be install with 2 AX		
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT21 or UVT21)		
External accessories		
Direct rotary handle	RHD21	101410
Extended rotary handle	ERH21	101409
Remote motor operators	MOD21	101411, 101412, 112079, 101425
Terminal cover, short	TCV21 3P, 4P	101439, 102372
Terminal cover, long	TCE21 3P, 4P	101440, 102373
Phase barrier	PHS21	112110
Box terminals	MC21	103705
Screw Terminal	MCS21	107873
Tunnel terminal	MC21 W	103707
DIN-rail adapter	DRA21	106319
Off position toggle key lock	KLK21	108852
Front plate connection	JP21	108859, 108865
Rear connection plate	RCP21	108871, 108875
Mechanical interlock	MIT21	108855
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, box terminals as well as phase barriers in the scope of delivery		

Technical Data **Ex9M1SD AC**

AC Moulded Case Switch Disconnectors up to 160 A

Electrical parameters

Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	690 V AC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	8 kV
Rated frequency	50/60 Hz
Rated short-time making capacity I_{cm}	3.2 kA
Rated short-time withstand current I_{cw}	2 kA / 1 s 2 kA / 3 s
Rated current	160 A
Utilization category	AC-22A, AC-23A
Mechanical service life	15 000 operation cycles
Electrical service life	2 000 operation cycles / 690 V AC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics

I_n	160 A
Pole resistance (mΩ)	0.8
Pole power dissipation (W)	20.5

Mechanical parameters

Device width 2P / 3P / 4P	62 mm / 90 mm / 120 mm
Device height	140 mm
Device depth	81.6 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	4 – 95 mm ²
Fastening torque of terminals	8 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 2P / 3P / 4P	0.9 kg / 1.05 kg / 1.55 kg
Mounting position	vertical, can be rotated by 90° in each axis

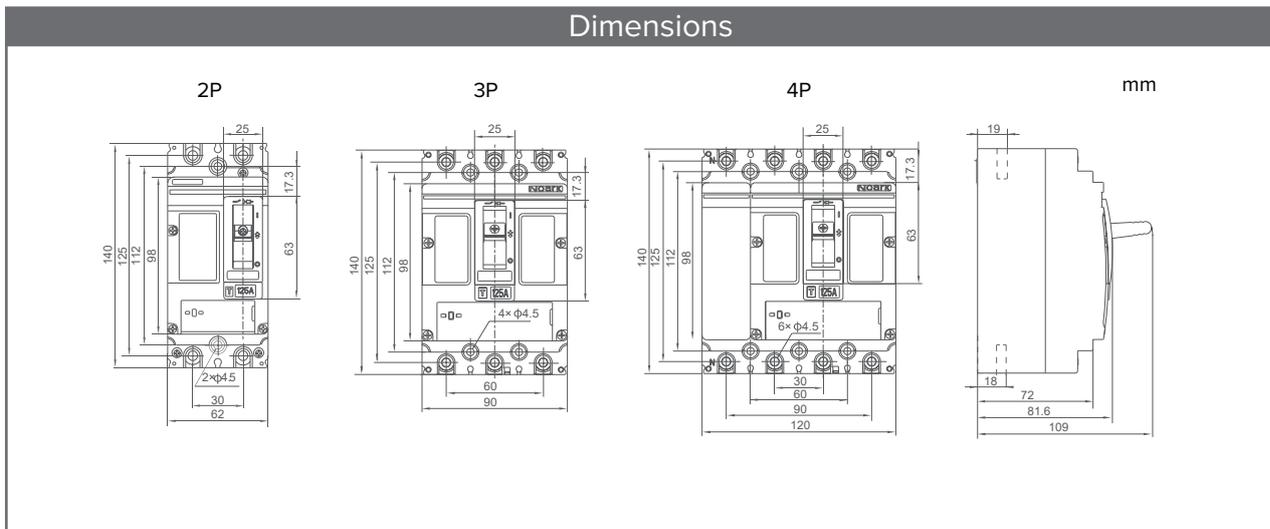
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

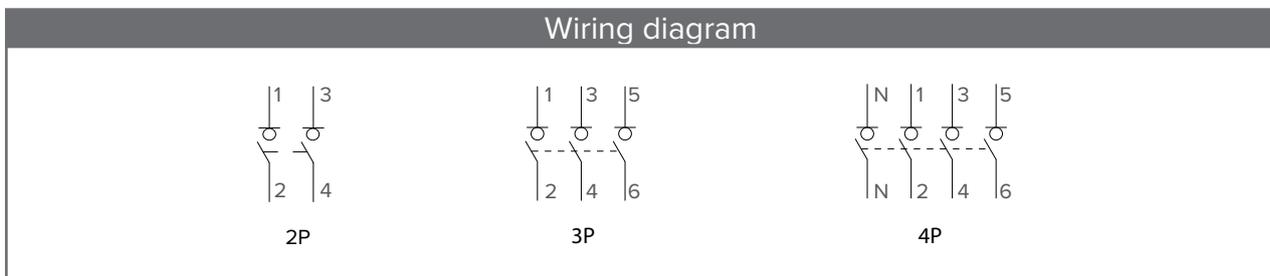
Technical Data Ex9M1SD AC

AC Moulded Case Switch Disconnectors up to 160 A

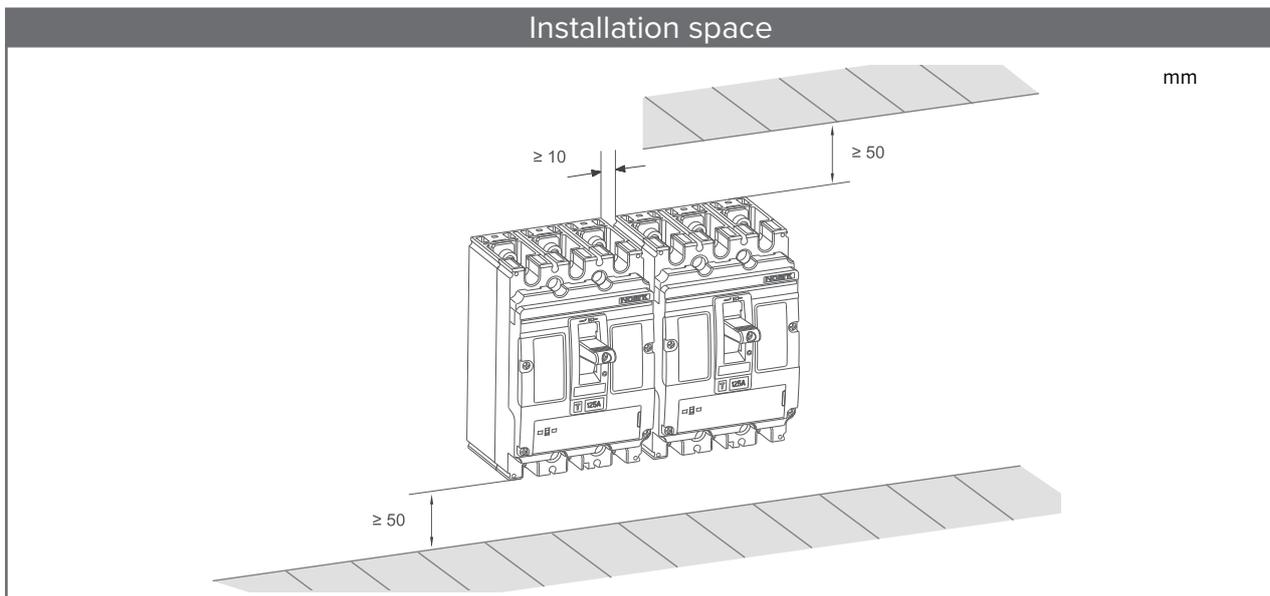
Dimensions



Wiring diagram



Installation space



Technical Data **Ex9M2SD AC**

AC Moulded Case Switch Disconnectors up to 250 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
2 Pole version can be install with 2 AX		
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD22	101429
Extended rotary handle	ERH22	101428
Remote motor operators	MOD22	101430, 101431, 112080, 101443
Terminal cover, short	TCV22 3P, 4P	101442, 102374
Terminal cover, long	TCE22 3P, 4P	101443, 102375
Phase barrier	PHS22	112111
Box terminals	MC22	103709
Screw Terminal	MCS22	107874
Tunnel terminal	MC22 W	103869, 103711, 103713
DIN-rail adapter	DRA22	106320
Off position toggle key lock	KLK22	108853
Front plate connection	JP22	108860, 108866
Rear connection plate	RCP22	108872, 108876
Mechanical interlock	MIT22	108856
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, box terminals as well as phase barriers in the scope of delivery		

Technical Data **Ex9M2SD AC**

AC Moulded Case Switch Disconnectors up to 250 A

Electrical parameters	
Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	690 V AC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	8 kV
Rated frequency	50/60 Hz
Rated short-time making capacity I_{cm}	5 kA / 690 V
Rated short-time withstand current I_{cw}	3.2 kA / 1 s 3.2 kA / 3 s
Rated current	250 A
Utilization category	AC-22A, AC-23A
Mechanical service life	15 000 operation cycles
Electrical service life	2 000 operation cycles / 690 V AC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics	
I_n	250 A
Pole resistance (m Ω)	0.4
Pole power dissipation (W)	25

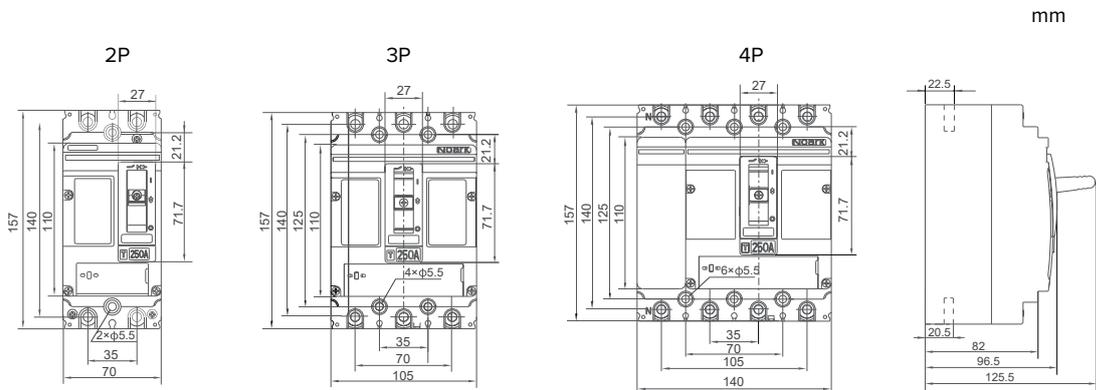
Mechanical parameters	
Device width 2P / 3P / 4P	70 mm / 105 mm / 140 mm
Device height	157 mm
Device depth	96.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	10 – 120 mm ²
Fastening torque of terminals	25 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 2P / 3P / 4P	1.3 kg / 1.85 kg / 2.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

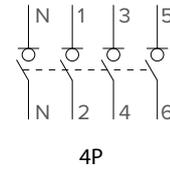
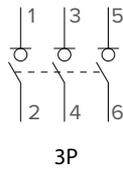
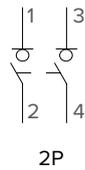
Technical Data Ex9M2SD AC

AC Moulded Case Switch Disconnectors up to 250 A

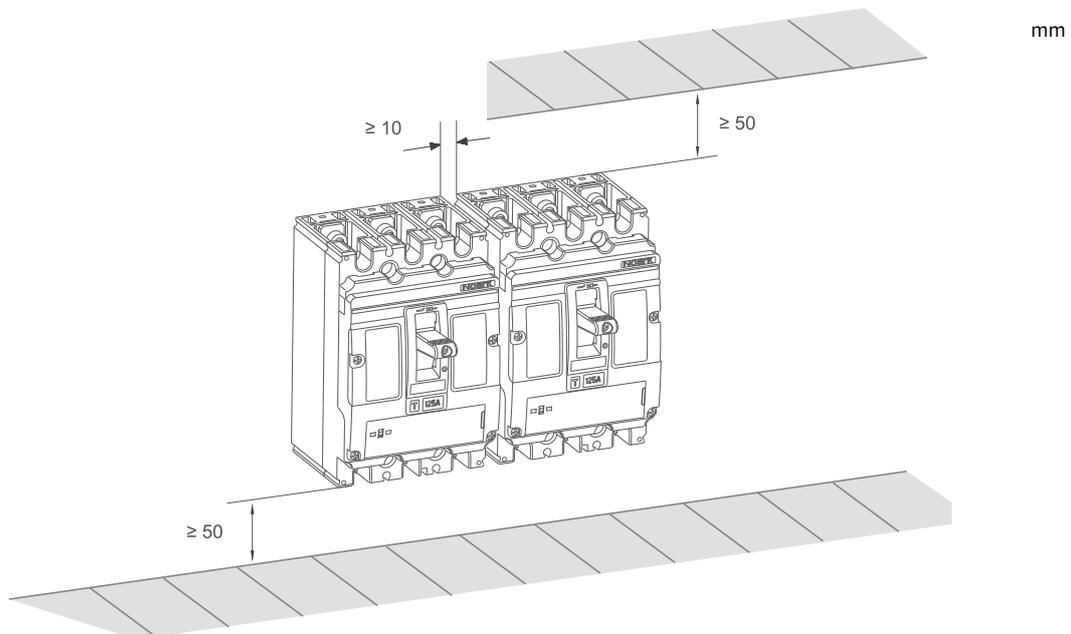
Dimensions



Wiring diagram



Installation space



Technical Data **Ex9M3SD AC**

AC Moulded Case Switch Disconnectors up to 400 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD23	101483
Extended rotary handle	ERH23	101482
Remote motor operators	MOD23	101484, 101485, 112081, 101488
Terminal cover, short	TCV23 3P, 4P	101489, 102376
Terminal cover, long	TCE23 3P, 4P	101490, 102377
Phase barrier	PHS23	112112
Box terminals	MC23	103715
Tunnel terminal	MC23 W	103719, 103721
Plug-in base	PIA 23	112879, 112880, 112885, 112886
Off position toggle key lock	KLK23	108854
Front plate connection	JP23	108861, 108867
Rear connection plate	RCP23	108873, 108877
Mechanical interlock	MIT23	108857
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data **Ex9M3SD AC**

AC Moulded Case Switch Disconnectors up to 400 A

Electrical parameters	
Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	690 V AC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	50/60 Hz
Rated short-time making capacity I_{cm}	8 kA / 690 V
Rated short-time withstand current I_{cw}	5 kA / 1 s 5 kA / 3 s
Rated current	400 A
Utilization category	AC-22A, AC-23A
Mechanical service life	15 000 operation cycles
Electrical service life	1 500 operation cycles / 690 V AC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics	
I_n	400 A
Pole resistance (mΩ)	0.15
Pole power dissipation (W)	24

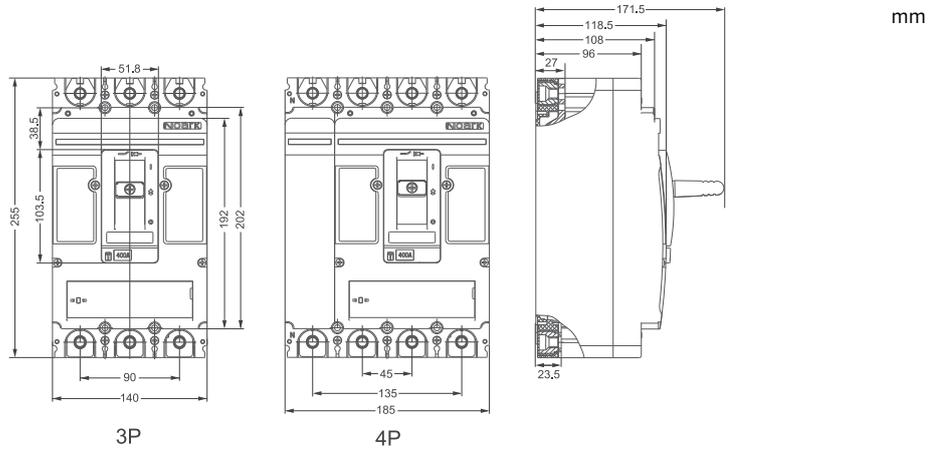
Mechanical parameters	
Device width 3P / 4P	140 mm / 185 mm
Device height	255 mm
Device depth	118.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 8 mm
Busbar width	≤ 30 mm
Cable lug width	≤ 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	5 kg / 6.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Technical Data **Ex9M3SD AC**

AC Moulded Case Switch Disconnectors up to 400 A

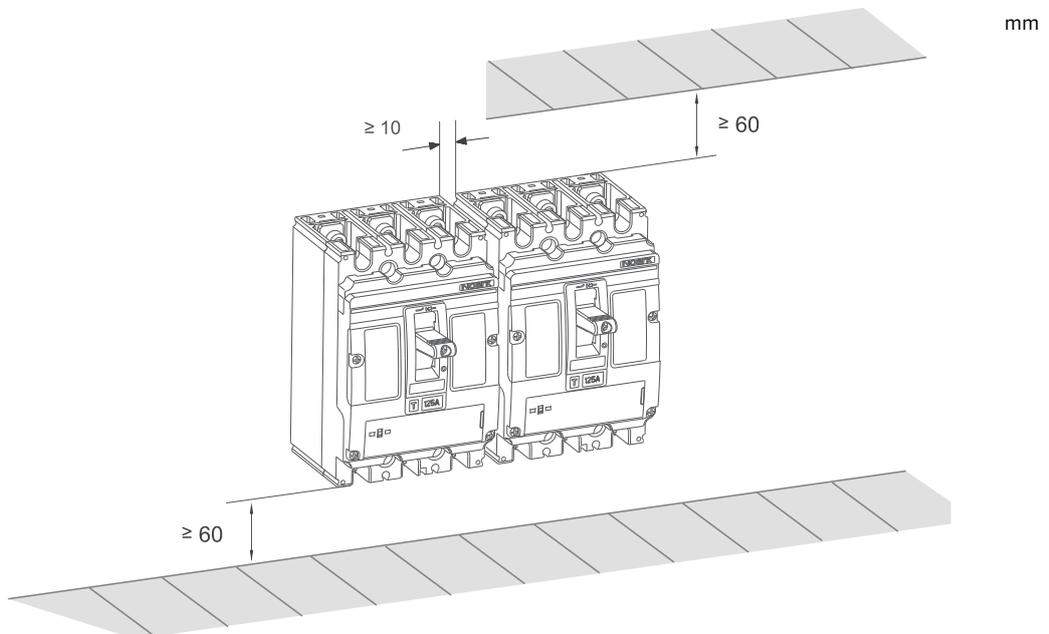
Dimensions



Wiring diagram



Installation space



Technical Data **Ex9M3SD AC**

AC Moulded Case Switch Disconnectors up to 630 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT24	103723 – 103730
Undervoltage releases	UVT24	103722 – 103740
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data **Ex9M4SD AC**

AC Moulded Case Switch Disconnectors up to 630 A

Electrical parameters	
Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	690 V AC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	50/60 Hz
Rated short-time making capacity I_{cm}	14 kA / 690 V
Rated short-time withstand current I_{cw}	8 kA / 1 s 8 kA / 3 s
Rated current	630 A
Utilization category	AC-22A, AC-23A
Mechanical service life	10 000 operation cycles
Electrical service life	1 000 operation cycles / 690 V AC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics	
I_n	630 A
Pole resistance (mΩ)	0.08
Pole power dissipation (W)	31.8

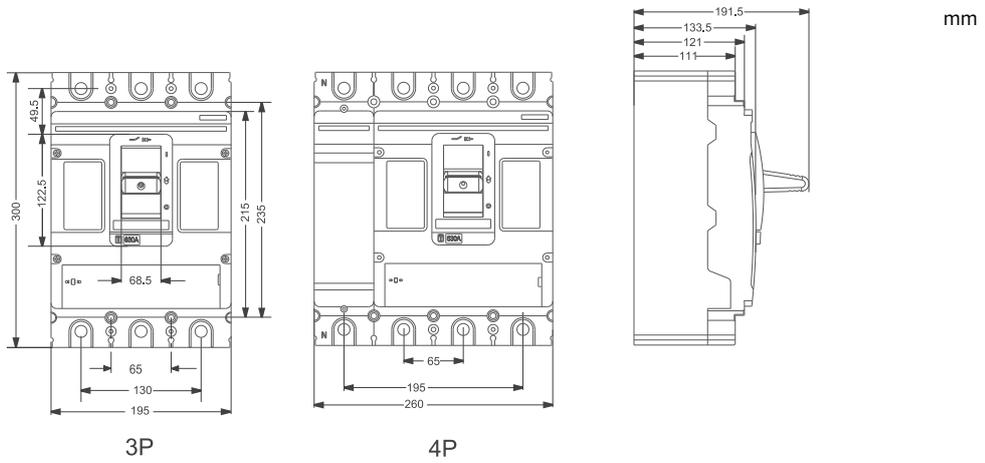
Mechanical parameters	
Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	9.5 kg / 12.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Technical Data **Ex9M4SD AC**

AC Moulded Case Switch Disconnectors up to 630 A

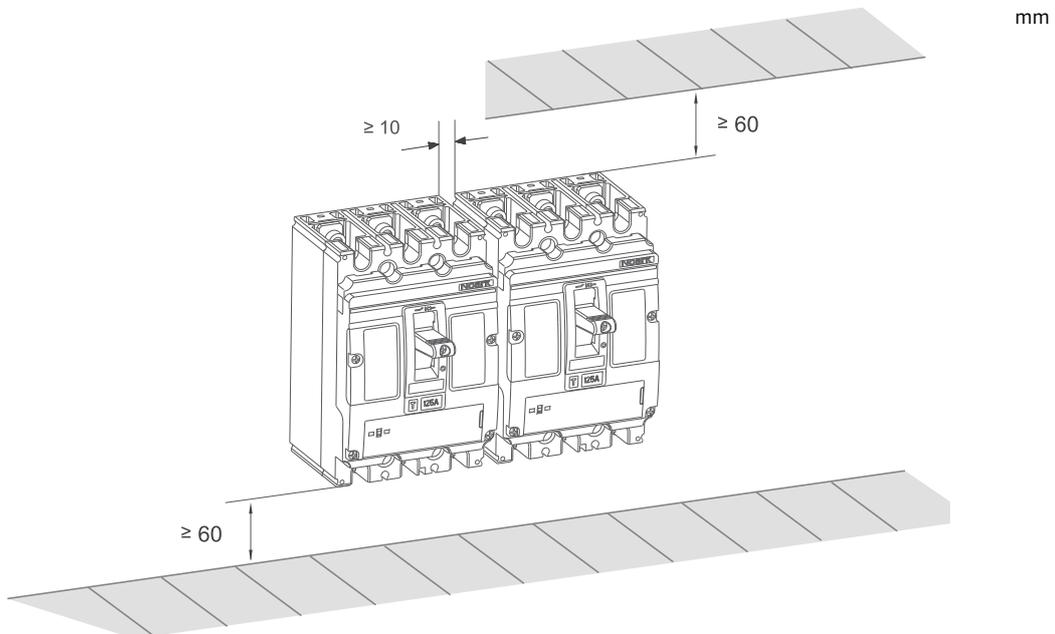
Dimensions



Wiring diagram



Installation space



Technical Data **Ex9M5SD AC**

AC Moulded Case Switch Disconnectors up to 800 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data **Ex9M5SD AC**

AC Moulded Case Switch Disconnectors up to 800 A

Electrical parameters

Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	690 V AC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	50/60 Hz
Rated short-time making capacity I_{cm}	17 kA / 690 V
Rated short-time withstand current I_{cw}	10 kA / 1 s 10 kA / 3 s
Rated current	800 A
Utilization category	AC-22A, AC-23A
Mechanical service life	10 000 operation cycles
Electrical service life	1 000 operation cycles / 690 V AC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics

I_n	800 A
Pole resistance (mΩ)	0.08
Pole power dissipation (W)	51.2

Mechanical parameters

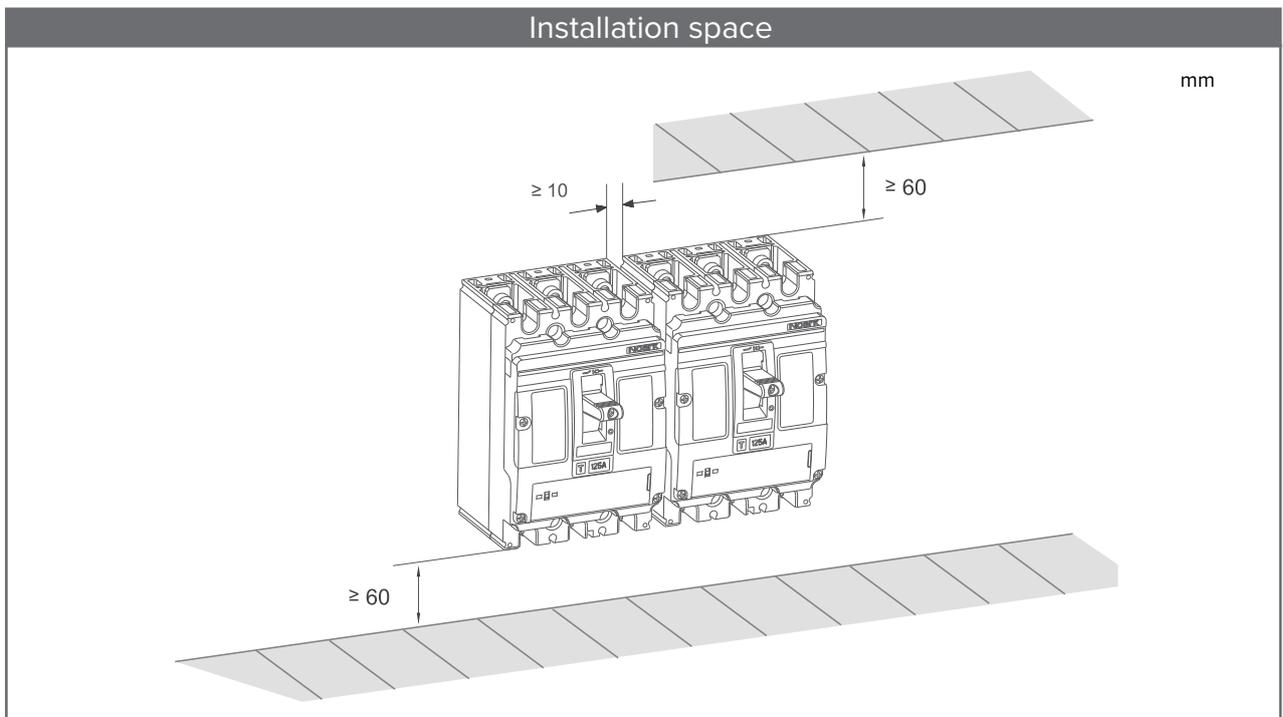
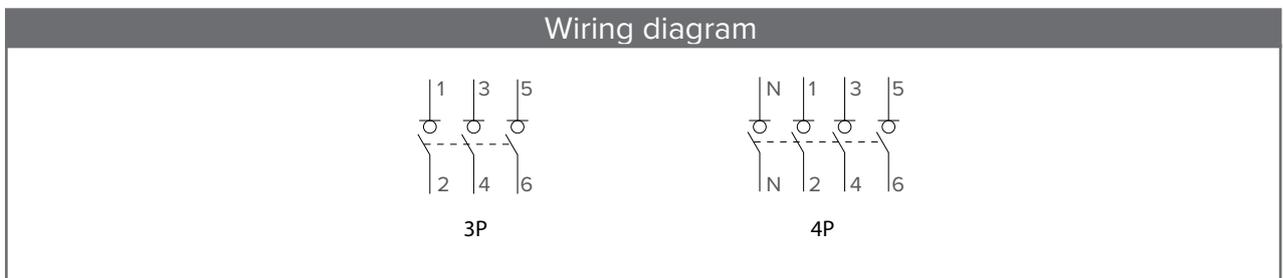
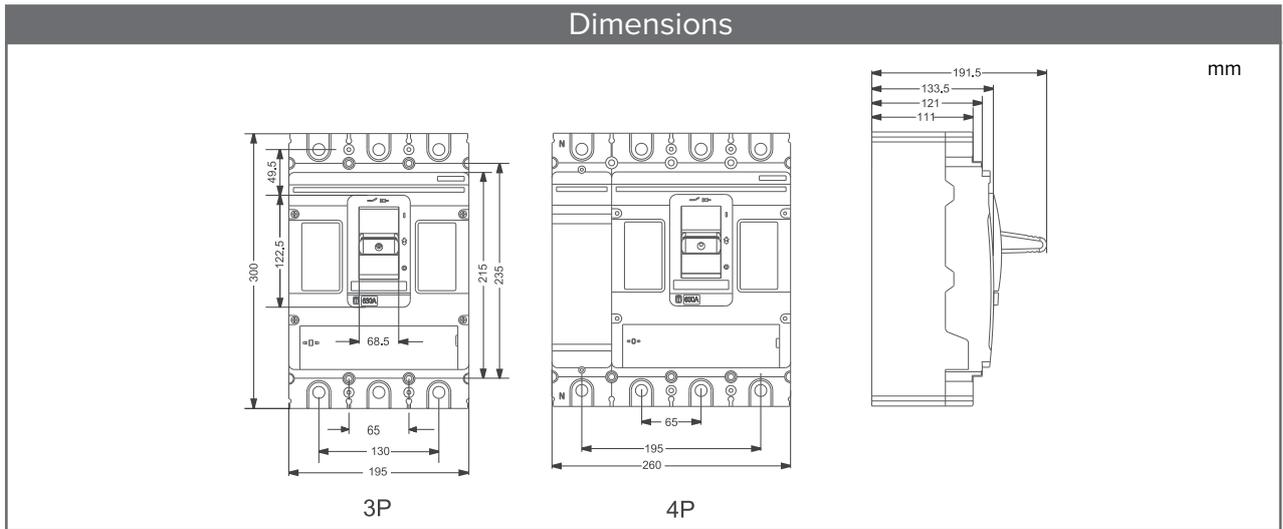
Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	9.5 kg / 12.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	2550 V AC	2370 V AC	2200 V AC	2050 V AC

Technical Data **Ex9M5SD AC**

AC Moulded Case Switch Disconnectors up to 800 A



Technical Data
Ex9M5SD AC

Technical Data **Ex9M6SD AC**

AC Moulded Case Switch Disconnectors up to 1 600 A

General parameters		
Suitable for household as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT26	110460 — 110467
Undervoltage releases	UVT26	110468 — 110469
Max. number of installed internal accessories is 2 pcs of AX21 and 1 pc of a release (SHT26 or UVT26)		
External accessories		
Extended handle	LHD26	110698
Extended rotary handle	ERH26	108846
Front connection plate	JP26	110694 — 110697
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data **Ex9M6SD AC**

AC Moulded Case Switch Disconnectors up to 1 600 A

Electrical parameters	
Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	690 V AC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	50/60 Hz
Rated short-time making capacity I_{cm}	40 kA / 690 V
Rated short-time withstand current I_{cw}	20 kA / 1 s 20 kA / 3 s
Rated current	800 / 1 000 / 1 250 / 1 600 A
Utilization category	AC-22A, AC-23A
Mechanical service life	6 000 operation cycles
Electrical service life	1 000 operation cycles / 690 V AC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics				
I_n	800 A	1 000 A	1 250 A	1 600 A
Pole resistance (mΩ)	0.08	0.08	0.04	0.04
Pole power dissipation (W)	51.2	80.0	62.5	102.4

Mechanical parameters	
Device width 3P / 4P	210 mm / 280 mm
Device height	286 mm
Device depth	191 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	25 — 30 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	13 / 17 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC

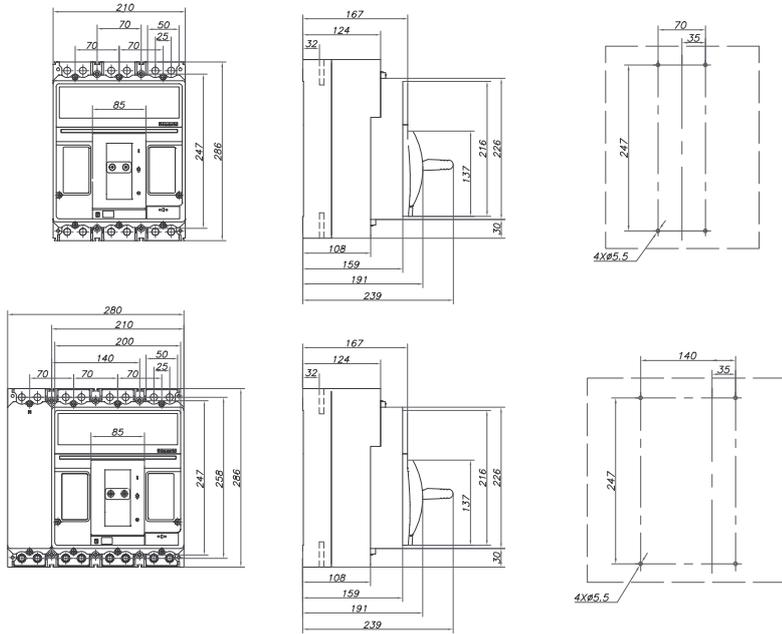
Technical Data Ex9M6SD AC

AC Moulded Case Switch Disconnectors up to 1 600 A

Dimensions

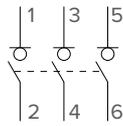
mm

3P

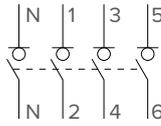


4P

Wiring diagram



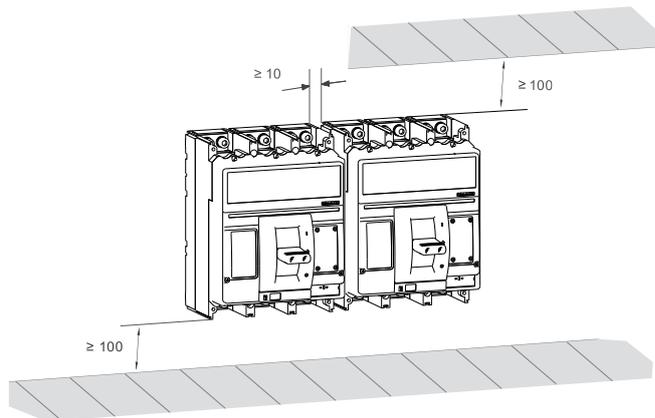
3P



4P

Installation space

mm



Technical Data **Ex9M6SD MOD AC**

Moulded Case Circuit Breakers up to 1600 A

General parameters		
Suitable for household as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT26	110460 — 110467
Undervoltage releases	UVT26	110468 — 110469, 112073 — 112078
Max. number of installed internal accessories is 2 pcs of AX21, 1 pc of AL21 and 1 pc of a release (SHT26 or UVT26)		
External accessories		
Front connection plate	JP26	110694 — 110697
Connection terminals	MC26 W/	112091 — 112092
Phase barrier	PHS26	112114
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data **Ex9M6SD MOD AC**

Moulded Case Circuit Breakers up to 1600 A

Electrical parameters

Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	690 V AC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	50/60 Hz
Rated short-time making capacity I_{cm}	40 kA / 690 V
Rated short-time withstand current I_{cw}	20 kA / 1 s 20 kA / 3 s
Rated current	800 / 1 000 / 1 250 / 1 600 A
Utilization category	AC-22A, AC-23A
Mechanical service life	6 000 operation cycles
Electrical service life	1 000 operation cycles / 690 V AC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]			
	800 A	1 000 A	1 250 A	1 600 A
-35	800	1 000 A	1 250 A	1 600 A
-25	800	1 000 A	1 250 A	1 600 A
-15	800	1 000 A	1 250 A	1 600 A
-5	800	1 000 A	1 250 A	1 600 A
0	800	1 000 A	1 250 A	1 600 A
10	800	1 000 A	1 250 A	1 600 A
20	800	1 000 A	1 250 A	1 600 A
30	800	1 000 A	1 250 A	1 600 A
40	800	1 000 A	1 250 A	1 600 A
50	800	1 000 A	1 250 A	1 520 A
60	800	1 000 A	1 250 A	1 440 A
70	800	1 000 A	1 250 A	1 360 A

Power dissipation characteristics

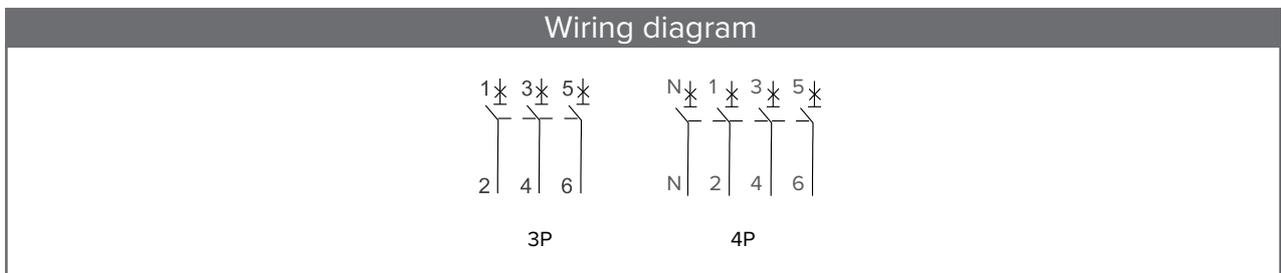
I_n	800 A	1 000 A	1 250 A	1 600 A
Pole resistance	0.08 mΩ	0.08 mΩ	0.04 mΩ	0.04 mΩ
Pole power dissipation	51.2 W	80.0 W	62.5 W	102.4 W

Technical Data **Ex9M6SD MOD AC**

Moulded Case Circuit Breakers up to 1600 A

Mechanical parameters	
Device width 3P / 4P	210 mm / 280 mm
Device height	286 mm
Device depth	198 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	25 — 30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	16 / 20 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC



Technical Data **Ex9M6SD MOD AC**

Motor operated SU20L MCCBs up to 1600 A

Remote motor operator MOD (MOD version only)

General parameters

The electric motor charges the spring mechanism when the circuit breaker is closed

The electric motor MOD is equipped with a limit switch which signals the “charged” position of the mechanism (spring is charged)

The spring-mechanism charging handle can be used when maintaining or without power supply

Electrical parameters

Operating voltage U_e	230 V AC 400 V AC 24 V DC 110 V DC 220 V DC
Operating frequency	1 operating cycle in 3 minutes
Operating threshold	85 – 110% U_e
Power consumption AC DC	40 VA 40 W
Charging time	≤ 4 s
Insulation voltage	400 V
Peak current	$6 \times I_n$

Technical Data **Ex9M6SD MOD AC**

Motor operated SU20L MCCBs up to 1600 A

Closing releases XF (MOD version only)

General parameters

Remotely close the breaker after the spring has stored energy

Operating voltage range 85 - 110% of nominal value U_e . Maximum allowed control command length 2 s (can be blocked e.g. by means of NC auxiliary contact, see below)

Electrical parameters

Operating voltage U_e	230 V AC 400 V AC 110 V DC 220 V DC
Operating threshold	85 – 110% U_e
Minimum duration of control impuls	0.2 s
Max. allowed duration of control impuls	2 s
Pick-up power time 100ms AC DC	200 VA 200 W
Power consumption AC DC	5 VA 5 W
Circuit breaker closing time	≤ 50 ms
Breaking time	30 ± 10 ms
Insulation voltage	400 V
Peak current	6 × I_n

Technical Data **Ex9M1SD DC**

DC Moulded Case Switch Disconnectors up to 160 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT21	101397 — 101405
Undervoltage releases	UVT21	101406 — 101407
2 Pole version cant be install with 2 AX		
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT21 or UVT21)		
External accessories		
Direct rotary handle	RHD21	101410
Extended rotary handle	ERH21	101409
Remote motor operators	MOD21	101411, 101412, 112079, 101425
Terminal cover, short	TCV21 3P, 4P	101439, 102372
Terminal cover, long	TCE21 3P, 4P	101440, 102373
Phase barrier	PHS21	112110
Box terminals	MC21	103705
Screw Terminal	MCS21	107873
Tunnel terminal	MC21 W	103707
DIN-rail adapter	DRA21	106319
Off position toggle key lock	KLK21	108852
Front plate connection	JP21	108859, 108865
Rear connection plate	RCP21	108871, 108875
Mechanical interlock	MIT21	108855
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, box terminals as well as phase barriers in the scope of delivery		

Technical Data Ex9M1SD DC

DC Moulded Case Switch Disconnectors up to 160 A

Electrical parameters

Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	750 / 1 000 V DC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	8 kV
Rated frequency	DC
Rated short-time making capacity I_{cm}	2 kA
Rated short-time withstand current I_{cw}	2 kA / 1 s 2 kA / 3 s
Rated current	160 A
Utilization category	DC-22A, DC-23A, DC-PV2
Mechanical service life	15 000 operation cycles
Electrical service life	2 000 operation cycles / 1 000 V DC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics

I_n	160 A
Pole resistance (mΩ)	0.8
Pole power dissipation (W)	20.5

Mechanical parameters

Device width 2P / 3P / 4P	62 mm / 90 mm / 120 mm
Device height	140 mm
Device depth	81.6 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	4 – 95 mm ²
Fastening torque of terminals	8 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 2P / 3P / 4P	0.9 kg / 1.05 kg / 1.55 kg
Mounting position	vertical, can be rotated by 90° in each axis

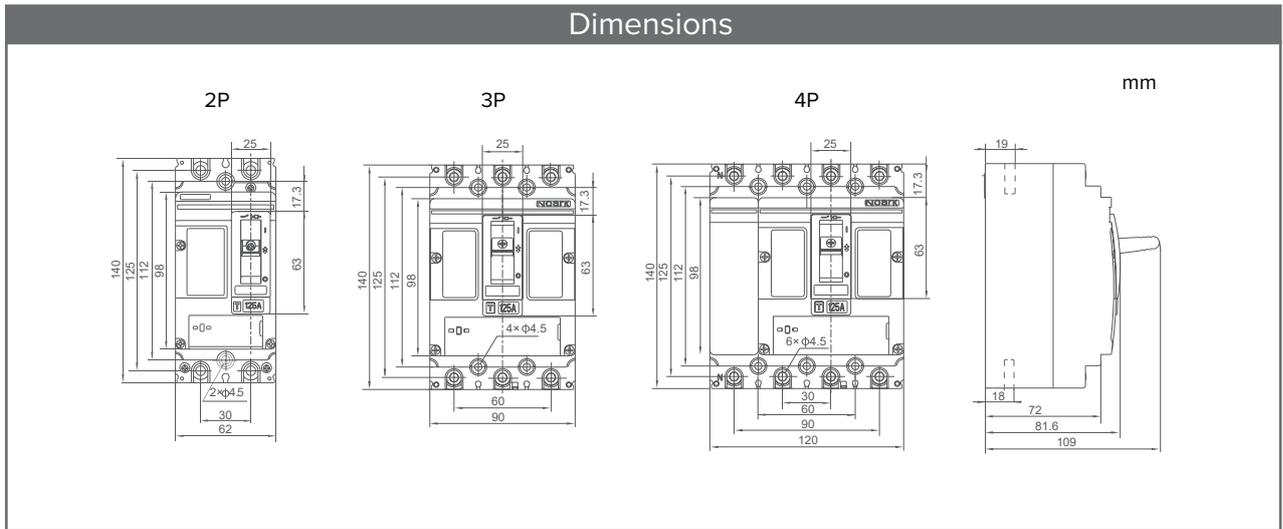
Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	3 110 V DC	2 892 V DC	2 705 V DC	2 488 V DC

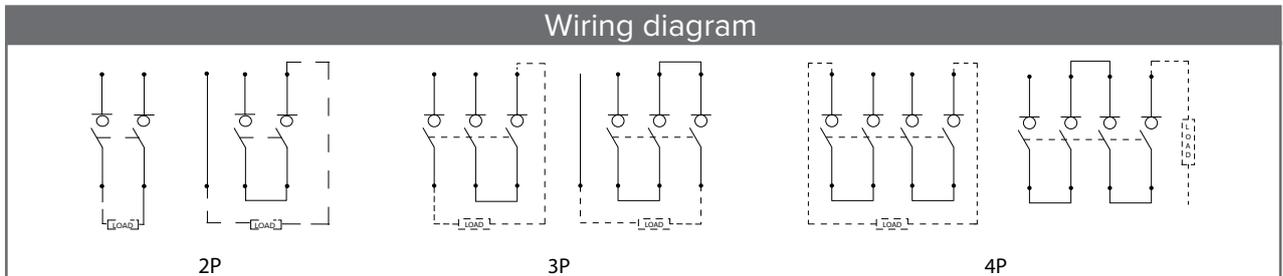
Technical Data **Ex9M1SD DC**

DC Moulded Case Switch Disconnectors up to 160 A

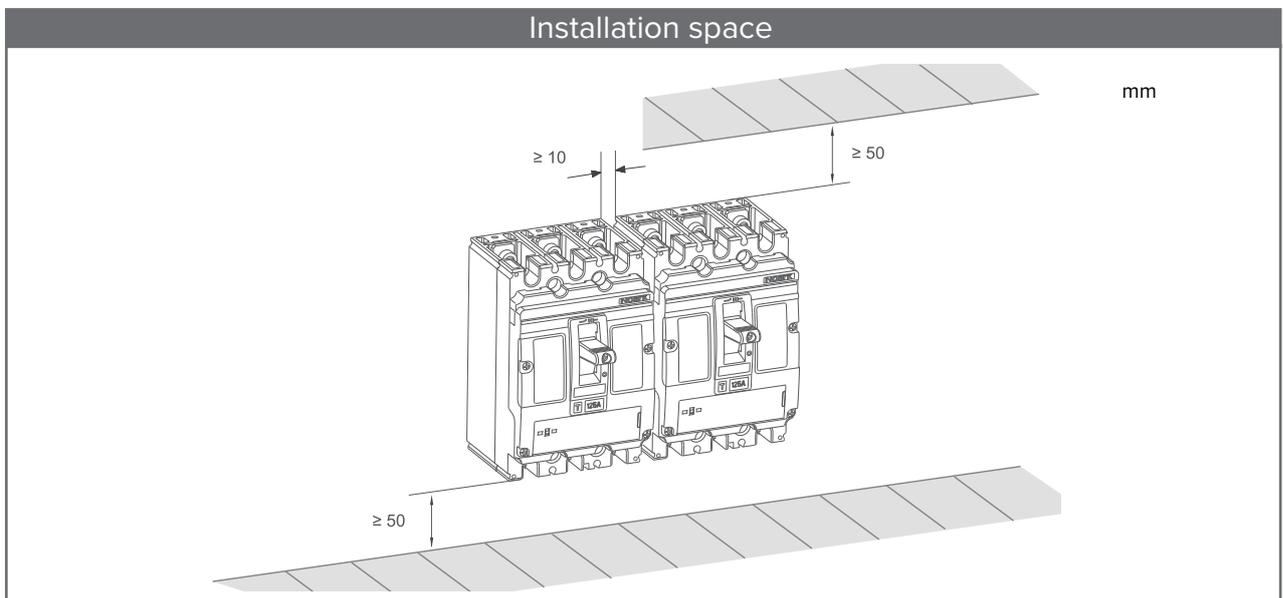
Dimensions



Wiring diagram



Installation space



Technical Data **Ex9M2SD DC**

DC Moulded Case Switch Disconnectors up to 250 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
2 Pole version can be install with 2 AX		
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD22	101429
Extended rotary handle	ERH22	101428
Remote motor operators	MOD22	101430, 101431, 112080, 101443
Terminal cover, short	TCV22 3P, 4P	101442, 102374
Terminal cover, long	TCE22 3P, 4P	101443, 102375
Phase barrier	PHS22	112111
Box terminals	MC22	103709
Screw Terminal	MCS22	107874
Tunnel terminal	MC22 W	103869, 103711, 103713
DIN-rail adapter	DRA22	106320
Off position toggle key lock	KLK22	108853
Front plate connection	JP22	108860, 108866
Rear connection plate	RCP22	108872, 108876
Mechanical interlock	MIT22	108856
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, box terminals as well as phase barriers in the scope of delivery		

Technical Data Ex9M2SD DC

DC Moulded Case Switch Disconnectors up to 250 A

Electrical parameters	
Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	750 / 1 000 V DC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	8 kV
Rated frequency	DC
Rated short-time making capacity I_{cm}	3.2 kA
Rated short-time withstand current I_{cw}	3.2 kA / 1 s 3.2 kA / 3 s
Rated current	250 A
Utilization category	DC-22A, DC-23A, DC-PV2
Mechanical service life	15 000 operation cycles
Electrical service life	1 500 operation cycles / 1 000 V DC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics	
I_n	250 A
Pole resistance (mΩ)	0.4
Pole power dissipation (W)	25

Mechanical parameters	
Device width 2P / 3P / 4P	70 mm / 105 mm / 140 mm
Device height	157 mm
Device depth	96.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	box
Terminal capacity	10 – 120 mm ²
Fastening torque of terminals	25 Nm
Ambient temperature	-40 – +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 2P / 3P / 4P	1.3 kg / 1.85 kg / 2.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

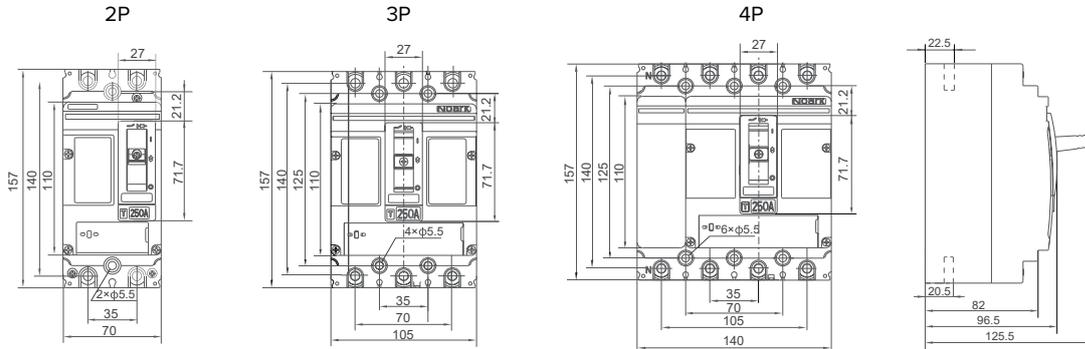
Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	3 110 V DC	2 892 V DC	2 705 V DC	2 488 V DC

Technical Data Ex9M2SD DC

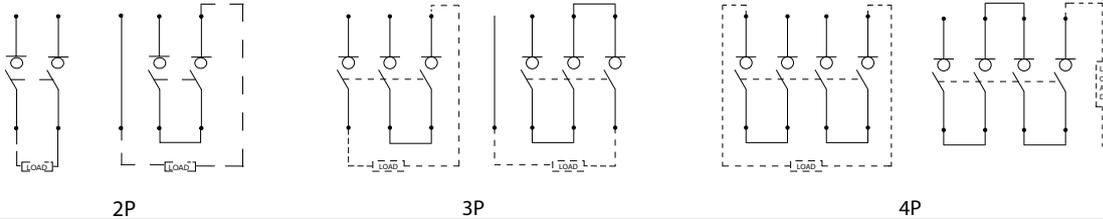
DC Moulded Case Switch Disconnectors up to 250 A

Dimensions

mm

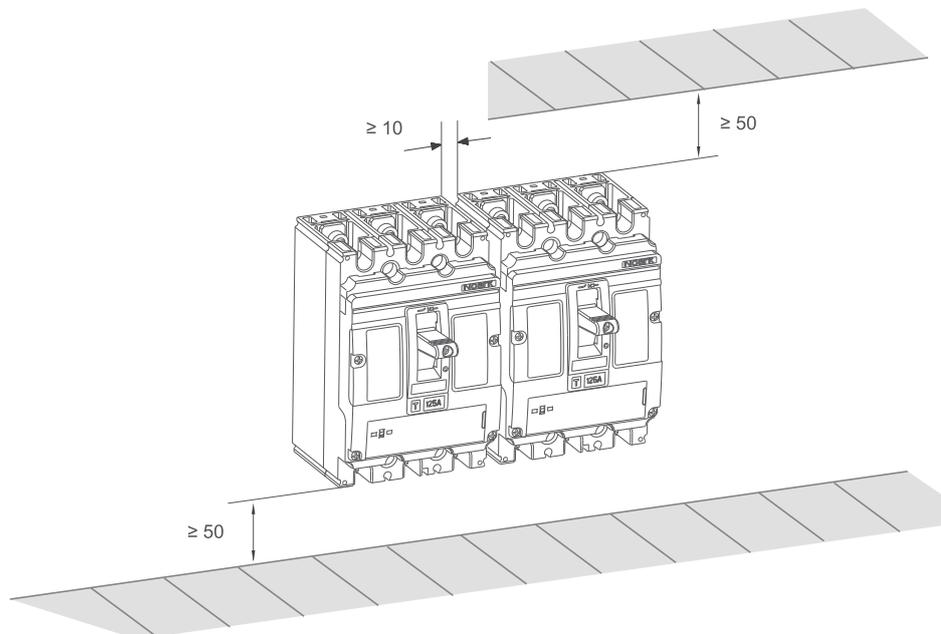


Wiring diagram



Installation space

mm



Technical Data **Ex9M3SD DC**

DC Moulded Case Switch Disconnectors up to 400 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Direct rotary handle	RHD23	101483
Extended rotary handle	ERH23	101482
Remote motor operators	MOD23	101484, 101485, 112081, 101488
Terminal cover, short	TCV23 3P, 4P	101489, 102376
Terminal cover, long	TCE23 3P, 4P	101490, 102377
Phase barrier	PHS23	112112
Box terminals	MC23	103715
Tunnel terminal	MC23 W	103719, 103721
Plug-in base	PIA 23	112879, 112880, 112885, 112886
Off position toggle key lock	KLK23	108854
Front plate connection	JP23	108861, 108867
Rear connection plate	RCP23	108873, 108877
Mechanical interlock	MIT23	108857
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data **Ex9M3SD DC**

DC Moulded Case Switch Disconnectors up to 400 A

Electrical parameters

Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	750 / 1 000 V DC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	DC
Rated short-time making capacity I_{cm}	5 kA
Rated short-time withstand current I_{cw}	5 kA / 1 s 5 kA / 3 s
Rated current	400 A
Utilization category	DC-22A, DC-23A, DC-PV2
Mechanical service life	15 000 operation cycles
Electrical service life	1 500 operation cycles / 1 000 V DC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics

I_n	400 A
Pole resistance (mΩ)	0.15
Pole power dissipation (W)	24

Mechanical parameters

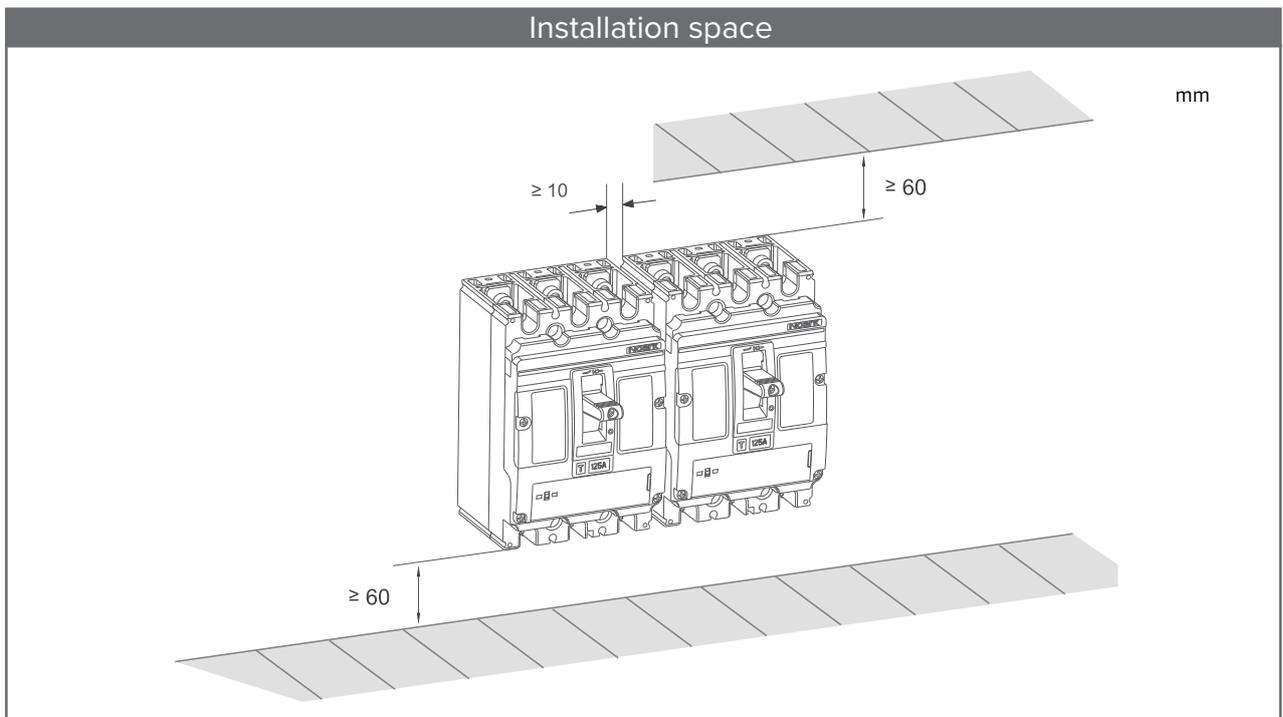
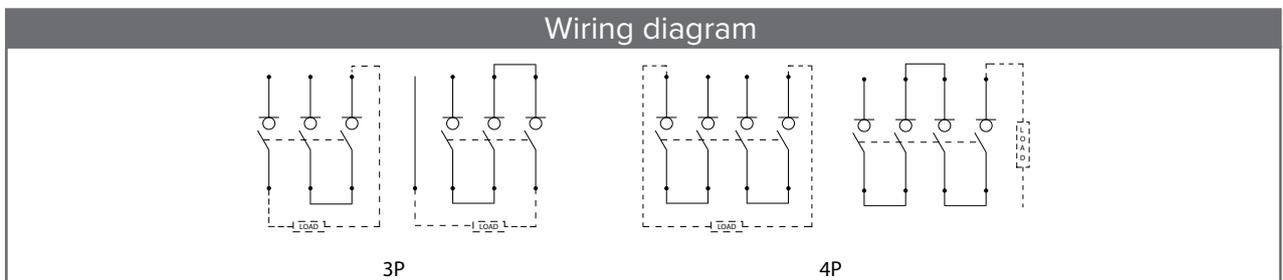
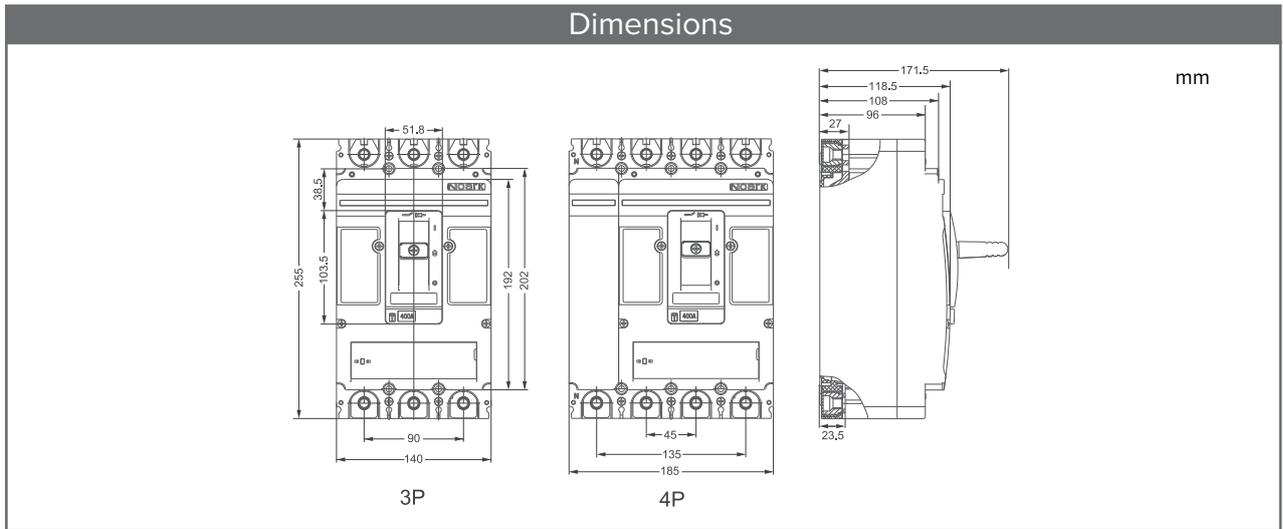
Device width 3P / 4P	140 mm / 185 mm
Device height	255 mm
Device depth	118.5 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 8 mm
Busbar width	≤ 30 mm
Cable lug width	≤ 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	5 kg / 6.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	3 600 V DC	3 350 V DC	3 110 V DC	2 985 V DC

Technical Data **Ex9M3SD DC**

DC Moulded Case Switch Disconnectors up to 400 A



Technical Data **Ex9M3SD DC**

DC Moulded Case Switch Disconnectors up to 630 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT24	103723 – 103730
Undervoltage releases	UVT24	103722 – 103740
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data Ex9M4SD DC

DC Moulded Case Switch Disconnectors up to 630 A

Electrical parameters	
Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	750 / 1 000 V DC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	DC
Rated short-time making capacity I_{cm}	14 kA
Rated short-time withstand current I_{cw}	8 kA / 1 s 8 kA / 3 s
Rated current	630 A
Utilization category	DC-22A, DC-23A, DC-PV2
Mechanical service life	10 000 operation cycles
Electrical service life	1 000 operation cycles / 1 000 V DC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics	
I_n	630 A
Pole resistance (mΩ)	0.08
Pole power dissipation (W)	31.8

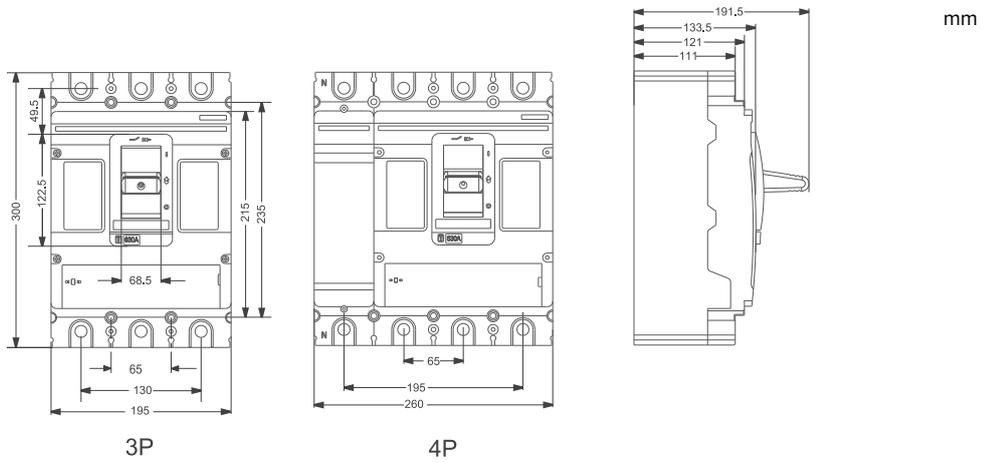
Mechanical parameters	
Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	9.5 kg / 12.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	3 600 V DC	3 350 V DC	3 110 V DC	2 985 V DC

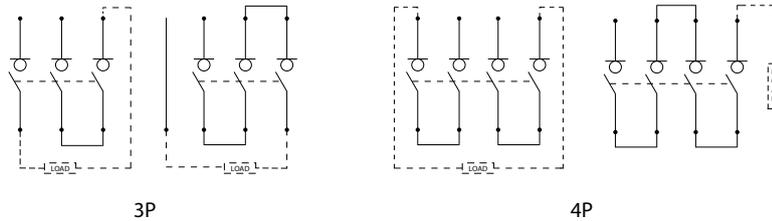
Technical Data **Ex9M4SD DC**

DC Moulded Case Switch Disconnectors up to 630 A

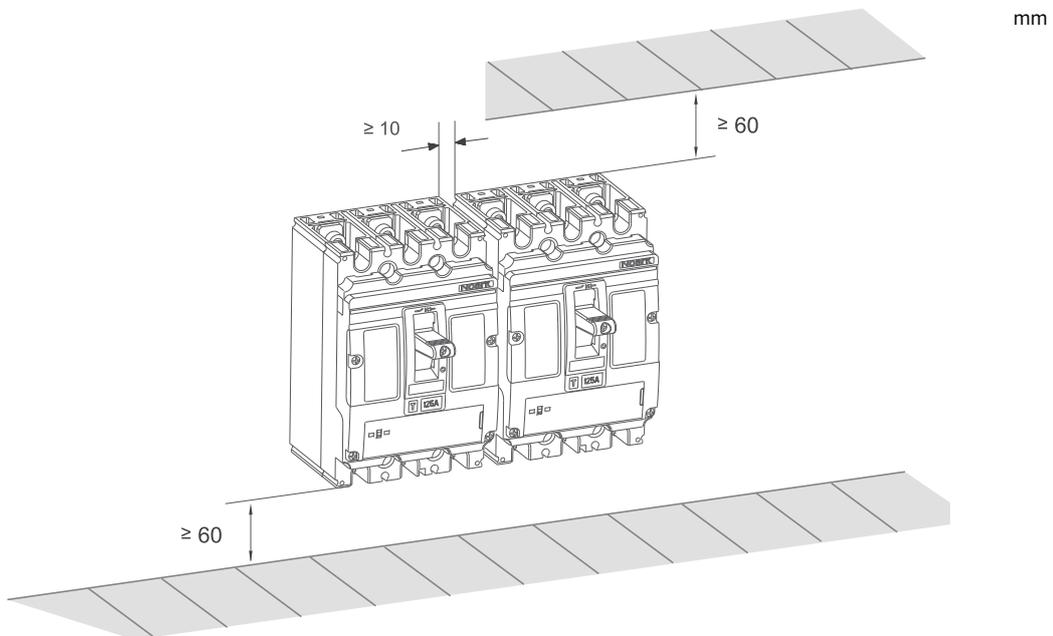
Dimensions



Wiring diagram



Installation space



Technical Data **Ex9M5SD DC**

DC Moulded Case Switch Disconnectors up to 800 A

General parameters		
Suitable for commercial as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740
Max. number of installed internal accessories is 2 pcs of AX21M and 1 pc of a release (SHT24 or UVT24)		
External accessories		
Direct rotary handle	RHD24	103742
Extended rotary handle	ERH24	103741
Remote motor operators	MOD24	112873, 112874, 112082, 103747
Terminal cover, short	TCV24 3P, 4P	103748, 103750
Terminal cover, long	TCE24 3P, 4P	103749, 104855
Phase barrier	PHS24	112113
Tunnel terminals	MC24 W2	106314
Rear connection plate	RCP24	108874, 108878
Mechanical interlock	MIT24	108858
Mounting depth spacers	WG10, WG13	106131, 106132
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data Ex9M5SD DC

DC Moulded Case Switch Disconnectors up to 800 A

Electrical parameters

Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	1 000 V DC
Rated insulation voltage U_i	1 250 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	DC
Rated short-time making capacity I_{cm}	17 kA
Rated short-time withstand current I_{cw}	10 kA / 1 s 10 kA / 3 s
Rated current	800 A
Utilization category	DC-22A, DC-23A, DC-PV2
Mechanical service life	10 000 operation cycles
Electrical service life	1 000 operation cycles / 1 000 V DC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics

I_n	800 A
Pole resistance (mΩ)	0.08
Pole power dissipation (W)	51.2

Mechanical parameters

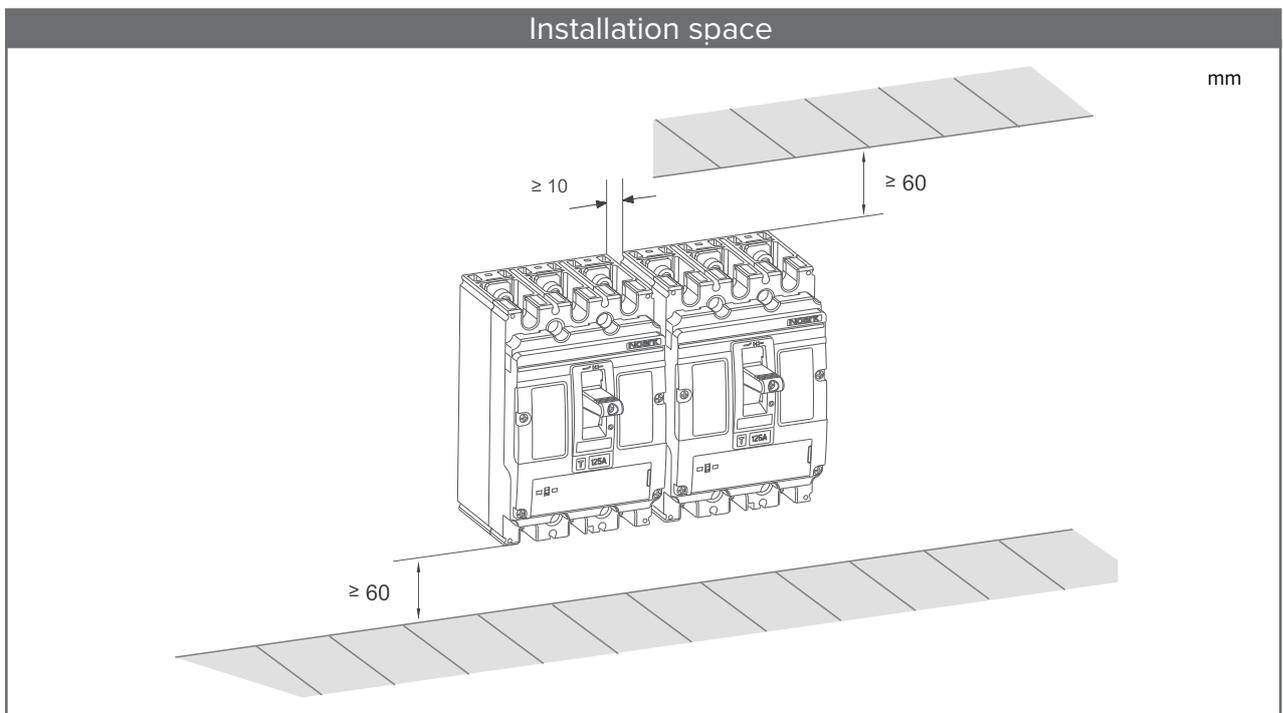
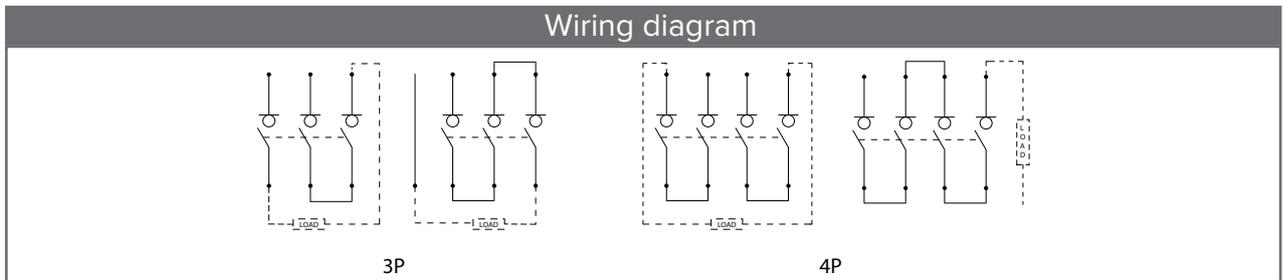
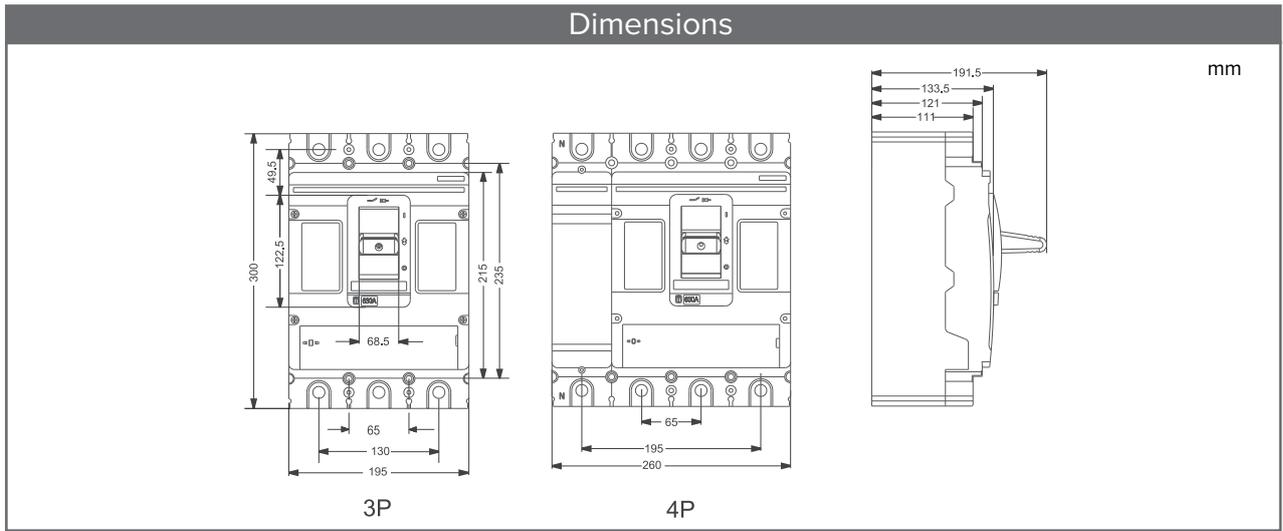
Device width 3P / 4P	195 mm / 260 mm
Device height	300 mm
Device depth	142 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M12 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	9.5 kg / 12.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude

Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	3 600 V DC	3 350 V DC	3 110 V DC	2 985 V DC

Technical Data **Ex9M5SD DC**

DC Moulded Case Switch Disconnectors up to 800 A



Technical Data
Ex9M5SD DC

Technical Data **Ex9M6SD DC**

DC Moulded Case Switch Disconnectors up to 1 600 A

General parameters		
Suitable for household as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Shunt trip releases	SHT26	110460 — 110467
Undervoltage releases	UVT26	110468 — 110469
Max. number of installed internal accessories is 2 pcs of AX21 and 1 pc of a release (SHT26 or UVT26)		
External accessories		
Extended handle	LHD26	110698
Extended rotary handle	ERH26	108846
Front connection plate	JP26	110694 — 110697
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data Ex9M6SD DC

DC Moulded Case Switch Disconnectors up to 1 600 A

Electrical parameters	
Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	750 / 1 500 V DC
Rated insulation voltage U_i	1 500 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	DC
Rated short-time making capacity I_{cm}	19.2 kA
Rated short-time withstand current I_{cw}	19.2 kA / 1 s
Rated current	800 / 1 000 / 1 250 / 1 600 A
Utilization category	DC-22A, DC-22B
Mechanical service life	6 000 operation cycles
Electrical service life	1 000 operation cycles / 1 000 V DC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Power dissipation characteristics				
I_n	800 A	1 000 A	1 250 A	1 600 A
Pole resistance (mΩ)	0.08	0.08	0.04	0.04
Pole power dissipation (W)	51.2	80.0	62.5	102.4

Mechanical parameters	
Device width 3P / 4P	210 mm / 280 mm
Device height	286 mm
Device depth	191 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	25 — 30 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	13 / 17 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1 000 V DC	900 V DC	850 V DC	800 V DC
Rated insulation voltage U_i	1 000 V DC	930 V DC	870 V DC	800 V DC
Rated impulse withstand voltage U_{imp}	12 kV	10 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=12$ kV)	3 600 V DC	3 350 V DC	3 110 V DC	2 985 V DC

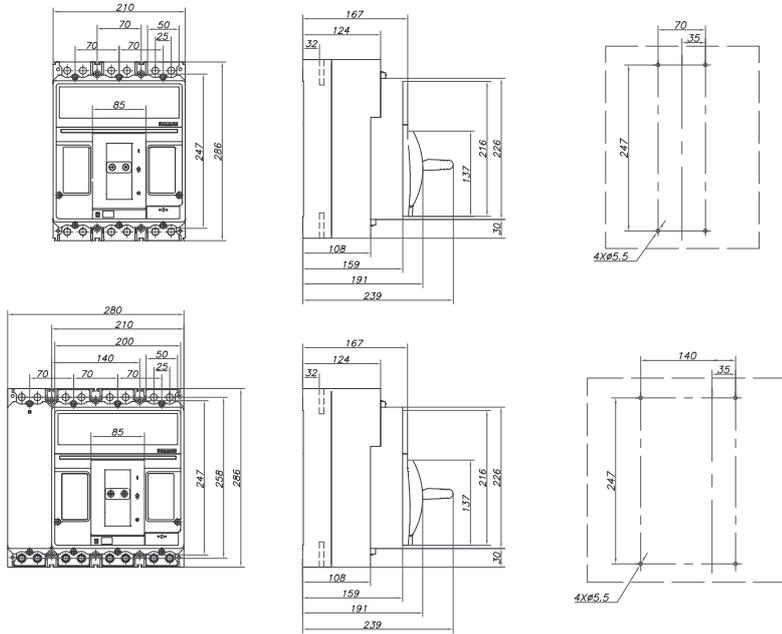
Technical Data Ex9M6SD DC

DC Moulded Case Switch Disconnectors up to 1 600 A

Dimensions

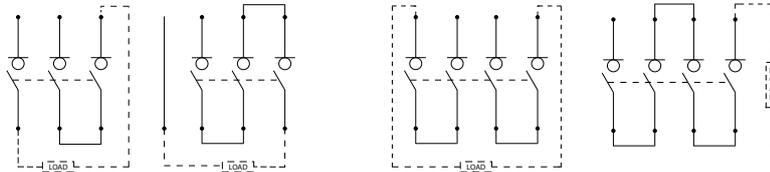
mm

3P



4P

Wiring diagram

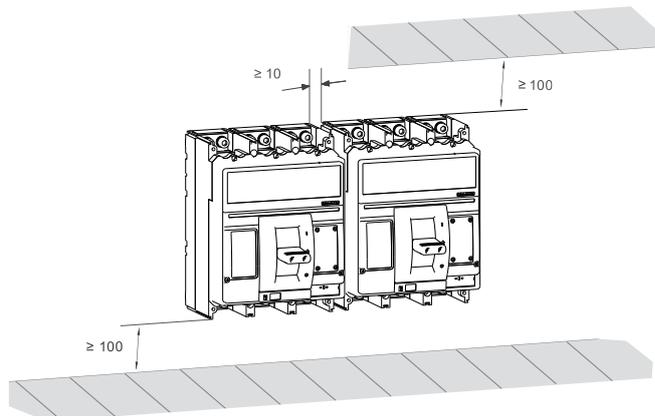


3P

4P

Installation space

mm



Technical Data **Ex9M6SD MOD DC**

Moulded Case Circuit Breakers up to 1600 A

General parameters		
Suitable for household as well as industrial applications		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT26	110460 — 110467
Undervoltage releases	UVT26	110468 — 110469, 112073 — 112078
Max. number of installed internal accessories is 2 pcs of AX21, 1 pc of AL21 and 1 pc of a release (SHT26 or UVT26)		
External accessories		
Front connection plate	JP26	110694 — 110697
Connection terminals	MC26 Wi	112091 — 112092
Phase barrier	PHS26	112114
Mounting screws, screw type terminals as well as phase barriers in the scope of delivery		

Technical Data **Ex9M6SD MOD DC**

Moulded Case Circuit Breakers up to 1600 A

Electrical parameters

Tested according to	IEC/EN 60947-3
Rated op. voltage U_e	690 V AC
Rated insulation voltage U_i	1 000 V
Rated impulse withstand voltage U_{imp}	12 kV
Rated frequency	50/60 Hz
Rated short-time making capacity I_{cm}	40 kA / 690 V
Rated short-time withstand current I_{cw}	20 kA / 1 s 20 kA / 3 s
Rated current	800 / 1 000 / 1 250 / 1 600 A
Utilization category	AC-22A, AC-23A
Mechanical service life	6 000 operation cycles
Electrical service life	1 000 operation cycles / 690 V AC
Total disconnection time at short circuit	< 2 ms
Line voltage connection	arbitrary above or below

Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]			
	800 A	1 000 A	1 250 A	1 600 A
-35	800	1 000 A	1 250 A	1 600 A
-25	800	1 000 A	1 250 A	1 600 A
-15	800	1 000 A	1 250 A	1 600 A
-5	800	1 000 A	1 250 A	1 600 A
0	800	1 000 A	1 250 A	1 600 A
10	800	1 000 A	1 250 A	1 600 A
20	800	1 000 A	1 250 A	1 600 A
30	800	1 000 A	1 250 A	1 600 A
40	800	1 000 A	1 250 A	1 600 A
50	800	1 000 A	1 250 A	1 520 A
60	800	1 000 A	1 250 A	1 440 A
70	800	1 000 A	1 250 A	1 360 A

Power dissipation characteristics

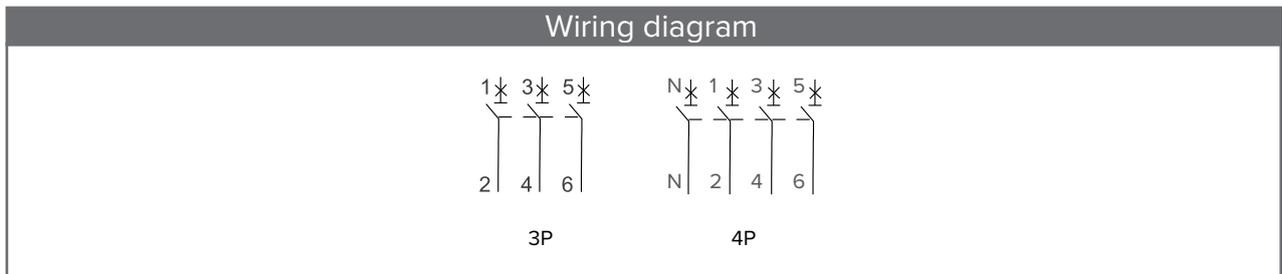
I_n	800 A	1 000 A	1 250 A	1 600 A
Pole resistance	0.08 mΩ	0.08 mΩ	0.04 mΩ	0.04 mΩ
Pole power dissipation	51.2 W	80.0 W	62.5 W	102.4 W

Technical Data **Ex9M6SD MOD DC**

Moulded Case Circuit Breakers up to 1600 A

Mechanical parameters	
Device width 3P / 4P	210 mm / 280 mm
Device height	286 mm
Device depth	198 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 10 mm
Busbar width	≤ 50 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	25 — 30 Nm
Ambient temperature	-35 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	16 / 20 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2200 V AC	2050 V AC	1900 V AC	1770 V AC



Technical Data **Ex9M6SD MOD DC**

Motor operated SU20L MCCBs up to 1600 A

Remote motor operator MOD (MOD version only)

General parameters

The electric motor charges the spring mechanism when the circuit breaker is closed

The electric motor MOD is equipped with a limit switch which signals the “charged” position of the mechanism (spring is charged)

The spring-mechanism charging handle can be used when maintaining or without power supply

Electrical parameters

Operating voltage U_e	230 V AC 400 V AC 24 V DC 110 V DC 220 V DC
Operating frequency	1 operating cycle in 3 minutes
Operating threshold	85 – 110% U_e
Power consumption AC DC	40 VA 40 W
Charging time	≤ 4 s
Insulation voltage	400 V
Peak current	$6 \times I_n$

Technical Data **Ex9M6SD MOD DC**

Motor operated SU20L MCCBs up to 1600 A

Closing releases XF (MOD version only)

General parameters

Remotely close the breaker after the spring has stored energy

Operating voltage range 85 - 110% of nominal value U_e . Maximum allowed control command length 2 s (can be blocked e.g. by means of NC auxiliary contact, see below)

Electrical parameters

Operating voltage U_e	230 V AC 400 V AC 110 V DC 220 V DC
Operating threshold	85 — 110% U_e
Minimum duration of control impuls	0.2 s
Max. allowed duration of control impuls	2 s
Pick-up power time 100ms AC DC	200 VA 200 W
Power consumption AC DC	5 VA 5 W
Circuit breaker closing time	≤ 50 ms
Breaking time	30 ± 10 ms
Insulation voltage	400 V
Peak current	6 × I_n

Technical Data **Ex9M2HV AC M**

AC M Moulded Case Circuit Breakers up to 250 A

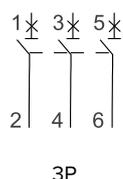
General parameters		
Suitable for commercial as well as industrial applications		
I_i fixed at $12 \times I_n$ for devices from 63 A up to 100 A		
I_i can be set in range $(9 - 14) \times I_n$ for the devices from 125 A to 250 A		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22HV	114832 — 114837
Undervoltage releases	UVT22HV	114838 — 114843
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Phase barrier	PB22	112111
Screw type terminals	MCS22	107874
Connection terminals	MC22	103709, 103869, 103711, 103713
Mounting screws, box type terminals, top and bottom terminal protection covers as well as phase barriers in the scope of delivery		

Technical Data **Ex9M2HV AC M**

AC M Moulded Case Circuit Breakers up to 250 A

Electrical parameters		
	Ex9M2HV-S	Ex9M2HV-N
Tested according to	IEC/EN 60947-2	
Rated op. voltage U_e	690 / 800 / 1000 / 1140 V AC	
Rated insulation voltage U_i	1 250 V	
Rated impulse withstand voltage U_{imp}	8 kV	
Rated frequency	50/60 Hz	
Rated ultimate short-circuit breaking capacity I_{cu}	50 kA / 690 V 36 kA / 800 V 15 kA / 1000 V 10 kA / 1140 V	80 kA / 690 V 50 kA / 800 V 30 kA / 1000 V 10 kA / 1140 V
Rated service short-circuit breaking capacity I_{cs}	50 kA / 690 V 36 kA / 800 V 15 kA / 1000 V 10 kA / 1140 V	80 kA / 690 V 36 kA / 800 V 15 kA / 1000 V 10 kA / 1140 V
Rated current	63 / 80 / 100 / 125 / 160 / 180 / 200 / 225 / 250 A	
Utilization category	A	
Mechanical service life	15 000 operation cycles	
Electrical service life	1 500 operation cycles / 800 V AC	
Line voltage connection	arbitrary above or below	

Wiring diagram



Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]								
	63 A	80 A	100 A	125 A	160 A	180 A	200 A	225 A	250 A
-40	88	112	140	175	224	252	280	315	350
-35	86.5	110	137	172	220	247	275	309	343
-25	83	106	132	165	212	238	265	300	332
-15	80	102	127	159	204	229	255	288	319
-5	77	98	122	153	196	220	245	276	306
0	75	96	120	150	192	216	240	270	300
10	72	92	115	144	184	207	230	259	287
20	69	88	110	137	176	198	220	247	275
30	66	84	105	131	168	189	210	236	262
40	63	80	100	125	160	180	200	225	250
50	58.5	74.5	93	118	152	171	190	213	237
60	53	67	84	106	136	157	175	196	218
70	46	56	80	96	120	144	166	180	207

Power dissipation characteristics

I_n	63 A	80 A	100 A	125 A	160 A	180 A	200 A	225 A	250 A
Pole resistance (mΩ)	1.7	1.3	0.88	0.7	0.55	0.55	0.55	0.4	0.4
Pole power dissipation (W)	6.7	8.3	8.8	10.9	14.1	17.8	22	20.3	25

Technical Data Ex9M2HV AC M

AC M Moulded Case Circuit Breakers up to 250 A

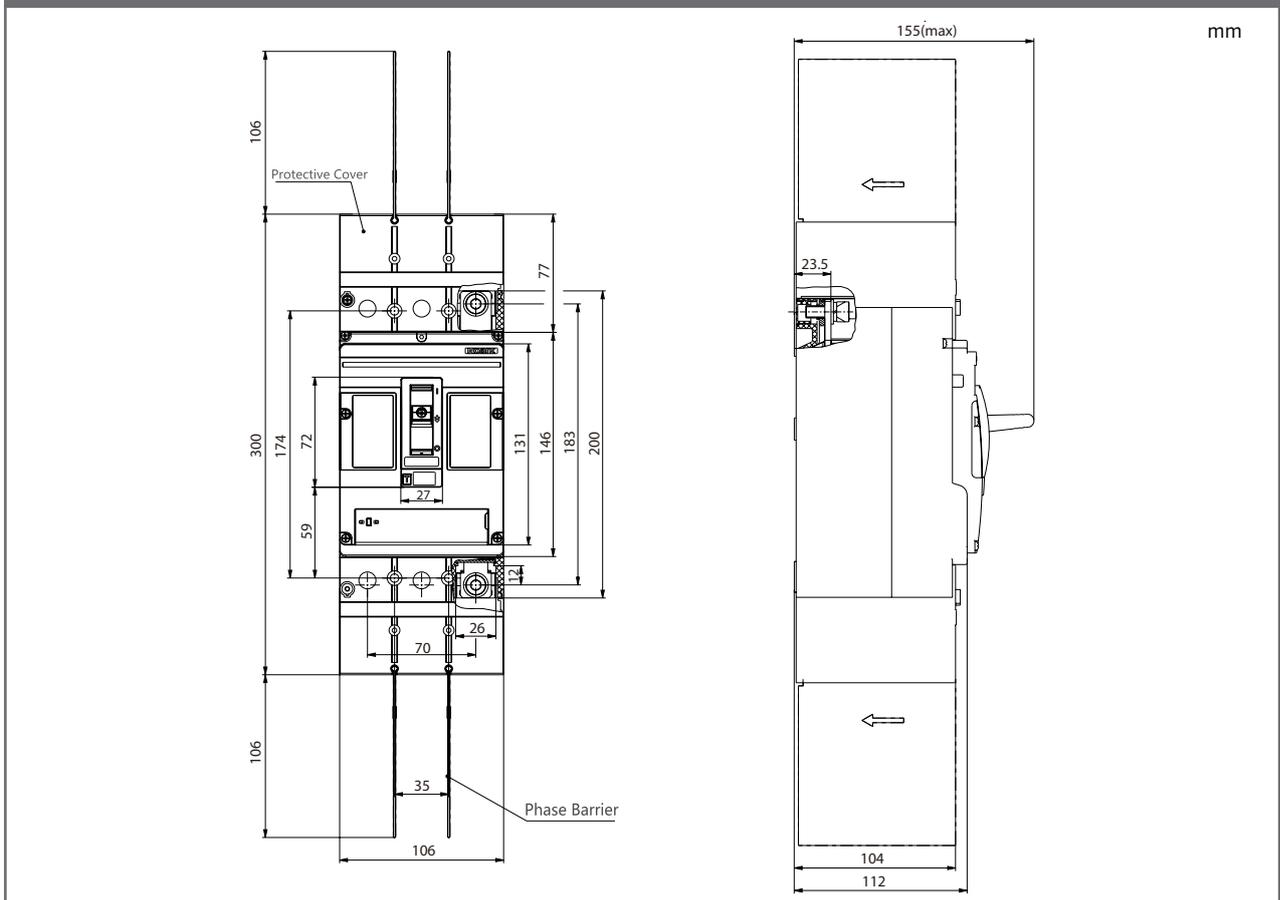
Mechanical parameters

Device width 3P / 4P	106 mm
Device height	200 mm
Device depth	112 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M8 screws
Busbar thickness	≤ 6 mm
Busbar width	≤ 25 mm
Cable lug width	≤ 25 mm
Fastening torque of terminals	11 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude

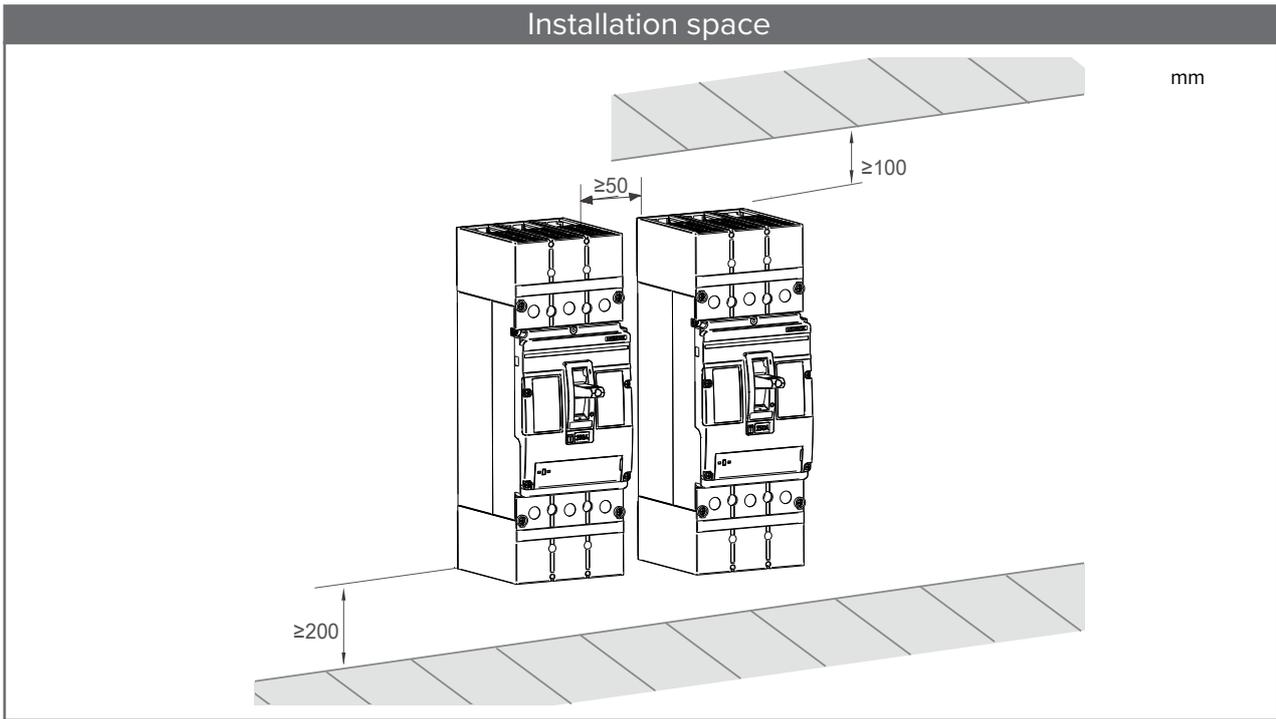
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1140 V AC	1030 V AC	950 V AC	850 V AC
Rated insulation voltage U_i	1250 V AC	1120 V AC	1000 V AC	880 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2550 V AC	2300 V AC	2050 V AC	1800 V AC

Dimensions

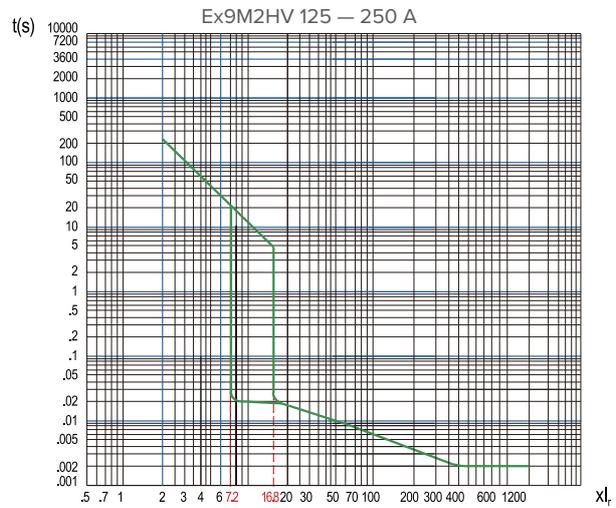
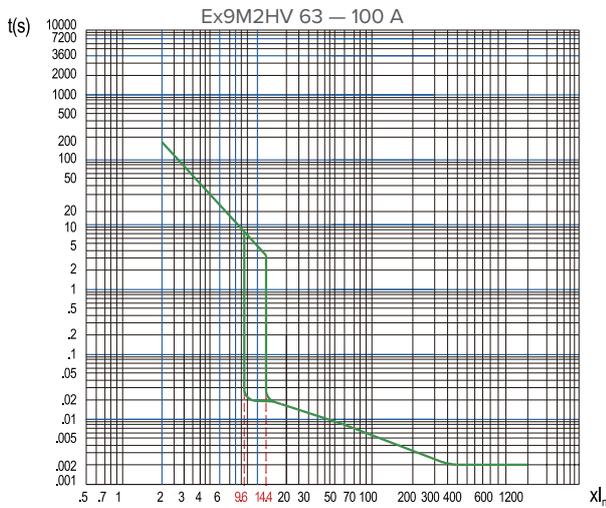


Technical Data **Ex9M2HV AC M**

AC M Moulded Case Circuit Breakers up to 250 A



Tripping characteristics



Technical Data **Ex9M3HV AC M**

AC M Moulded Case Circuit Breakers up to 630 A

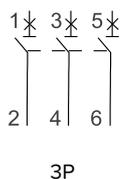
General parameters		
Suitable for commercial as well as industrial applications		
I_i can be set in range $(9 - 14) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Phase barrier	PB23	112112
Connection terminals	MC23	103715 — 103722
Mounting screws, screw type terminals, top terminal protection covers as well as phase barriers in the scope of delivery		

Technical Data Ex9M3HV AC M

AC M Moulded Case Circuit Breakers up to 630 A

Electrical parameters		
	Ex9M3HV-S	Ex9M3HV-N
Tested according to	IEC/EN 60947-2	
Rated op. voltage U_e	690 / 800 / 1000 / 1140 V AC	
Rated insulation voltage U_i	1 250 V	
Rated impulse withstand voltage U_{imp}	12 kV	
Rated frequency	50/60 Hz	
Rated ultimate short-circuit breaking capacity I_{cu}	50 kA / 690 V 36 kA / 800 V 25 kA / 1000 V 10 kA / 1140 V	80 kA / 690 V 50 kA / 800 V 35 kA / 1000 V 10 kA / 1140 V
Rated service short-circuit breaking capacity I_{cs}	50 kA / 690 V 36 kA / 800 V 15 kA / 1000 V 10 kA / 1140 V	80 kA / 690 V 50 kA / 800 V 20 kA / 1000 V 10 kA / 1140 V
Rated current	250 / 315 / 350 / 400 / 500 / 630 A	
Utilization category	A	
Mechanical service life	15 000 operation cycles	
Electrical service life	1 500 operation cycles / 800 V AC	
Line voltage connection	arbitrary above or below	

Wiring diagram



Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]					
	250 A	315 A	350 A	400 A	500 A	630 A
-40	350	441	490	560	700	882
-35	343	433	481	550	687	866
-25	332	418	465	530	662	836
-15	319	402	447	510	637	804
-5	306	386	429	490	612	772
0	300	378	420	480	600	756
10	287	362	402	460	575	724
20	275	346	385	440	550	693
30	262	331	367	420	525	661
40	250	315	350	400	500	630
50	237	300	332	380	450	580
60	225	286	295	360	406	530
70	212	271	276	320	360	490

Power dissipation characteristics

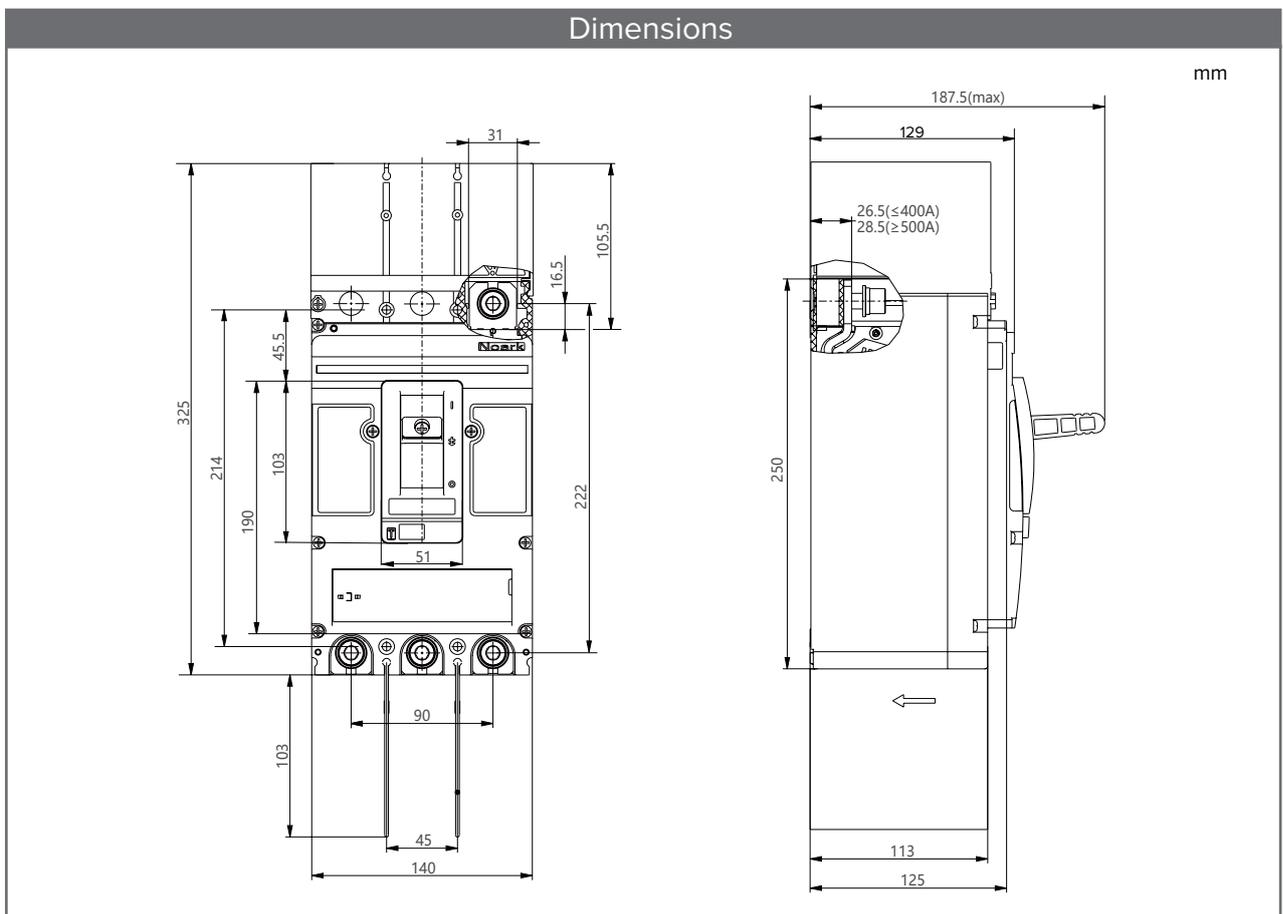
I_n	250 A	315 A	350 A	400 A	500 A	630 A
Pole resistance (mΩ)	0.35	0.25	0.25	0.2	0.12	0.12
Pole power dissipation (W)	21.9	24.8	30.6	32	30	47.6

Technical Data Ex9M3HV AC M

AC M Moulded Case Circuit Breakers up to 630 A

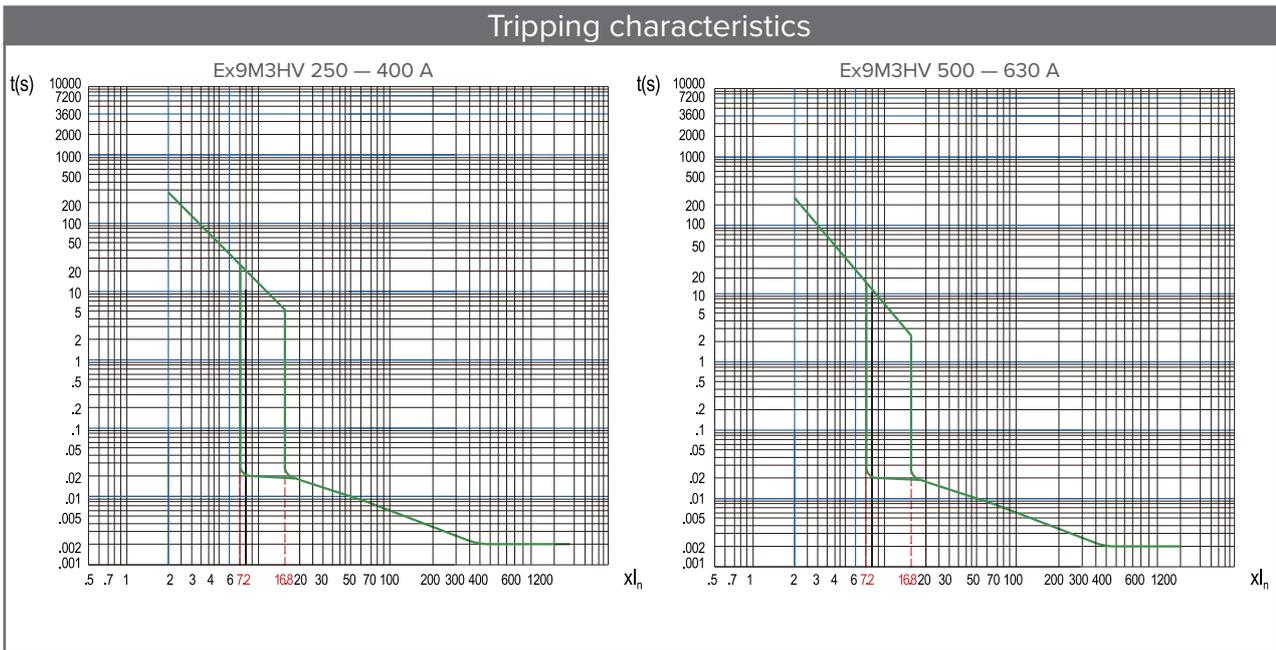
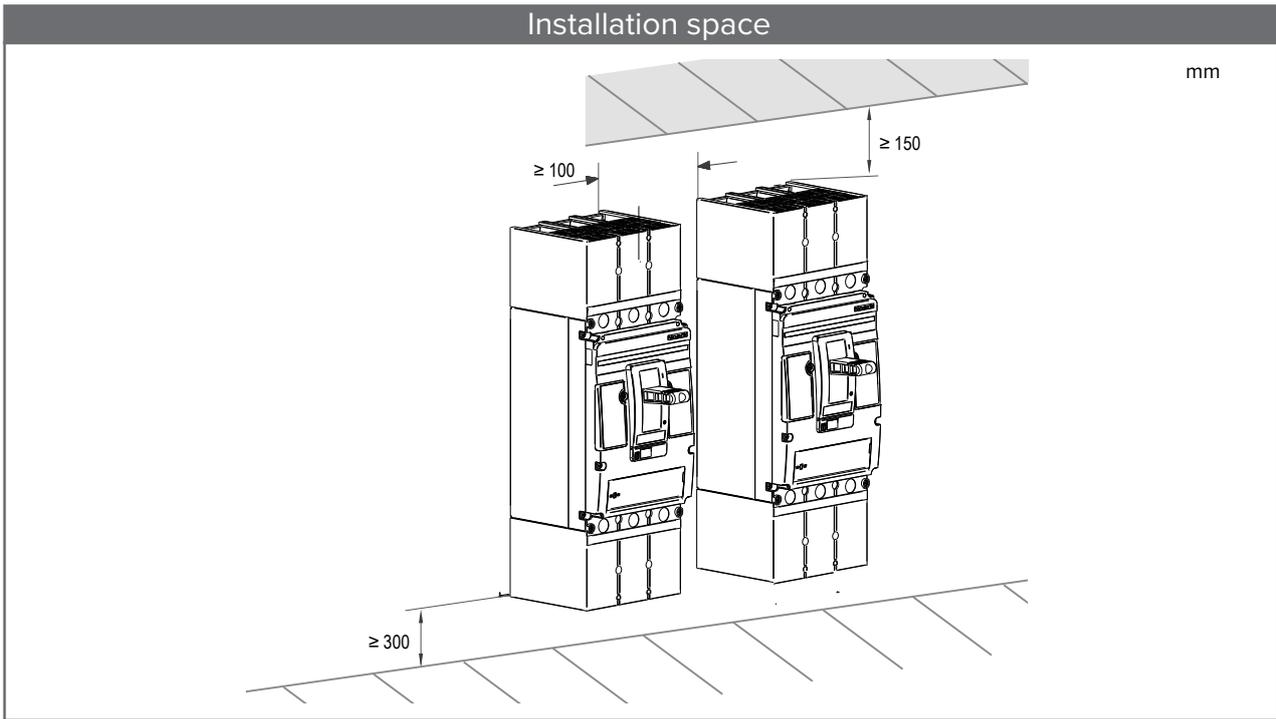
Mechanical parameters	
Device width 3P	140 mm
Device height	250 mm
Device depth	130 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 8 mm
Busbar width	≤ 30 mm
Cable lug width	≤ 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	5.2 kg / 6.7 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1140 V AC	1030 V AC	950 V AC	850 V AC
Rated insulation voltage U_i	1250 V AC	1120 V AC	1000 V AC	880 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2550 V AC	2300 V AC	2050 V AC	1800 V AC



Technical Data Ex9M3HV AC M

AC M Moulded Case Circuit Breakers up to 630 A



Technical Data **Ex9M2HV AC TM**

AC TM Moulded Case Circuit Breakers up to 250 A

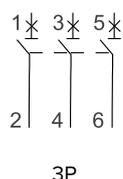
General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.7 - 1.0) \times I_n$		
I_i fixed at $10 \times I_n$ for devices from 63 A up to 100 A		
I_i can be set in range $(7 - 12) \times I_n$ for 125 A and 160 A; $(5 - 10) \times I_n$ for other devices up to 250 A		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 – 101424
Undervoltage releases	UVT22	101425 – 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Phase barrier	PB22	112111
Screw type terminals	MCS22	107874
Connection terminals	MC22	103709, 103869, 103711, 103713
Mounting screws, screw type terminals, top terminal protection covers as well as phase barriers in the scope of delivery		

Technical Data Ex9M2HV AC TM

AC TM Moulded Case Circuit Breakers up to 250 A

Electrical parameters		
	Ex9M2HV-S	Ex9M2HV-N
Tested according to	IEC/EN 60947-2	
Rated op. voltage U_e	690 / 800 / 1000 / 1140 V AC	
Rated insulation voltage U_i	1 250 V	
Rated impulse withstand voltage U_{imp}	8 kV	
Rated frequency	50/60 Hz	
Rated ultimate short-circuit breaking capacity I_{cu}	50 kA / 690 V 36 kA / 800 V 15 kA / 1000 V 10 kA / 1140 V	80 kA / 690 V 50 kA / 800 V 30 kA / 1000 V 10 kA / 1140 V
Rated service short-circuit breaking capacity I_{cs}	50 kA / 690 V 36 kA / 800 V 15 kA / 1000 V 10 kA / 1140 V	80 kA / 690 V 36 kA / 800 V 15 kA / 1000 V 10 kA / 1140 V
Rated current	63 / 80 / 100 / 125 / 160 / 180 / 200 / 225 / 250 A	
Utilization category	A	
Mechanical service life	15 000 operation cycles	
Electrical service life	1 500 operation cycles / 800 V AC	
Line voltage connection	arbitrary above or below	

Wiring diagram



Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]								
	63 A	80 A	100 A	125 A	160 A	180 A	200 A	225 A	250 A
-40	88	112	140	175	224	252	280	315	350
-35	86.5	110	137	172	220	247	275	309	343
-25	83	106	132	165	212	238	265	300	332
-15	80	102	127	159	204	229	255	288	319
-5	77	98	122	153	196	220	245	276	306
0	75	96	120	150	192	216	240	270	300
10	72	92	115	144	184	207	230	259	287
20	69	88	110	137	176	198	220	247	275
30	66	84	105	131	168	189	210	236	262
40	63	80	100	125	160	180	200	225	250
50	58.5	74.5	93	118	152	171	190	213	237
60	53	67	84	106	136	157	175	196	218
70	46	56	80	96	120	144	166	180	207

Power dissipation characteristics

I_n	63 A	80 A	100 A	125 A	160 A	180 A	200 A	225 A	250 A
Pole resistance (mΩ)	1.7	1.3	0.88	0.7	0.55	0.55	0.55	0.4	0.4
Pole power dissipation (W)	6.7	8.3	8.8	10.9	14.1	17.8	22	20.3	25

Technical Data Ex9M2HV AC TM

AC TM Moulded Case Circuit Breakers up to 250 A

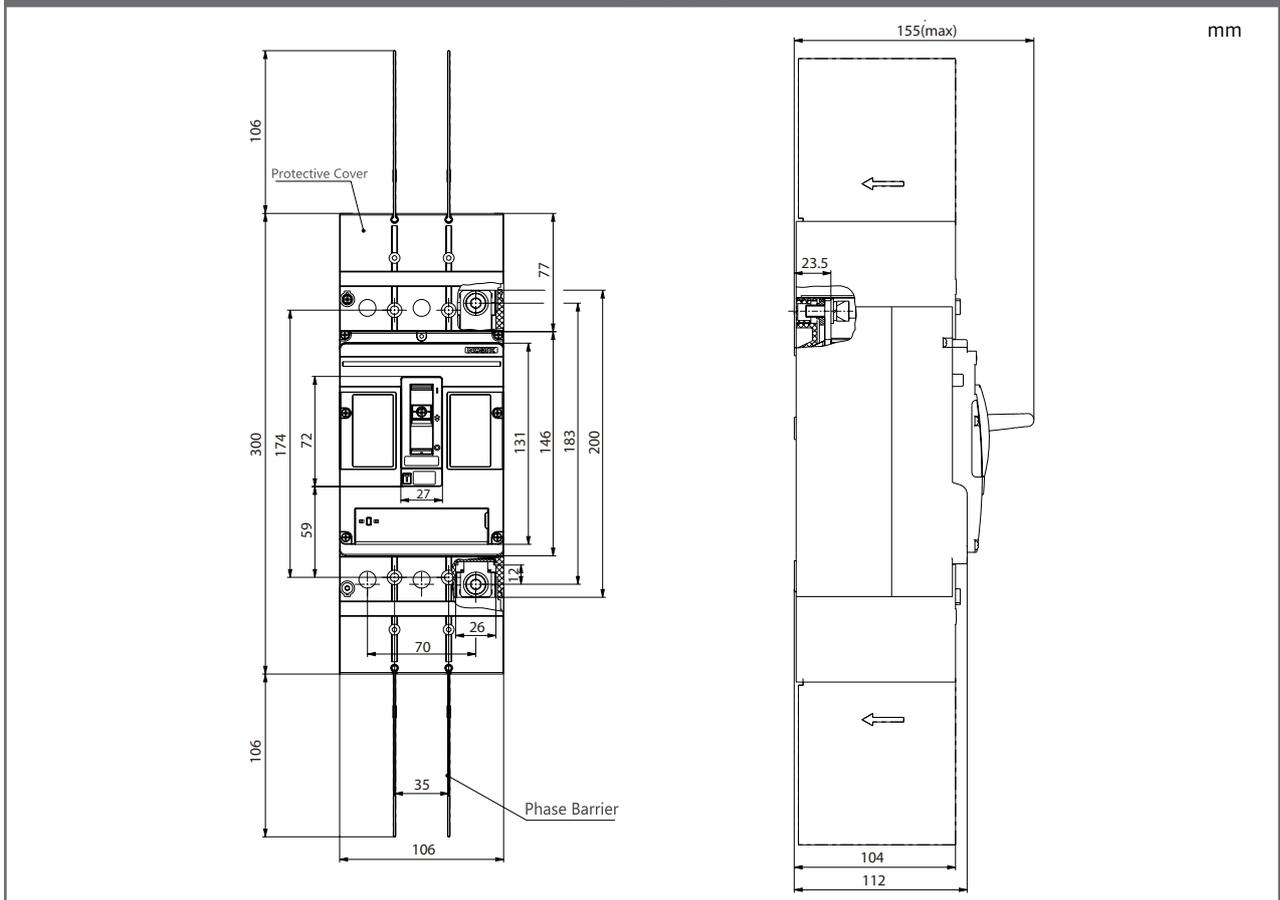
Mechanical parameters

Device width 3P / 4P	106 mm
Device height	200 mm
Device depth	112 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M8 screws
Busbar thickness	≤ 6 mm
Busbar width	≤ 25 mm
Cable lug width	≤ 25 mm
Fastening torque of terminals	11 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude

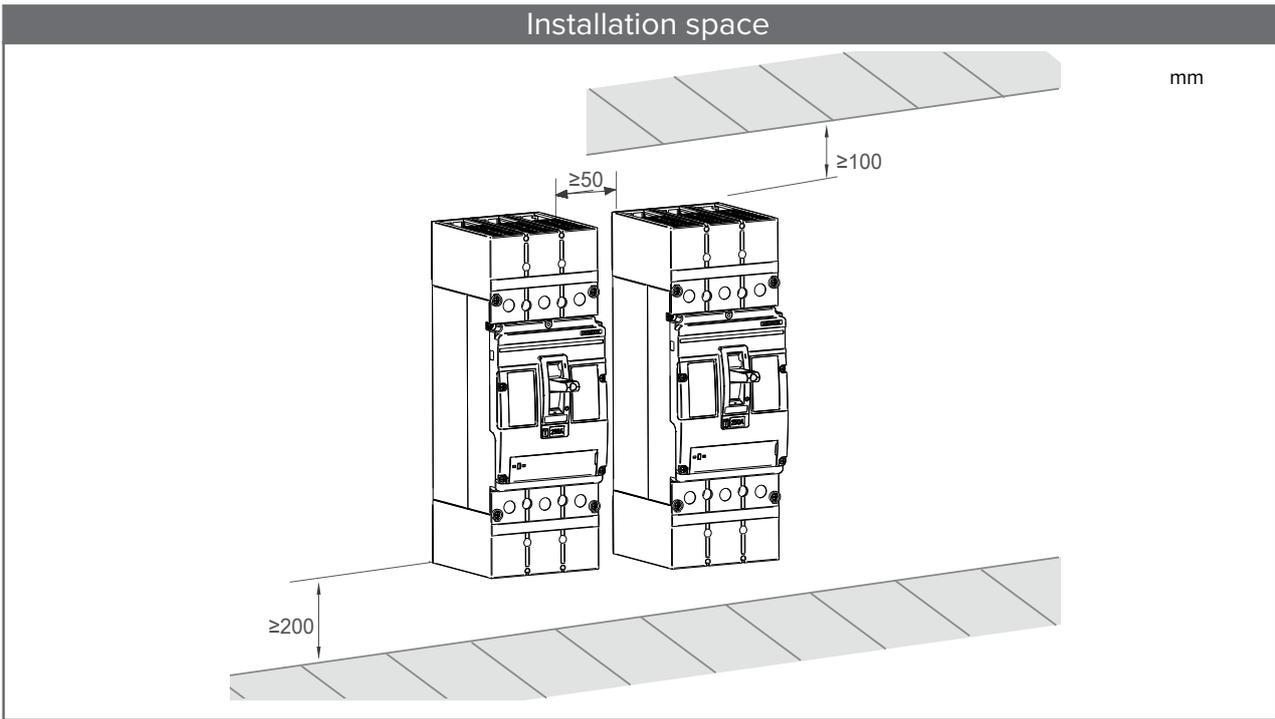
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1140 V AC	1030 V AC	950 V AC	850 V AC
Rated insulation voltage U_i	1250 V AC	1120 V AC	1000 V AC	880 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2550 V AC	2300 V AC	2050 V AC	1800 V AC

Dimensions

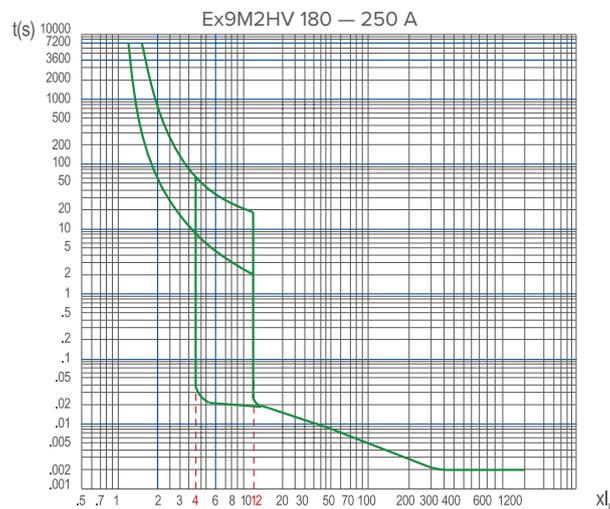
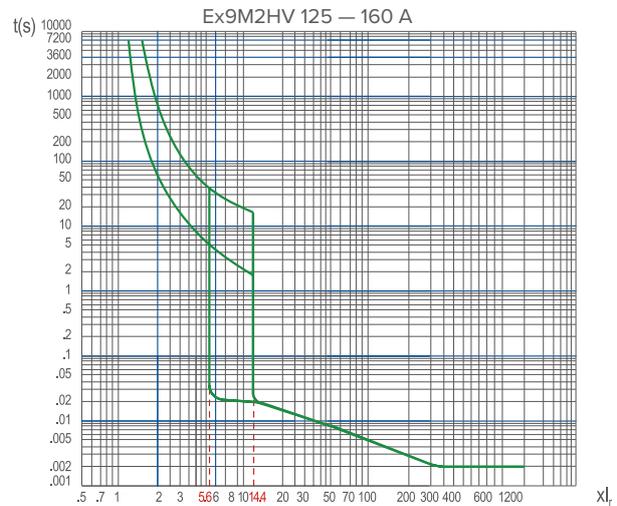
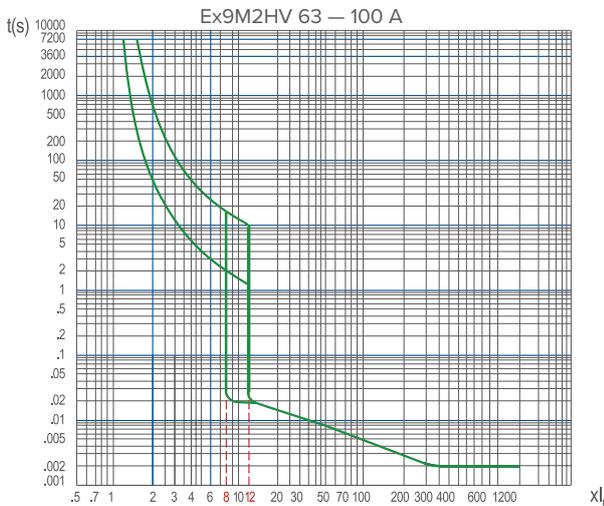


Technical Data Ex9M2HV AC TM

AC TM Moulded Case Circuit Breakers up to 250 A



Tripping characteristics



Technical Data **Ex9M3HV AC TM**

AC TM Moulded Case Circuit Breakers up to 630 A

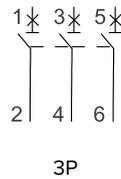
General parameters		
Suitable for commercial as well as industrial applications		
I_r can be set in range $(0.7 - 1.0) \times I_n$		
I_i can be set in range $(5 - 10) \times I_n$		
Internal accessories		
Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT22	101416 — 101424
Undervoltage releases	UVT22	101425 — 101426
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT22 or UVT22)		
External accessories		
Phase barrier	PB23	112112
Connection terminals	MC23	103715 — 103722
Mounting screws, screw type terminals, top terminal protection covers as well as phase barriers in the scope of delivery		

Technical Data Ex9M3HV AC TM

AC TM Moulded Case Circuit Breakers up to 630 A

Electrical parameters		
	Ex9M3HV-S	Ex9M3HV-N
Tested according to	IEC/EN 60947-2	
Rated op. voltage U_e	690 / 800 / 1000 / 1140 V AC	
Rated insulation voltage U_i	1 250 V	
Rated impulse withstand voltage U_{imp}	12 kV	
Rated frequency	50/60 Hz	
Rated ultimate short-circuit breaking capacity I_{cu}	50 kA / 690 V 36 kA / 800 V 25 kA / 1000 V 10 kA / 1140 V	80 kA / 690 V 50 kA / 800 V 35 kA / 1000 V 10 kA / 1140 V
Rated service short-circuit breaking capacity I_{cs}	50 kA / 690 V 36 kA / 800 V 15 kA / 1000 V 10 kA / 1140 V	80 kA / 690 V 50 kA / 800 V 20 kA / 1000 V 10 kA / 1140 V
Rated current	250 / 315 / 350 / 400 / 500 / 630 A	
Utilization category	A	
Mechanical service life	15 000 operation cycles	
Electrical service life	1 500 operation cycles / 800 V AC	
Line voltage connection	arbitrary above or below	

Wiring diagram



Dependence of Tripping Characteristics on Ambient Temperature

T [°C]	I_n (T) [A]					
	250 A	315 A	350 A	400 A	500 A	630 A
-40	350	441	490	560	700	882
-35	343	433	481	550	687	866
-25	332	418	465	530	662	836
-15	319	402	447	510	637	804
-5	306	386	429	490	612	772
0	300	378	420	480	600	756
10	287	362	402	460	575	724
20	275	346	385	440	550	693
30	262	331	367	420	525	661
40	250	315	350	400	500	630
50	237	300	332	380	450	580
60	225	286	295	360	406	530
70	212	271	276	320	360	490

Power dissipation characteristics

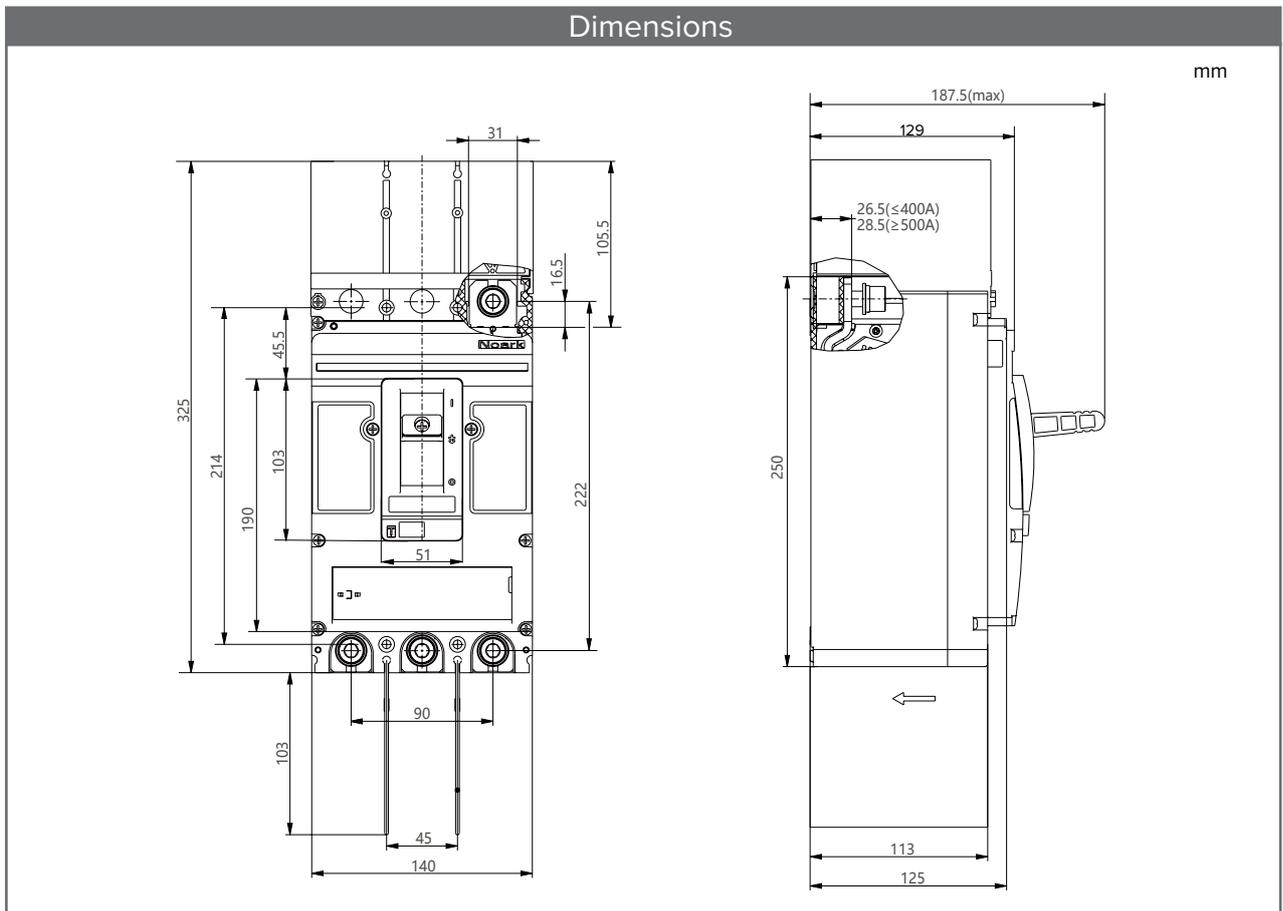
I_n	250 A	315 A	350 A	400 A	500 A	630 A
Pole resistance (mΩ)	0.35	0.25	0.25	0.2	0.12	0.12
Pole power dissipation (W)	21.9	24.8	30.6	32	30	47.6

Technical Data Ex9M3HV AC TM

AC M Moulded Case Circuit Breakers up to 630 A

Mechanical parameters	
Device width 3P	140 mm
Device height	250 mm
Device depth	130 mm
Mounting	onto panel
Degree of protection	IP40, IP20 terminals
Terminals	M10 screws
Busbar thickness	≤ 8 mm
Busbar width	≤ 30 mm
Cable lug width	≤ 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	5.2 kg / 6.7 kg
Mounting position	vertical, can be rotated by 90° in each axis

Derating coefficient of technical parameters based on altitude				
Altitude	≤ 2 000 m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	1140 V AC	1030 V AC	950 V AC	850 V AC
Rated insulation voltage U_i	1250 V AC	1120 V AC	1000 V AC	880 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric properties ($U_{imp}=8$ kV)	2550 V AC	2300 V AC	2050 V AC	1800 V AC

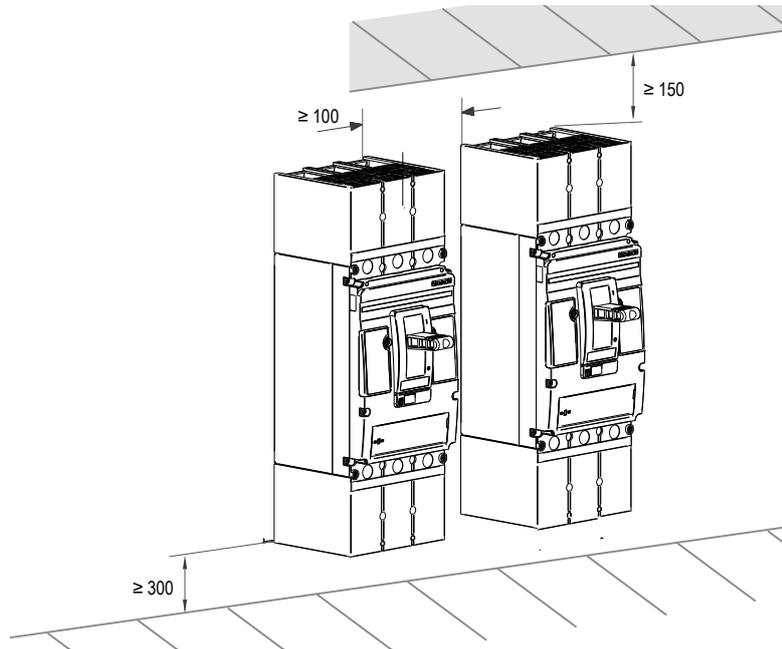


Technical Data **Ex9M3HV AC TM**

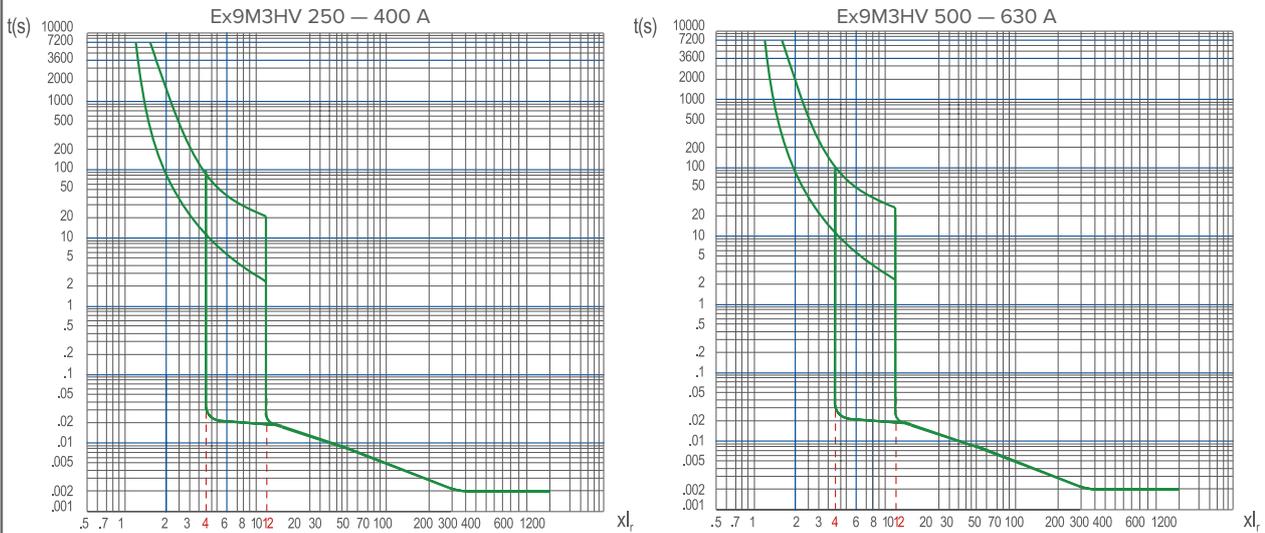
AC TM Moulded Case Circuit Breakers up to 630 A

Installation space

mm



Tripping characteristics



Technical Data Ex9ML

Electronic RCD module for MCCBs

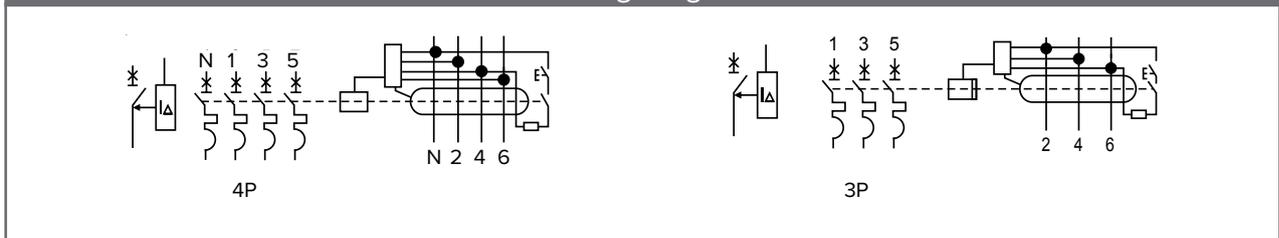
General parameters

Suitable for household as well as industrial applications		
Adjustable delay time Δt : 0, 60, 200, 500, 1000, 2000 ms		
Adjustable leakage current sensitivity $I_{\Delta n}$ can be set in 8 step: 0.03 A, 0.05 A, 0.1 A, 0.2 A, 0.3 A, 0.5 A, 1 A, 2 A		
Internal accessories		
Alarm contact unit	AL21 / AL21M	101396 / 112072
Max. number of installed internal accessories is 1 pcs of alarm contact		
Mounting screws in the scope of delivery		

Electrical parameters

	Ex9ML1	Ex9ML2	Ex9ML3
Tested according to	IEC/EN 60947-2		
Rated op. voltage U_e	380 / 400 / 415 / 440 V AC		
Rated insulation voltage U_i	1000 V		
Rated impulse withstand voltage U_{imp}	8 kV		
Rated frequency	50/60 Hz		
Compatible MCCB	Ex9M1	Ex9M2	Ex9M3
Rated residual making and breaking capacity $I_{\Delta m}$	$0.25 \times I_{cu}$		
Rated current I_n	160 A	250 A	630 A
Rated residual non-operating current $I_{\Delta n}$ (A)	$0.5 \times I_{\Delta n}$		
RCD1 type	0.03 A, 0.05 A, 0.1 A, 0.2 A, 0.3 A, 0.5 A, 1 A, 2 A		
Leakage current detection type	AC / A		
Total disconnection time (adjustable)	0, 60, 200, 500, 1000, 2000 ms		
Line voltage connection	arbitrary above or below, 3 phase only		

Wiring diagram



Technical Data **Ex9ML**

Electronic RCD module for MCCBs

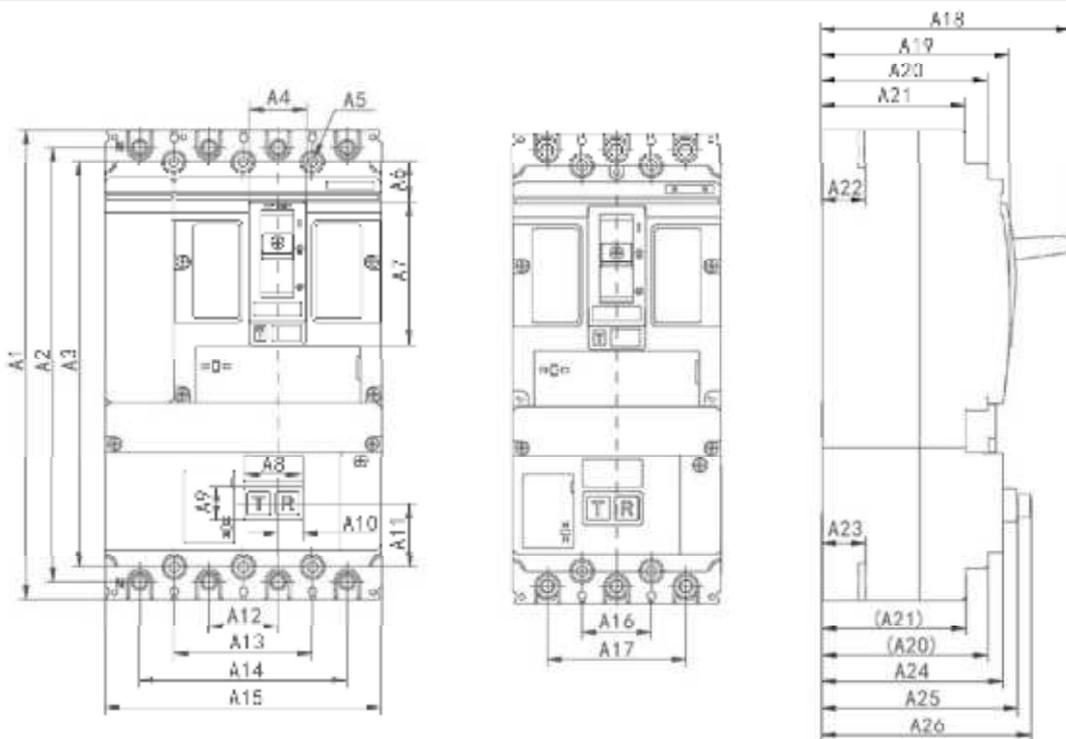
Mechanical parameters			
	Ex9ML1	Ex9ML2	Ex9ML3
Device width 3P / 4P	90 / 120 mm	105 / 140 mm	140 / 185 mm
Device height (attached on MCCB)	205 mm	232 mm	355 mm
Device depth	85 mm	94.5 mm	118.5 mm
Mounting	attached to Ex9M1	attached to Ex9M2	attached to Ex9M3
Terminals	Box	Box	Screw
Terminals capacity	4 – 95 mm ²	10 – 120 mm ²	
Bushbar width	—	—	≤ 50 mm
Fastening torque of terminals	8Nm	25 Nm	25 – 30 Nm
Operating temperature	-25 – +70 °C		
Altitude	≤ 2 000 m		
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average		
Pollution degree	3		
Weight 3P / 4P	0.43 / 0.51 kg	0.84 / 1.08 kg	1.98 / 2.69 kg

Derating factor					
Applied MCCB	Ex9ML1	Ex9ML2		Ex9ML3	
	+Ex9M1 (TM)	+Ex9M2 (TM)	+Ex9M2 (SU)	+Ex9M3 (TM)	+Ex9M3 (SU)
16 A	1	—	—	—	—
20 A	1	—	—	—	—
25 A	1	—	—	—	—
32 A	1	—	1	—	—
40 A	1	—	—	—	—
50 A	1	—	—	—	—
63 A	1	—	1	—	—
80 A	0.95	—	—	—	—
100 A	0.9	—	1	—	—
125 A	0.8	1	—	—	—
160 A	0.82	1	1	—	—
180 A	—	1	—	—	—
200 A	—	0.9	—	—	—
225 A	—	0.9	—	—	—
250 A	—	0.9	0.95	1	1
315 A	—	—	—	0.96	—
350 A	—	—	—	0.95	—
400 A	—	—	—	0.93	1
500 A	—	—	—	0.87	—
630 A	—	—	—	—	0.95

Technical Data Ex9ML

Electronic RCD module for MCCBs

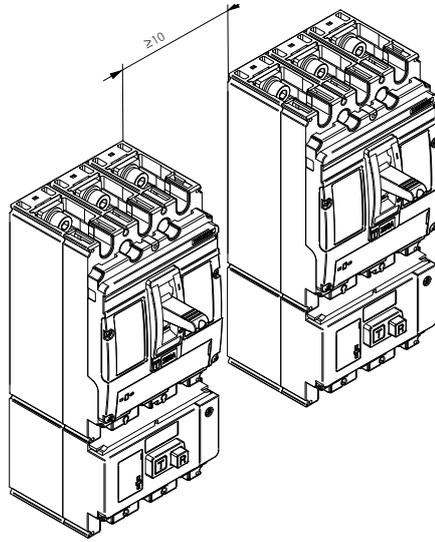
Dimensions



mm/in	Ex9ML1/3P	Ex9ML1/4P	Ex9ML2/3P	Ex9ML2/4P	Ex9ML3/3P	Ex9ML3/4P
A1	205 / 8.07		232 / 9.13		355 / 13.98	
A2	190 / 7.48		215 / 8.46		327 / 12.87	
A3	177 / 6.97		200 / 7.87		301 / 11.85	
A4	25 / 0.98		27 / 1.06		51.8 / 2.04	
A5	4×Φ4.5 / 4×Φ0.18	6×Φ4.5 / 6×Φ0.18	4×Φ5.5 / 4×Φ0.22	6×Φ5.5 / 6×Φ0.22	4×Φ5.5 / 4×Φ0.22	6×Φ5.5 / 6×Φ0.22
A6	17.3 / 0.68		21.2 / 0.83		38.3 / 1.51	
A7	63 / 2.48		71.4 / 2.81		103.5 / 4.07	
A8	26 / 1.02		30 / 1.18		45 / 1.77	
A9	14.5 / 0.57		16 / 0.63		27 / 1.06	
A10	11.2 / 0.44		15 / 0.59		22.5 / 0.89	
A11	27.3 / 1.07		32 / 1.26		38.5 / 1.52	
A12	-	30 / 1.18	-	35 / 1.38	-	45 / 1.77
A13	-	60 / 2.36	-	70 / 2.76	-	90 / 3.54
A14	-	90 / 3.54	-	105 / 4.13	-	135 / 5.31
A15	90 / 3.54	120 / 4.72	105 / 4.13	140 / 5.51	140 / 5.51	185 / 7.28
A16	30 / 1.18	-	35 / 1.38	-	45 / 1.77	-
A17	60 / 2.36	-	70 / 2.76	-	90 / 3.54	-
A18	109 / 4.29		125 / 4.92		170.8 / 6.72	
A19	81.6 / 3.21		91.5 / 3.60		118.5 / 4.67	
A20	72 / 2.83		82 / 3.23		108 / 4.25	
A21	62.5 / 2.46		72.5 / 2.85		96 / 3.78	
A22	19 / 0.75		22.5 / 0.89		27(≤ 400 A) / 1.06 28(> 400 A) / 1.10	
A23	19 / 0.75		22.5 / 0.89		27 / 1.06	
A24	78.5 / 3.09		88 / 3.46		113 / 4.45	
A25	85 / 3.35		94.5 / 3.72		118.5 / 4.67	
A26	90.7 / 3.57		100.2 / 3.94		124.2 / 4.89	

Electronic RCD module for MCCBs

Installation space



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Auxiliary and signal contact units AX21, AL21

General parameters

Contact units for auxiliary and signal contact functions are suitable for all MCCB frame sizes

Auxiliary contacts synchronous with main contacts of the circuit breaker

Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)

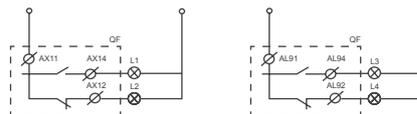
Electrical parameters

	AX21	AL21
Contacts	1 changeover (CO)	1 changeover (CO)
Contact function	auxiliary	signal
Tested according to	IEC/EN 60947-1, IEC/EN 60947-5-1	
Rated op. voltage U	240/415 V AC, 110/220 V DC	
Rated frequency	50/60 Hz	
Rated op. current I _e AC	4 A (240 V), 2 A (415 V)	
Rated op. current I _e DC	0.25 A (110 V), 0.25 A (220 V)	
Rated thermal current I _{th}	5 A	
Rated op. current I _e , ut. cat. AC-15	4 A (240 V), 2 A (415 V)	
Rated op. current I _e , ut. cat. DC-13	0.25 A (110 V), 0.25 A (220 V)	
Rated insulation voltage U _i	500 V	

Mechanical parameters

	AX21	AL21
Suitable for	M1, M2, M3, M4, M5	M1, M2, M3, M4, M5
Connection	screw terminals	

Wiring diagrams



AX21

AL21

Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Shunt trip releases SHT2*i*

General parameters

It is possible to use one unit of shunt trip release SHT2*i* or one unit of undervoltage release UVT2*i*

Can be used for remote switch off

SHT21 for MCCBs of frame size M1

SHT22 for MCCBs of frame sizes M2 and M3

SHT24 for MCCBs of frame sizes M4 and M5

SHT26 for MCCBs of frame size M6

With connection wires

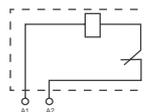
Electrical parameters

	SHT21	SHT22	SHT24	SHT26
Tested according to	IEC/EN 60947-1, IEC/EN 60947-5-1			
Rated operating voltage U (according to type)	110 V AC 220 — 240 V AC 380 — 415 V AC 24 V DC 220 V DC	110 V AC 220 — 240 V AC 380 — 415 V AC 24 V DC 220 V DC	110 V AC 220 — 240 V AC 380 — 415 V AC 110 — 120 V DC 220 V DC 24 V DC	110 V AC 220 — 240 V AC 380 — 415 V AC 110 — 120 V DC 220 V DC 24 V DC
Rated frequency	50/60 Hz DC			
Rated insulation voltage U	500 V			
Tripping time	< 20 ms	< 20 ms	< 30 ms	<100 ms

Mechanical parameters

	SHT21	SHT22	SHT24	SHT26
Suitable for	M1	M2, M3	M4, M5	M6
Connection	equipped with connection wires			

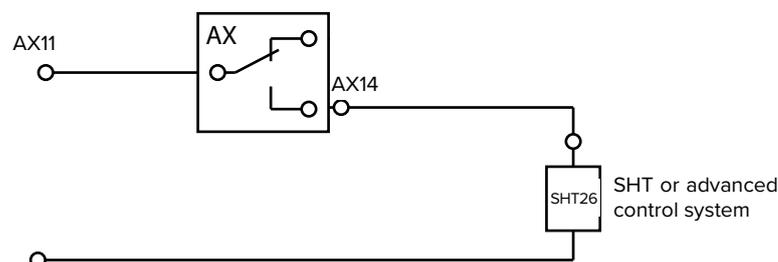
Wiring diagrams



SHT2*i*

Connection diagram for long control signals

In case external control circuit cannot assure not-exceeding of max. impuls duration, AX contact of NO configuration can be used for limiting (direct connection with SHT 230 or 400 V AC, signal to advanced control system in case of use of SHT for DC control voltages due to maximum allowed current of AX).



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Undervoltage releases UVT2i

General parameters

It is possible to use one unit of shunt trip release SHT2i or one unit of undervoltage release UVT2i

To switch connected breaker off in case of voltage drop

UVT21 for MCCBs of frame size M1

UVT22 for MCCBs of frame size M2 and M3

UVT24 for MCCBs of frame size M4 and M5

UVT26 for MCCBs of frame size M6

With connection wires

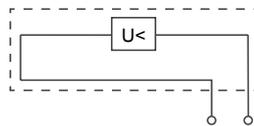
Electrical parameters

	UVT21	UVT22	UVT24	UVT26
Tested according to	IEC/EN 60947-1, IEC/EN 60947-5-1			
Rated operating voltage U_n	220 — 240 V AC 380 — 415 V AC	220 — 240 V AC 380 — 415 V AC	110 V AC 220 — 240 V AC 380 — 415 V AC 110 —120 V DC 220 V DC 24 V DC	110 V AC 220 — 240 V AC 380 — 415 V AC 110 —120 V DC 220 V DC 24 V DC 48 V DC
Rated frequency f	50/60 Hz DC			
Rated insulation voltage U_i	500 V			
Tripping time	< 20 ms	< 20 ms	< 20 ms	<100
Making threshold	85 % U_n	85 % U_n	85 % U_n	85 % U_n
Tripping threshold	35 % U_n	35 % U_n	35 % U_n	35 % U_n

Mechanical parameters

	UVT21	UVT22	UVT24	UVT26
Suitable for	M1	M2, M3	M4, M5	M6
Connection	equipped with connection wires			

Wiring diagrams



UVT2i

Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Remote motor operators MOD2i

General parameters

Motor drives for electrical and remote control of MCCBs

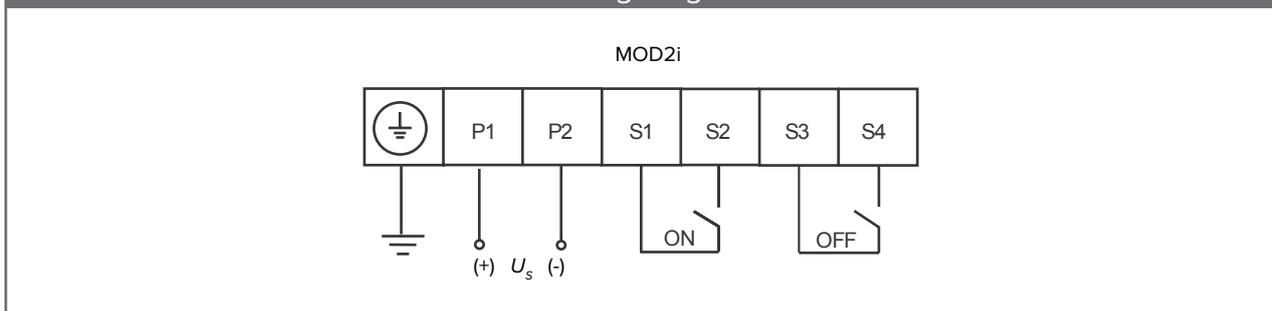
Electrical parameters

	MOD21	MOD22	MOD23	MOD24
Tested according to	IEC/EN 60947-1, IEC/EN 60947-5-1			
Rated operating voltage U_s (according to type)	230 V AC 110 V AC 220 V DC 110 V DC 24 V DC			
Rated frequency	50/60 Hz DC			
Power consumption	150 VA	150 VA	300 VA	300 VA
Total time to switch ON	500 ms	500 ms	1000 ms	1000 ms
Total time to switch OFF	500 ms	500 ms	1000 ms	1000 ms
Min. pulse duration for ON	300 ms	300 ms	300 ms	300 ms
Min. pulse duration for OFF	300 ms	300 ms	300 ms	300 ms
Max. pulse duration	limited by internal contact switch			

Mechanical parameters

	MOD21	MOD22	MOD23	MOD24
Suitable for	M1	M2	M3	M4, M5
Terminals	lift			
Terminal capacity	0.2 – 1.5 mm ²			
Mechanical service life	10 000 operation cycles		8 000 operation cycles	
Maximum frequency of switch. cycles	120 operating cycles per hour			

Wiring diagram

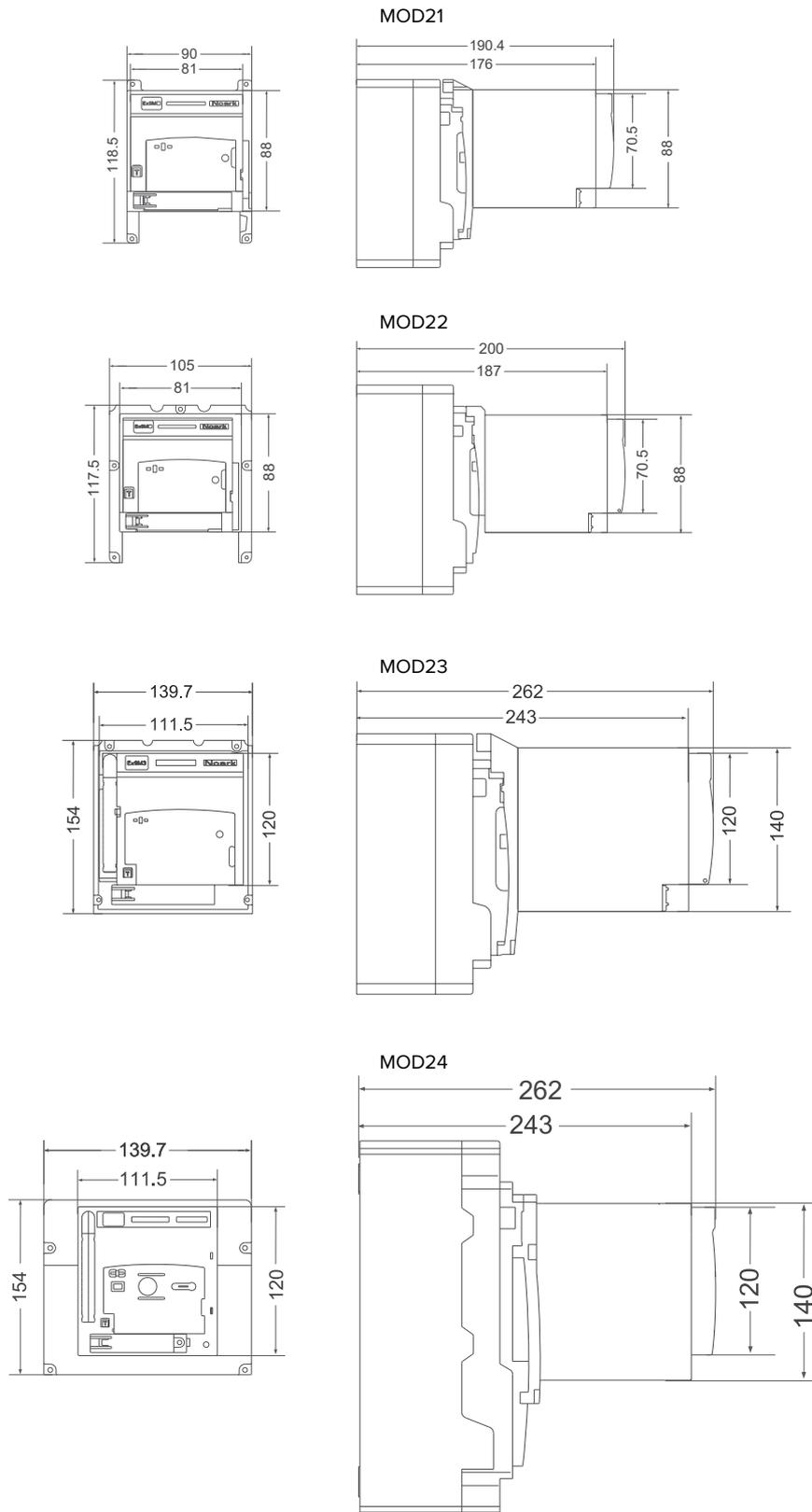


Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Remote motor operators MOD2*i*

Dimensions



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Mechanical interlocks MIT2*i*

General parameters

Avoid simultaneous connection of two interlocked MCCBs

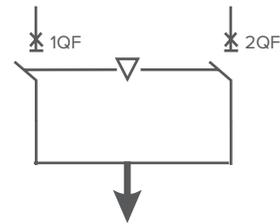
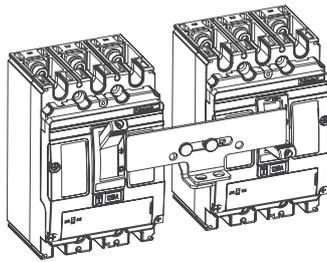
Suitable for two circuit breakers of the same frame size

To be installed in the front of the circuit breakers, incompatible with other accessories installed in the front (RHD, ERH, MOD)

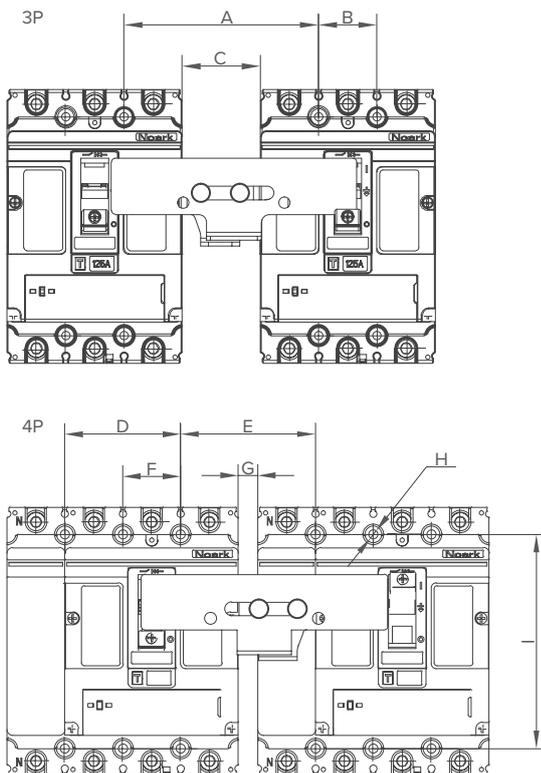
Mechanical parameters

	MIT 21	MIT 22	MIT 23	MIT 24
Suitable for: Ex9M TM Ex9M SU Ex9M SD	M1	M2	M3	M4 / M5
Mounting	front cover			
Locking	Padlock, 5 up to 8mm diameter			

Diagram



Dimensions



(mm)	MIT 21	MIT 22	MIT 23	MIT 24
A	100	115	143.5	205
B	30	35	45	65
C	40	45	48.5	75
D	60	70	90	130
E	70	80	98.5	140
F	30	35	45	65
G	10	10	3.5	10
H	Ø4.5	Ø5.5	Ø5.5	Ø6.5
I	112	125	201	235

Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Direct rotary handles RHD2i

General parameters

Rotary handle for direct mounting onto breaker

Scope of delivery: mechanism block, rotary handle

Can be locked in ON and OFF position with up to three padlocks (not in the scope of delivery)

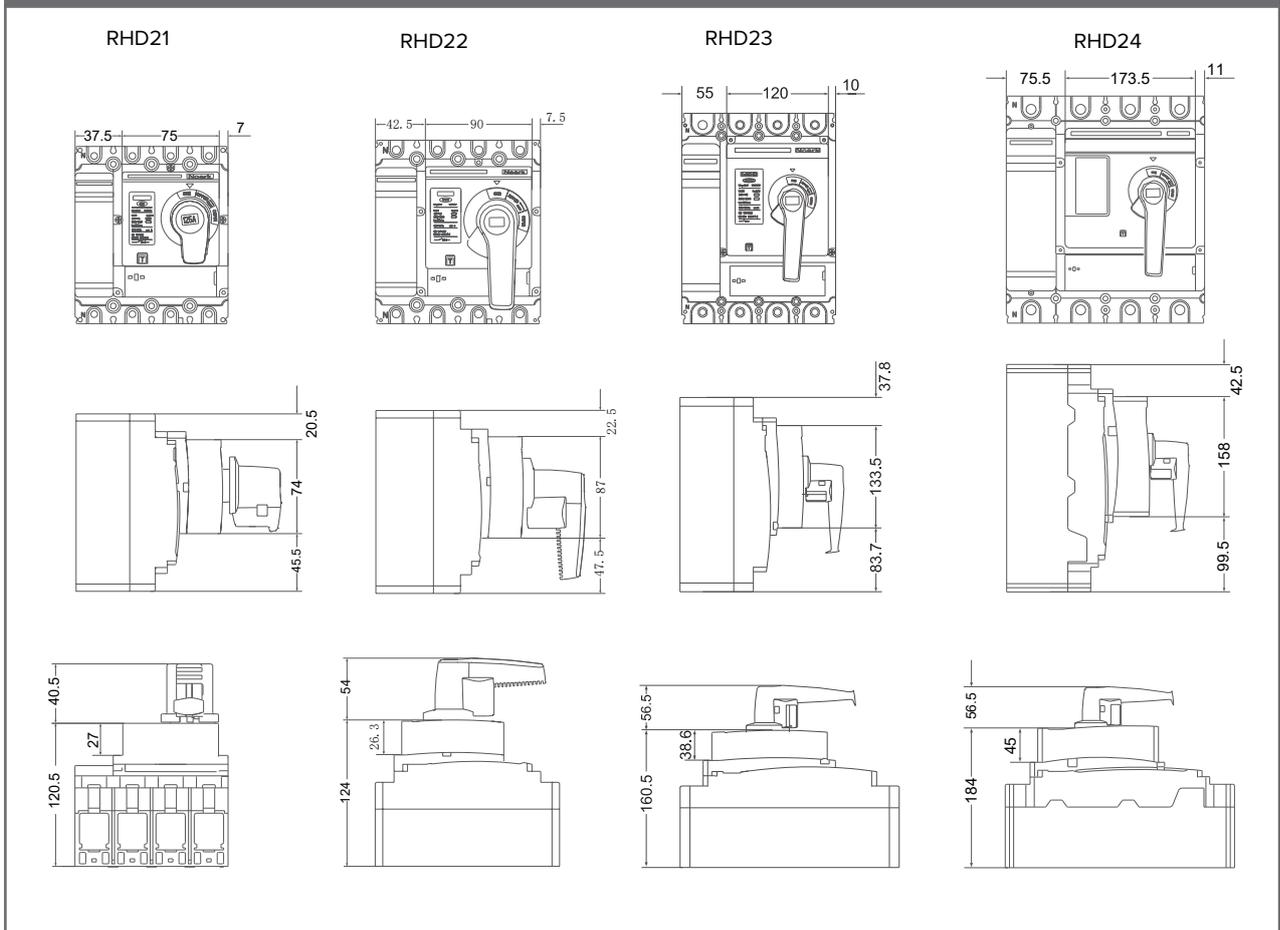
Electrical parameters

	RHD21	RHD22	RHD23	RHD24
Tested according to	IEC/EN 60947-3			
Degree of protection	IP40			

Mechanical parameters

	RHD21	RHD22	RHD23	RHD24
Suitable for	M1	M2	M3	M4, M5
Mechanical shock resistance	IK07			
Indication	connected breaker status ON-OFF-TRIP			
Mounting	directly onto breaker			
Toggle colour	grey			

Dimensions



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Extended rotary handles ERH2i

General parameters

Rotary handle with extension shaft
Scope of delivery: mechanism block, extension shaft, rotary handle
Can be locked in ON and OFF position with up to three padlocks (not in the scope of delivery)
Extension shaft can be shortened
Possibility of longer extension shaft 500 mm (only the shaft as separated item)

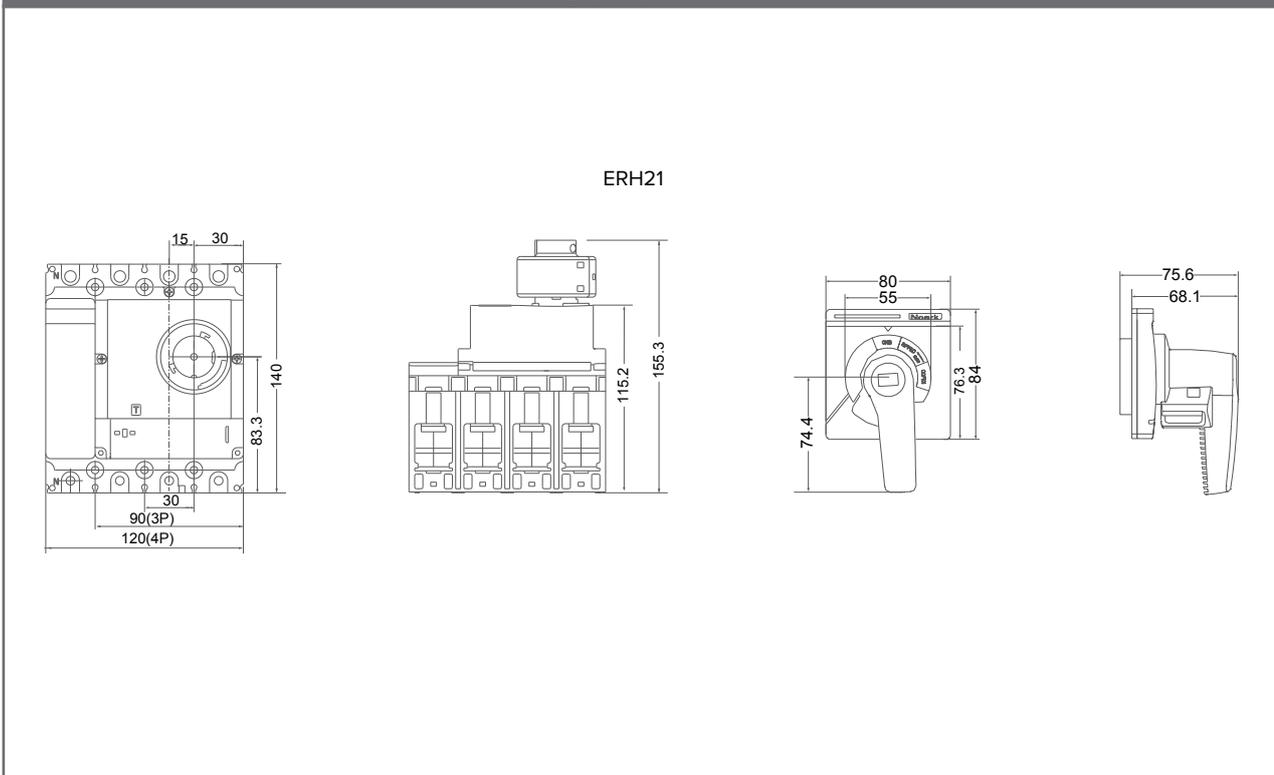
Electrical parameters

	ERH21	ERH22	ERH23	ERH24	ERH26
Tested according to	IEC/EN 60947-3				
Degree of protection	IP54			IP30	

Mechanical parameters

	ERH21	ERH22	ERH23	ERH24	ERH26
Suitable for	M1	M2	M3	M4, M5	M6
Length of the extension shaft	300 mm	300 mm	300 mm	300 mm	150 mm
Mechanical shock resistance	IK08				
Indication	connected breaker status ON-OFF-TRIP				
Mounting	directly onto breaker				
Toggle colour	grey			black	

Dimensions



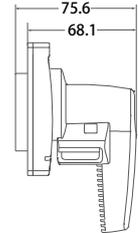
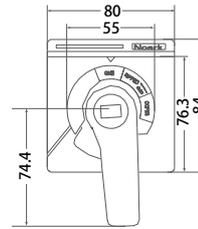
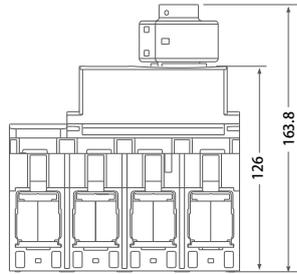
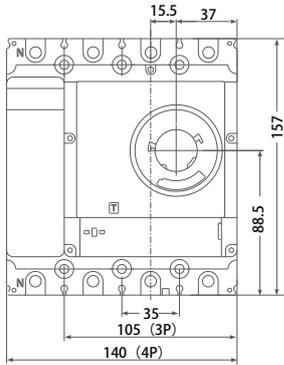
Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

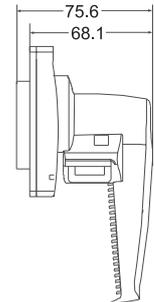
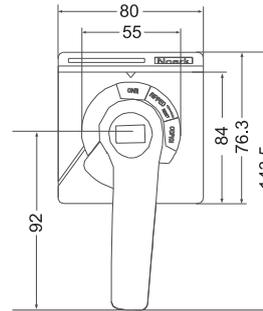
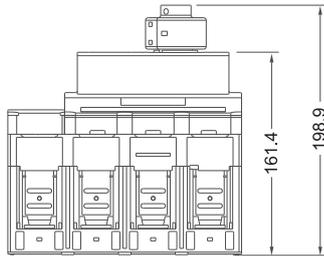
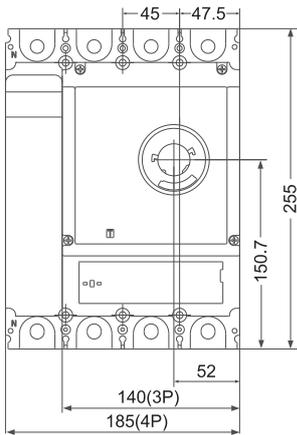
Extended rotary handles ERH2i

Dimensions

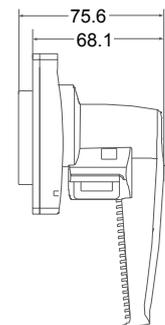
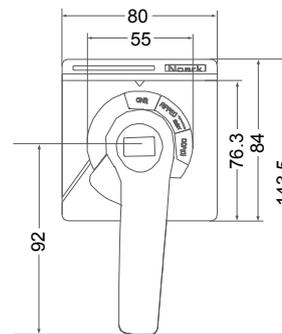
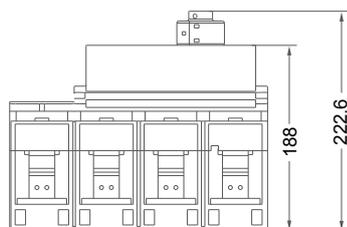
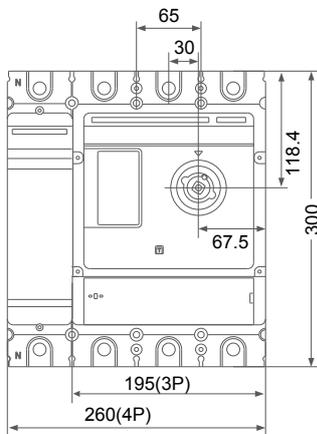
ERH22



ERH23



ERH24



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Extended handle LHD26

General parameters

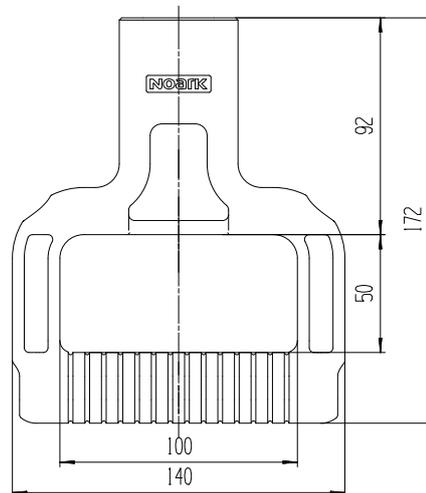
Extended handle for easier operation of the device

Scope of delivery: mechanism locker, extended handle

Mechanical parameters

	LHD26
Suitable for	Ex9M6
Length of the extended toggle	172 mm min
Indication	connected breaker status ON-OFF-TRIP
Mounting	directly onto breaker
Toggle colour	grey

Dimensions



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Connection terminals MC2i

General parameters

Box and tunnel connection terminals for Ex9M MCCBs and MCCB based switch disconnectors

Versions suitable for all frame sizes

Screws in the scope of delivery

Mechanical parameters - box terminals

	MC21	MC22	MC23	MC23 UL
Suitable for	M1	M2	M3	M3
Terminal type	box			
Terminal capacity	4 – 95 mm ²	10 – 120 mm ²	120 – 240 mm ²	120 – 240 mm ²
Fastening torque of terminals	8 Nm	10 Nm	35 Nm	35 Nm

Drawings - box terminals



MC21(22)

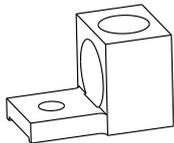


MC23

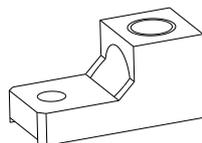
Mechanical parameters - tunnel terminals

	MC21 W	MC22 W	MC22 W2	MC22 W6	MC23 W2	MC23 W4	MC24 W2	MC26 W3	MC26 W4
Suitable for	M1	M2	M2	M2	M3	M3	M4, M5	M6	M6
Terminal type	tunnel								
Terminal capacity	1x 16 - 95 mm ²	1x 35 - 240 mm ²	2x 35 - 120 mm ²	6x 10 - 35 mm ²	2x 120 - 240 mm ²	4x 35 - 95 mm ²	2x 240 mm ²	3x 95 - 300 mm ²	4x 95 - 240 mm ²
Fastening torque of terminals (to MCCB)	10 - 15 Nm	15 Nm	15 Nm	15 Nm	35 Nm	35 Nm	35 Nm	35 Nm	35 Nm
Fastening torque of terminals (wires)	10 Nm	30 Nm	30 Nm	10 Nm	35 Nm	15 Nm	35 Nm	35 Nm	35 Nm

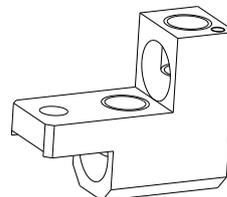
Drawings - tunnel terminals



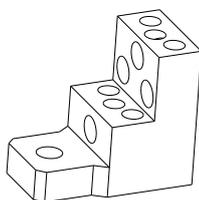
MC22 W



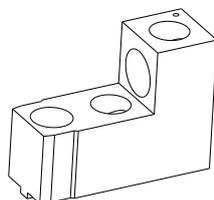
MC22 W2



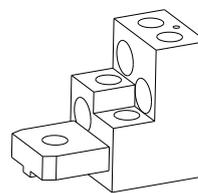
MC24 W2



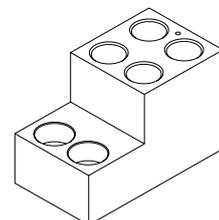
MC22 W6



MC23 W2



MC23 W4



MC26 W4

Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Front connection plates JP

General parameters

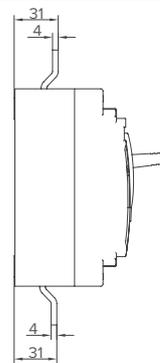
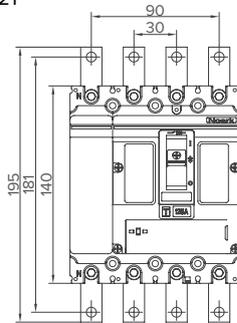
Front connection plates JP for frame sizes M1, M2, M3 and M6

Mechanical parameters - Front connection plates JP

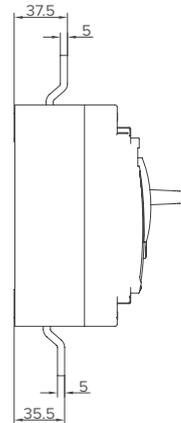
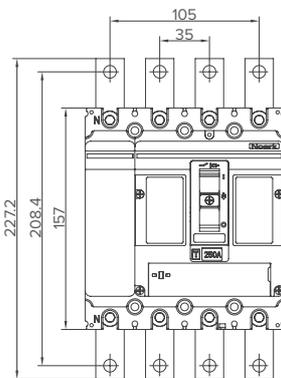
	JP21	JP22	JP23
Suitable for	M1	M2	M3
Terminal pitch	30 mm	35 mm	53 mm
Busbar / cable lug width	15 mm	20mm	30 mm
Terminal screw size	M6	M8	M10
Fastening torque of terminals	6 Nm	11 Nm	25 Nm

Dimensions

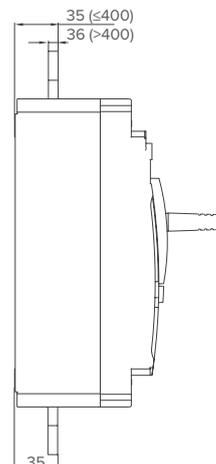
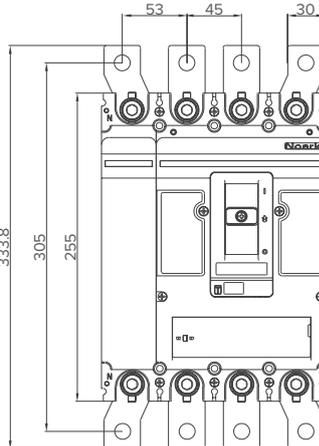
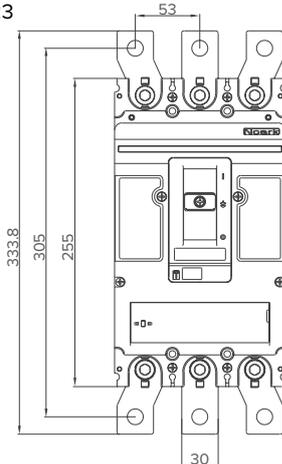
JP21



JP22



JP23



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Rear connection plates RCP

General parameters

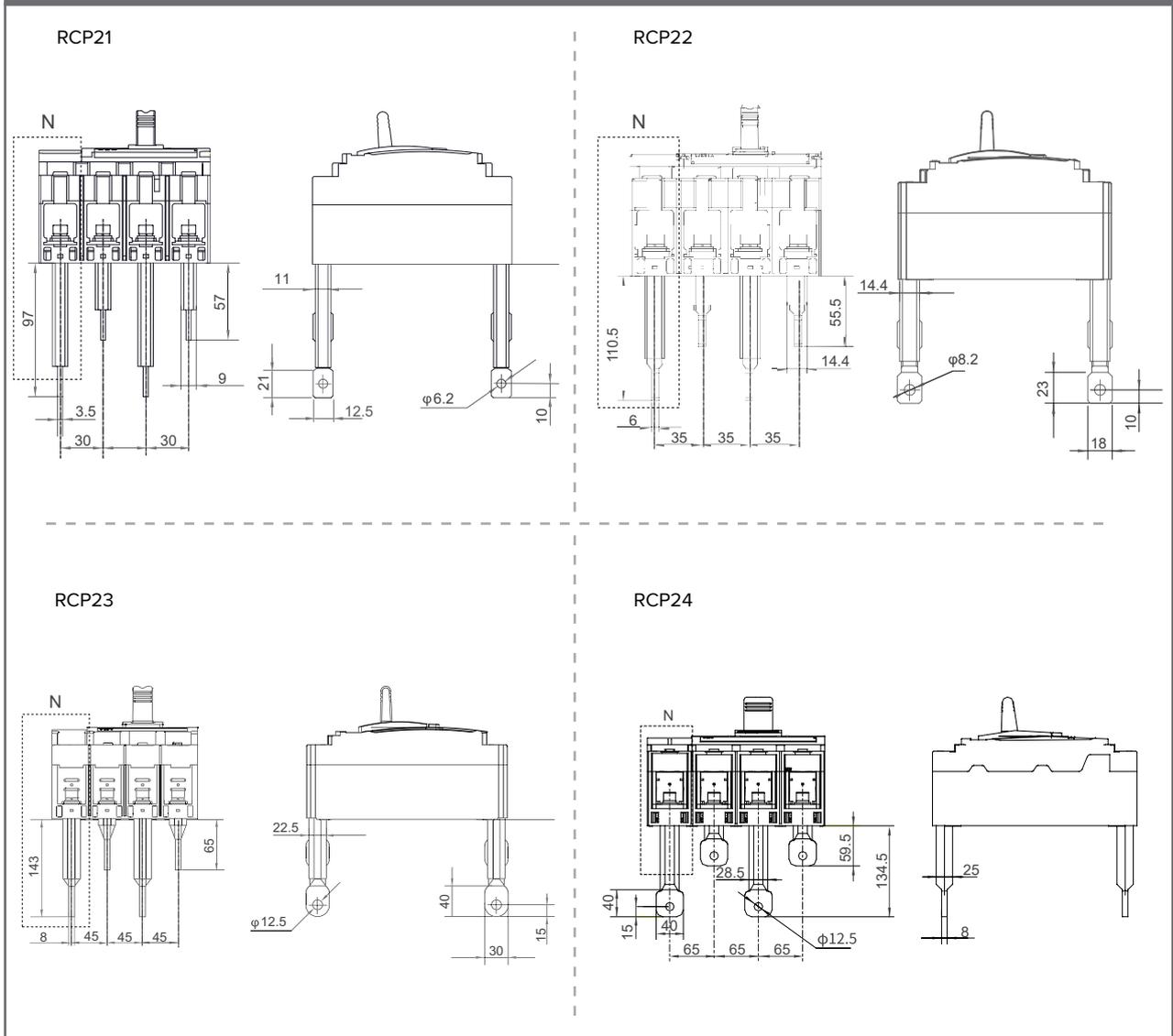
Front connection plates JP for frame sizes from M1 up to M3

Rear connection plates RCP for frame sizes from M1 up to M5

Mechanical parameters - rear connection plates RCP

	RCP21	RCP22	RCP23	RCP24
Suitable for	M1	M2	M3	M4 / M5
Terminal pitch	30 mm	35 mm	53 mm	65 mm
Busbar / cable lug width	12.5 mm	20mm	30 mm	40 mm
Terminal screw size	M6	M8	M10	M12
Fastening torque of terminals	6 Nm	11 Nm	25 Nm	25 – 30 Nm

Dimensions



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Plug-in base PIA2i

General parameters

Suitable for commercial and industrial applications
For fast service and maintenance of the installation
Suitable for circuit breakers of frame sizes from M1 until M3
Thermomagnetic and electronic variants have different models available
Premounted with automatic safety trip mechanism to avoid damages while unplugging the circuit breaker.
Offered with front type and back type of terminals.
In scope of delivery the tripping mechanism, phase barriers, MCCB plug-in terminals, mounting screws, phase barriers and the plug-in base.

Derating coefficient of Tripping Characteristics on accessories combination

Nominal current	I_n (T) [A]				
	Ex9M1 TM	Ex9M2 TM	Ex9M3 TM	Ex9M2 SU20	Ex9M3 SU20
16 – 50 A	1	—	—	1	—
63 A	1	—	—	1	—
80 A	1	—	—	—	—
100 A	1	—	—	1	—
125 A	0.95	1	—	—	—
160 A	0.95	1	—	1	—
180 A	—	1	—	—	—
200 A	—	0.95	—	—	—
225 A	—	0.95	—	—	—
250 A	—	0.95	1	0.95	1
315 A	—	—	1	—	—
350 A	—	—	1	—	—
400 A	—	—	1	—	1
500 A	—	—	0.95	—	—
630 A	—	—	—	—	0.9 (≤570A)

Mechanical parameters

	PIA21	PIA22 / PIA22 SU20	PIA23 / PIA23 SU20
Device width 3P / 4P	90 mm / 120 mm	105 mm / 140 mm	140 mm / 185 mm
Device height front / back connection	252 mm / 186 mm	267 mm / 201 mm	359 mm / 326 mm
Device depth with MCCB mounted front connection	176 mm	193 mm	260 mm
Device depth with MCCB mounted back connection	230 mm	247 mm	325 mm
Mounting	onto panel / DIN rail 35mm		
Degree of protection	IP40, IP20 terminals		
Terminals	M8 screws	M8 screws	M10 screws
Busbar width	≤ 15 mm	≤ 18 mm	≤ 28 mm
Cable lug width	≤ 15 mm	≤ 18 mm	≤ 28 mm
Fastening torque of terminals	9 Nm	9 Nm	15 Nm
Ambient temperature	-40 — +70 °C		
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average		
Weight 3P / 4P (front connection)	1 / 1.35 kg	1.64 / 2.23 kg	5.95 / 7.86 kg
Mounting position	vertical, can be rotated by 90° in each axis		

Technical Data Ex9M Accessories

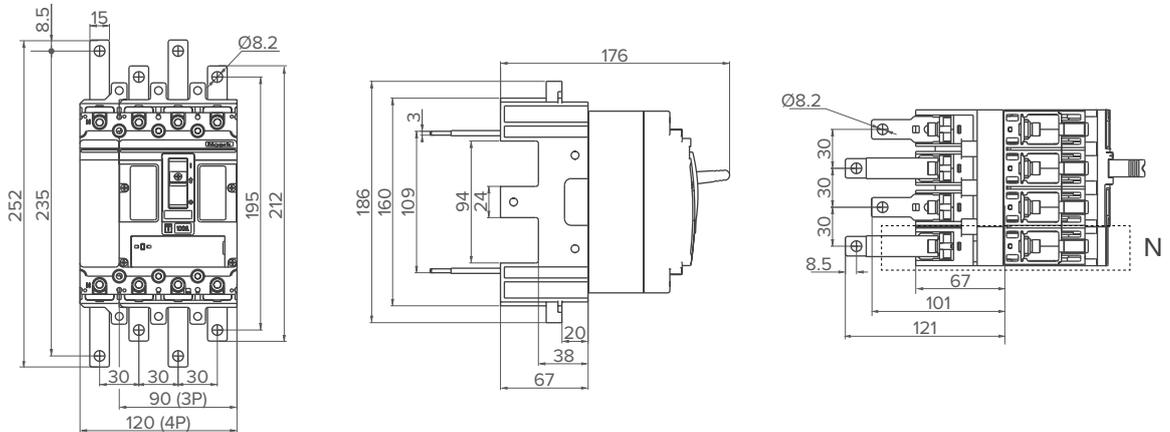
Accessories for Moulded Case Circuit Breakers Ex9M

Plug-in base PIA2i

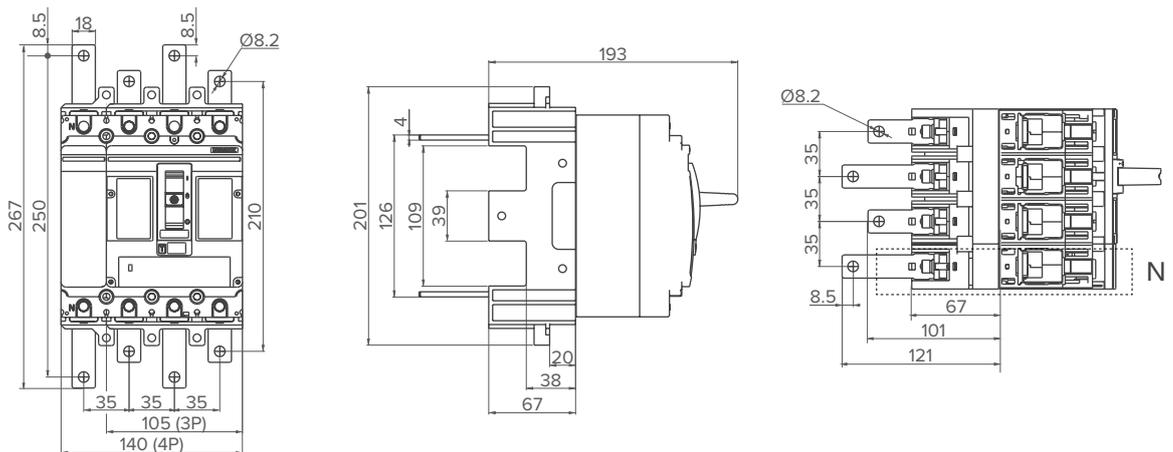
Dimensions

PIA 21

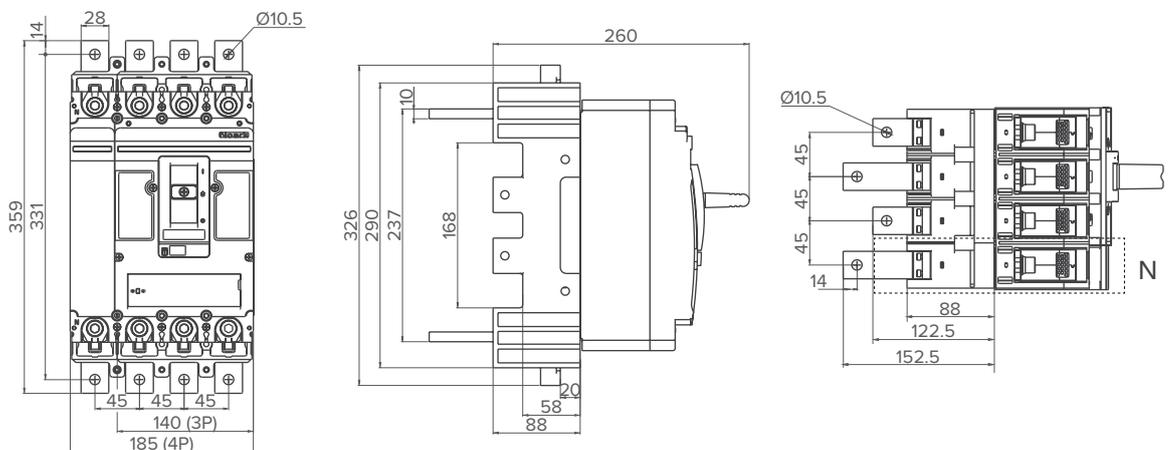
mm



PIA 22



PIA 23



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Draw-Out Base DOB2i

General parameters

Suitable for commercial and industrial applications
For fast service and maintenance of the installation
Suitable for circuit breakers of frame sizes from M3 til M5
TM and electronic versions of Ex9M3 have different types of bases
Premounted with automatic safety trip mechanism to avoid damages while unplug the circuit breaker.
Offered with front type and back type of terminals.
In scope of delivery the tripping mechanism, base position indicators, phase barriers, MCCB plug-in terminals, auxiliary terminals for the cassette, mounting screws, phase barriers and the draw-out base.

Derating coefficient of Tripping Characteristics on accessories combination

Nominal current	I_n (T) [A]					
	Ex9M3 TM	Ex9M4 TM	Ex9M5 TM	Ex9M3 SU20	Ex9M4 SU20	Ex9M5 SU20
250 A	1	—	—	1	—	—
315 A	1	—	—	—	—	—
350 A	1	—	—	—	—	—
400 A	1	0.95	—	1	—	—
500 A	1	0.95	—	—	—	—
630 A	—	0.95	0.95	0.9 ($\leq 570A$)	0.95	—
700 A	—	—	0.95	—	—	—
800 A	—	—	0.9	—	—	0.9

Mechanical parameters

	DOB 23	DOB 24
Device width 3P / 4P	214 mm / 259 mm	281 mm / 346 mm
Device height front / back connection	342 mm / 312 mm	485 mm / 275 mm
Device depth with MCCB mounted front connection	280 mm	270 mm
Device depth with MCCB mounted back connection	315.5 mm	332.5 mm
Mounting	onto panel / DIN rail 35mm	
Degree of protection	IP40, IP20 terminals	
Terminals	M10 screws	M12 screws
Busbar width	≤ 30 mm	≤ 40 mm
Cable lug width	≤ 30 mm	≤ 40 mm
Fastening torque of terminals	25 Nm	30 Nm
Ambient temperature	-40 — +70 °C	
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average	
Weight 3P / 4P	8 / 10 kg (≤ 400 A) 8.1 / 10.12 kg (630A)	15.25 / 18.36 kg
Mounting position	vertical, can be rotated by 90° in each axis	

Technical Data **Ex9M** Accessories

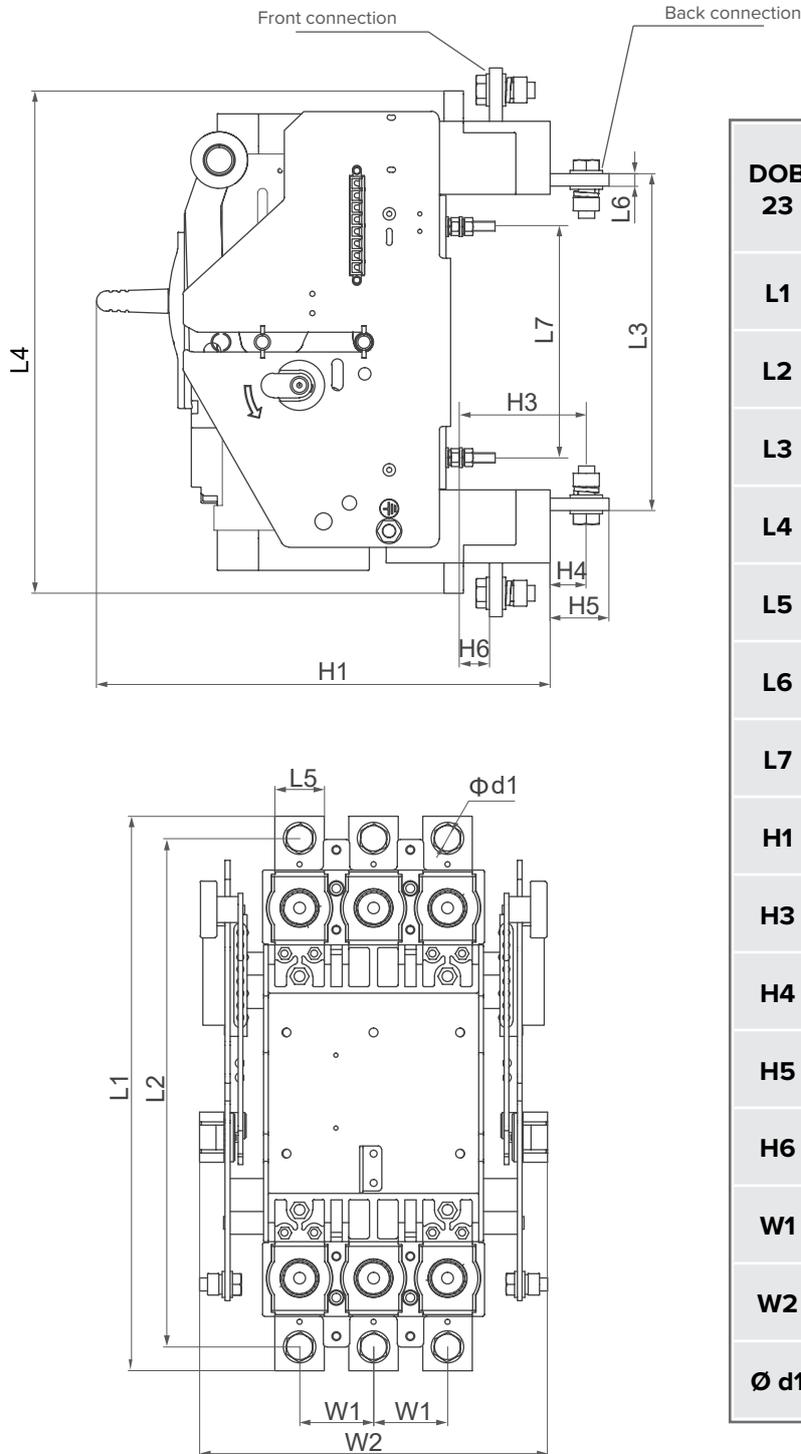
Accessories for Moulded Case Circuit Breakers Ex9M

Draw-Out Base DOB2i

Dimensions

DOB 23 CO

mm



DOB 23	≤400 A		>400 A	
	3P	4P	3P	4P
L1	342	342	342.5	342.5
L2	313	313	314.5	314.5
L3	207	207	210.5	210.5
L4	312	312	313.5	313.5
L5	30	30	30	30
L6	6	6	8	8
L7	143	143	143	143
H1	280	280	280	280
H3	77	77	77.5	77.5
H4	21	21	21.5	21.5
H5	35.5	35.5	35.5	35.5
H6	17.5	17.5	17.5	17.5
W1	45	45	45	45
W2	214	259	214	259
Ø d1	11	11	11	11

Technical Data **Ex9M** Accessories

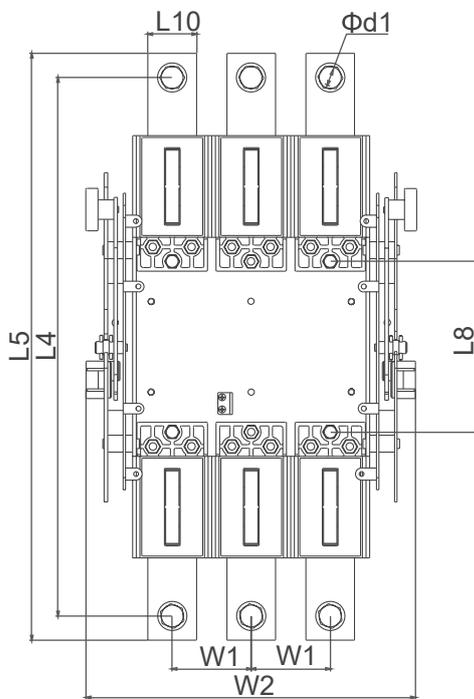
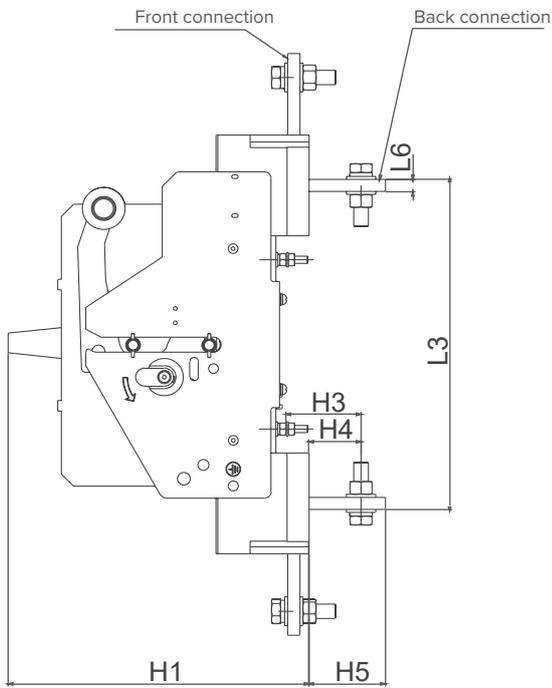
Accessories for Moulded Case Circuit Breakers Ex9M

Draw-Out Base DOB2i

Dimensions

DOB 24 CO

mm



DOB 24	3P	4P
L3	275	275
L4	445	445
L5	485	485
L6	10	10
L8	141	141
L10	40	40
H1	270	270
H3	61	61
H4	42.5	42.5
H5	62.5	62.5
W1	65	65
W2	281	346
Ø d1	13	13

Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

DIN-rail adaptors DRA2*i*

General parameters

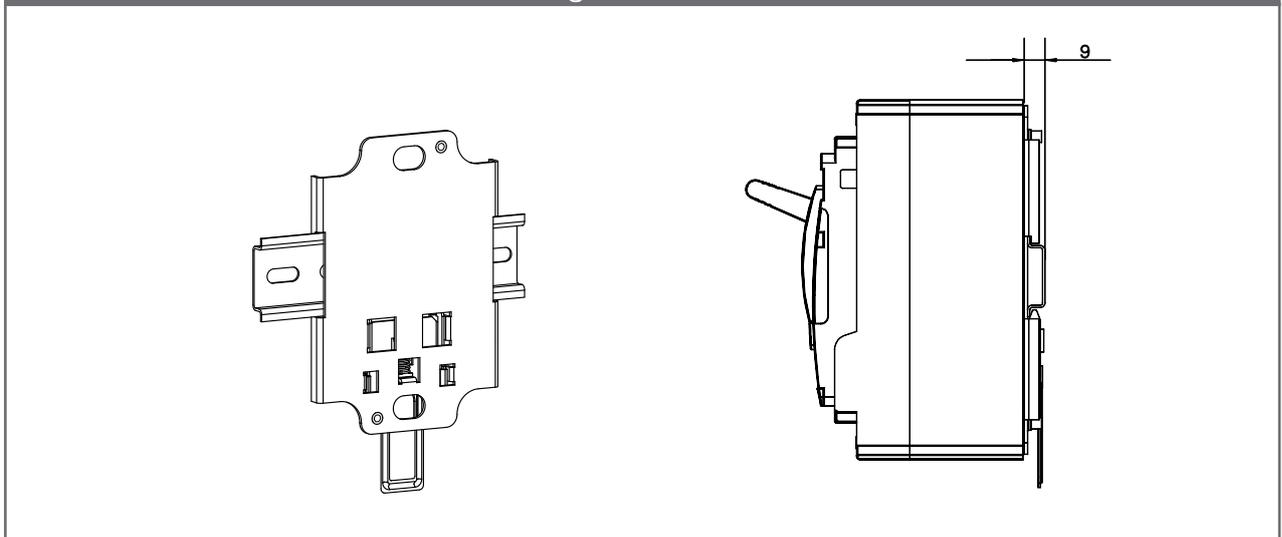
Adaptors for mounting of MCCBs and MCCB Switch Disconnectors onto 35 mm device DIN-rail

Suitable for M1 and M2 frame sizes, 3P and 4P versions

Mechanical parameters

	DRA21	DRA22
Suitable for	M1	M2
Mounting	easy mounting onto 35 mm device rail (DIN)	

Drawings and dimensions



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Mounting depth spacers WG

General parameters

Set of mounting depth spacers for compensation of differences in height between frame sizes

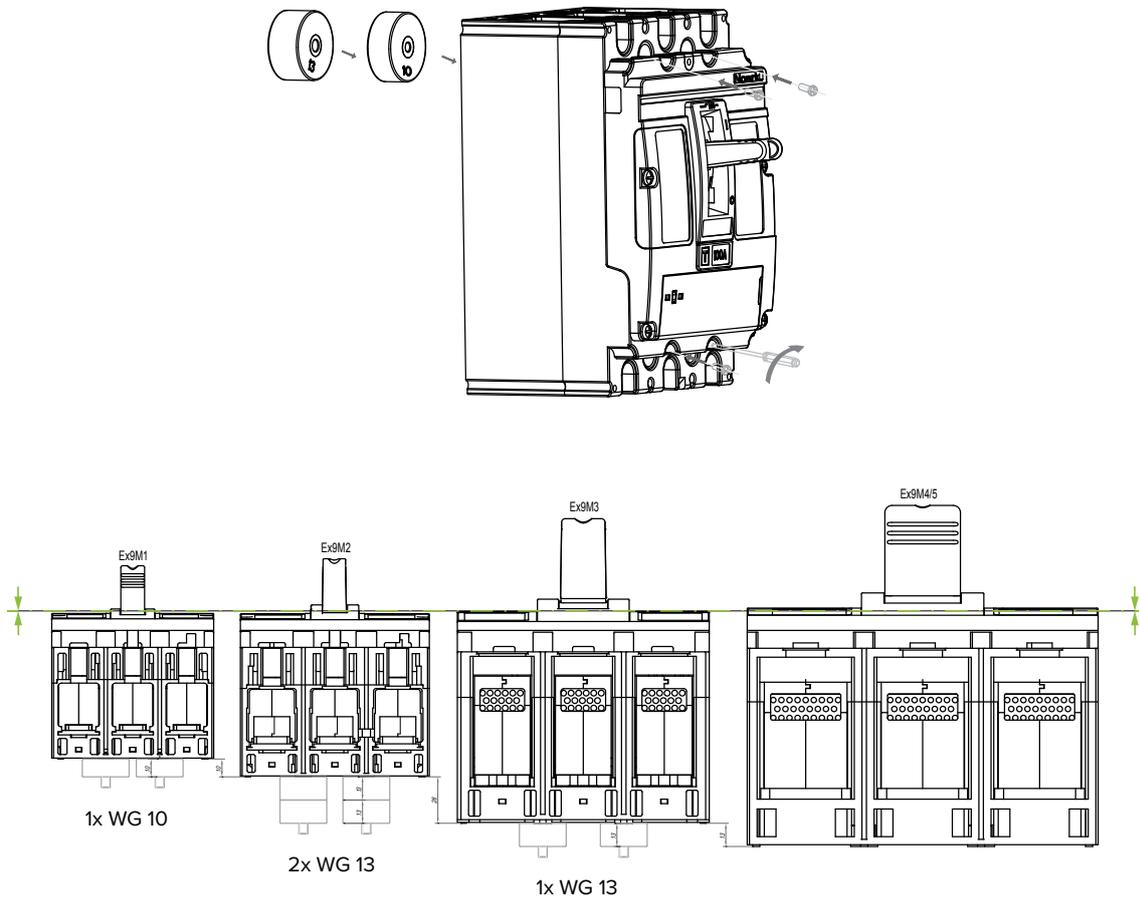
Suitable for all variants of MCCBs and MCCB Switch Disconnectors

Variants with height 10 and 13 mm

Mechanical parameters

	WG 10	WG 13
Suitable for height compensation	M1 -> M2	M2 -> M3 M3 -> M4/M5
Height	10 mm	13 mm

Mounting



WG \ Ex9M	9M1/9M2	9M1/9M3	9M1/9M4	9M2/9M3	9M2/9M4	9M3/9M4
	WG10	4X	4X	4X		
WG13		8X	12X	8X	12X	4X

Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Battery box (BAB22)

General parameters

Battery box for external power supply of SU20S type MCCBs

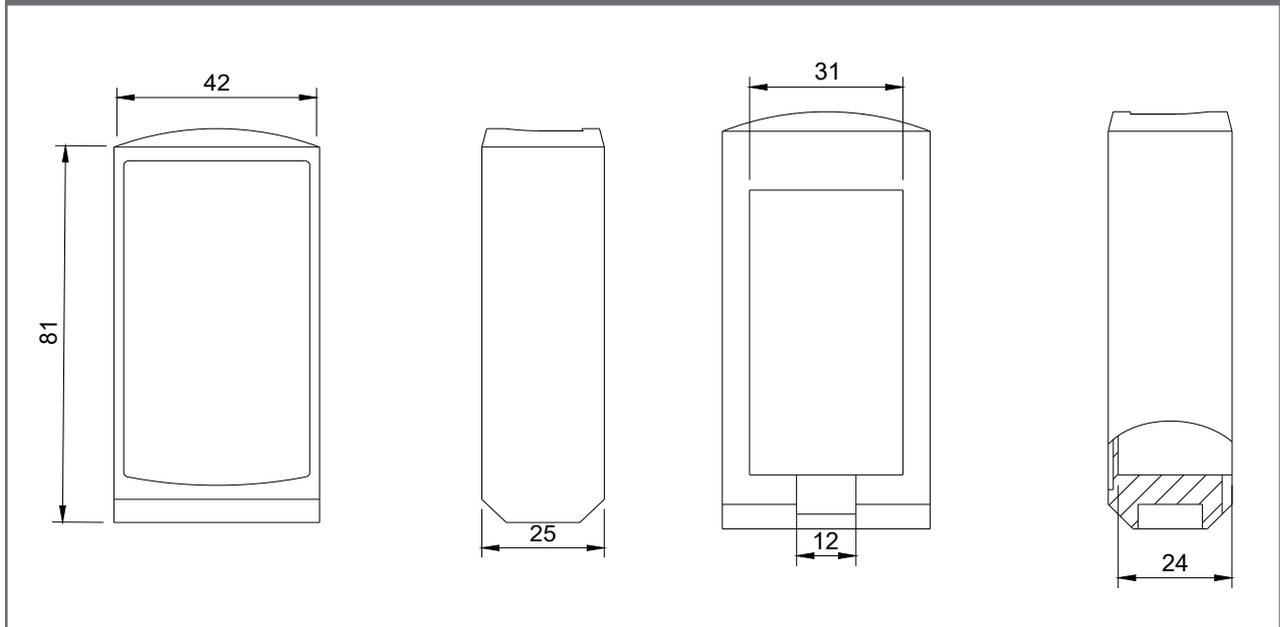
Suitable for circuit breakers of frame sizes from M2 to M6

In scope of delivery 1.5 meter Mini-DIN Plug 8 pin cable

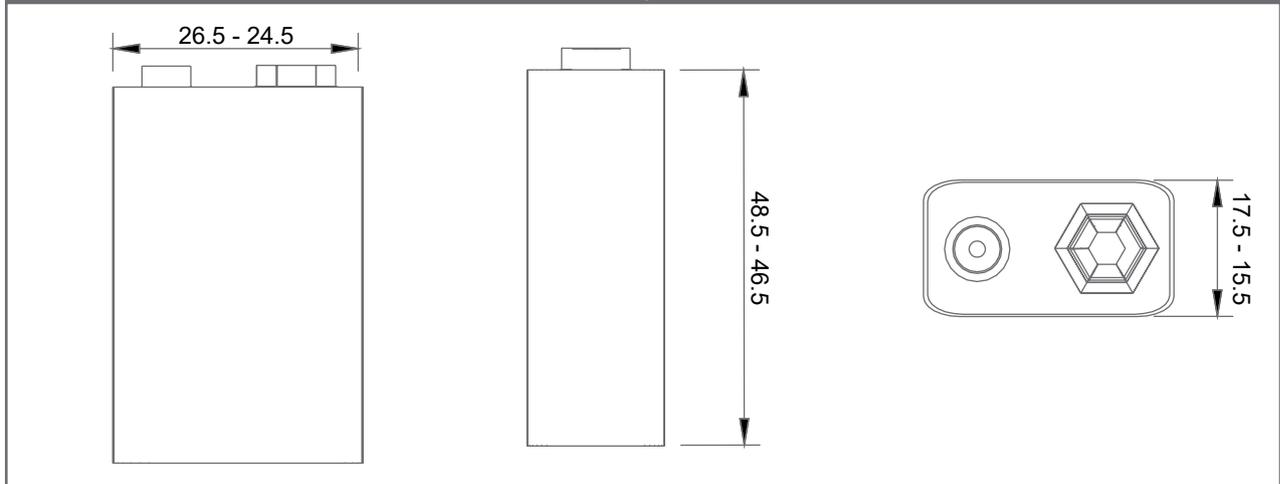
Operating conditions

Basic parameters	Performance indicators
Operating temperature	-20° C - +40° C
Operating output voltage*	DC 9V
Capacity*	120mA H

Dimensions



Usual battery dimensions



Note: * The battery is not included

Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Communication module COM22

General parameters

Auxiliary component of moulded case circuit breakers used for networking and communication of MCCBs to facilitate remote control for users.

COM22 refers to universal accessory of standard type electronic moulded case circuit breaker

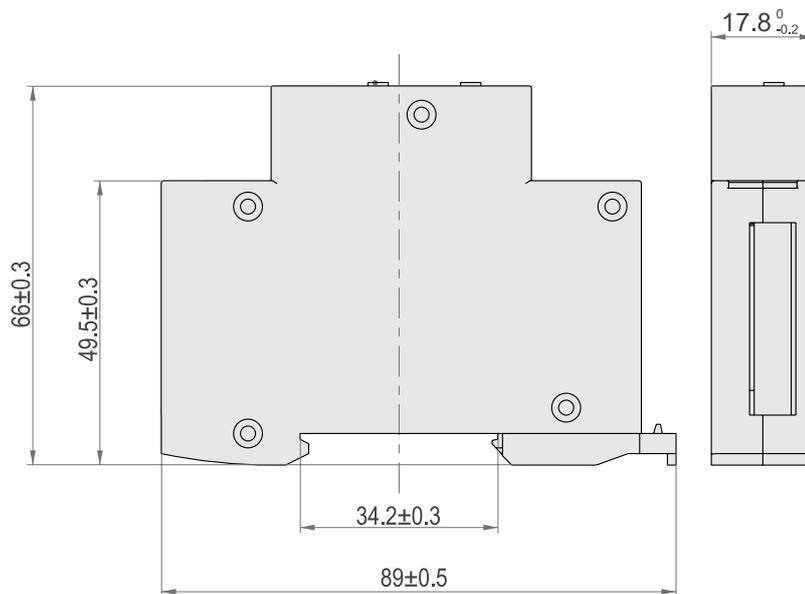
Electrical parameters

Basic parameters	Performance indicators
Operating power supply	AC220V, range: AC85V - AC265V or DC24V
Communication	RS485 communication - Baud rate: 9600/19200bps
Two way relay output	Output capacity 3 A 30 V DC/250 V A

Mechanical parameters

Basic parameters	Performance indicators
Operating temperature	-25°C - 75°C
Mounting	DIN steel rail (TS35x7.5mm) same as miniature circuit breaker.

Dimensions

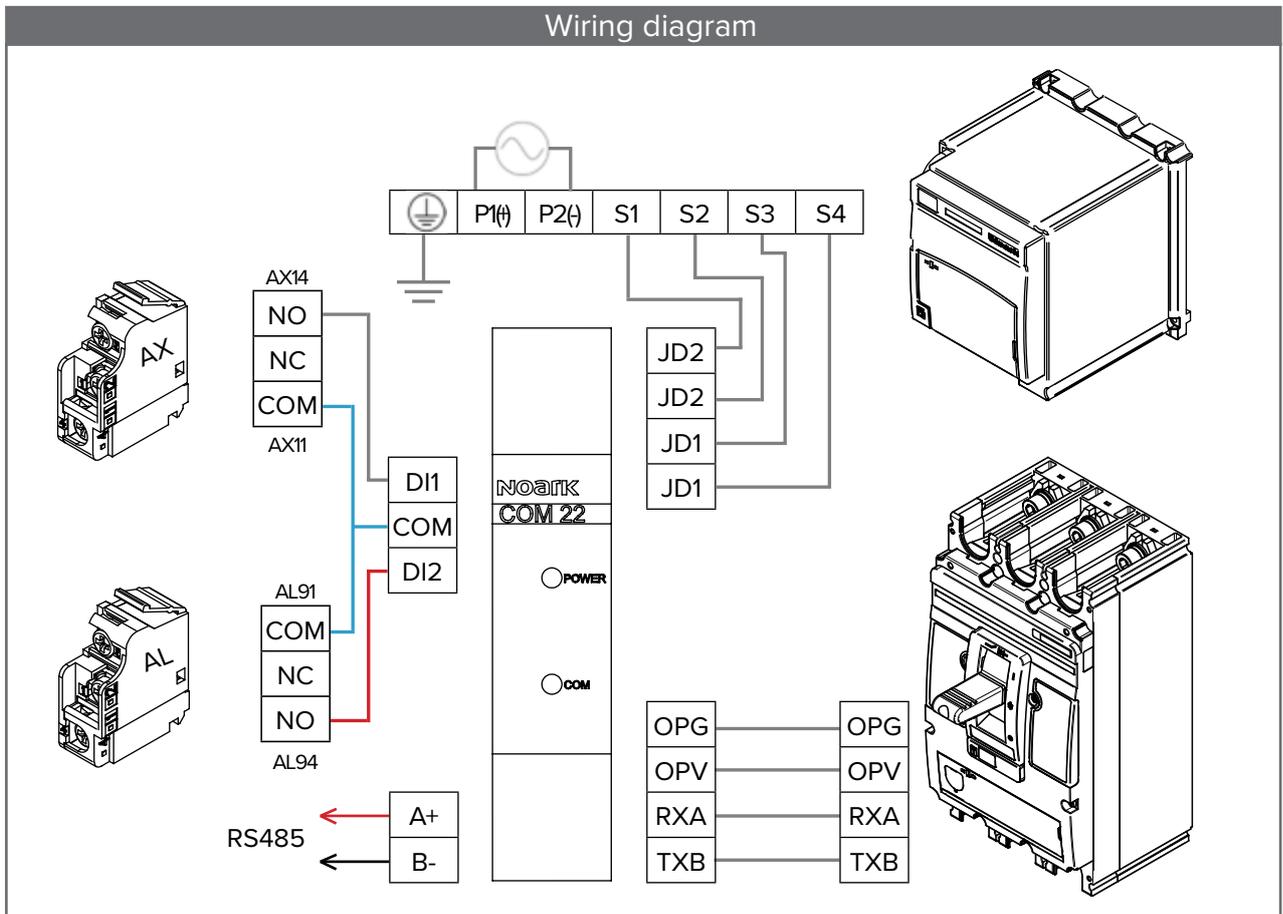


Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Communication module COM22

Wiring diagram



Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Communication module COM22

Function parameter settings

Breaker metering data

Item	Address	Permissions	Notes	SU20S	SU20L
L1 Phase current (A)	0x0001	R		✓	✓
L2 Phase current (A)	0x0002	R		✓	✓
L3 Phase current (A)	0x0003	R		✓	✓
N Phase current (A)	0x0004	R		✓	✓
Ground phase current (A)	0x0005	R		✓	-
1st Fault Status Words	0x003B	R	Break alarming state: 0 = Normal; 1 = Fault Bit 15: L1 phase current fault Bit 14: L2 phase current fault Bit 13: L3 phase current fault Bit 12: N phase current fault Bit 11: Instantaneous/Short circuit fault Bit 10: Short-time delay fault Bit 09: Long time / Overload fault Bit 08: Ground fault Bit 07: Phase unbalance fault (motor type) Bit 06: Motor block fault (motor type) Others: reserve, default return value 0	✓	✓
1st Fault current	0x003C	R		✓	✓
2nd Fault Status Words	0x003D	R	Same with 0x003B	✓	✓
2nd Fault current	0x003E	R		✓	✓
3rd Fault Status Words	0x003F	R	Same with 0x003B	✓	✓
3rd Fault current	0x0040	R		✓	✓

Communication setup

Item	Address	Permissions	Notes	SU20S	SU20L
Modbus address	0x0100	R/W	Range 1-247	✓	✓
Modbus baud rate	0x0101	R/W	Options: 9600, 19200	✓	✓

Device information

Item	Address	Permissions	Notes	SU20S	SU20L
Frame current (A)	0x0180	R	Options:250, 630, 800, 1600	✓	✓
Rated current (A)	0x0181	R	250A frame: 32, 63, 100, 160, 250 630A frame: 250, 400, 630 800A frame: 800, 630 1600A frame: 800, 1000, 1250, 1600	✓	✓
Software version	0x01C5 - 0x01CC	R		✓	✓

Control function

(Write permission of control command default is OFF, can be enabled with "Net Permit" in controller menu)

Item	Address	Permissions	Notes	SU20S	SU20L
Control command	0x2800	W	Bits 9:8 Breaker state: 01 = break; 10 = make Bit 4 Break test = stand by; 1= trigger Others: Reserve	✓	✓

Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Communication module COM22

Function parameter settings

Protect functions

(Write permission of protection parameters default is OFF, can be enabled with "Net Permit" in controller menu)

Item	Address	Permissions	Notes	SU20S	SU20L
Long time delay current setting (I _r)	0x2007	R/W*	0.4-1.0 I _n	✓	R/O
Long time delay time setting (T _r) (s)	0x2008	R/W*	Power distribution type: 3, 6, 12, 18 Motor type: 5, 10, 20, 230 (250A frame and below: 5,10, 20)	✓	R/O
Short time delay current setting (I _{sd})	0x2009	R/W*	Range: Power distribution type (1.5-10) I _r (OFF); Motor type (4-12) I _r (OFF)	✓	R/O
Short time time setting (T _{sd}) (s)	0x200A	R/W*	Power distribution type: 100, 200, 300, 400; Motor type: 100	✓	R/O
Short circuit instantaneous current setting (I _i)	0x200B	R/W*	Power distribution type: (1.5-12) I _n (OFF); Motor type: 15	✓	R/O
Ground fault protection current setting (I _g)	0x200C	R/W	Options: (0.4, 0.5, 0.6 0.7, 0.8, 0.9, 1.0) I _n	✓	-
Ground fault protection time setting (T _g) (s)	0x200D	R/W	Options: 100, 200, 300, 400	✓	-
N phase protection current setting (I _N)	0x200E	R/W*	Options: 5 (0.5I _n), 10 (1.0I _n)	✓	R/O
3 phase unbalance	0x200F	R/W*	Options: (0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9) Only motor type	✓	R/O
3 phase unbalance time delay setting	0x2010	R/W*	Options: 4, 6, 8, 10 Only motor type	✓	R/O
Motor block current setting	0x2011	R/W	Options: (3-10) I _r (OFF) Only motor type	✓	-
Motor block delay time setting (s)	0x2012	R/W	Options: (1-30) Only motor type	✓	-
Long time protection enable	0x2013	R/W	Options: 1 (ON) or 0 (OFF) Only motor type	✓	-
Short time protection enable	0x2014	R/W	Options: 1 (ON) or 0 (OFF)	✓	-
Instantaneous protection enable	0x2015	R/W	Power distribution type: Options: 1 (ON) or 0 (OFF) Motor: 1 (ON)	✓	-
N phase protection enable	0x2016	R/W	Options: 1 (ON) or 0 (OFF)	✓	-
Ground fault protection enable	0x2017	R/W	Options: 1 (ON) or 0 (OFF)	✓	-
3 phase unbalance enable	0x2018	R/W	Options: 1 (ON) or 0 (OFF) Only motor type	✓	-
Motor block protection enable	0x2019	R/W	Options: 1 (ON) or 0 (OFF) Only motor type	✓	-

Technical Data **Ex9M** Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Compatibility table

Product family	Frame size	Manual operation	Remote operation	MOD Motor drive		SHT Shunt trip release		UVT Undervoltage release	
Ex9M	M1	✓	With external accessory	MOD21	Ordered separately	SHT21	Ordered separately	UVT21	Ordered separately
Ex9M	M2	✓	With external accessory	MOD22	Ordered separately	SHT22	Ordered separately	UVT22	Ordered separately
Ex9M	M3	✓	With external accessory	MOD23	Ordered separately	SHT22	Ordered separately	UVT22	Ordered separately
Ex9M	M4	✓	With external accessory	MOD24	Ordered separately	SHT24	Ordered separately	UVT24	Ordered separately
Ex9M	M5	✓	With external accessory	MOD24	Ordered separately	SHT24	Ordered separately	UVT24	Ordered separately
Ex9M	M6	✓	-	-	-	SHT26	Ordered separately	UVT26	Ordered separately
Ex9M6 MOD	M6	✓	With premounted internal accessory	MD26 (premounted)	Premounted accessory (not offered)	SHT26 (premounted)	Premounted accessory	UVT26	Ordered separately

Product family	Frame size	Manual operation	Remote operation	XF Closing release		AX Auxiliary contact		AL Signal contact	
Ex9M	M1	✓	With external accessory	-	-	AX21M	Ordered separately	AL21M	Ordered separately
Ex9M	M2	✓	With external accessory	-	-	AX21M	Ordered separately	AL21M	Ordered separately
Ex9M	M3	✓	With external accessory	-	-	AX21M	Ordered separately	AL21M	Ordered separately
Ex9M	M4	✓	With external accessory	-	-	AX21M	Ordered separately	AL21M	Ordered separately
Ex9M	M5	✓	With external accessory	-	-	AX21M	Ordered separately	AL21M	Ordered separately
Ex9M	M6	✓	-	-	-	AX21M	Ordered separately	AL21M	Ordered separately
Ex9M6 MOD	M6	✓	With premounted internal accessory	XF26 (premounted)	Premounted accessory (not offered)	SHT26 (premounted)	Premounted accessory	AL21M (premounted)	Premounted accessory

Technical Data **Ex9MHV** Accessories

Accessories for Moulded Case Circuit Breakers **Ex9MHV**

Auxiliary and signal contact units AX21M, AL21M

General parameters

Contact units for auxiliary and signal contact functions are suitable for all MCCB frame sizes

Auxiliary contacts synchronous with main contacts of the circuit breaker

Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)

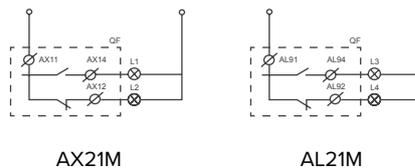
Electrical parameters

	AX21M	AL21M
Contacts	1 changeover (CO)	1 changeover (CO)
Contact function	auxiliary	signal
Tested according to	IEC/EN 60947-1, IEC/EN 60947-5-1	
Rated op. voltage U	240/415 V AC, 110/220 V DC	
Rated frequency	50/60 Hz	
Rated op. current I _e AC	4 A (240 V), 2 A (415 V)	
Rated op. current I _e DC	0.25 A (110 V), 0.25 A (220 V)	
Rated thermal current I _{th}	5 A	
Rated op. current I _e , ut. cat. AC-15	4 A (240 V), 2 A (415 V)	
Rated op. current I _e , ut. cat. DC-13	0.25 A (110 V), 0.25 A (220 V)	
Rated insulation voltage U _i	500 V	

Mechanical parameters

	AX21M	AL21M
Suitable for	M2HV, M3HV	M2HV, M3HV

Wiring diagrams



Technical Data **Ex9MHV** Accessories

Accessories for Moulded Case Circuit Breakers Ex9MHV

Shunt trip releases SHT2iHV

General parameters

It is possible to use one unit of shunt trip release SHT2i or one unit of undervoltage release UVT2i

Can be used for remote switch off

SHT22HV for MCCBs of frame size M2HV

SHT23HV for MCCBs of frame sizes M3HV

With connection wires

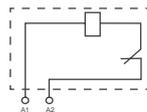
Electrical parameters

	SHT22HV	SHT23HV
Tested according to	IEC/EN 60947-1, IEC/EN 60947-5-1	
Rated operating voltage U (according to type)	110 V AC 220 — 240 V AC 380 — 415 V AC 24 V DC 110 — 120 V DC 220 V DC	110 V AC 220 — 240 V AC 380 — 415 V AC 24 V DC 110 — 120 V DC 220 V DC
Rated frequency	50/60 Hz DC	
Rated insulation voltage U	500 V	
Tripping time	< 20 ms	< 20 ms

Mechanical parameters

	SHT22HV	SHT23HV
Suitable for	M2HV	M3HV
Connection	equipped with connection wires	

Wiring diagrams



SHT2i

Technical Data **Ex9MHV** Accessories

Accessories for Moulded Case Circuit Breakers Ex9MHV

Undervoltage releases UVT2iHV

General parameters

It is possible to use one unit of shunt trip release SHT2iHV or one unit of undervoltage release UVT2iHV
To switch connected breaker off in case of voltage drop
UVT22HV for MCCBs of frame size M2HV
UVT23HV for MCCBs of frame size M3HV
With connection wires

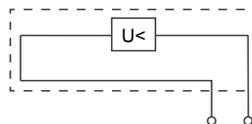
Electrical parameters

	UVT22HV	UVT23HV
Tested according to	IEC/EN 60947-1, IEC/EN 60947-5-1	
Rated operating voltage U_n	110 V AC 220 – 240 V AC 380 – 415 V AC 24 V DC 110 – 120 V DC 220 V DC	110 V AC 220 – 240 V AC 380 – 415 V AC 24 V DC 110 – 120 V DC 220 V DC
Rated frequency f	50/60 Hz DC	
Rated insulation voltage U_i	500 V	
Tripping time	< 20 ms	< 20 ms
Making threshold	85 % U_n	85 % U_n
Tripping threshold	35 % U_n	35 % U_n

Mechanical parameters

	UVT22HV	UVT23HV
Suitable for	M2HV	M3HV
Connection	equipped with connection wires	

Wiring diagrams



UVT2iHV

Technical Data **Ex9MHV** Accessories

Accessories for Moulded Case Circuit Breakers Ex9MHV

Extended rotary handles ERH2/HV

General parameters

Rotary handle with extension shaft
Scope of delivery: mechanism block, extension shaft, rotary handle
Can be locked in ON and OFF position with up to three padlocks (not in the scope of delivery)
Extension shaft can be shortened
Possibility of longer extension shaft 500 mm (only the shaft as separated item)

Electrical parameters

	ERH22HV	ERH23HV
Tested according to	IEC/EN 60947-3	
Degree of protection	IP54	

Mechanical parameters

	ERH22HV	ERH23HV
Suitable for	M2HV	M3HV
Length of the extension shaft	300 mm	300 mm
Mechanical shock resistance	IK08	
Indication	connected breaker status ON-OFF-TRIP	
Mounting	directly onto breaker	
Toggle colour	grey	

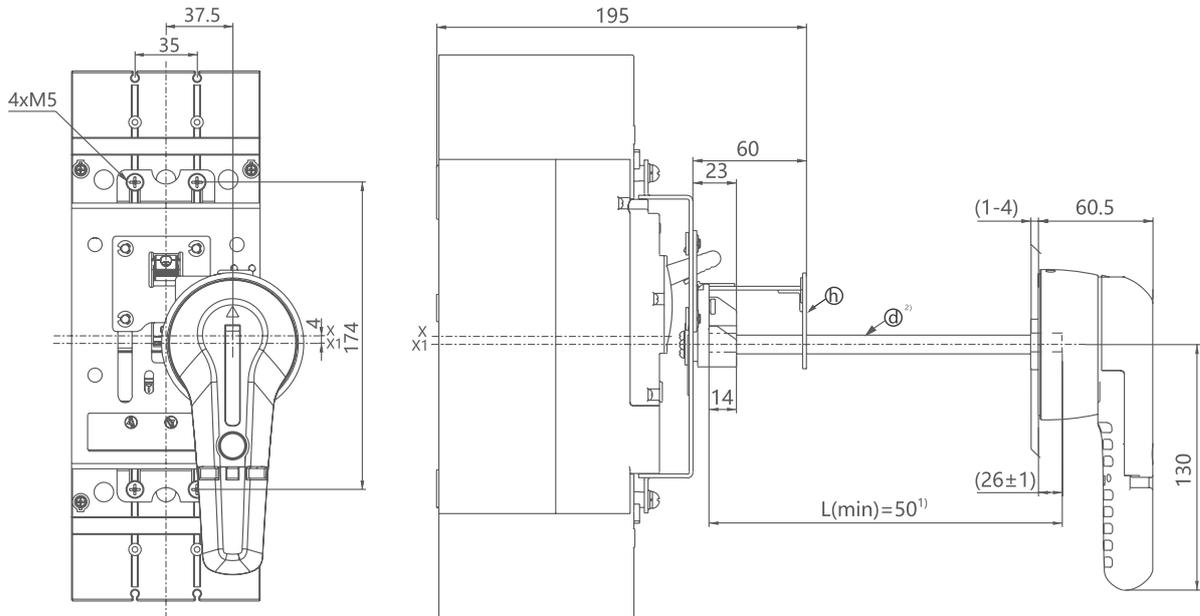
Technical Data Ex9MHV Accessories

Accessories for Moulded Case Circuit Breakers Ex9MHV

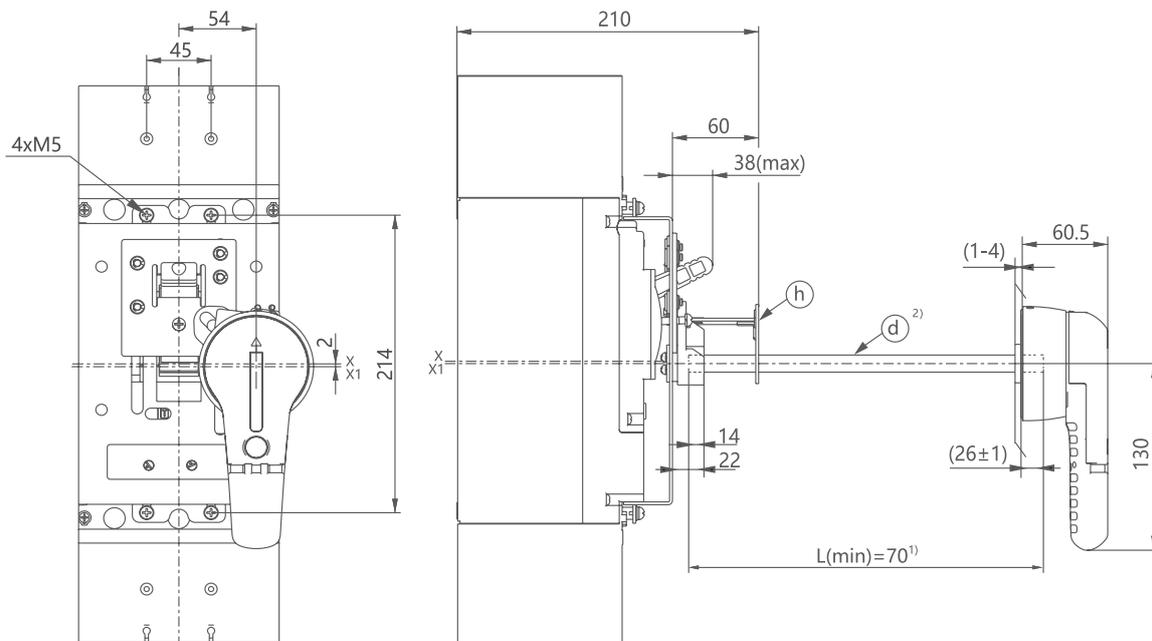
Extended rotary handles ERH2iHV

Dimensions

ERH22HV



ERH23HV



Note:
If the length (L) of the shaft (d) is bigger than 150mm, it is needed to install the support plate (h) to avoid sagging of the shaft.

Technical Data **Ex9MHV** Accessories

Accessories for Moulded Case Circuit Breakers Ex9MHV

Connection terminals MC2i

General parameters

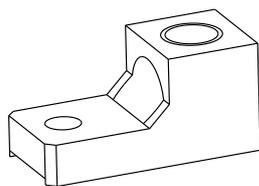
Tunnel connection terminals for Ex9MHV MCCBs

Screws in the scope of delivery

Mechanical parameters - tunnel terminals

	MC22 W
Suitable for	M2HV
Terminal type	Tunnel
Terminal capacity	1x 35 - 240 mm ²
Fastening torque of terminals (to MCCB)	15 Nm
Fastening torque of terminals (wires)	30 Nm

Drawings - tunnel terminals



MC22 W

Technical Data **Ex9MHV** Accessories

Accessories for Moulded Case Circuit Breakers Ex9MHV

Front connection plates JP

General parameters

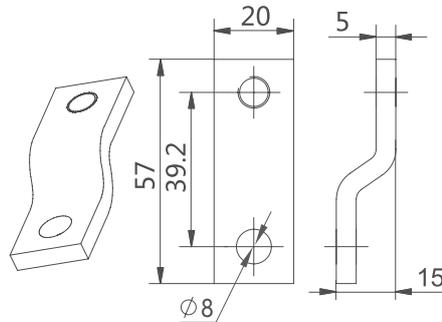
Front connection plates JP for frame sizes M2HV and M3HV

Mechanical parameters - Front connection plates JP

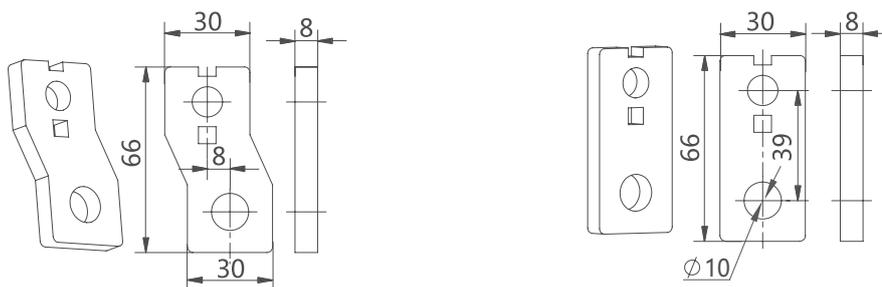
	JP22	JP23
Suitable for	M2HV	M3HV
Terminal pitch	35	53
Busbar / cable lug width	20mm	30 mm
Terminal screw size	M8	M10
Fastening torque of terminals	11 Nm	25 Nm

Dimensions

JP22



JP23



Technical Data **Ex9MHV** Accessories

Accessories for Moulded Case Circuit Breakers Ex9MHV

Mounting depth spacers WG

General parameters

Set of mounting depth spacers for compensation of differences in height between frame sizes

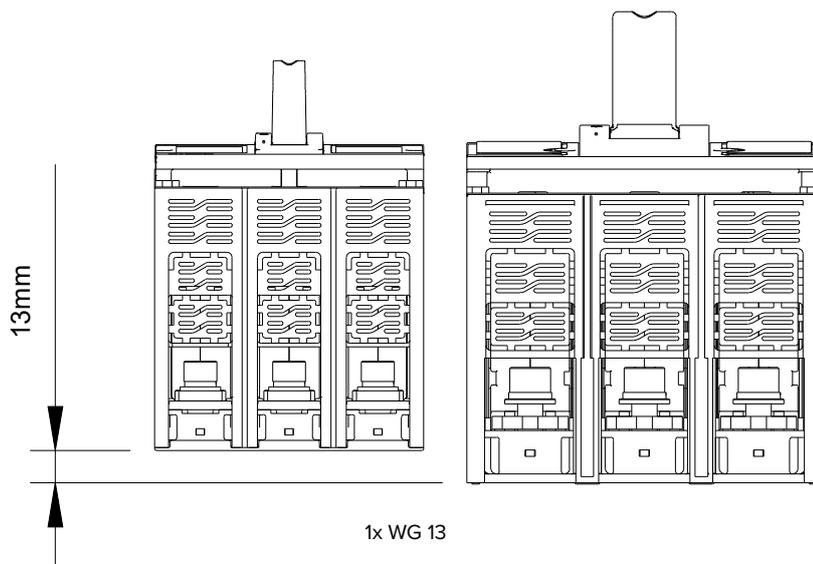
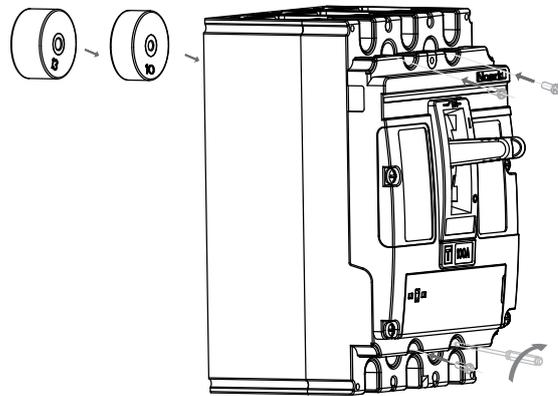
Suitable for all variants of MCCBs and MCCB Switch Disconnectors

Variants with height 10 and 13 mm

Mechanical parameters

	WG 13
Suitable for height compensation	M2HV -> M3HV
Height	13 mm

Mounting

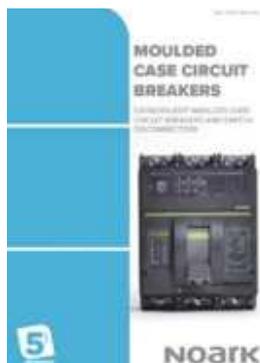


Selectivity protection

Selectivity protection table. Number: Maximum fault current to achieve selectivity

Upstream		Ex9M1 TM											Ex9M2 TM					Ex9M2 SU20S					
Downstream	I_n (A)	16	20	25	32	40	50	63	80	100	125	160	125	160	180	200	225	250	32	63	100	160	250
Ex9B B and C Characteristics	≤10	190	190	300	400	500	500	500	630	800	1000	1250	T	T	T	T	T	T	400	500	1000	T	T
	16			300	400	500	500	500	630	800	1000	1250	T	T	T	T	T	T	400	500	1000	T	T
	20					500	500	500	630	800	1000	1250	T	T	T	T	T	T		500	1000	T	T
	25						500	500	630	800	1000	1250	T	T	T	T	T	T		500	1000	T	T
	32							500	630	800	1000	1250	2000	5000	T	T	T	T		500	1000	T	T
	40								630	800	1000	1250	2000	5000	T	T	T	T			1000	T	T
	50									800	1000	1250	2000	5000	T	T	T	T			1000	T	T
	63										1000	1250	2000	5000	T	T	T	T			1000	T	T
Ex9M1 TM	16					400	500	500	630	800	1000	1250	1000	2500	2500	2500	2500	2800		500	1000	2500	2800
	20						500	500	630	800	1000	1250	1000	2500	2500	2500	2500	2800		500	1000	2500	2800
	25							500	630	800	1000	1250	1000	2500	2500	2500	2500	2800		500	1000	2500	2800
	32								630	800	1000	1250	1000	2500	2500	2500	2500	2800			1000	2500	2800
	40									800	1000	1250	1000	2000	2000	2500	2500	2800			1000	2500	2800
	50										1000	1250	1000	2000	2000	2500	2500	2800			1000	2500	2800
	63											1250	1000	2000	2000	2500	2500	2800				2500	2800
	80													2000	2000	2500	2500	2800				2500	2800
	100															2500	2500	2800					2800
	125																2500	2800					2800
	160																2500	2800					2800
Ex9M2 TM	125																						
	160																						
	180																						
	200																						
	225																						
	250																						
Ex9M2 SU20S/L	32																			1000	2000	2800	
	63																				2000	2800	
	100																					2800	
	160																						
	250																						
Ex9M3	250																						
	315																						
	350																						
	400																						
	500																						
Ex9M3 SU20S/L	250																						
	400																						
	630																						

CATALOGUES AND ASSORTMENT OVERVIEW



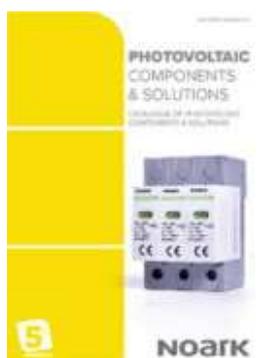
MOULDED CASE CIRCUIT BREAKERS CATALOGUE

- MOULDED CASE CIRCUIT BREAKERS
- MOULDED CASE SWITCH DISCONNECTORS
- DC MOULDED CASE CIRCUIT BREAKERS
- DC MOULDED CASE SWITCH DISCONNECTORS
- ACCESSORIES FOR MOULDED CASE CIRCUIT BREAKERS



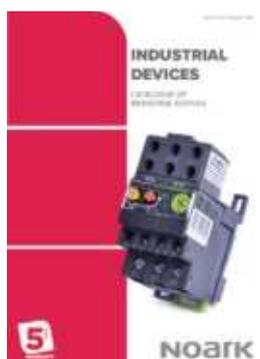
INSTALLATION DEVICES CATALOGUE

- MINIATURE CIRCUIT BREAKERS
 - POWER SUPPLIES
 - RESIDUAL CURRENT CIRCUIT BREAKERS
 - SURGE PROTECTION DEVICES
- AND MANY MORE ...



PHOTOVOLTAIC COMPONENTS AND SOLUTIONS CATALOGUE

- MINIATURE CIRCUIT BREAKERS
 - FUSE DISCONNECTORS
 - EV CHARGERS
 - SURGE PROTECTION DEVICES
- AND MANY MORE ...



INDUSTRIAL DEVICES CATALOGUE

- CONTACTORS AND RELAYS
 - MOTOR PROTECTIVE CIRCUIT BREAKERS
 - OVERLOAD THERMAL RELAYS
 - PANEL MOUNTED DEVICES
- AND MANY MORE ...



CONSUMER UNITS CATALOGUE

- PLASTIC CONSUMER UNITS
 - PLASTIC CONSUMER UNITS WITH SHEET STEEL DOOR
 - PLASTIC CONSUMER UNITS FOR OUTDOOR USE
 - METAL ENCLOSURES WITH MOUNTING PLATES
- AND MANY MORE ...

