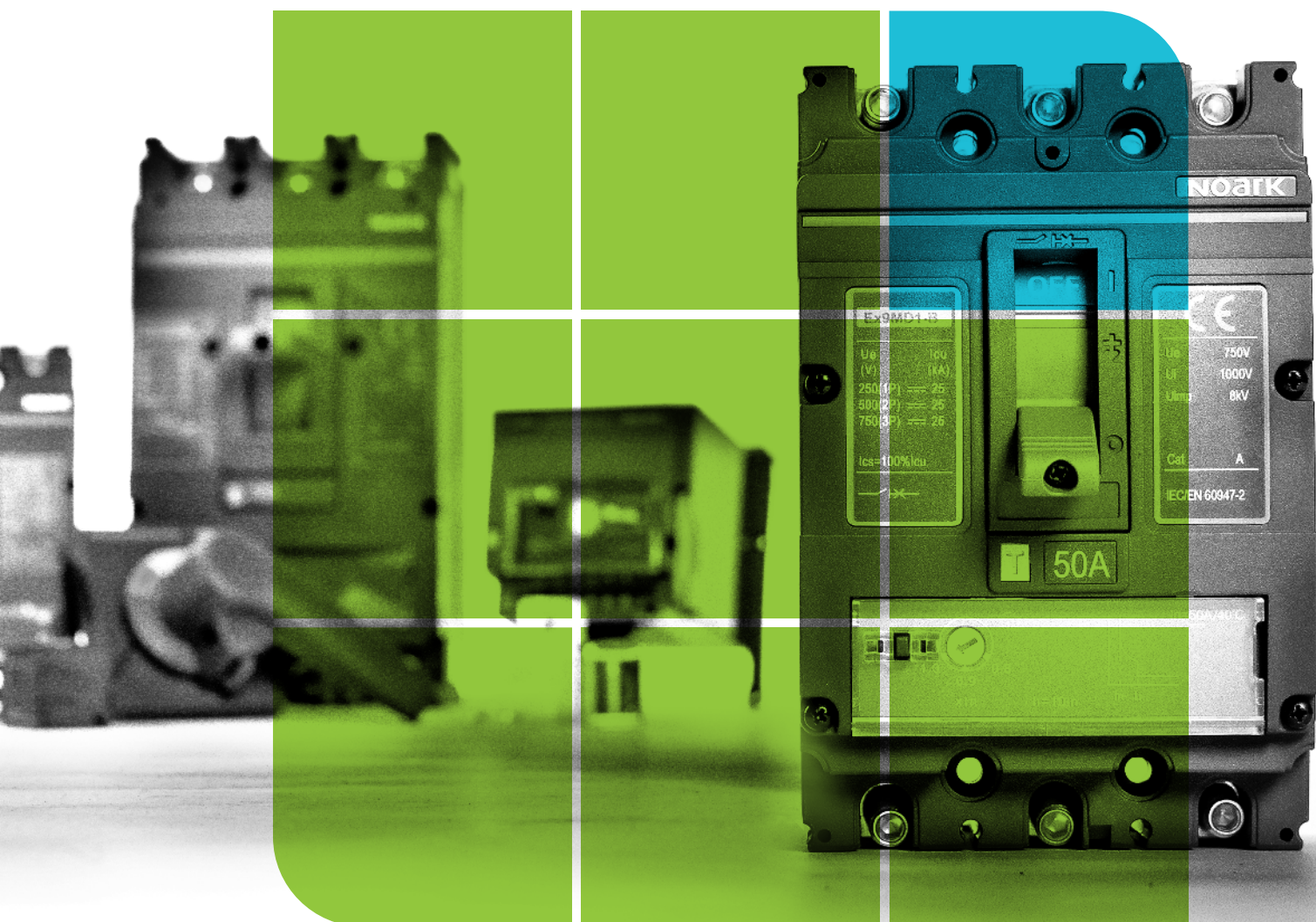


MOULDED CASE CIRCUIT BREAKERS

CATALOGUE
OF MOULDED CASE CIRCUIT
BREAKERS AND SWITCH DISCONNECTORS

VALID FROM 1ST MARCH 2022



www.noark-electric.eu

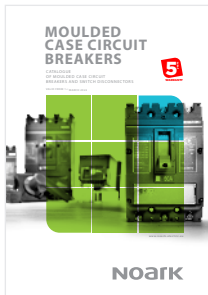
NOARK

Catalogues and assortment overview



INSTALLATION DEVICES

- Miniature Circuit Breakers
- Fuse Holders and Disconnectors
- Isolators, Residual Current Devices
- Energy Meters
- Motor Protective Circuit Breakers
- Surge Protection Devices and other Installation Devices



MOULDED CASE CIRCUIT BREAKERS

- Moulded Case Circuit Breakers
- Moulded Case Switch Disconnectors
- DC Moulded Case Circuit Breakers
- DC Moulded Case Switch Disconnectors
- Accessories



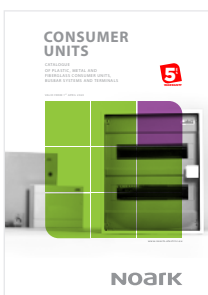
AIR CIRCUIT BREAKERS

- Digital Tripping Units
- Air Circuit Breakers
- Air Switch Disconnectors
- Accessories



INDUSTRIAL DEVICES

- Industrial Relays and Contactors
- Motor Protective Circuit Breakers
- Overload Thermal Relays
- Panel Mounted Devices
- Accessories



CONSUMER UNITS

- Plastic Consumer Units
- Consumer Units with Metal Doors
- Metal Flat Enclosures
- Fiberglass Consumer Units
- Interconnection Busbars
- Terminals and Distribution Blocks



PHOTOVOLTAIC COMPONENTS AND SOLUTIONS

- Miniature Circuit Breakers
- Fuse Disconnectors
- Isolators
- Surge Protection Devices
- Moulded Case Circuit Breakers and Switch Disconnectors
- EV chargers

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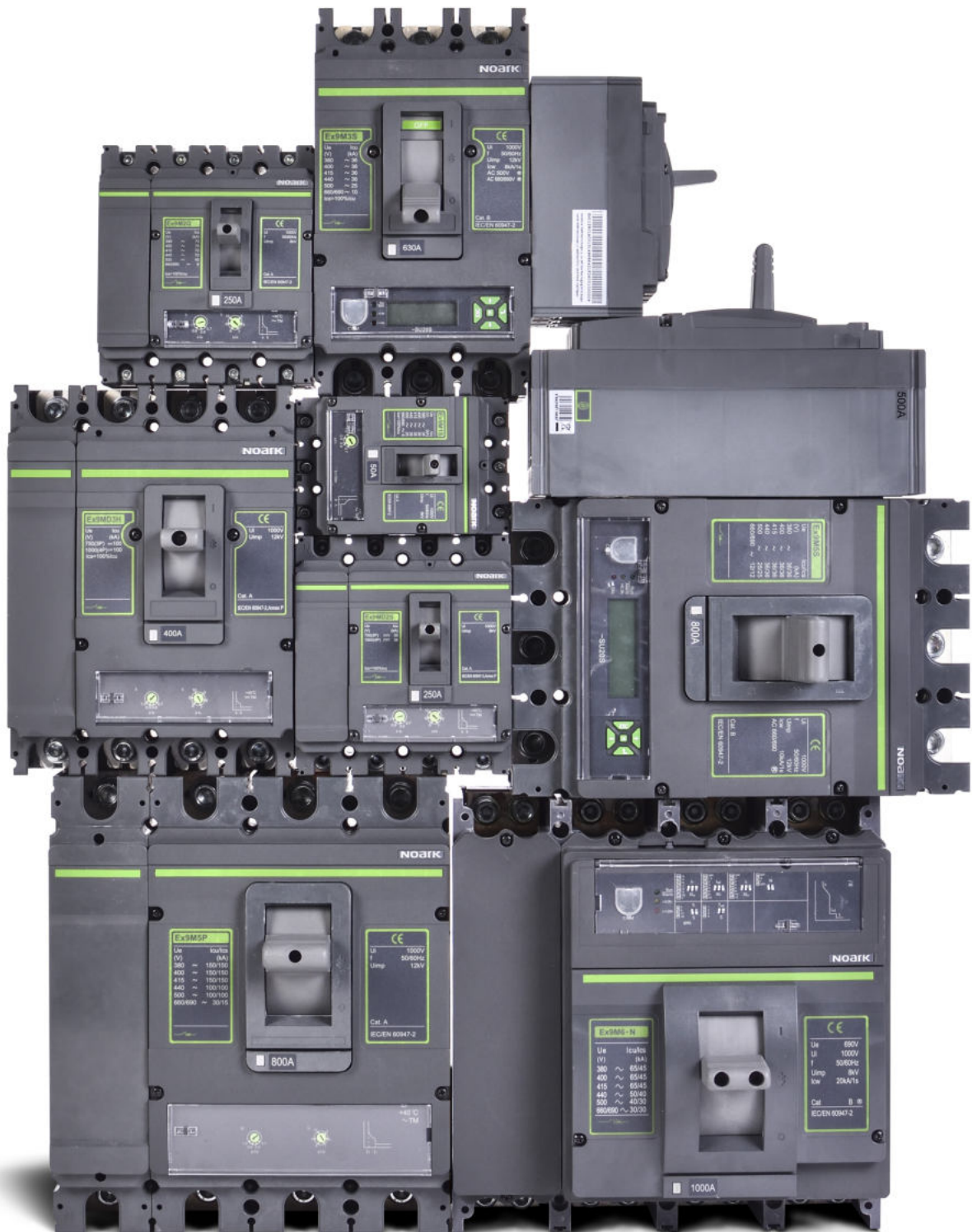
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frame size M3 up to 500 A	15
frame size M4 up to 630 A	17
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frame size M5 up to 800 A	34
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frame size M4 up to 630 A	161
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MOULDED CASE CIRCUIT BREAKERS



Moulded Case Circuit Breakers

Professional Tips



- | | |
|--|--|
| <ul style="list-style-type: none"> 1 5 years warranty 2 Rated current from 16 A up to 1600 A 3 Breaking capacity up 150 kA 4 3 and 4-pole versions available | <ul style="list-style-type: none"> 5 Six frame sizes M1 - M6 6 AC and DC MCCBs and Switch disconnectors 7 Wide range of accessories 8 Thermomagnetic release for size M1-M5 and electronic release for size M6 |
|--|--|

Moulded Case Circuit Breakers Ex9M AC TM



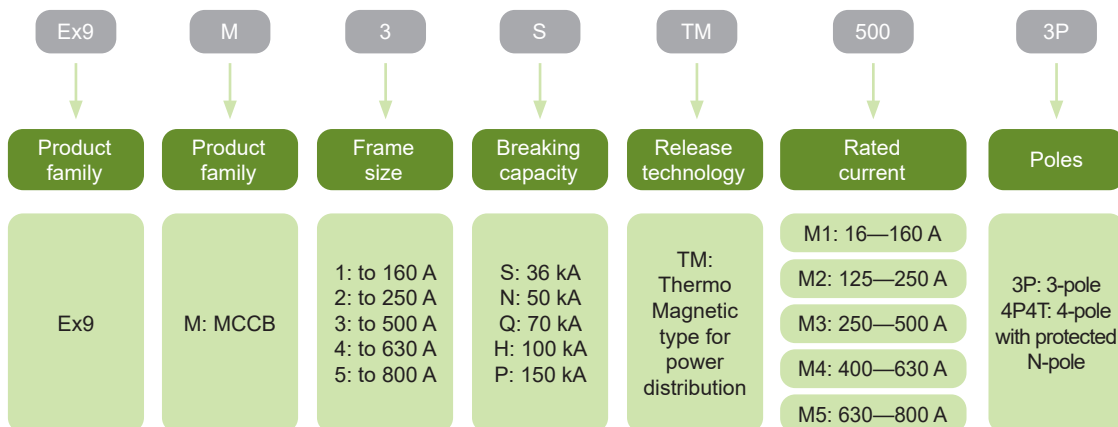
- Thermo-magnetic tripping unit for power distribution
- Frame sizes M1-M5
- Rated operating current up to 800 A
- 3 and 4-pole versions
- Rated ultimate short circuit breaking capacity $I_{cu} = I_{cs}$ up to 150 kA,
- Rated voltage 415 / 690 V AC

Moulded Case Circuit Breakers Ex9M 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

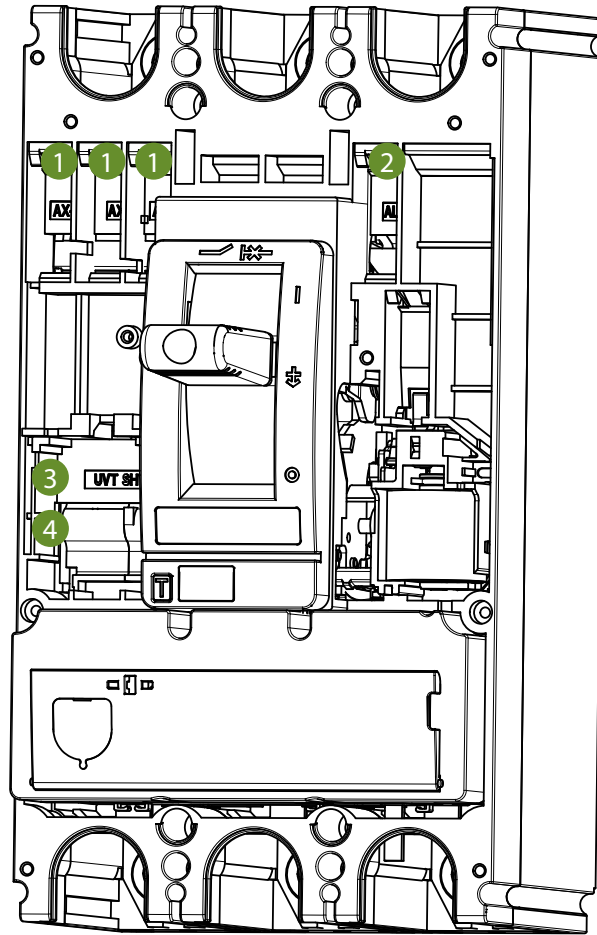


Certification marks



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

see page 92

Signal contact AL21/M

see page 92

Shunt trip releases SHT2i

see page 92

Undervoltage releases UVT2i

see page 93

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

Phase barriers PHS2i

see page 94

Terminal cover, short TCV2i

see page 95

Remote operators MOD2i

see page 93

Extended rotary handles ERH2i

see page 94

Terminal cover, long TCE2i

see page 96

Direct rotary handles RHD2i

see page 94

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



Plug-in base
PIA2i



Withdrawable base
DOB2i

Tunnel terminals MC2i W

see page 95

Mounting depth spacers WG i

see page 96

Box terminals MC2i

see page 95

Screw terminals MCS2i

see page 95

Din rail DRA2i

see page 96

Plug-in base PIA2i

see page 91

Withdrawable base DOB2i

Moulded Case Circuit Breakers Ex9M AC TM

Version Ex9M1S 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_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
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

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_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
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, $I_{cu} = 70$ 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 $(0.7 - 1.0) \times I_n$
- I_f 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_f	Article No.	Type	Packing
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

Version Ex9M1H up to 160 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 $(0.7 - 1.0) \times I_n$
- I_f 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_f	Article No.	Type	Packing
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

Technical data p. 105

Moulded Case Circuit Breakers Ex9M AC TM

Version Ex9M1P up to 160 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 $(0.7 - 1.0) \times I_n$
- 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
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, $I_{cu} = 36$ 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 $(0.7 - 1.0) \times I_n$
- 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
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

Version Ex9M2N up to 250 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 $(0.7 - 1.0) \times I_n$
- 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
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, $I_{cu} = 75$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75$ 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
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	800-1600 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, $I_{cu} = 100$ 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 $(0.7 - 1.0) \times I_n$
- 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
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, $I_{cu} = 150$ 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 $(0.7 - 1.0) \times I_n$
- 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
- $I_{M} = I_i$
- 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
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, $I_{cu} = 100$ 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 $(0.7 - 1.0) \times I_n$
- 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, $I_{cu} = 150$ 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 $(0.7 - 1.0) \times I_n$
- 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, $I_{cu} = 36$ 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 $(0.7 - 1.0) \times I_n$
- 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, $I_{cu} = 50$ 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 $(0.7 - 1.0) \times I_n$
- 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, $I_{cu} = 75$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75$ 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, $I_{cu} = 100$ 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 $(0.7 - 1.0) \times I_n$
- 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, $I_{cu} = 150$ 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 $(0.7 - 1.0) \times I_n$
- 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, $I_{cu} = 36$ 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 $(0.7 - 1.0) \times I_n$
- 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, $I_{cu} = 50$ 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 $(0.7 - 1.0) \times I_n$
- 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, $I_{cu} = 75$ kA

- 3 and 4-pole Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 75$ 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, $I_{cu} = 100$ 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 $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{th} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	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, $I_{cu} = 150$ 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 $(0.7 - 1.0) \times I_n$
- I_i can be set in range $(5 - 10) \times I_n$
- $I_{th} = I_i$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	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

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 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 overvoltage 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 110 V DC 220 V

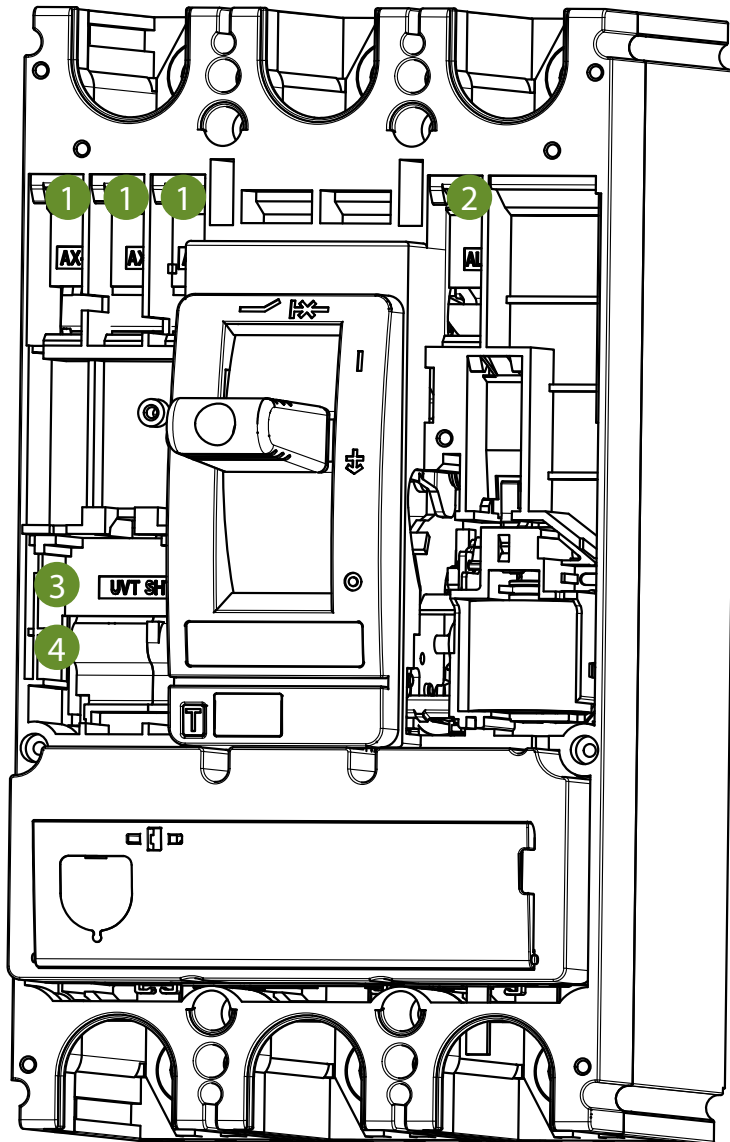
Certification marks



Moulded Case Circuit Breakers Ex9M SU20L

Internal accessories Ex9M2-M5 SU20L

AC MCCB's
SU20L (DIP Switches)



1

2

3

4

Auxiliary contact
AX21/M

Signal contact
AL21/M

Shunt trip release
SHT2i
1 unit or UVT2i

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21/M

see page 92

Signal contact AL21/M

see page 92

Shunt trip releases SHT2i

see page 92

Undervoltage releases UVT2i

see page 93

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

see page 94

Terminal cover, short TCV2i

see page 95

Remote operators MOD2i

see page 93

Extended rotary handles ERH2i

see page 94

Terminal cover, long TCE2i

see page 96

Direct rotary handles RHD2i

see page 94

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



Plug-in base
PIA2i



Withdrawable base
DOB2i

Tunnel terminals MC2i W

see page 95

Mounting depth spacers WG i

see page 96

Screw type terminals MC2i

see page 95

Screw terminals MCS2i

see page 95

Din rail DRA2i

see page 96

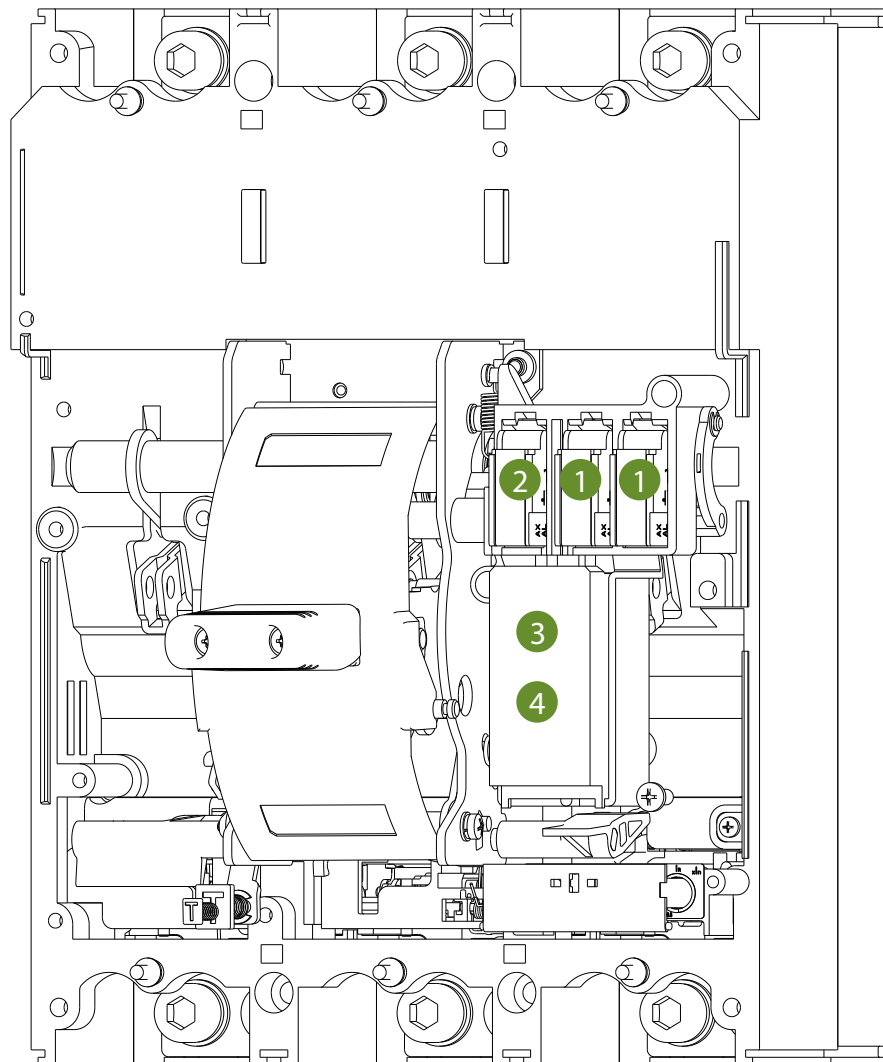
Plug-in base PIA2i

see page 94

Withdrawable base DOB2i

Moulded Case Circuit Breakers Ex9M SU20L

Internal accessories Ex9M6 SU20L



1

Auxiliary contact
AX21M

2

Signal contact
AL21M

3

Shunt trip release
SHT26
1 unit or UVT2*i*

4

Undervoltage release
UVT26
1 unit or SHT2*i*

Auxiliary contact AX21M

see page 92

Signal contact AL21M

see page 92

Shunt trip releases SHT26

see page 92

Undervoltage releases UVT26

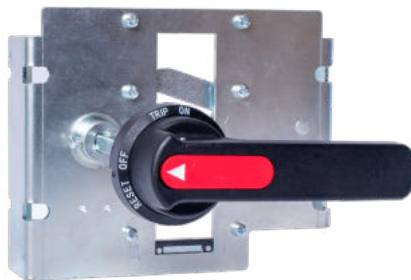
see page 93

Only M6 MOD allows UVT+SHT+XF

Moulded Case Circuit Breakers Ex9M SU20L

External accessories Ex9M6 SU20L

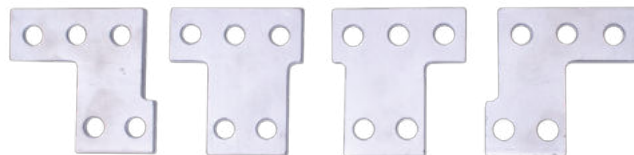
AC MCCB's
SU20L (DIP Switches)



Extended rotatory
handle
ERH26



Extended handle
LHD26



Front connection
plate
JP26

Extended rotary handles ERH26

Extended handles LHD26

Front connection plate JP26

see page 99

see page 99

see page 99

Moulded Case Circuit Breakers Ex9M SU20L

Version Ex9M2S up to 250 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, 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, $I_{cu} = 50$ 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, 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, $I_{cu} = 150$ 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 $(2 - 12) \times I_n$
- 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, $I_{cu} = 36$ 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	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, $I_{cu} = 50$ 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	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, $I_{cu} = 70$ 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	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, $I_{cu} = 100$ 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, 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, $I_{cu} = 150$ 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 $(2 - 12) \times I_n$
- 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—630 A	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, $I_{cu} = 100$ 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, 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, $I_{cu} = 150$ 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 $(2 - 12) \times I_n$
- 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 SU20L

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 SU20L

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 $(2 - 12) \times I_n$
- 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, $I_{cu} = 150$ 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 $(2 - 12) \times I_n$
- 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, $I_{cu} = 50$ 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	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, $I_{cu} = 50$ 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	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 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 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 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
3	1250 A	500—1250 A	2500—15000 A	110454	Ex9M6H SU20L 1250 3P MOD DC220	1/1
3	1600 A	640—1600 A	3200—19200 A	110455	Ex9M6H SU20L 1600 3P MOD DC220	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
4	1250 A	500—1250 A	2500—15000 A	110458	Ex9M6H SU20L 1250 4P MOD DC220	1/1
4	1600 A	640—1600 A	3200—19200 A	110459	Ex9M6H SU20L 1600 4P MOD DC220	1/1

Moulded Case Circuit Breakers Ex9M SU20S



- LCD display version
- SU20S Standard type smart unit controller
- Frame sizes M2-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
- High tripping accuracy, reliable operation, less sensibility to ambient temperature

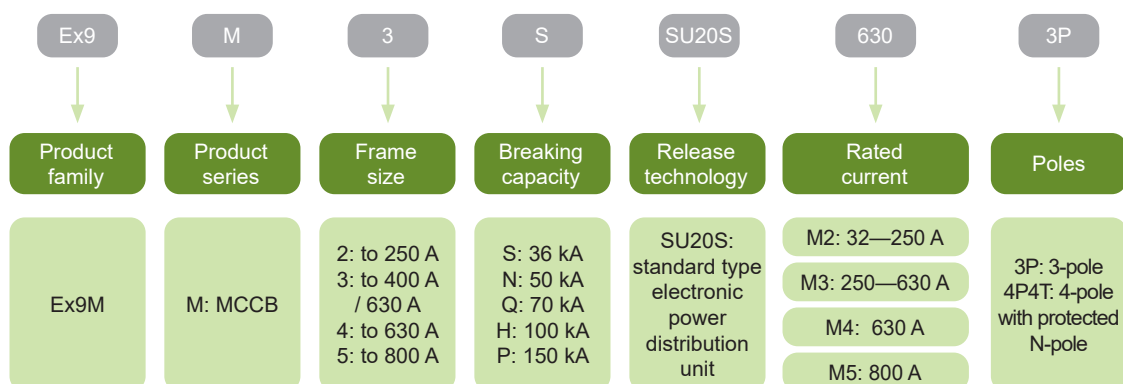
Moulded Case Circuit Breakers Ex9M with SU20S type of smart unit are intended for applications in power distribution mainly. Testing according to IEC / EN 60947-2 standards ensures the functionality and reliability for wide variety of applications including isolation.

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 overvoltage waves of high intensity, e.g. in heavy industry.

Utilization category A and B circuit breakers.

Type Key

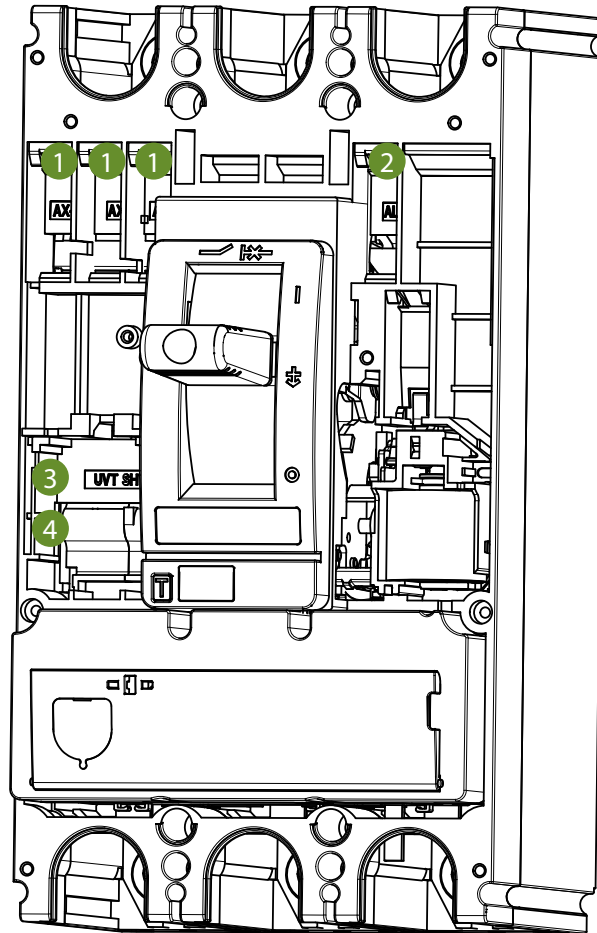


Certification marks



Moulded Case Circuit Breakers Ex9M SU20S

Internal accessories



1

Auxiliary contact
AX21M

2

Signal contact
AL21M

3

Shunt trip release
SHT2i
1 unit or UVT2i

4

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21M

see page 92

Signal contact AL21M

see page 92

Shunt trip releases SHT2i

see page 92

Undervoltage releases UVT2i

see page 93

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

see page 94

Terminal cover, short TCV2i

see page 95

Remote operators MOD2i

see page 93

Extended rotary handles ERH2i

see page 94

Terminal cover, long TCE2i

see page 96

Direct rotary handles RHD2i

see page 94

Moulded Case Circuit Breakers Ex9M SU20S

External accessories Ex9M2-M5 SU20S



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Screw type terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i



Plug-in base
PIA2i



Withdrawable base
DOB2i

Tunnel terminals MC2i W

see page 95

Mounting depth spacers WG i

see page 96

Screw type terminals MC2i

see page 95

Screw terminals MCS2i

see page 95

Din rail DRA2i

see page 96

Plug-in base PIA2i

Withdrawable base DOB2i

Moulded Case Circuit Breakers Ex9M SU20S

Version Ex9M2S up to 250 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 $(1.5 - 12) \times I_n$
- 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	32A	13-32 A	48-384 A	111277	Ex9M2S SU20S 32 3P	1/8
3	63A	25-63 A	95-756 A	111278	Ex9M2S SU20S 63 3P	1/8
3	100A	40-100 A	150-1200 A	111279	Ex9M2S SU20S 100 3P	1/8
3	160A	64-160 A	240-1920 A	111280	Ex9M2S SU20S 160 3P	1/8
3	250A	100-250 A	375-3000 A	111281	Ex9M2S SU20S 250 3P	1/8
4	32A	13-32 A	48-384 A	111282	Ex9M2S SU20S 32 4P4T	1/8
4	63A	25-63 A	95-756 A	111283	Ex9M2S SU20S 63 4P4T	1/8
4	100A	40-100 A	150-1200 A	111284	Ex9M2S SU20S 100 4P4T	1/8
4	160A	64-160 A	240-1920 A	111285	Ex9M2S SU20S 160 4P4T	1/8
4	250A	100-250 A	375-3000 A	111286	Ex9M2S SU20S 250 4P4T	1/8

Version Ex9M2N up to 250 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, 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	32A	13-32 A	48-384 A	111287	Ex9M2N SU20S 32 3P	1/8
3	63A	25-63 A	95-756 A	111288	Ex9M2N SU20S 63 3P	1/8
3	100A	40-100 A	150-1200 A	111289	Ex9M2N SU20S 100 3P	1/8
3	160A	64-160 A	240-1920 A	111290	Ex9M2N SU20S 160 3P	1/8
3	250A	100-250 A	375-3000 A	111291	Ex9M2N SU20S 250 3P	1/8
4	32A	13-32 A	48-384 A	111292	Ex9M2N SU20S 32 4P4T	1/8
4	63A	25-63 A	95-756 A	111293	Ex9M2N SU20S 63 4P4T	1/8
4	100A	40-100 A	150-1200 A	111294	Ex9M2N SU20S 100 4P4T	1/8
4	160A	64-160 A	240-1920 A	111295	Ex9M2N SU20S 160 4P4T	1/8
4	250A	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	32A	13-32 A	48-384 A	111297	Ex9M2Q SU20S 32 3P	1/8
3	63A	25-63 A	95-756 A	111298	Ex9M2Q SU20S 63 3P	1/8
3	100A	40-100 A	150-1200 A	111299	Ex9M2Q SU20S 100 3P	1/8
3	160A	64-160 A	240-1920 A	111300	Ex9M2Q SU20S 160 3P	1/8
3	250A	100-250 A	375-3000 A	111301	Ex9M2Q SU20S 250 3P	1/8
4	32A	13-32 A	48-384 A	111302	Ex9M2Q SU20S 32 4P4T	1/8
4	63A	25-63 A	95-756 A	111303	Ex9M2Q SU20S 63 4P4T	1/8
4	100A	40-100 A	150-1200 A	111304	Ex9M2Q SU20S 100 4P4T	1/8
4	160A	64-160 A	240-1920 A	111305	Ex9M2Q SU20S 160 4P4T	1/8
4	250A	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	32A	13-32 A	48-384 A	111307	Ex9M2H SU20S 32 3P	1/8
3	63A	25-63 A	95-756 A	111308	Ex9M2H SU20S 63 3P	1/8
3	100A	40-100 A	150-1200 A	111309	Ex9M2H SU20S 100 3P	1/8
3	160A	64-160 A	240-1920 A	111310	Ex9M2H SU20S 160 3P	1/8
3	250A	100-250 A	375-3000 A	111311	Ex9M2H SU20S 250 3P	1/8
4	32A	13-32 A	48-384 A	111312	Ex9M2H SU20S 32 4P4T	1/8
4	63A	25-63 A	95-756 A	111313	Ex9M2H SU20S 63 4P4T	1/8
4	100A	40-100 A	150-1200 A	111314	Ex9M2H SU20S 100 4P4T	1/8
4	160A	64-160 A	240-1920 A	111315	Ex9M2H SU20S 160 4P4T	1/8
4	250A	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, $I_{cu} = 150$ 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, 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	32A	13-32 A	48-384 A	111317	Ex9M2P SU20S 32 3P	1/8
3	63A	25-63 A	95-756 A	111318	Ex9M2P SU20S 63 3P	1/8
3	100A	40-100 A	150-1200 A	111319	Ex9M2P SU20S 100 3P	1/8
3	160A	64-160 A	240-1920 A	111320	Ex9M2P SU20S 160 3P	1/8
3	250A	100-250 A	375-3000 A	111321	Ex9M2P SU20S 250 3P	1/8
4	32A	13-32 A	48-384 A	111322	Ex9M2P SU20S 32 4P4T	1/8
4	63A	25-63 A	95-756 A	111323	Ex9M2P SU20S 63 4P4T	1/8
4	100A	40-100 A	150-1200 A	111324	Ex9M2P SU20S 100 4P4T	1/8
4	160A	64-160 A	240-1920 A	111325	Ex9M2P SU20S 160 4P4T	1/8
4	250A	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, $I_{cu} = 36$ 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 $(1.5 - 12) \times I_n$
- 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, $I_{cu} = 50$ 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	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, $I_{cu} = 70$ 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	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, $I_{cu} = 100$ 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	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, $I_{cu} = 150$ 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	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, $I_{cu} = 36$ 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 $(1.5 - 12) \times I_n$
- 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, $I_{cu} = 50$ 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	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, $I_{cu} = 70$ 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	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, $I_{cu} = 36$ 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 $(1.5 - 12) \times I_n$
- 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	800A	320-800A	1200-9600A	111367	Ex9M5S SU20S 800 3P	1/1
4	800A	320-800A	1200-9600A	111368	Ex9M5S SU20S 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 $(1.5 - 12) \times I_n$
- 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	800A	320-800A	1200-9600A	111369	Ex9M5N SU20S 800 3P	1/1
4	800A	320-800A	1200-9600A	111370	Ex9M5N SU20S 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 $(1.5 - 12) \times I_n$
- 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	800A	320-800A	1200-9600A	111371	Ex9M5Q SU20S 800 3P	1/1
4	800A	320-800A	1200-9600A	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	800A	320-800A	1200-9600A	111373	Ex9M5H SU20S 800 3P	1/1
4	800A	320-800A	1200-9600A	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	800A	320-800A	1200-9600A	111375	Ex9M5P SU20S 800 3P	1/1
4	800A	320-800A	1200-9600A	111376	Ex9M5P SU20S 800 4P4T	1/1

Notes

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AC MCCB Switch Disconnectors Ex9MSD

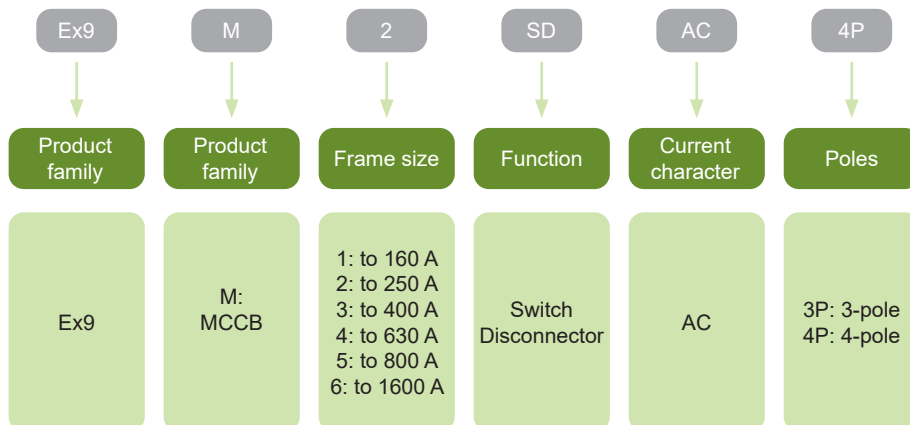


- AC MCCB Switch Disconnectors
- Frame sizes M1-M6
- Rated operating current up to 1 600 A
- Tested according to EN 60947-3
- AC current character
- 3 and 4-pole versions
- Rated operating voltage U_n up to 690 V AC

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

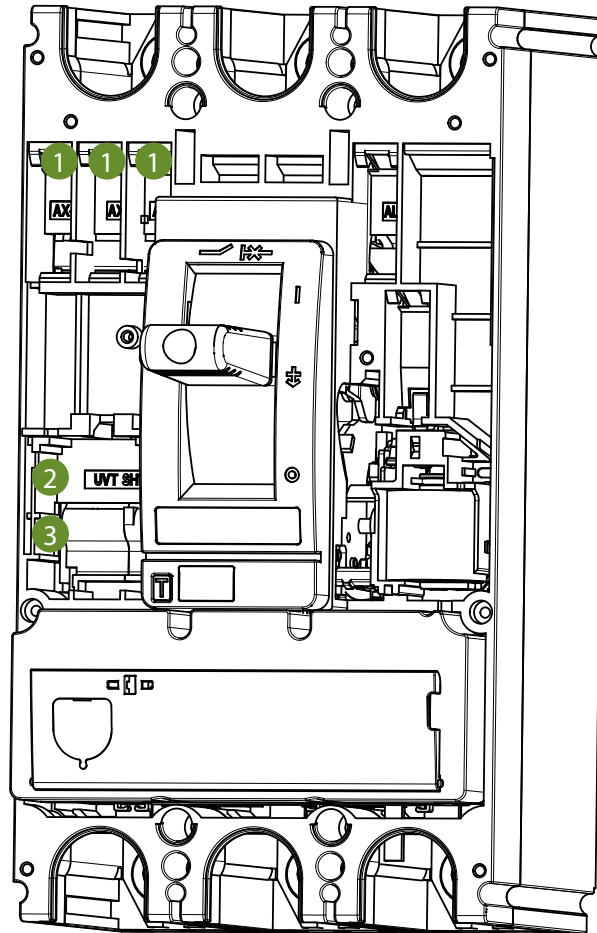


Certification marks



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 releases UVT2i

see page 92

see page 92

see page 93

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

see page 94

Terminal cover, short TCV2i

see page 95

Remote operators MOD2i

see page 93

Extended rotary handles ERH2i

see page 94

Terminal cover, long TCE2i

see page 96

Direct rotary handles RHD2i

see page 94

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

Tunnel terminals MC2i W

see page 95

Mounting depth spacers WG i

see page 96

Box terminals MC2i

see page 95

Screw terminals MCS2i

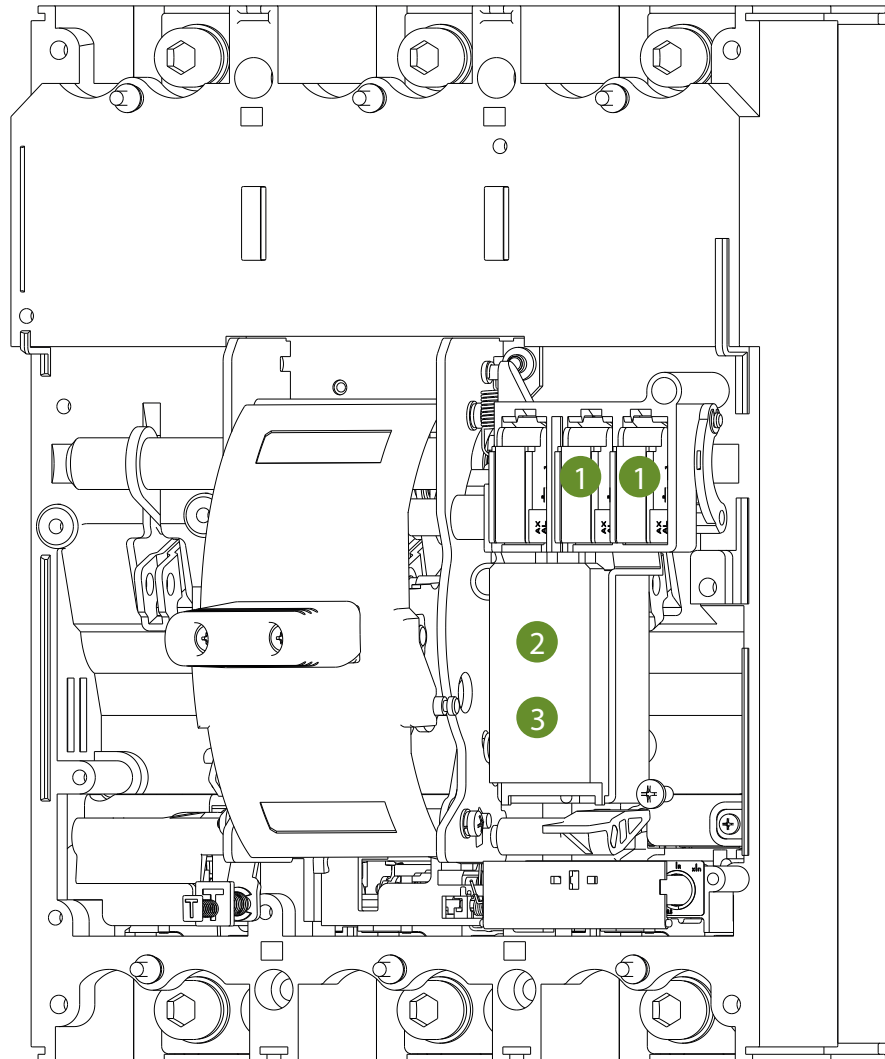
see page 95

Din rail DRA2i

see page 96

AC MCCB Switch Disconnectors Ex9M6SD

Internal accessories Ex9M6 AC SD



1

Auxiliary contact
AX21M

2

Shunt trip release
SHT26
1 unit or UVT2*i*

3

Undervoltage release
UVT26
1 unit or SHT2*i*

Auxiliary contact AX21M

Shunt trip releases SHT26

Undervoltage releases UVT26

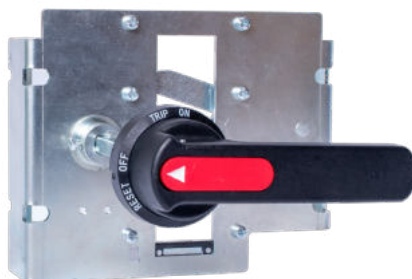
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see page 92

see page 93

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

see page 99

see page 99

see page 99

AC MCCB Switch Disconnectors Ex9MSD

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

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

Notes

A large grid of dashed lines for taking notes, consisting of 20 columns and 30 rows.

Moulded Case Circuit Breakers Ex9M DC TM



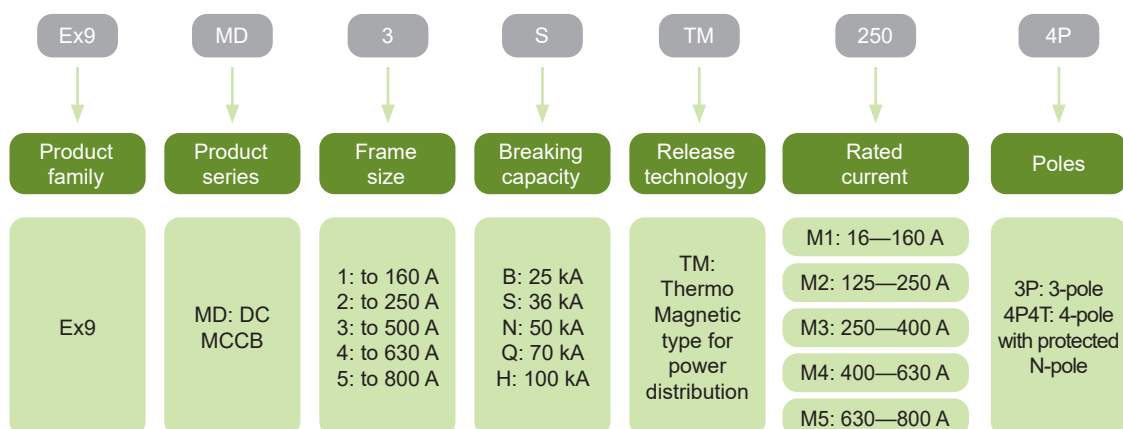
- Thermo-magnetic tripping unit for power distribution
- Frame sizes M1-M5
- Rated operating current up to 800 A
- 3 and 4-pole versions
- Rated ultimate short circuit breaking capacity $I_{cu} = I_{cs}$ up to 100 kA
- Rated voltage 750 V DC (3-pole) and 1000 V DC (4-pole)

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

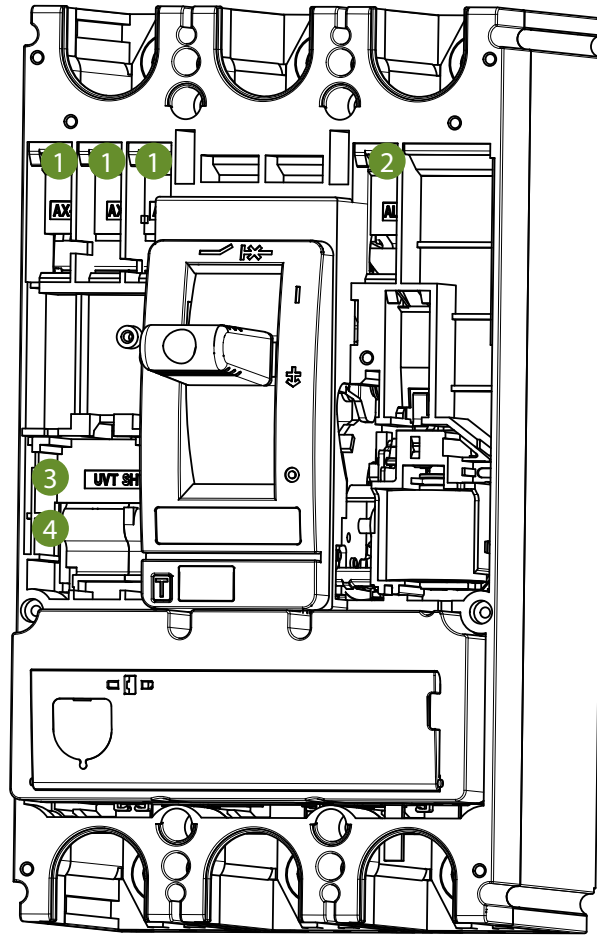


Certification marks



Moulded Case Circuit Breakers Ex9M DC TM

Internal accessories



1

Auxiliary contact
AX21M

2

Signal contact
AL21M

3

Shunt trip release
SHT2i
1 unit or UVT2i

4

Undervoltage release
UVT2i
1 unit or SHT2i

Auxiliary contact AX21M

see page 92

Signal contact AL21M

see page 92

Shunt trip releases SHT2i

see page 92

Undervoltage releases UVT2i

see page 93

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

Phase barriers PHS2i

see page 94

Terminal cover, short TCV2i

see page 96

Terminal cover, long TCE2i

see page 96

Remote operators MOD2i

see page 93

Direct rotary handles RHD2i

see page 94

Extended rotary handles ERH2i

see page 94

Moulded Case Circuit Breakers Ex9M DC TM

External accessories Ex9M1-M5 DC TM



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Screw type terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i



Plug-in base
PIA2i



Withdrawable base
DOB2i

Tunnel terminals MC2i W

see page 95

Mounting depth spacers WG i

see page 96

Screw type terminals MC2i

see page 95

Screw terminals MCS2i

see page 95

Din rail DRA2i

see page 96

Plug-in base PIA2i

Withdrawable base DOB2i

Moulded Case Circuit Breakers Ex9M DC TM

Version Ex9MD1B up to 160 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 $(5 - 10) \times I_n$ 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
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

Version Ex9MD1S up to 160 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 $(5 - 10) \times I_n$ 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
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, $I_{cu} = 50$ 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 $(5 - 10) \times I_n$ 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
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

Version Ex9MD1Q up to 160 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 $(5 - 10) \times I_n$ 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
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, $I_{cu} = 100$ 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 $(5 - 10) \times I_n$ 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
3	16A	11-16 A	160 A	112599	Ex9MD1Q TM 16 3P	1/12
3	20A	14-20 A	200 A	112600	Ex9MD1Q TM 20 3P	1/12
3	25A	17-25 A	250 A	112601	Ex9MD1Q TM 25 3P	1/12
3	32A	22-32 A	320 A	112602	Ex9MD1Q TM 32 3P	1/12
3	40A	28-40 A	400 A	112603	Ex9MD1Q TM 40 3P	1/12
3	50A	35-50 A	500 A	112604	Ex9MD1Q TM 50 3P	1/12
3	63A	44-63 A	630 A	112605	Ex9MD1Q TM 63 3P	1/12
3	80A	56-80 A	800 A	112606	Ex9MD1Q TM 80 3P	1/12
3	100A	70-100 A	1000 A	112607	Ex9MD1Q TM 100 3P	1/12
3	125A	87-125 A	625-1250 A	112608	Ex9MD1Q TM 125 3P	1/12
3	160A	112-160 A	800-1600 A	112609	Ex9MD1Q TM 160 3P	1/12
4	16A	11-16 A	160 A	112610	Ex9MD1Q TM 16 4P4T	1/12
4	20A	14-20 A	200 A	112611	Ex9MD1Q TM 20 4P4T	1/12
4	25A	17-25 A	250 A	112612	Ex9MD1Q TM 25 4P4T	1/12
4	32A	22-32 A	320 A	112613	Ex9MD1Q TM 32 4P4T	1/12
4	40A	28-40 A	400 A	112614	Ex9MD1Q TM 40 4P4T	1/12
4	50A	35-50 A	500 A	112615	Ex9MD1Q TM 50 4P4T	1/12
4	63A	44-63 A	630 A	112616	Ex9MD1Q TM 63 4P4T	1/12
4	80A	56-80 A	800 A	112617	Ex9MD1Q TM 80 4P4T	1/12
4	100A	70-100 A	1000 A	112618	Ex9MD1Q TM 100 4P4T	1/12
4	125A	87-125 A	625-1250 A	112619	Ex9MD1Q TM 125 4P4T	1/12
4	160A	112-160 A	800-1600 A	112620	Ex9MD1Q TM 160 4P4T	1/12

Moulded Case Circuit Breakers Ex9M DC TM

Version Ex9MD2B up to 250 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 $(7 - 12) \times I_n$ 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
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

Version Ex9MD2S up to 250 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 $(7 - 12) \times I_n$ 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
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, $I_{cu} = 50$ 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 $(7 - 12) \times I_n$ 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
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

Version Ex9MD2Q up to 250 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 $(7 - 12) \times I_n$ 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
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, $I_{cu} = 100 \text{ kA}$

- 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
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, $I_{cu} = 25$ 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	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, $I_{cu} = 35$ kA

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 35$ 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, $I_{cu} = 50$ 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	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, $I_{cu} = 70$ 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_f 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_f	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112739	Ex9MD4Q TM 400 3P	1/1
3	500 A	350-500 A	2500-5000 A	112740	Ex9MD4Q TM 500 3P	1/1
3	630 A	441-630 A	3150-6300 A	112741	Ex9MD4Q TM 630 3P	1/1
4	400 A	280-400 A	2000-4000 A	112742	Ex9MD4Q TM 400 4P4T	1/1
4	500 A	350-500 A	2500-5000 A	112743	Ex9MD4Q TM 500 4P4T	1/1
4	630 A	441-630 A	3150-6300 A	112744	Ex9MD4Q TM 630 4P4T	1/1

Version Ex9MD4H up to 630 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_f 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_f	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

DC MCCBs Ex9MV2S-PV



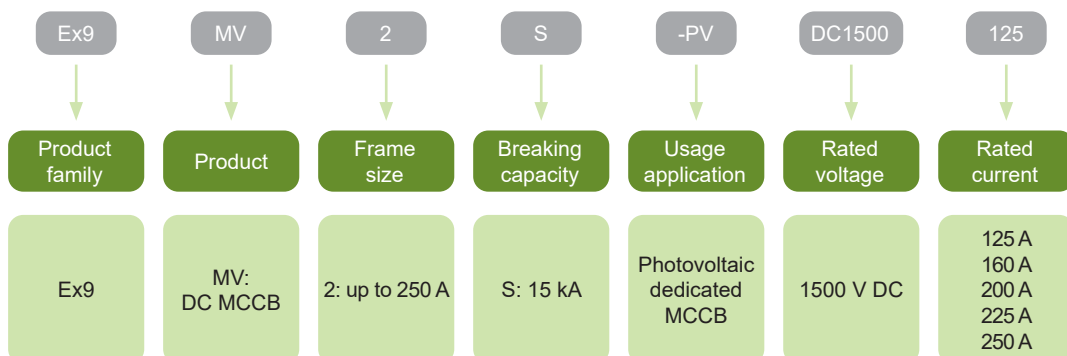
- DC Moulded Case Circuit Breakers suitable for photovoltaic applications
- Frame size M2
- Rated current up to 250 A
- Rated ultimate short circuit breaking capacity $I_{cu} = 15 \text{ kA}$, $I_{cs} = 100 \% I_{cu}$
- Rated voltage 1500 V DC
- Thermomagnetic releases
- Fixed version

DC Moulded Case Circuit Breakers Ex9MV2S-PV are intended mainly for photovoltaic applications. Testing according to IEC / EN 60947-2 standards ensures functions and reliability for wide variety of applications including isolation.

These breakers are offered with breaking capacity of 15 kA. Rated impulse withstand voltage U_{imp} 12 kV makes it possible to use them even in systems with occurrences of transient overvoltage waves of high intensity.

Utilization category A.

Type Key



Certification marks



DC MCCBs Ex9MV2S-PV

Version Ex9MV2S-PV/DC1500, $I_{cu} = 15 \text{ kA}$

- DC Moulded Case Circuit Breakers suitable for photovoltaic
- $I_{cs} = I_{cu} = 15 \text{ kA}$ at 1500 V DC
- Fixed version
- Instantaneous release $I_i = I_n \times 10$
- Mounting screws and phase barriers in the scope of delivery



Rated current I_n	Article No.	Type	Packing
125 A	110194	Ex9MV2S-PV/DC1500 125	1/8
160 A	110195	Ex9MV2S-PV/DC1500 160	1/8
200 A	110196	Ex9MV2S-PV/DC1500 200	1/8
225 A	110197	Ex9MV2S-PV/DC1500 225	1/8
250 A	110198	Ex9MV2S-PV/DC1500 250	1/8

DC MCCB Switch Disconnectors Ex9MSD

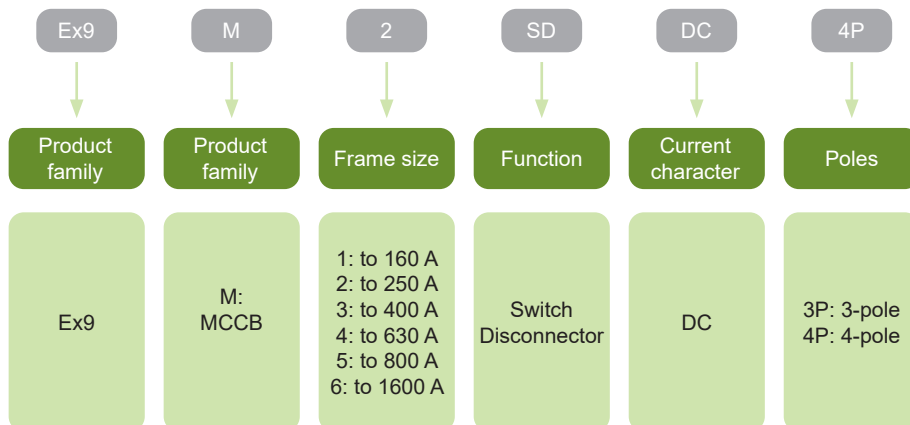


- DC MCCB Switch Disconnectors
- Frame sizes M1-M6
- Rated operating current up to 1600 A
- Tested according to EN 60947-3
- DC current character
- 3 and 4-pole versions
- M1 to M5 Rated voltage 750 V DC (3-pole) and 1000 V DC (4-pole)
- M6 rated voltage up to 1500 V DC (4-pole)

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.

Type Key

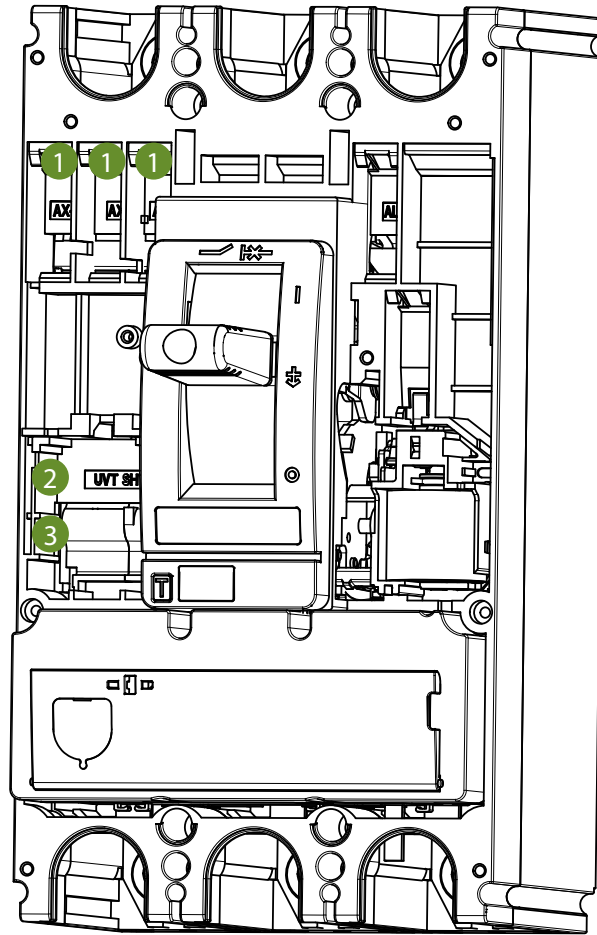


Certification marks



DC MCCB Switch Disconnectors Ex9MSD

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

see page 92

Shunt trip releases SHT2i

see page 92

Undervoltage releases UVT2i

see page 93

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

see page 94

Terminal cover, short TCV2i

see page 96

Remote operators MOD2i

see page 93

Extended rotary handles ERH2i

see page 94

Terminal cover, long TCE2i

see page 96

Direct rotary handles RHD2i

see page 94

DC MCCB Switch Disconnectors Ex9MSD

External accessories Ex9M1-M5 DC SD



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Screw type terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i

Tunnel terminals MC2i W

see page 95

Mounting depth spacers WG i

see page 96

Screw type terminals MC2i

see page 95

Screw terminals MCS2i

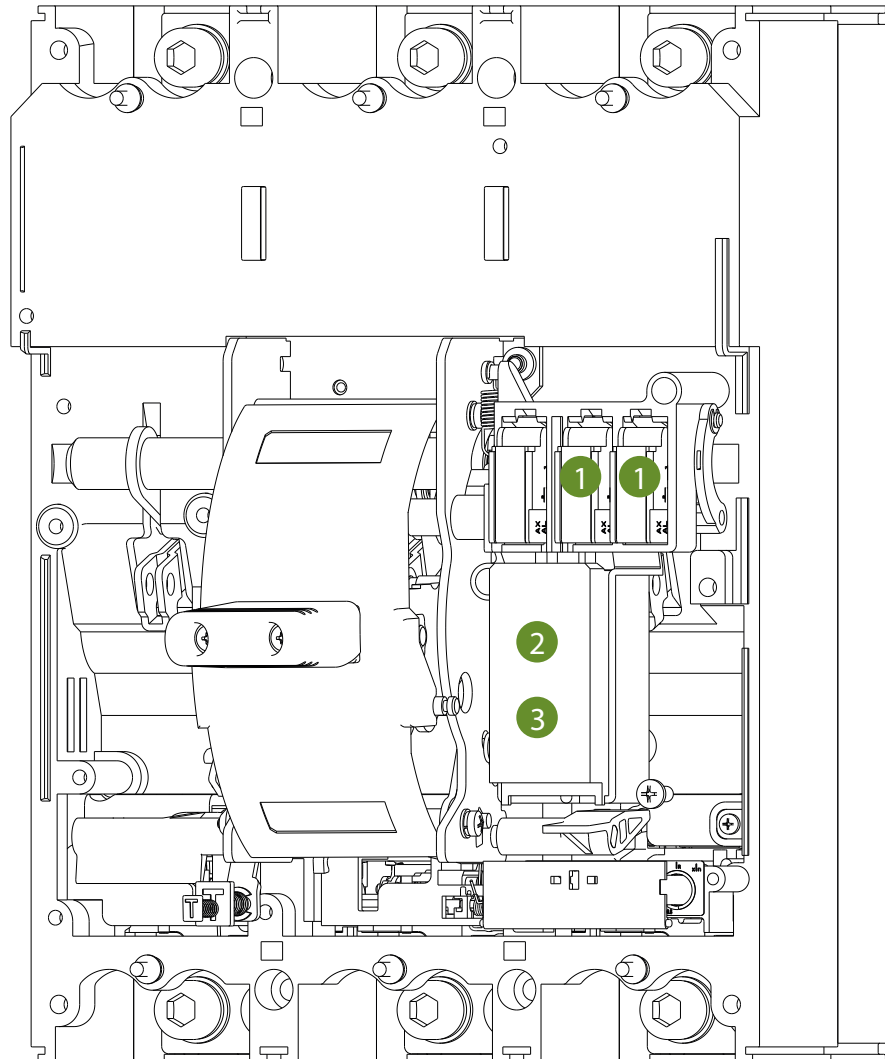
see page 95

Din rail DRA2i

see page 96

DC MCCB Switch Disconnectors Ex9M6SD

Internal accessories Ex9M6 DC SD



1

Auxiliary contact
AX21M

2

Shunt trip release
SHT26
1 unit or UVT2*i*

3

Undervoltage release
UVT26
1 unit or SHT2*i*

Auxiliary contact AX21M

see page 98

Shunt trip releases SHT26

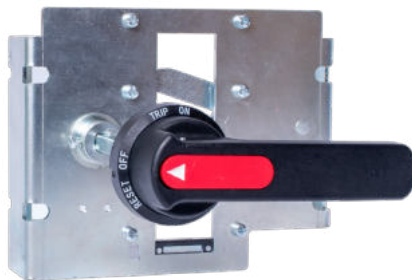
see page 98

Undervoltage releases UVT26

see page 98

DC MCCB Switch Disconnectors Ex9M6SD

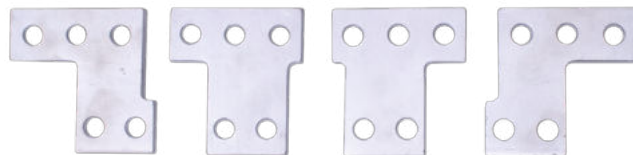
External accessories Ex9M6 DC SD



Extended rotatory handle
ERH26



Extended handle
LHD26



Front connection plate
JP26

Extended rotary handles ERH26

see page 99

Extended handles LHD26

see page 99

Front connection plate JP26

see page 99

DC MCCB Switch Disconnectors Ex9MSD

3-pole versions

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



Rated current i_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 i_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

Notes

A large grid of dashed lines for taking notes, consisting of 20 columns and 30 rows.

Accessories for MCCBs 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 MCCBs 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*



Aux. cont.	Frame size	Operating Voltage	Article No.	Type	Packing
-	M1	48V AC	101397	SHT21 AC48V	1/24
-	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	48V DC	101402	SHT21 DC48V	1/24
-	M1	110-120V DC	101403	SHT21 DC110V	1/24
-	M1	220V DC	101405	SHT21 DC220V	1/24
-	M2, M3	48V AC	101416	SHT22 AC48V	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	48V DC	101421	SHT22 DC48V	1/24
-	M2, M3	110-120V DC	101422	SHT22 DC110V	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
-	M4, M5	48V DC	103730	SHT24 DC48V	1/12
-	M4, M5	110-120V DC	103727	SHT24 DC110V	1/12
-	M4, M5	220V DC	103728	SHT24 DC220V	1/12

Accessories for MCCBs Ex9M

Undervoltage releases

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



Aux. cont.	Frame size	Operating Voltage	Article No.	Type	Packing
-	M1	220-240V AC	101406	UVT21 220-240V AC	1/24
-	M1	380-415V AC	101407	UVT21 380-415V AC	1/24
-	M1	380-415V AC	101407	UVT21 24V DC	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
-	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	110-120V DC	103736	UVT24 DC110-120V	1/12
-	M4, M5	220V DC	103737	UVT24 DC220V	1/12
-	M4, M5	24V DC	103738	UVT24 DC24V	1/12
-	M4, M5	48V DC	103739	UVT24 DC48V	1/12

Remote operators

- Motor drives for electrical and remote control of MCCBs
- Available for all frame sizes



Frame size	Operating Voltage	Article No.	Type	Packing
M1	230 V AC	101411	MOD21 AC230V	1/8
M1	110 V AC	101412	MOD21 AC110V	1/8
M1	220 V DC	101413	MOD21 DC220V	1/8
M1	110 V DC	101414	MOD21 DC110V	1/8
M1	24 V DC	101415	MOD21 DC24V	1/8
M2	230 V AC	101430	MOD22 AC230V	1/8
M2	110 V AC	101431	MOD22 AC110V	1/8
M2	220 V DC	101432	MOD22 DC220V	1/8
M2	110 V DC	101433	MOD22 DC110V	1/8
M2	24 V DC	101434	MOD22 DC24V	1/8
M3	230 V AC	101484	MOD23 AC230V	1/4
M3	110 V AC	101485	MOD23 AC110V	1/4
M3	220 V DC	101486	MOD23 DC220V	1/4
M3	110 V DC	101487	MOD23 DC110V	1/4
M3	24 V DC	101488	MOD23 DC24V	1/4
M4, M5	230 V AC	103743	MOD24 AC230V	1/2
M4, M5	110 V AC	103744	MOD24 AC110V	1/2
M4, M5	220 V DC	103745	MOD24 DC220V	1/2
M4, M5	110 V DC	103746	MOD24 DC110V	1/2
M4, M5	24 V DC	103747	MOD24 DC24V	1/2

Accessories for MCCBs Ex9M

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	RHD21	1/36
M2	Grey	101429	RHD22	1/18
M3	Grey	101483	RHD23	1/9
M4, M5	Grey	103742	RHD24	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	ERH21	1/6
M2	300 mm	Grey	101428	ERH22	1/6
M3	300 mm	Grey	101482	ERH23	1/6
M4, M5	300 mm	Grey	103741	ERH24	1/4
All (only the shaft)	500 mm	-	110189	ERH2x ES 500mm	1/50

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	3P	101441	PB21 3P	1 set
M2	3P	101444	PB22 3P	1 set
M3	3P	101491	PB23 3P	1 set
M4, M5	3P	103751	PB24 3P	1 set
M1	4P	104852	PB21 4P	1 set
M2	4P	104853	PB22 4P	1 set
M3	4P	104854	PB23 4P	1 set
M4, M5	4P	104856	PB24 4P	1 set

Accessories for MCCBs Ex9M

Connection terminals

- 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

Box terminals



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

Tunnel terminals



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

Screw terminals



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

Terminal covers, short

- Terminal covers to increase touch protection of terminals



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

Accessories for MCCBs Ex9M

Terminal covers, long

- Terminal covers to increase touch protection of terminals



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

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	3P, 4P	106319	DRA21	1
M2	3P, 4P	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

Mounting sets for MF line of sheet steel enclosures

- There are available tailored mounting panels and front plates for MCCBs and Disconnectors of size M1 and M2 as accessories of metal enclosures of line MF.
- Mounting plates are drilled with threads for easy mounting of MCCBs
- Front plates with particular device cut out for M1 and M2 devices (3P and 4P, vertical or horizontal position)
- For more details, please see catalogue "CONSUMER UNITS"

Accessories for electronic MCCBs Ex9M6



- Accessories for Ex9M6 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
- Rotary handle
- Extended handle
- Connection terminals

Accessories suitable for Moulded Case Circuit Breakers Ex9M6. It is possible to supplement or modify functions of a basic circuit breaker by the installation of suitable accessories.

Circuit breakers can be equipped with two auxiliary contacts AX21 and one unit of signal contact AL21. The device can be controlled by the shunt trip release SHT and the undervoltage release UVT. The closing release XF is only suitable for the MOD version.

The circuit breakers can also be equipped with an extended handle for easier operation of the toggle and an extended rotatory handle for different applications e.g. for door coupling.

Mounting of the device onto plate can be done directly.

Accessories for electronic MCCBs Ex9M6

Auxiliary and signal contact units

- Auxiliary contacts synchronous with main contacts of the circuit breaker
- Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)



Function	Suitable MCCB	Contacts	Article No.	Type	Packing
Auxiliary	all	1 CO	112071	AX21M	1/24
Signal	all (except SD)	1 CO	112072	AL21M	1/24

Shunt trip releases

- It is possible to use one unit of shunt trip release SHT26



Suitable MCCB	Operating Voltage	Article No.	Type	Packing
all M6 size	24V DC	110460	SHT26 DC24V	1/3
all M6 size	48V DC	110461	SHT26 DC48V	1/3
all M6 size	110V DC	110462	SHT26 DC110V	1/3
all M6 size	220V DC	110463	SHT26 DC220V	1/3
all M6 size	48V AC	110464	SHT26 AC48V	1/3
all M6 size	110V AC	110465	SHT26 AC110V	1/3
all M6 size	220 - 240V AC	110466	SHT26 AC220-240V	1/3
all M6 size	380 - 415V AC	110467	SHT26 AC380-415V	1/3

Undervoltage releases

- It is possible to use one unit of undervoltage release UVT26



Suitable MCCB	Operating Voltage	Article No.	Type	Packing
all M6 size	220 - 240 V AC	110468	UVT26 AC220-240V	1/3
all M6 size	380 - 415 V AC	110469	UVT26 AC380-415V	1/3

Accessories for electronic MCCBs Ex9M6

Extended rotary handle

- Rotary handle with extension shaft
- Scope of delivery: mechanism block, extension shaft, rotary handle
- Indication of connected breaker status ON-OFF-TRIP
- Can be locked in ON and OFF position



Suitable MCCB	Shaft length	Handle colour	Article No.	Type	Packing
Ex9M6/SD	150 mm	Black	110718	ERH26	1/2

Extended handle

- For easier operation of the toggle



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

Front connection plate

- Front connection plate for frame size M6
- Set is for connection from one side



Suitable MCCB	Poles	Rated current	Article No.	Type	Packing
all M6 size	3P	800-1250	110694	JP26 3P 800-1250	1 set
all M6 size	3P	1600	110695	JP26 3P 1600	1 set
all M6 size	4P	800-1250	110696	JP26 4P 800-1250	1 set
all M6 size	4P	1600	110697	JP26 4P 1600	1 set

Accessories for MCCBs Ex9MV2S



- Accessories for Ex9MV2S line devices
- Auxiliary contacts synchronous with main contacts
- Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)
- Shunt trip releases
- Rotary handles

Accessories suitable for PV Moulded Case Circuit Breakers Ex9MV2S. It is possible to supplement or modify functions of a basic circuit breaker by the installation of suitable accessories.

Circuit breakers can be equipped with auxiliary contacts AX22V (or 2AX22V) and one unit of signal contact AL22 or a combination of both AX+AL22V. Accessories are mounted into specific positions, for this reason parts mounted on the right side are named with a -R in the product name (2AX22VR). One unit of shunt trip release SHT22VR can be installed in the breaker.

The circuit breakers can also be equipped with an extended rotatory handle for different operation of the toggle, e.g. for door coupling.

Mounting of the device onto plate can be done directly.

Accessories for MCCBs Ex9MV2S

Auxiliary and signal contact units

- Auxiliary contacts synchronous with main contacts of the circuit breaker
- Signal contacts active on electrical tripping of the circuit breaker (tripping signal contacts)



Function	Suitable MCCB	Contacts	Article No.	Type	Packing
Auxiliary	Ex9MV2S	1 CO	110199	AX22V	1/8
Auxiliary	Ex9MV2S	2 CO	110200	2AX22V	1/8
Signal	Ex9MV2S	1 CO	110201	AL22V	1/8
Auxiliary + Signal	Ex9MV2S	2 CO	110202	AX+AL22V	1/8
Auxiliary	Ex9MV2S	1 CO	110206	AX22VR	1/8
Auxiliary	Ex9MV2S	2 CO	110207	2AX22VR	1/8

Shunt trip releases

- It is possible to use one unit of shunt trip release SHT22VR on the right side of the MCCB



Aux. cont.	Suitable MCCB	Operating Voltage	Article No.	Type	Packing
-	Ex9MV2S	24V DC	110208	SHT22VR DC24V	1/8
-	Ex9MV2S	230V AC	110209	SHT22VR AC230V	1/8
-	Ex9MV2S	400V AC	110210	SHT22VR AC400V	1/8

Extended rotary handles

- Rotary handle with extension shaft (extension shaft can be shortened)
- Scope of delivery: mechanism block, extension shaft, rotary handle
- Indication of connected breaker status ON-OFF-TRIP
- Can be locked in ON and OFF position

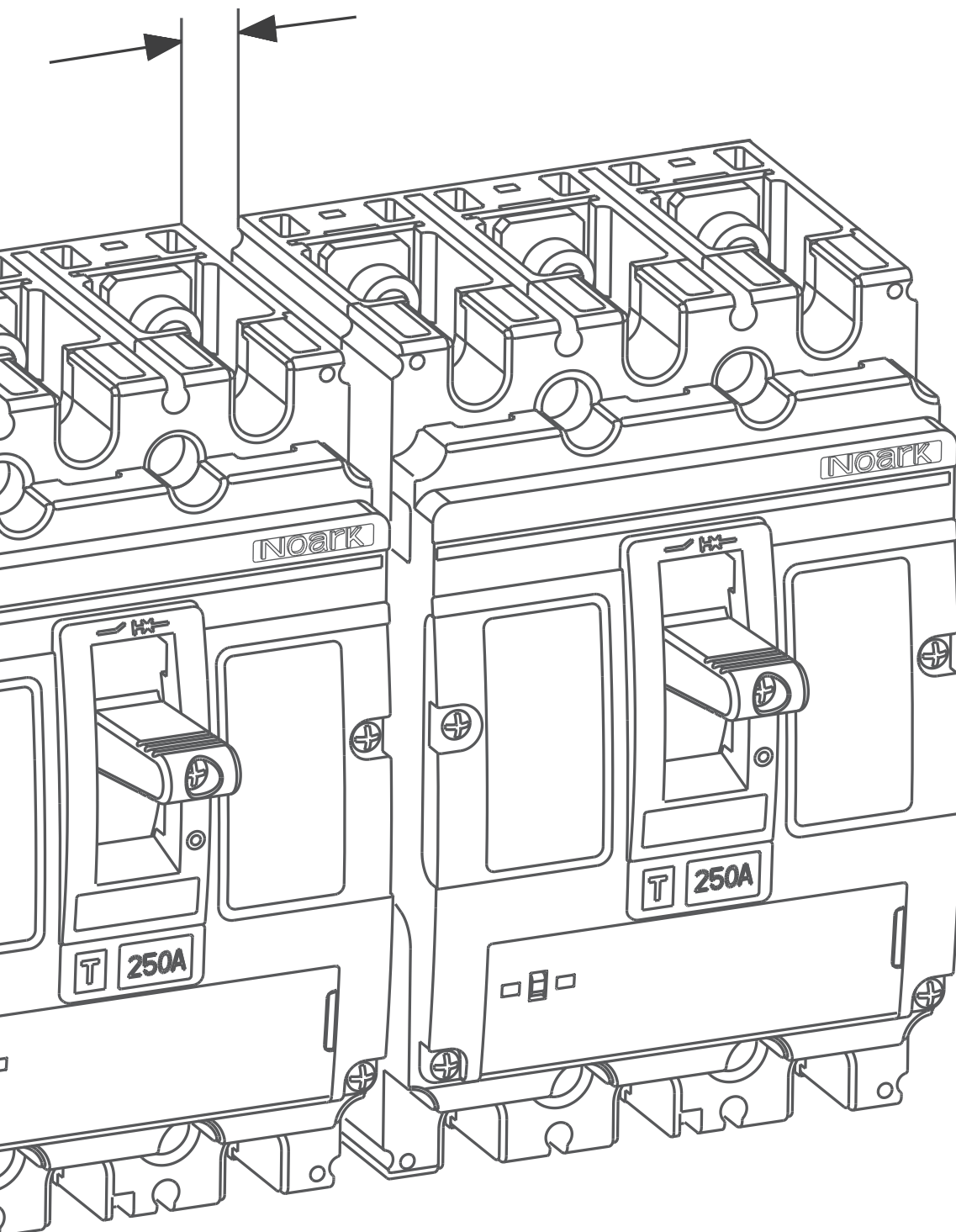


Suitable MCCB	Length	Colour	Article No.	Type	Packing
Ex9MV2S	300 mm	Black	110211	ERH-1	1

Notes

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Technical Data



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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 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 $10 \times I_n$

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 — 101415
Terminal cover, short	TCV21 3P, 4P	101439, 102372
Terminal cover, long	TCE21 3P, 4P	101440, 102373
Phase barrier	PHS21	112110
Connection terminals	MC21	103705 — 103708
DIN-rail adapter	DRA21	106319
Plug-in base	PIA 21	112875, 112876, 112881, 112882

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
Ex9ML1	1	1	0.9	0.9	0.8	0.82
PIA 21	1	1	1	1	0.95	0.95

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

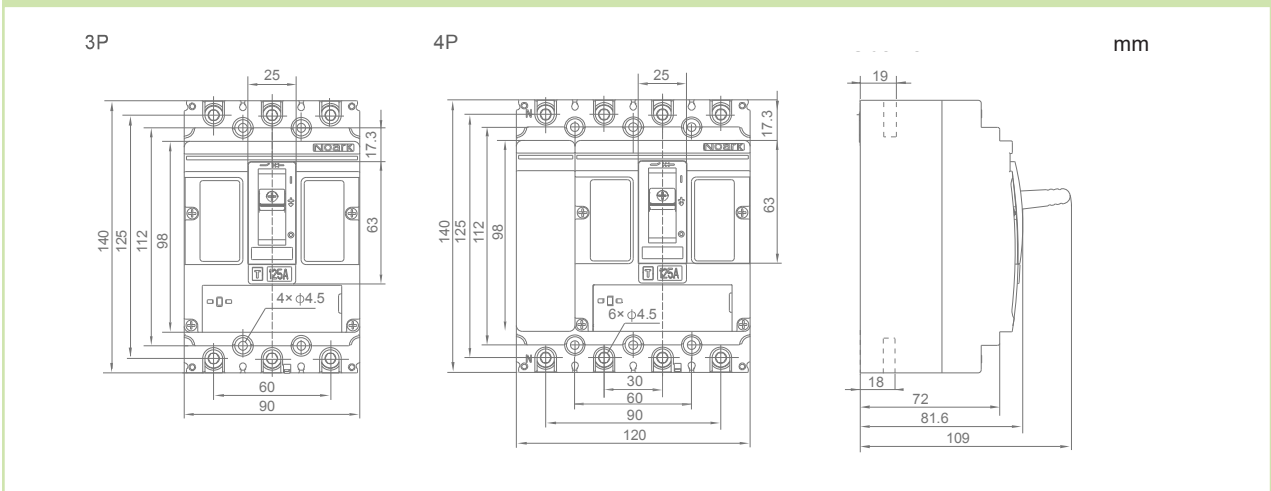
Mechanical parameters

Device width 3P / 4P	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 3P / 4P	1.2 kg / 1.7 kg
Mounting position	vertical, can be rotated by 90° in each axis

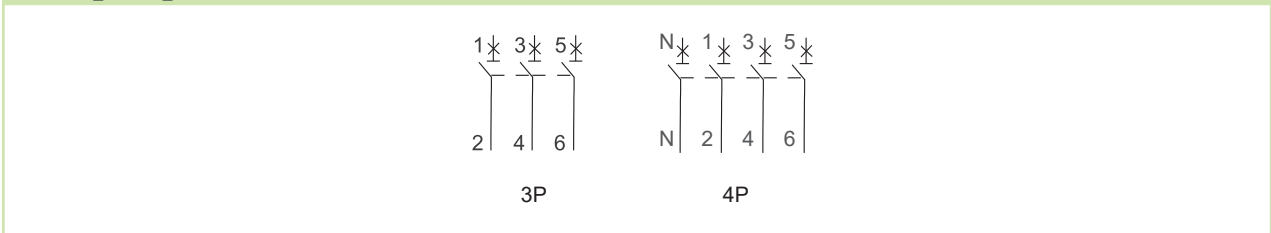
Derating coefficient of technical parameters based on altitude

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



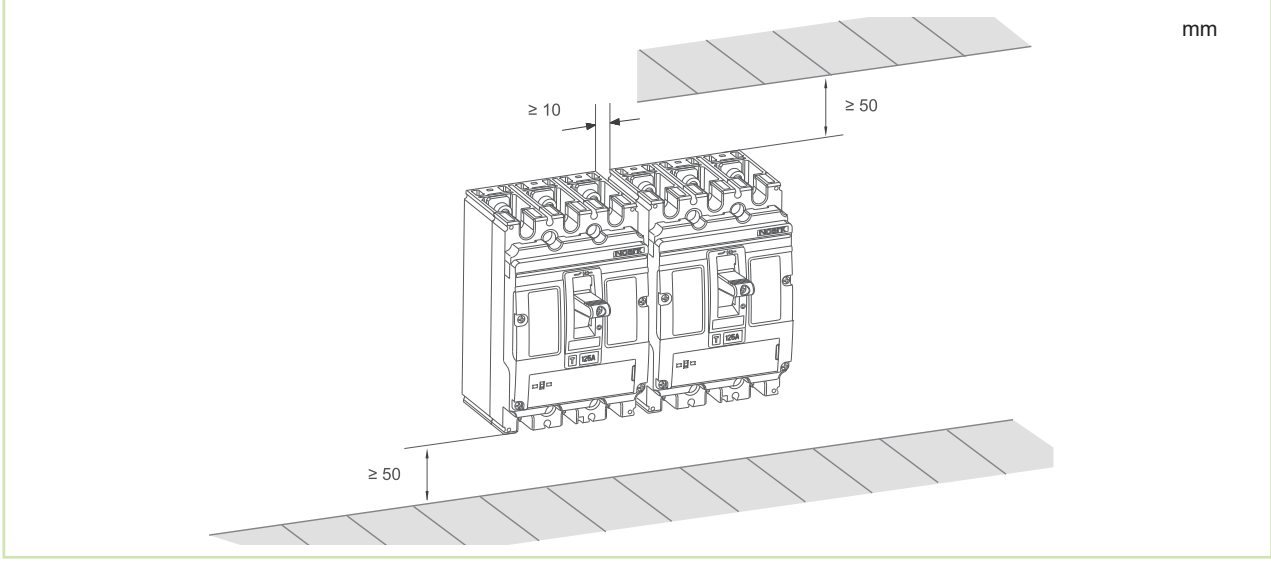
Wiring diagram



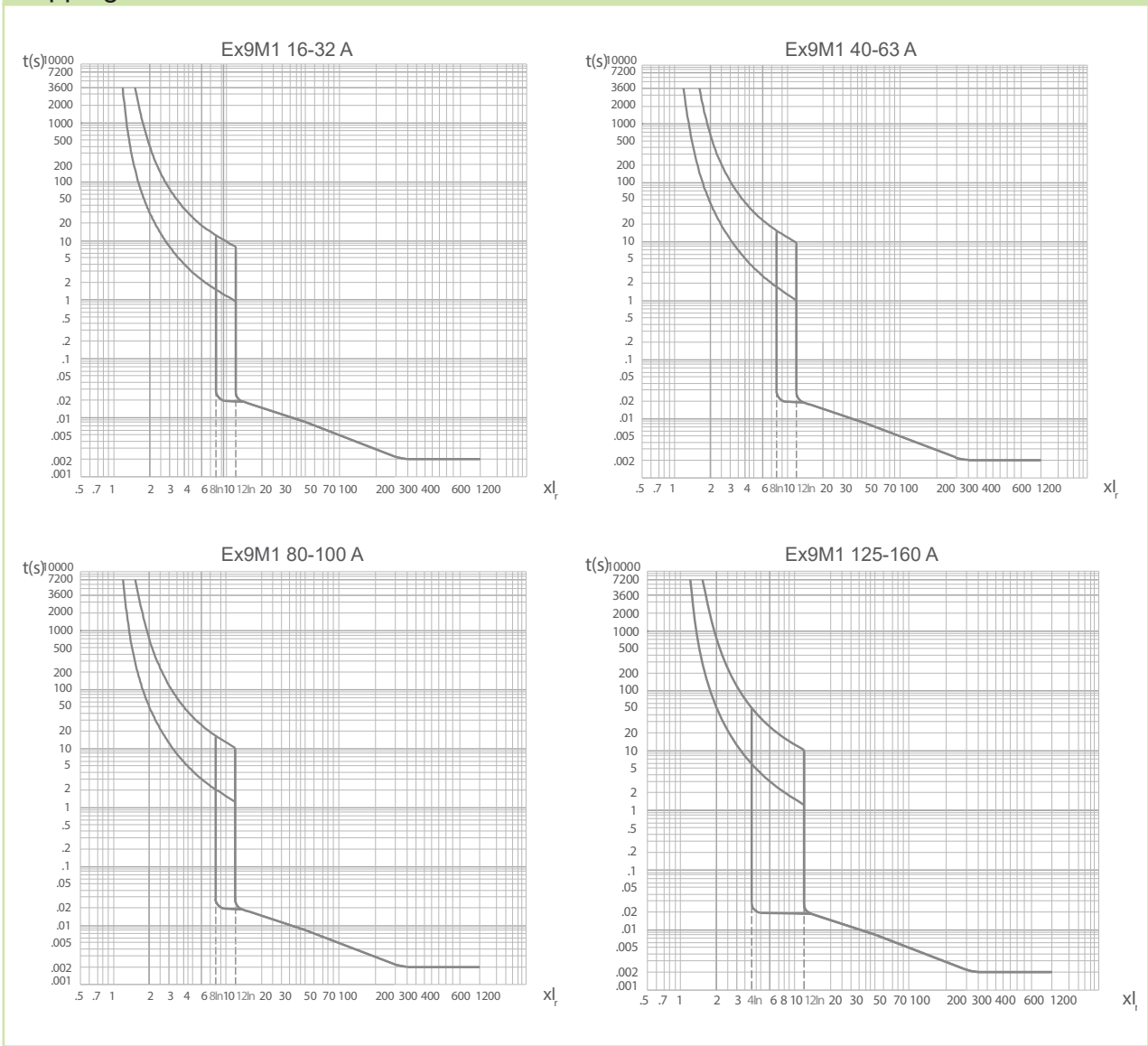
Technical Data Ex9M1 AC TM

AC TM Moulded Case Circuit Breakers up to 160 A

Installation space



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 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 — 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	112877, 112878, 112883, 112884

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
Ex9ML	1	1	1	0.9	0.9	0.9
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

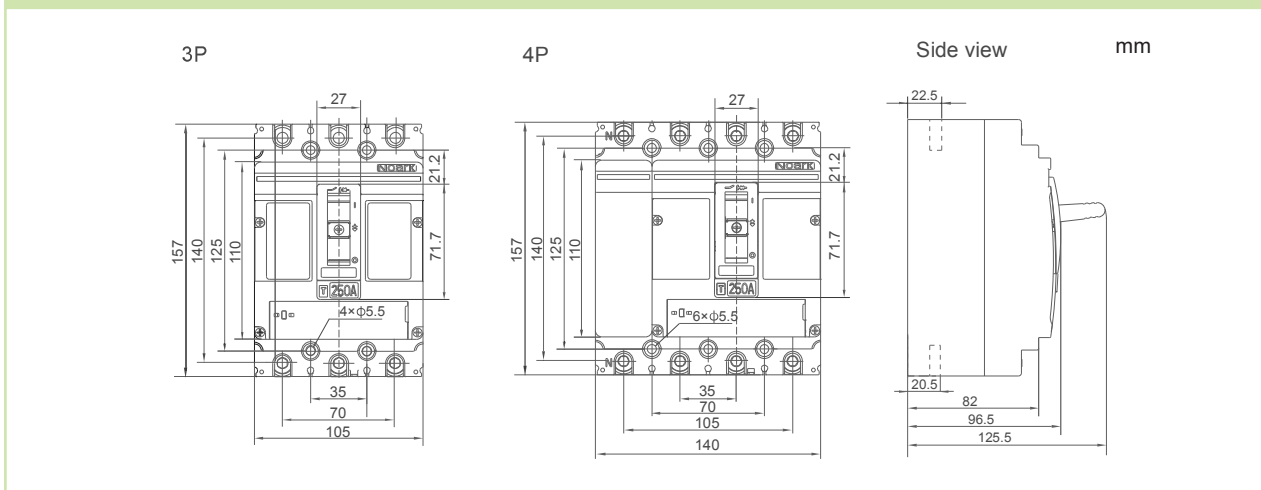
Mechanical parameters

Device width 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	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	1.85 kg / 2.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

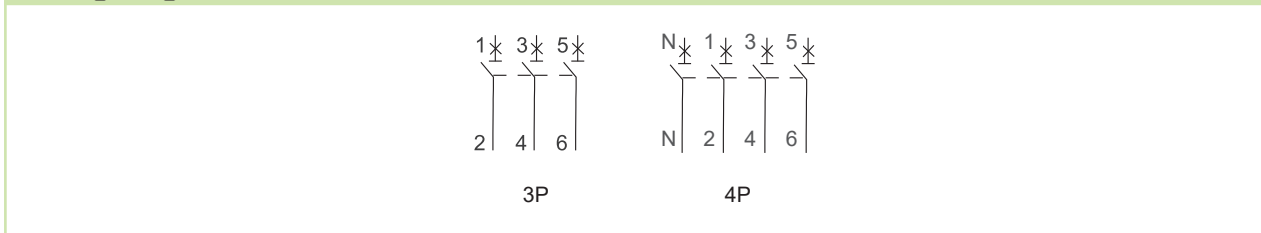
Derating coefficient of technical parameters based on altitude

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



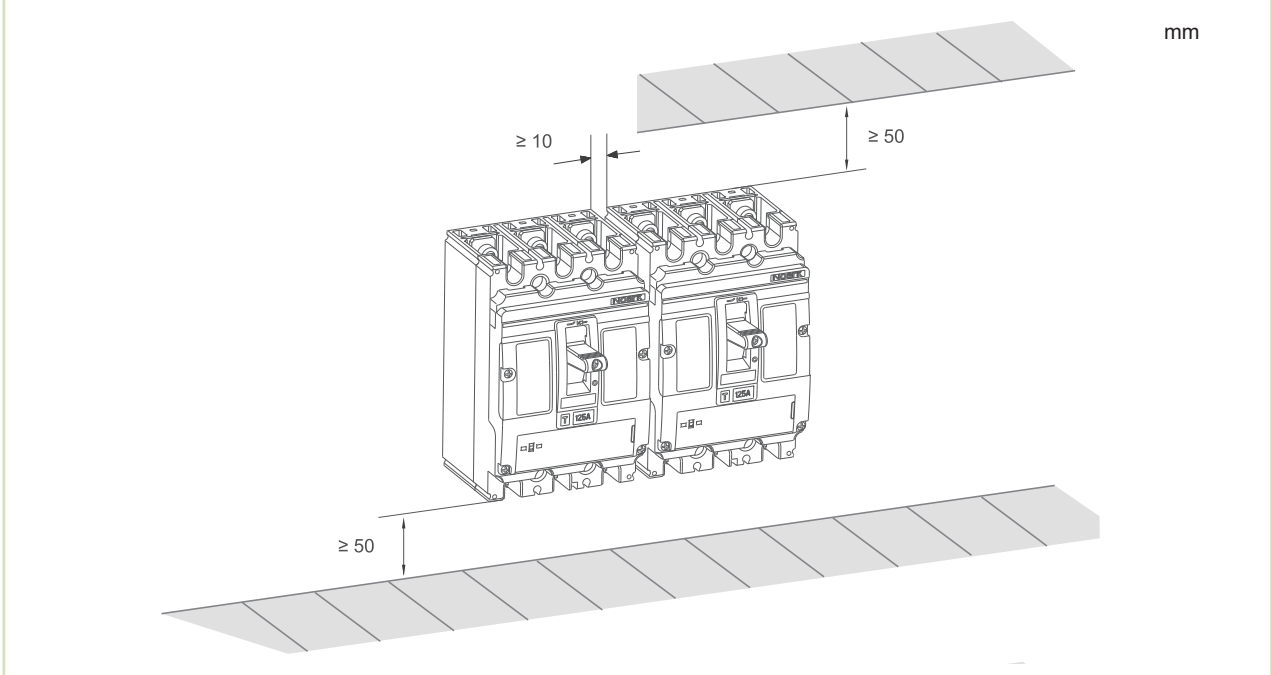
Wiring diagram



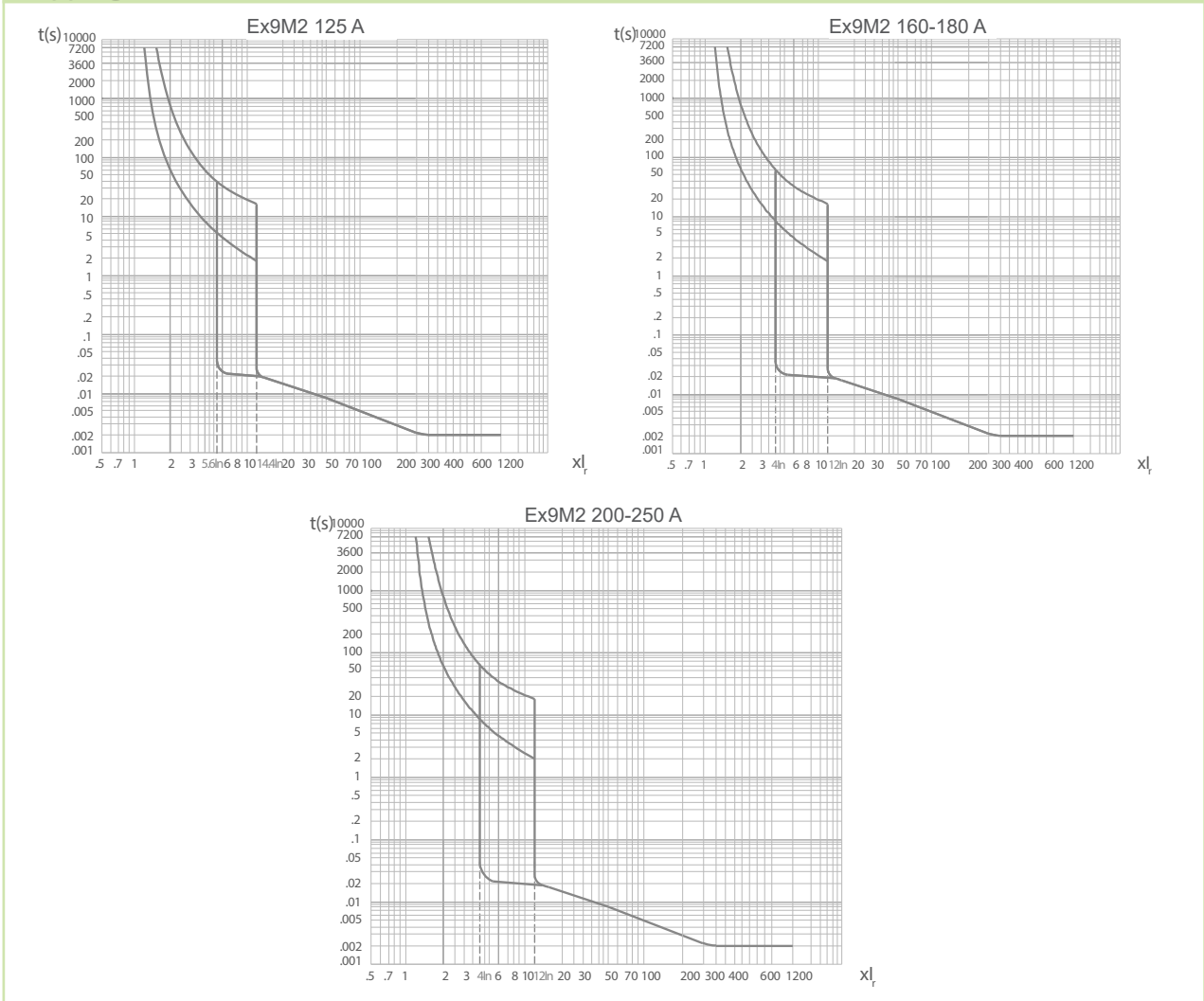
Technical Data Ex9M2 AC TM

AC TM Moulded Case Circuit Breakers up to 250 A

Installation space



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 — 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	112879, 112880, 112885, 112886
Withdrawable base	DOB 23	108887, 108899, 108893, 108905, 108889, 108901, 108895, 108907

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
Ex9ML	1	0.96	0.96	0.93	0.87
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

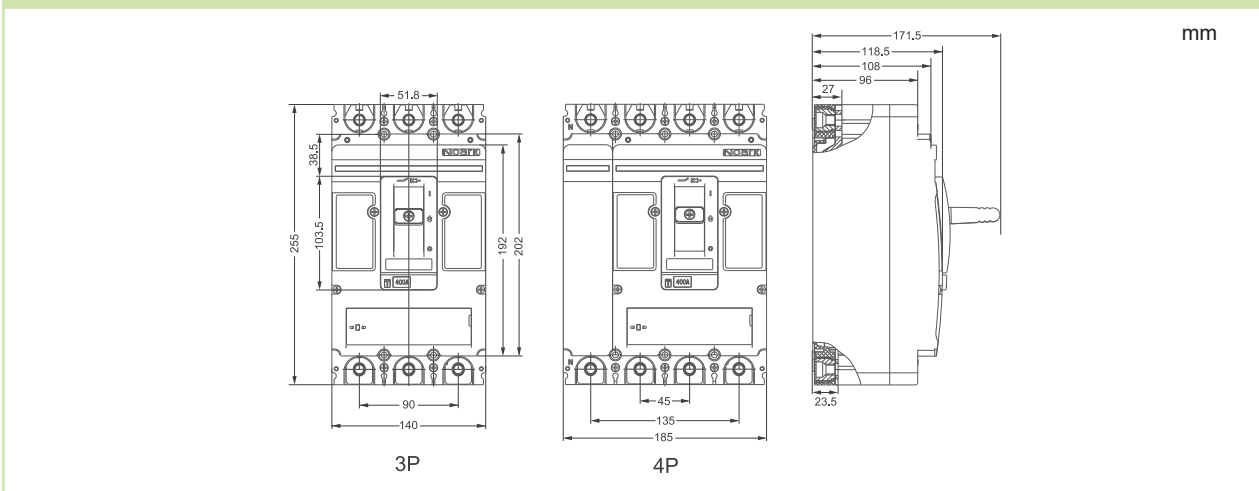
Mechanical parameters

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

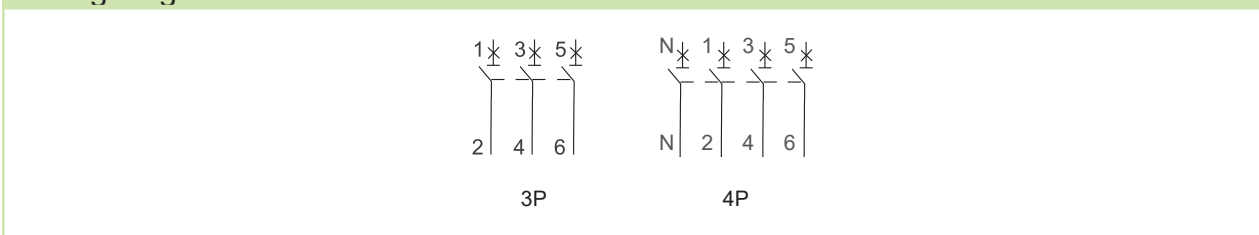
Derating coefficient of technical parameters based on altitude

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 Ex9M4 AC TM

AC TM Moulded Case Circuit Breakers up to 630 A

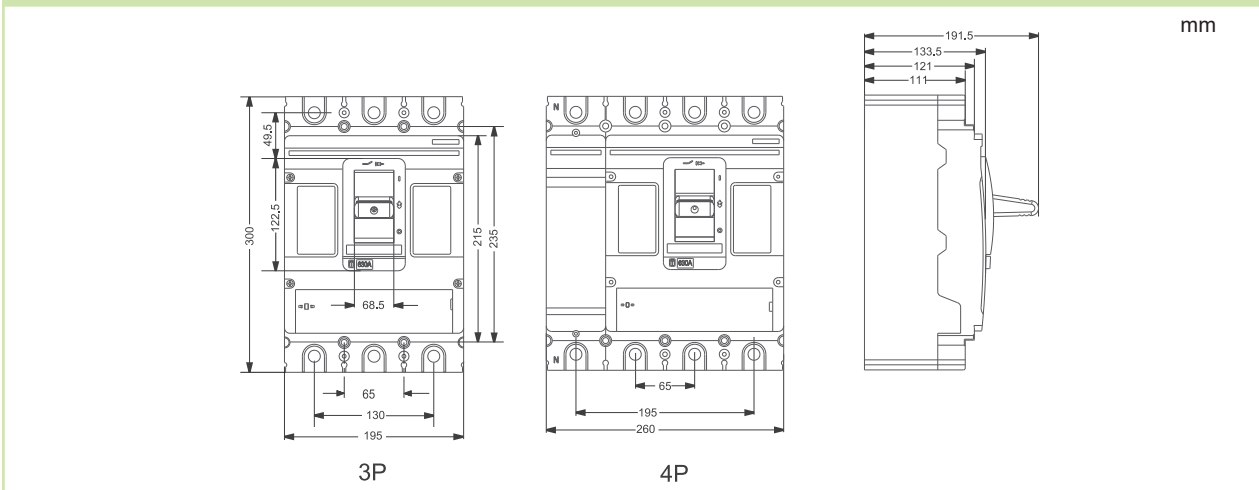
Mechanical parameters

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

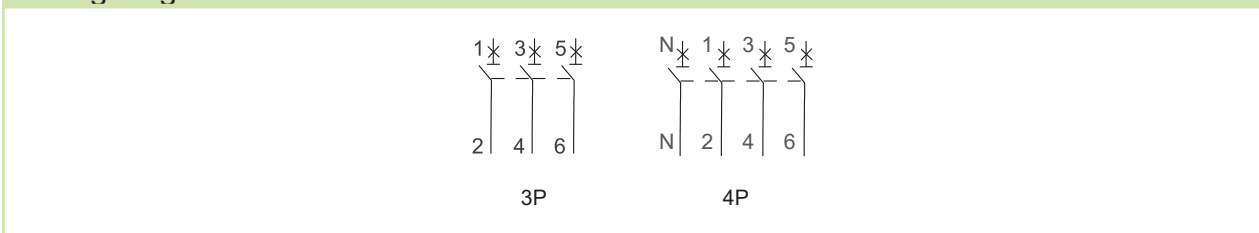
Derating coefficient of technical parameters based on altitude

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

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	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	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]		
	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

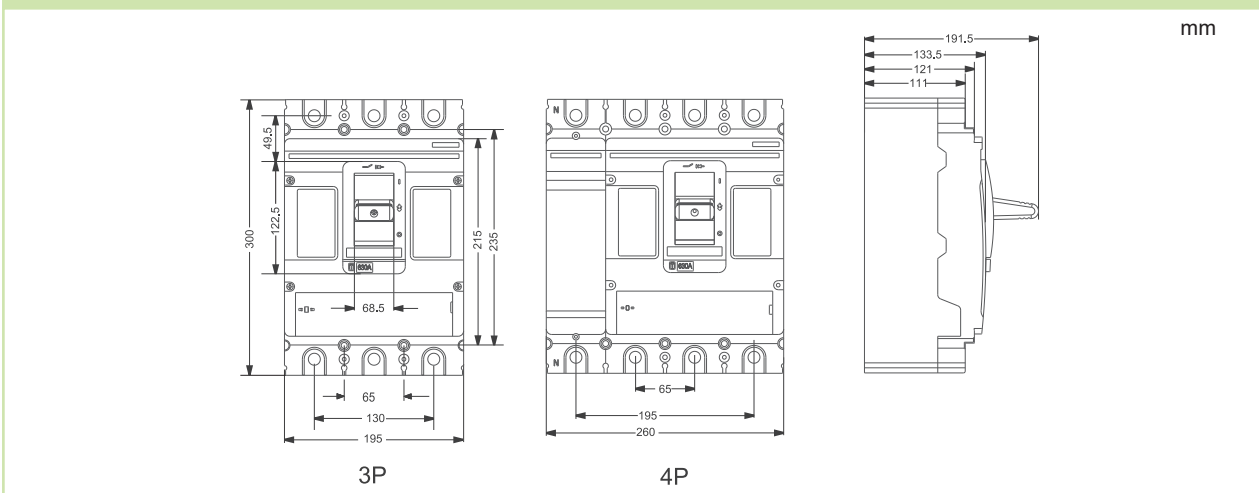
Mechanical parameters

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

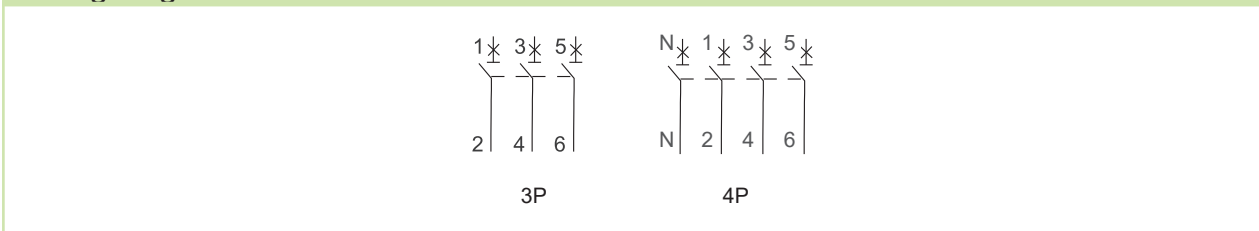
Derating coefficient of technical parameters based on altitude

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



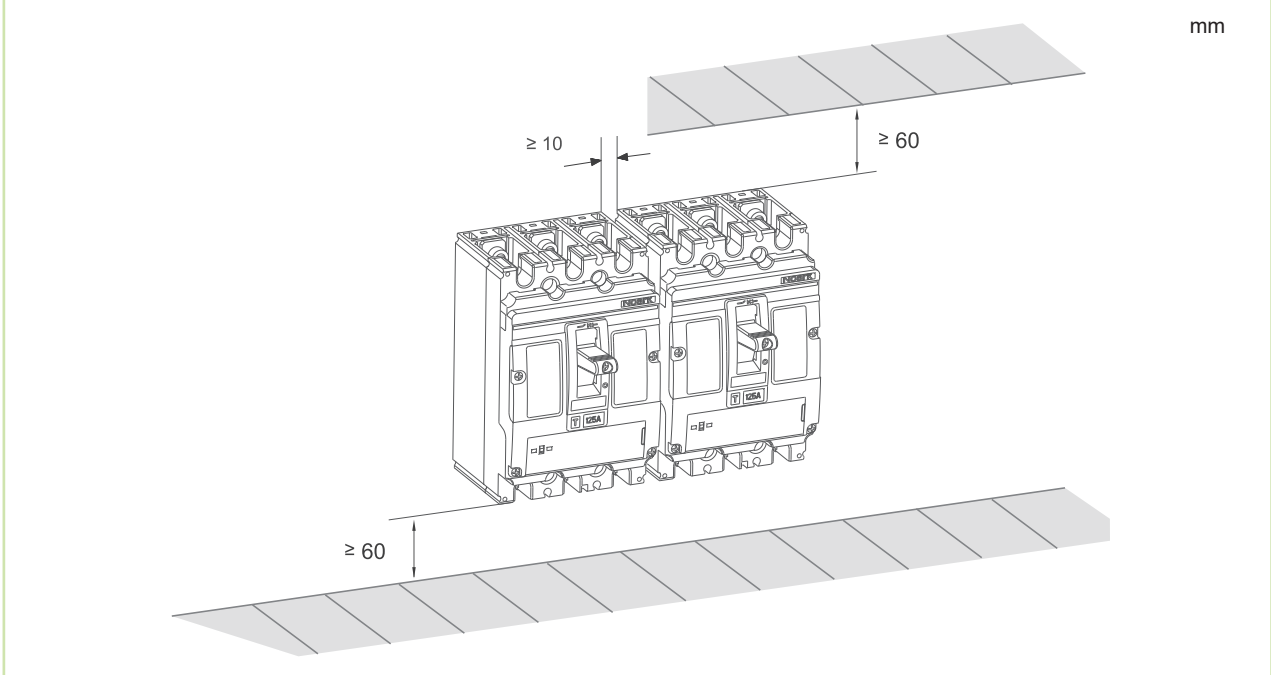
Wiring diagram



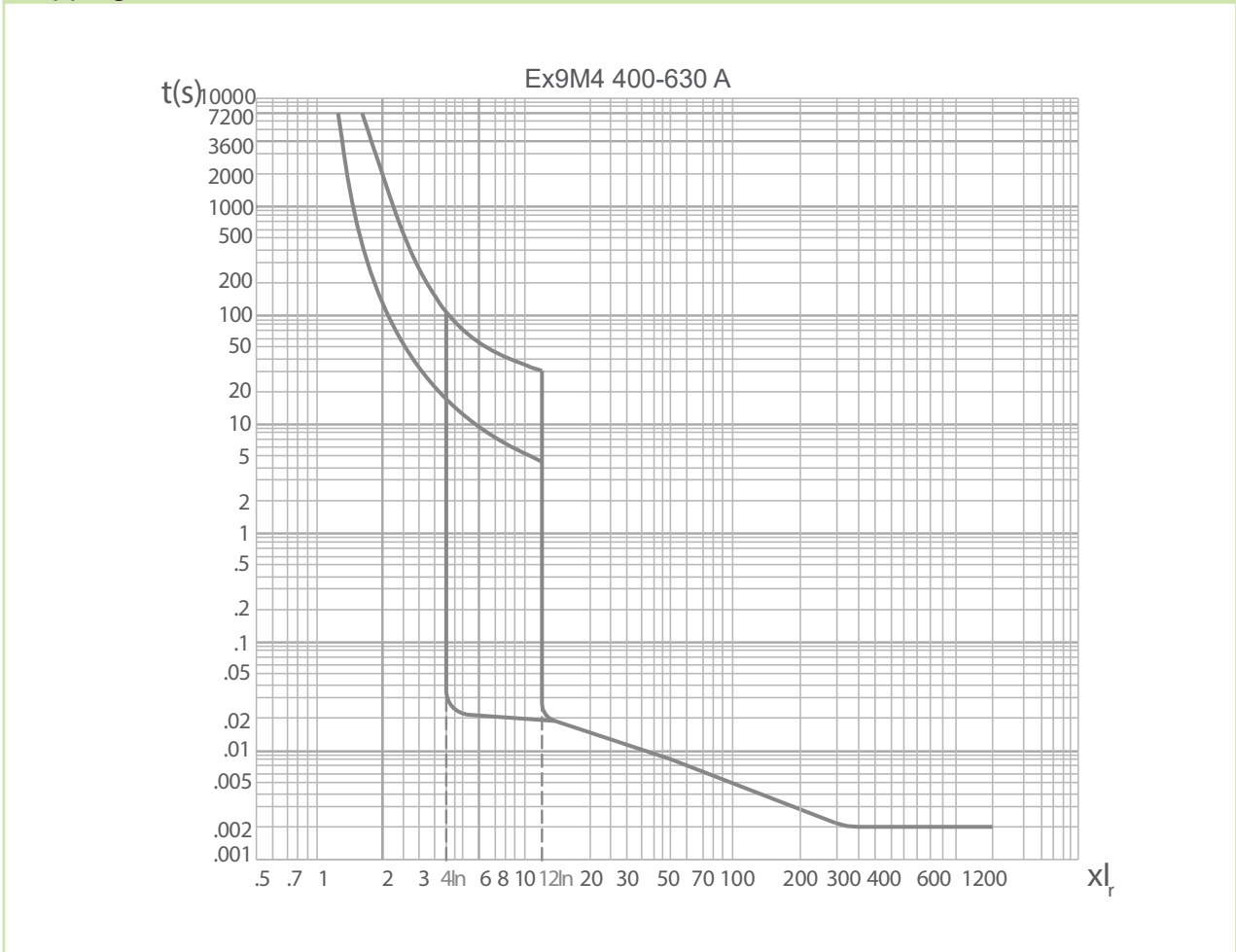
Technical Data Ex9M4 AC TM

AC TM Moulded Case Circuit Breakers up to 630 A

Installation space



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	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	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	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

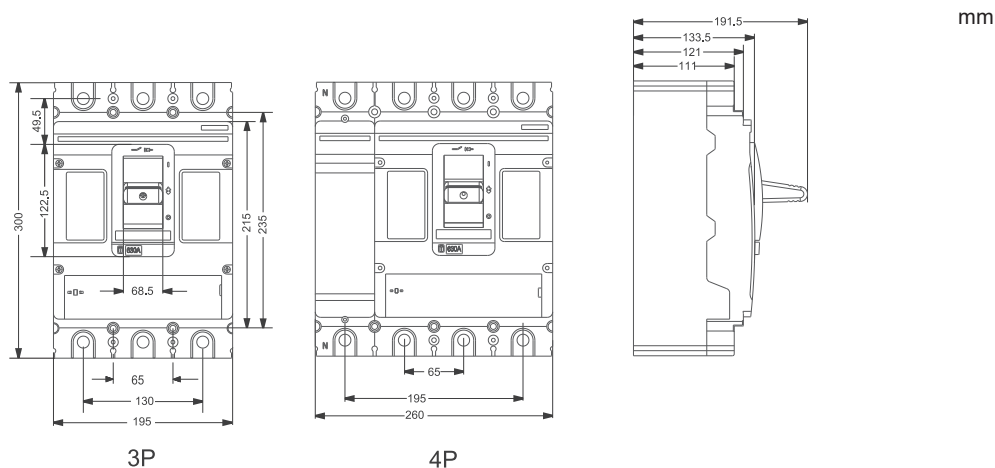
Mechanical parameters

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

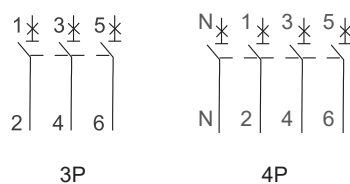
Derating coefficient of technical parameters based on altitude

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



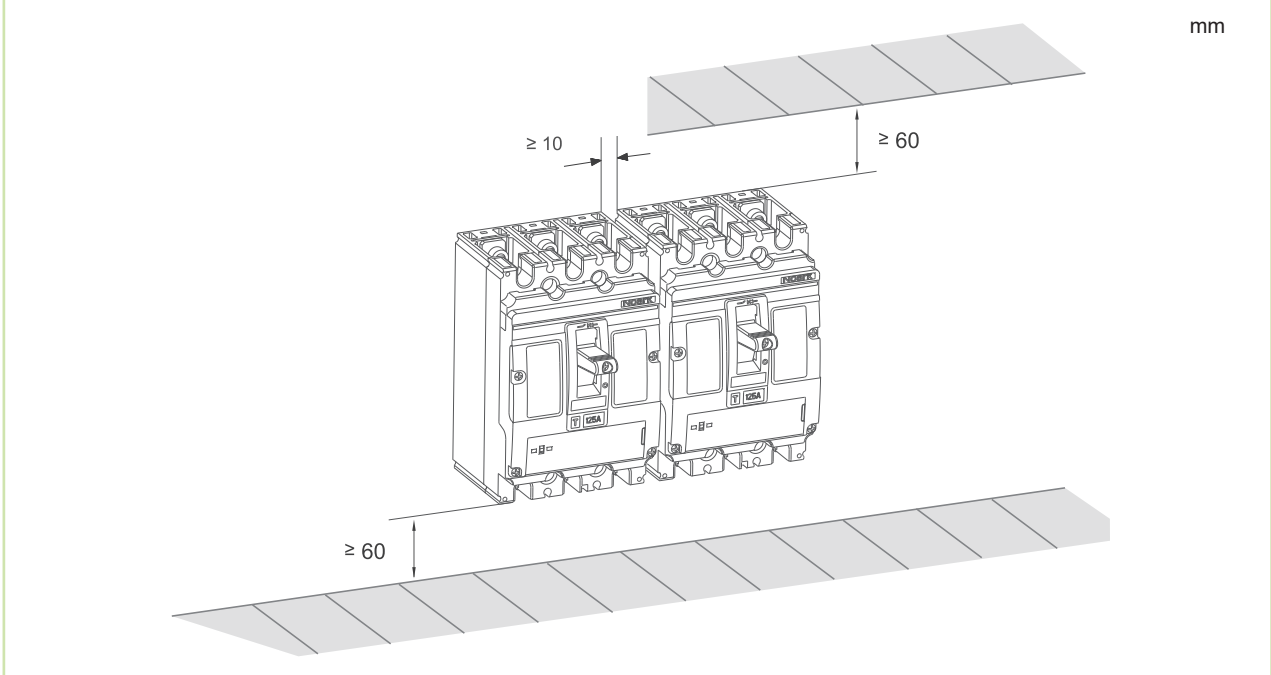
Wiring diagram



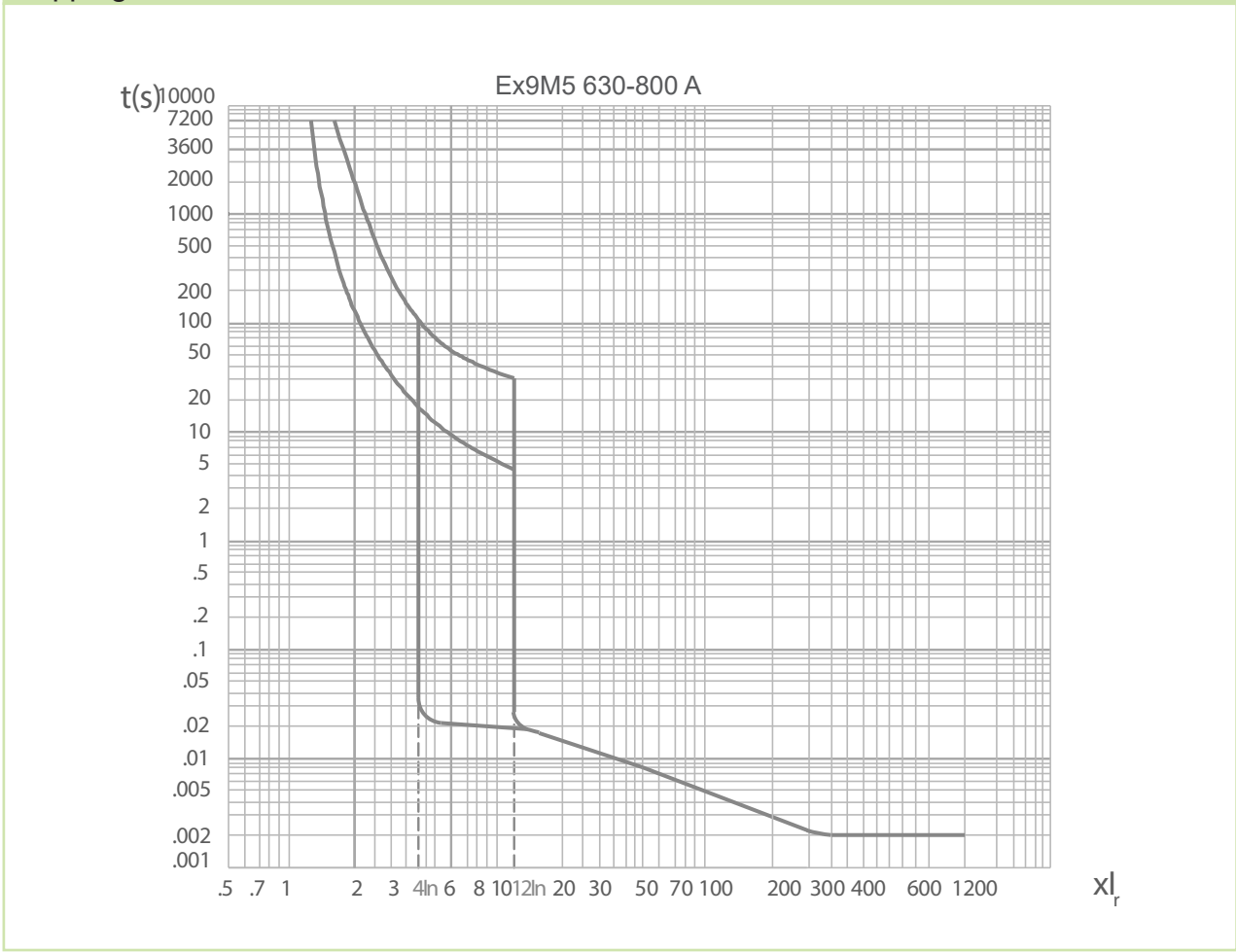
Technical Data Ex9M5 AC TM

AC TM Moulded Case Circuit Breakers up to 800 A

Installation space



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_r 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

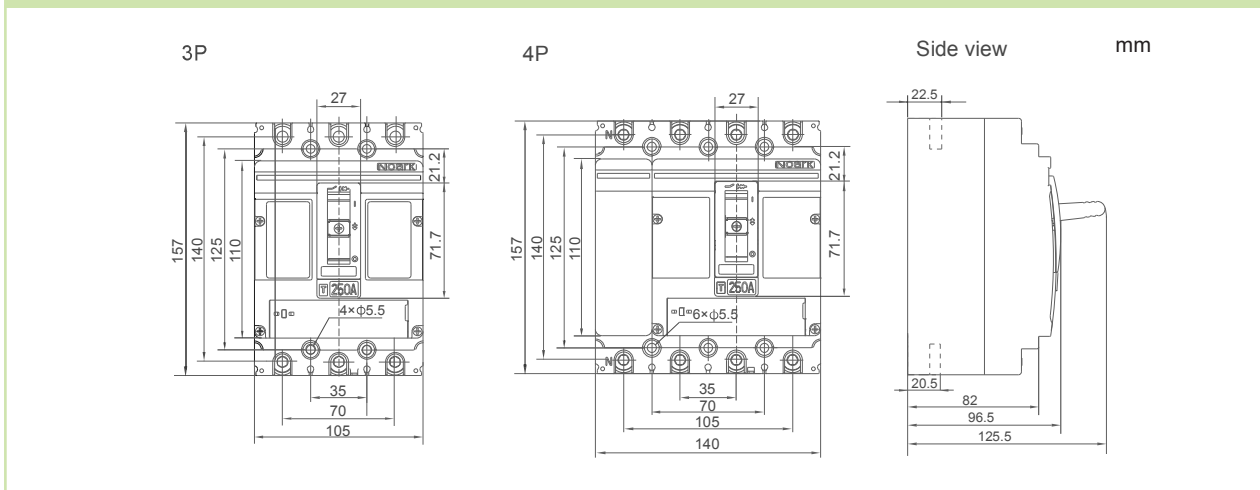
Mechanical parameters

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

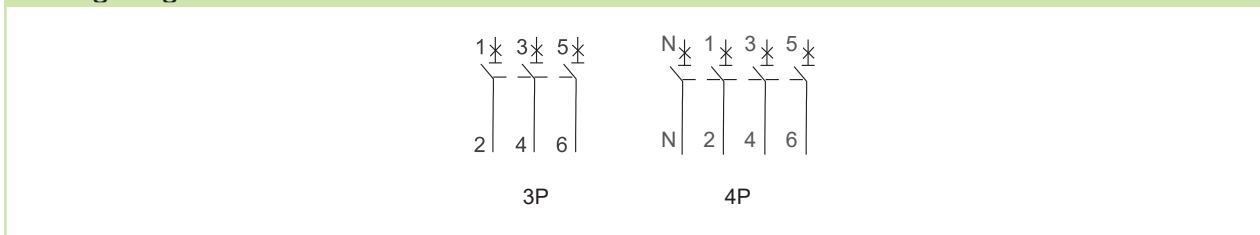
Derating coefficient of technical parameters based on altitude

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



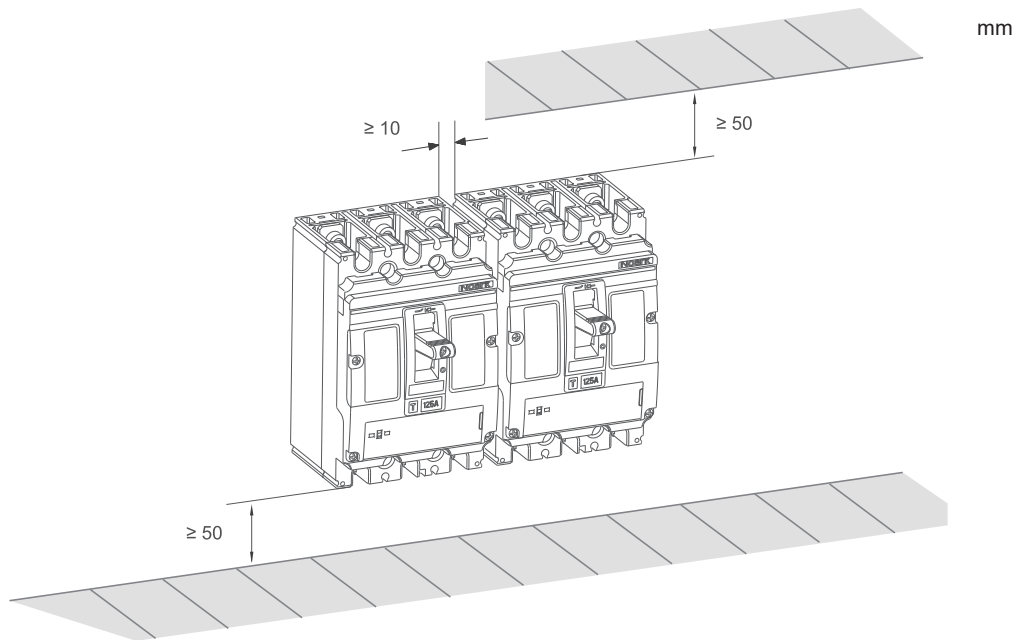
Wiring diagram



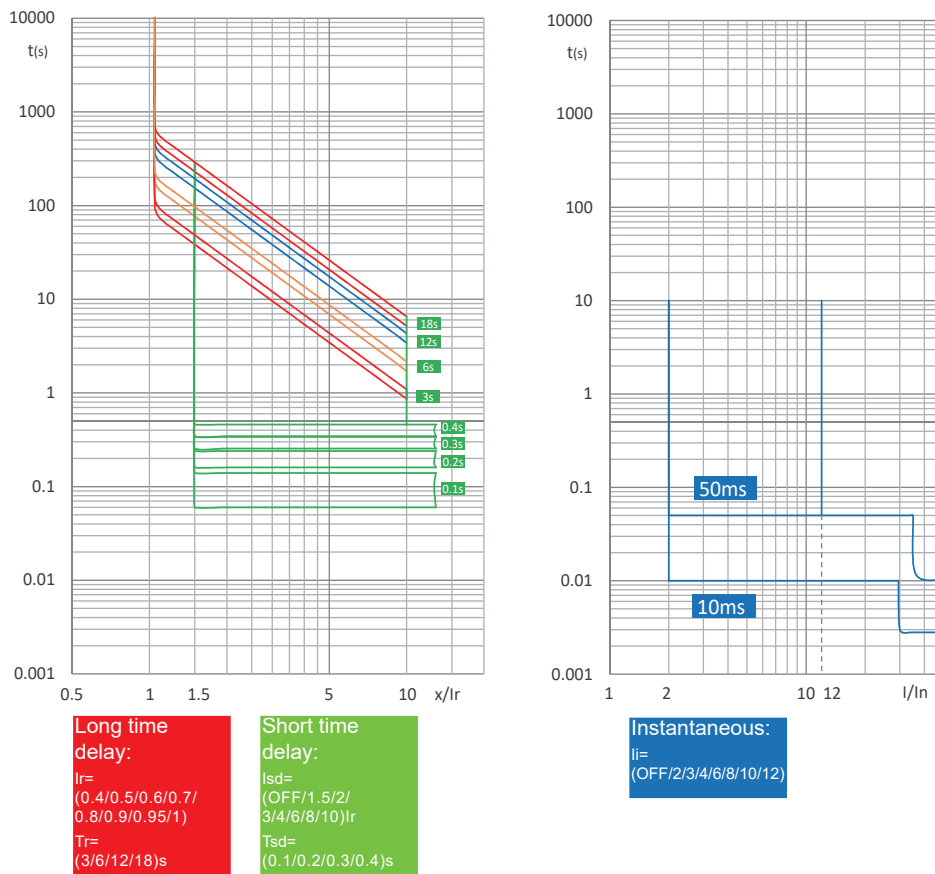
Technical Data Ex9M2 SU20L

SU20L Moulded Case Circuit Breakers up to 250 A

Installation space



Tripping characteristics



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_r 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

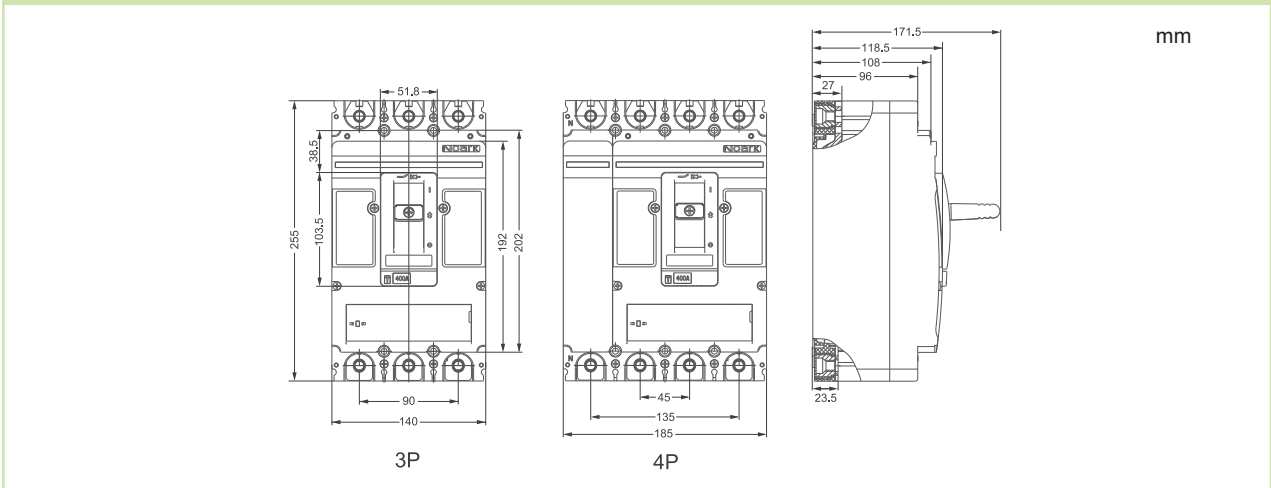
Mechanical parameters

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

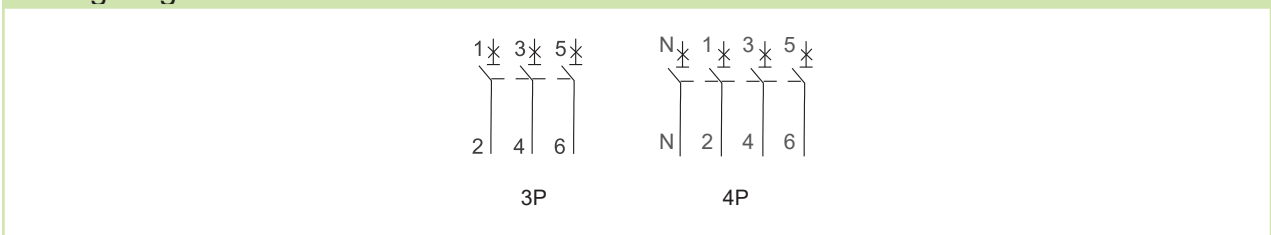
Derating coefficient of technical parameters based on altitude

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



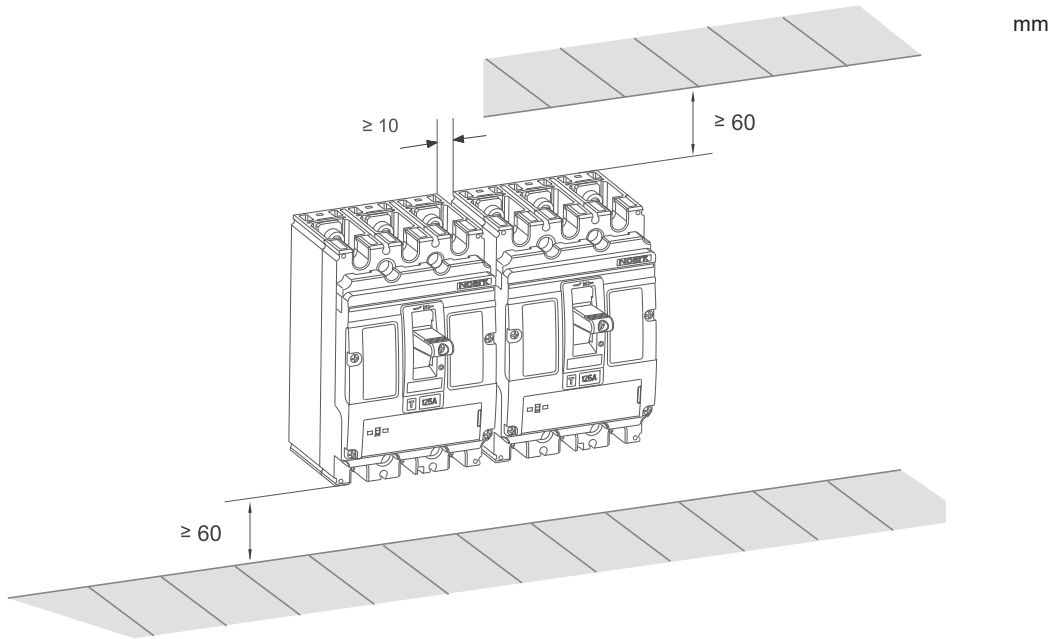
Wiring diagram



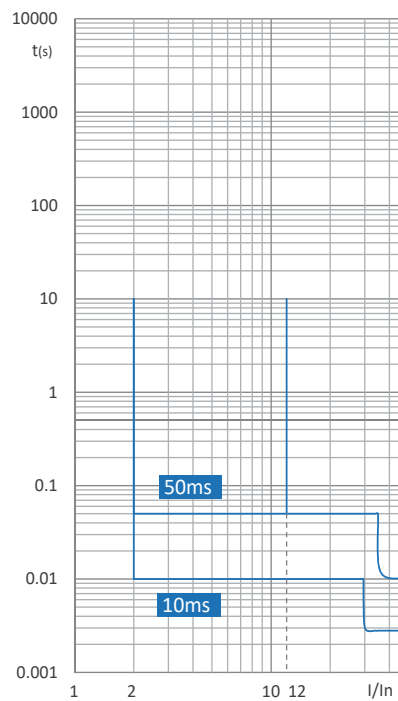
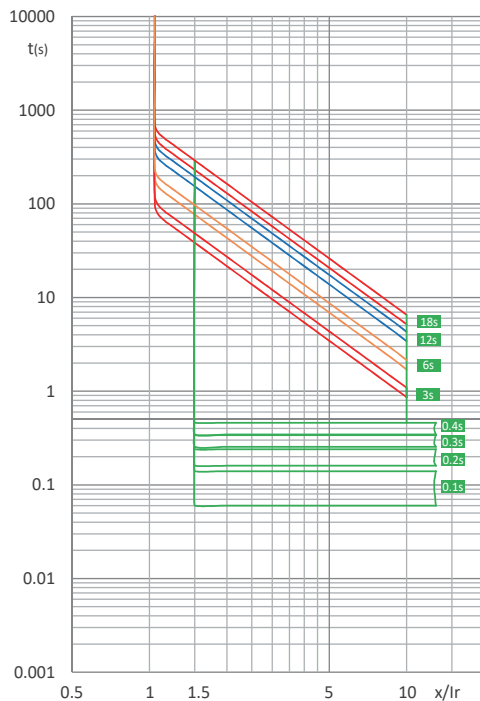
Technical Data Ex9M3 SU20L

SU20L Moulded Case Circuit Breakers up to 630 A

Installation space



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_r 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

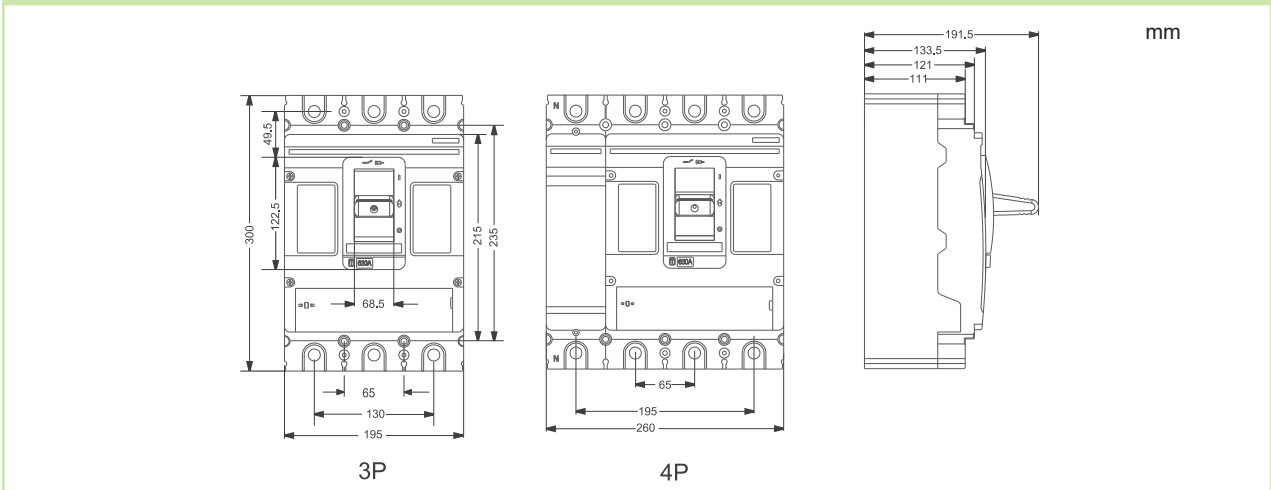
Mechanical parameters

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

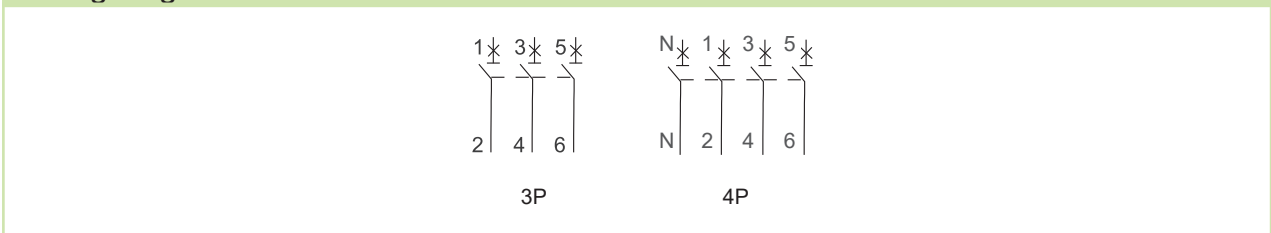
Derating coefficient of technical parameters based on altitude

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



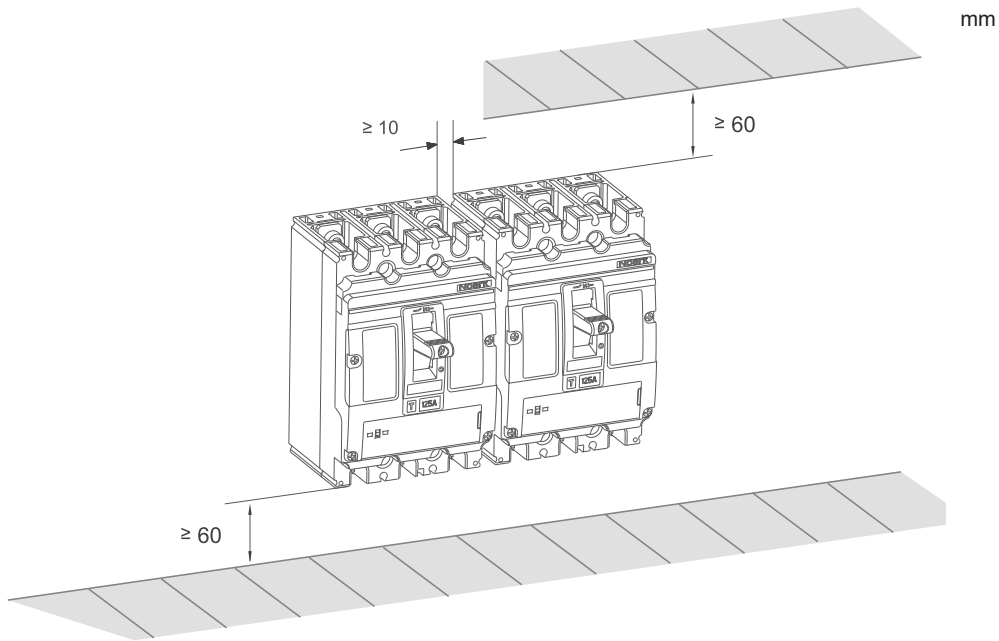
Wiring diagram



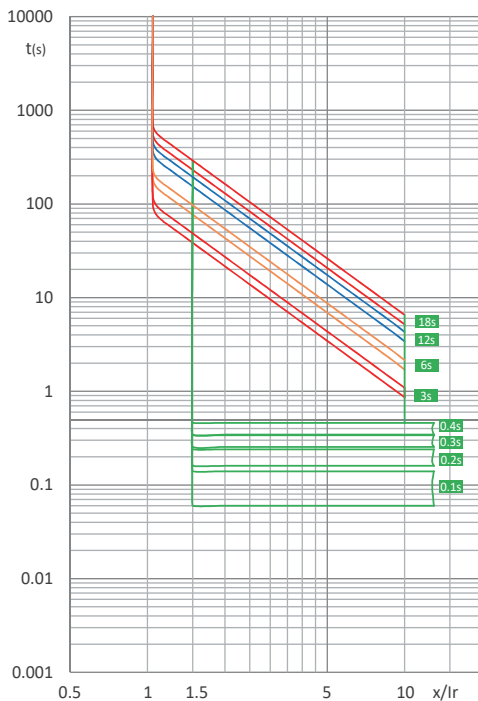
Technical Data Ex9M4 SU20L

SU20L Moulded Case Circuit Breakers up to 630 A

Installation space

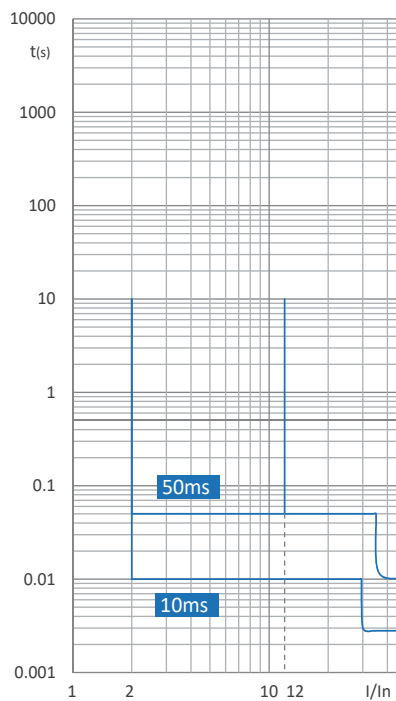


Tripping characteristics



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_r 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

SU20L Moulded Case Circuit Breakers up to 800 A

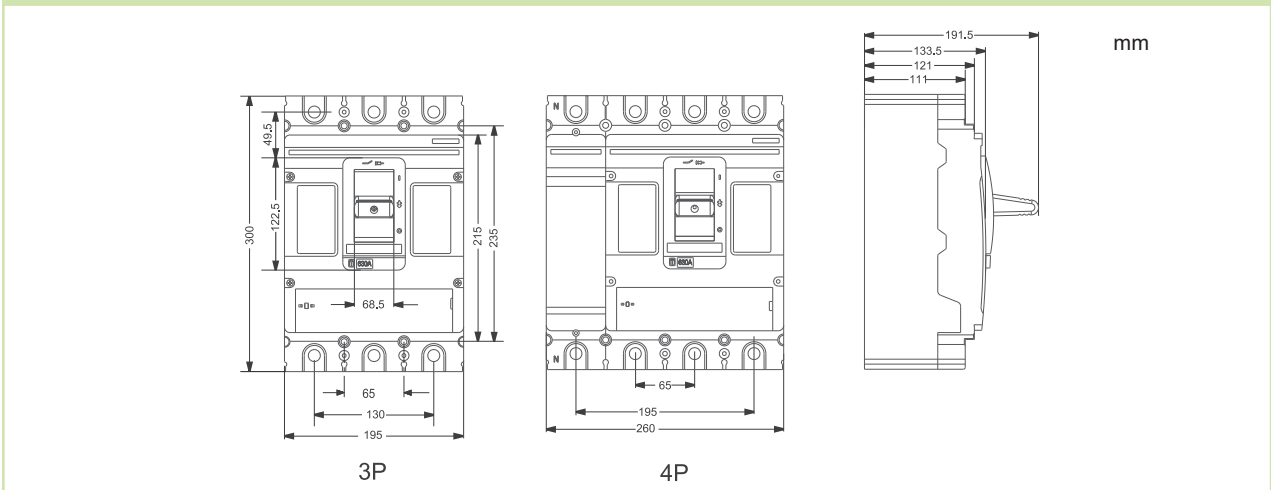
Mechanical parameters

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

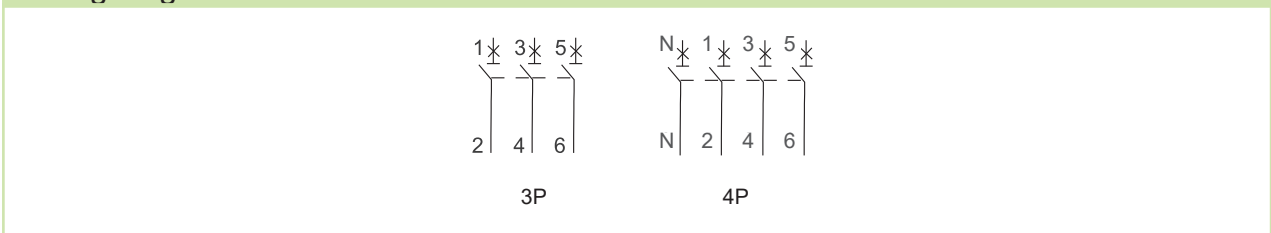
Derating coefficient of technical parameters based on altitude

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



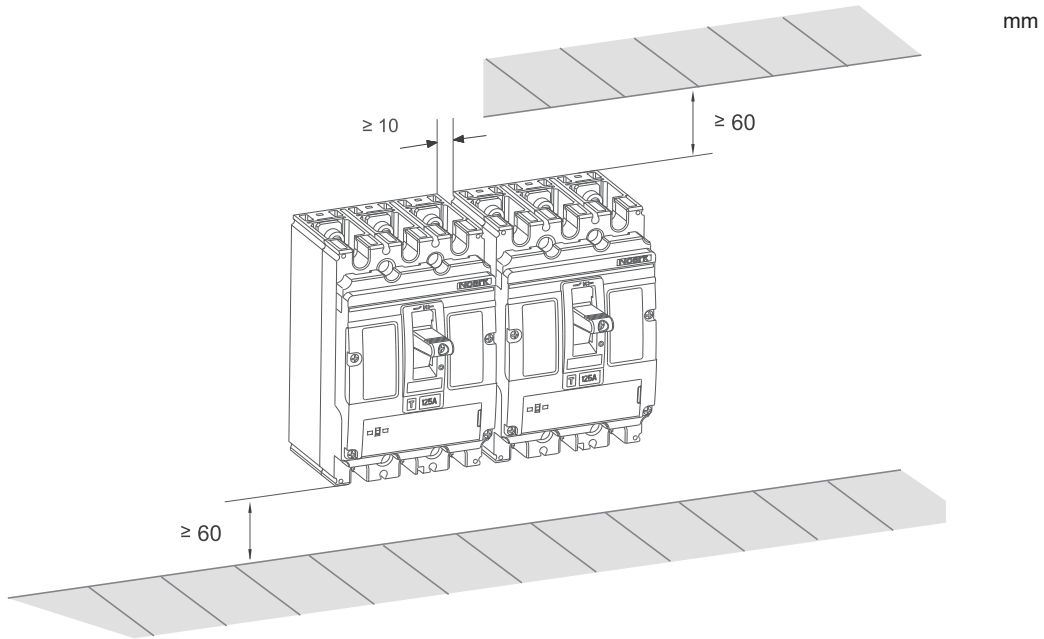
Wiring diagram



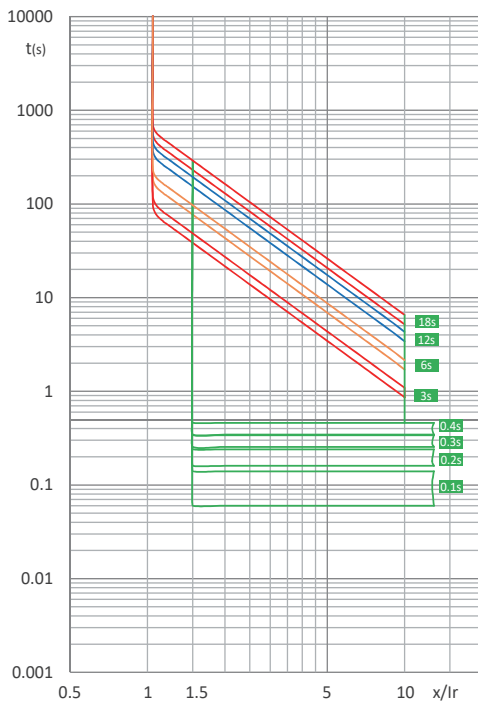
Technical Data Ex9M5 SU20L

SU20L Moulded Case Circuit Breakers up to 800 A

Installation space

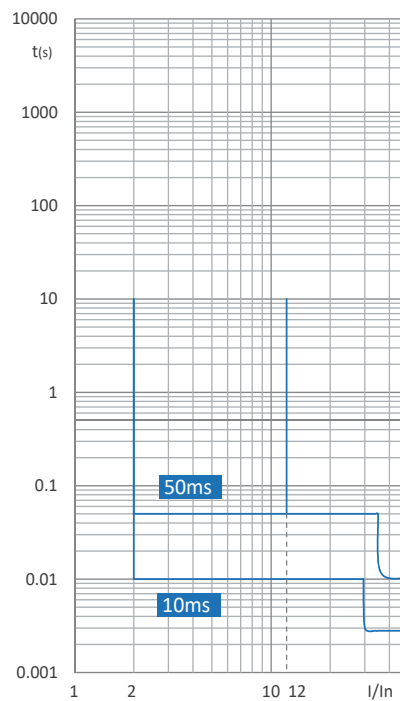


Tripping characteristics



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 Ex9M6 SU20L

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 <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 SU20L

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

SU20L Moulded Case Circuit Breakers up to 1600 A

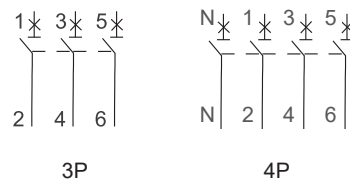
Mechanical parameters

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

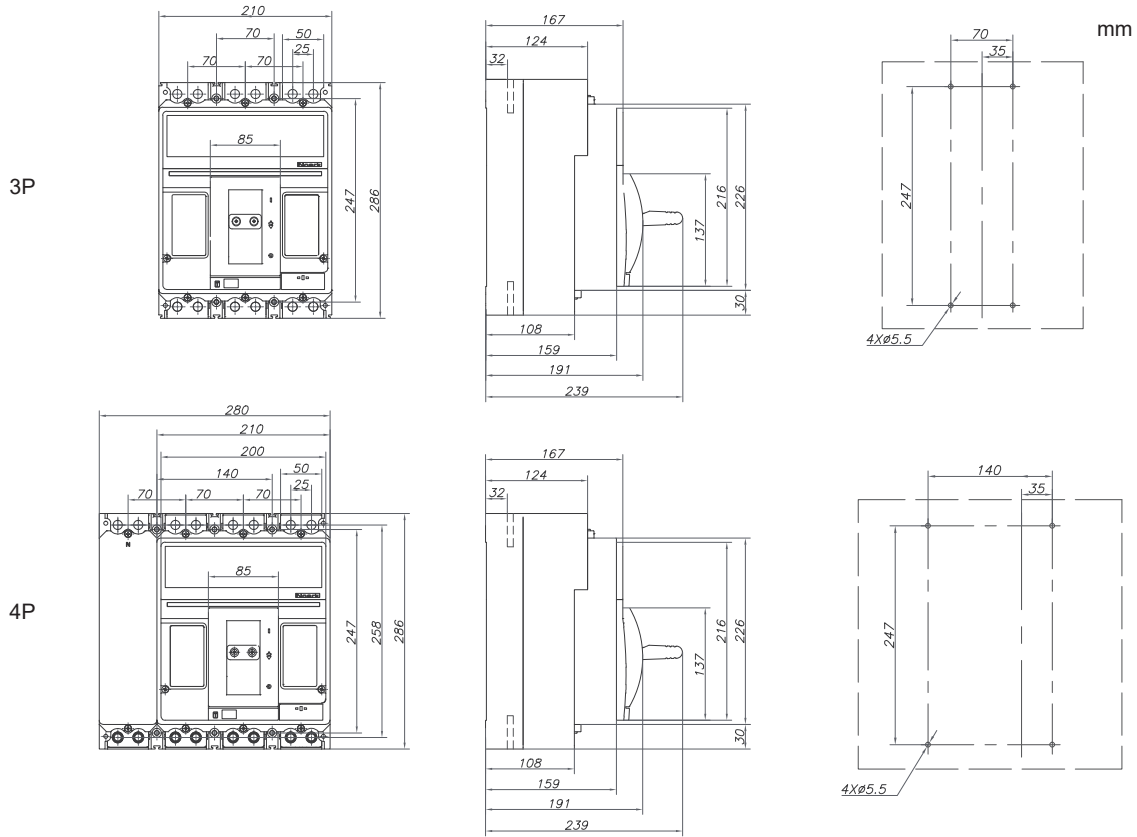
Wiring diagram



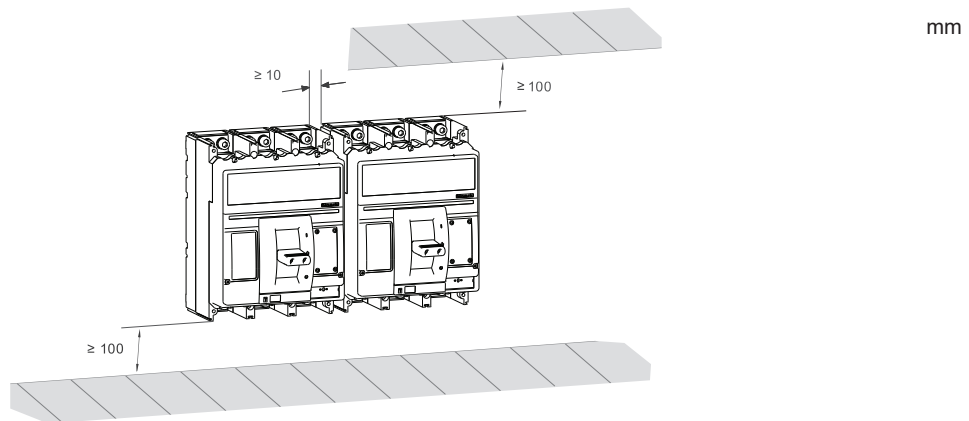
Technical Data Ex9M6 SU20L

SU20L Moulded Case Circuit Breakers up to 1600 A

Dimensions



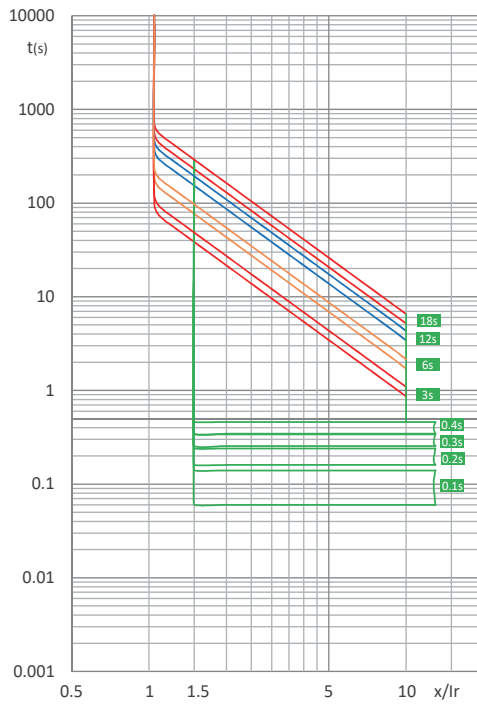
Installation space



Technical Data Ex9M6 SU20L

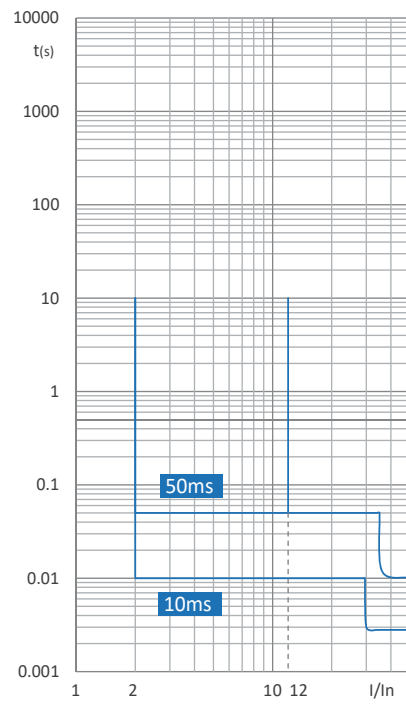
SU20L Moulded Case Circuit Breakers up to 1600 A

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

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

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	v	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

SU20L Moulded Case Circuit Breakers up to 1600 A

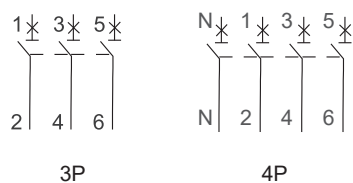
Mechanical parameters

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

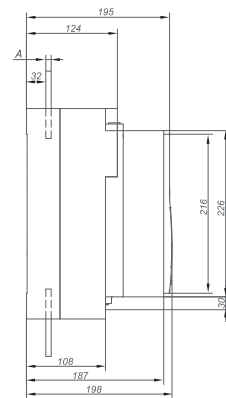
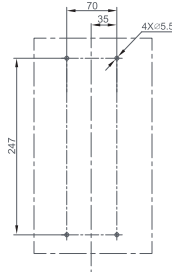
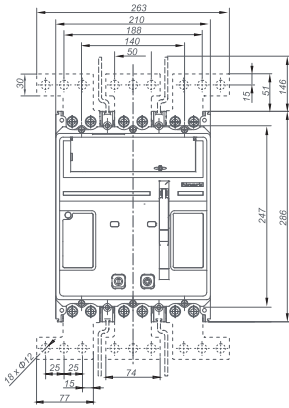


Technical Data Ex9M6 MOD SU20L

SU20L Moulded Case Circuit Breakers up to 1600 A

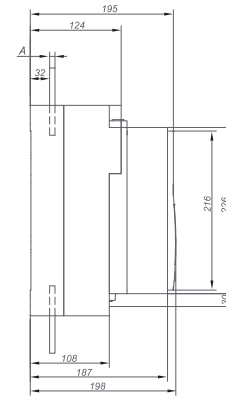
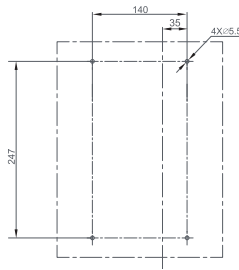
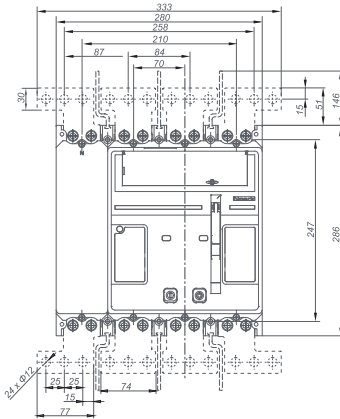
Dimensions

3P



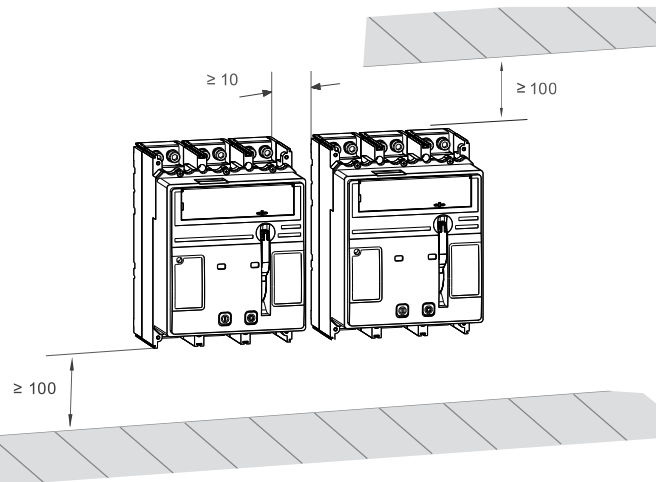
mm

4P



In [A]	800, 1000, 1250	1600
A [mm]	10	20

Installation space

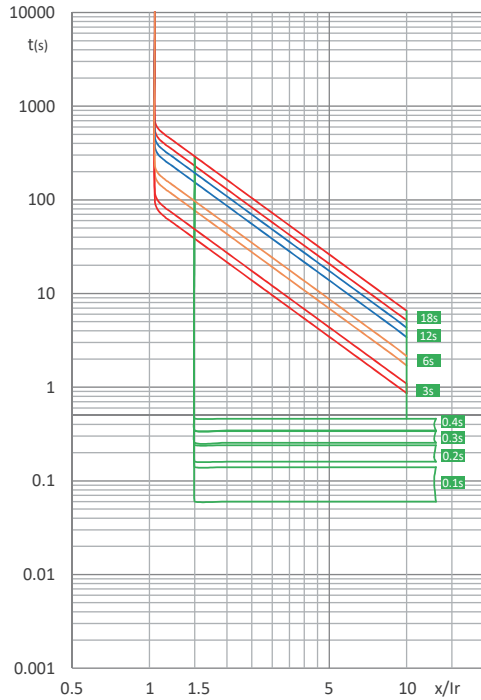


mm

Technical Data Ex9M6 MOD SU20L

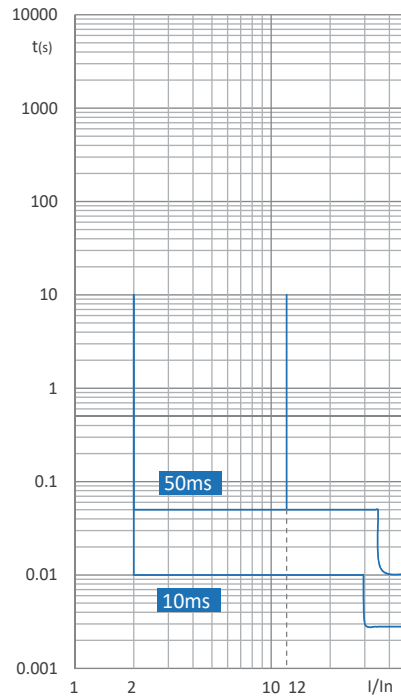
SU20L Moulded Case Circuit Breakers up to 1600 A

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 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 x 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 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 x 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

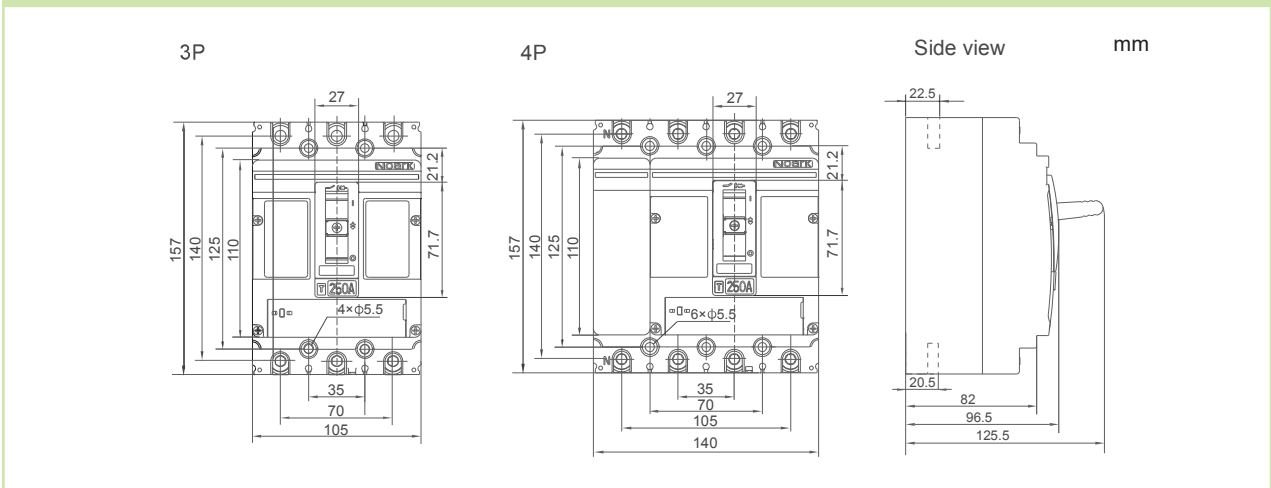
Mechanical parameters

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

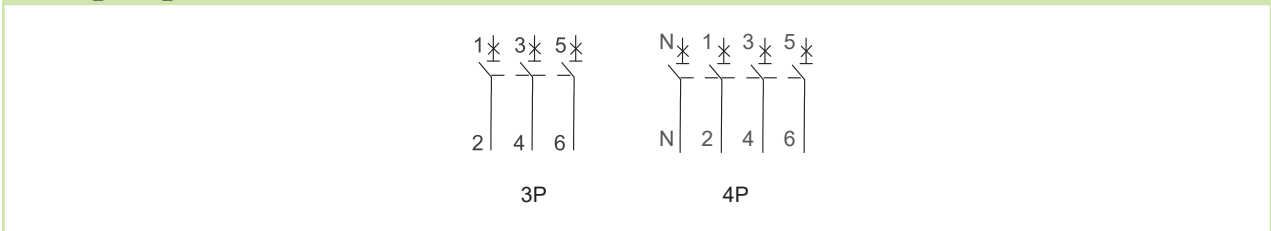
Derating coefficient of technical parameters based on altitude

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



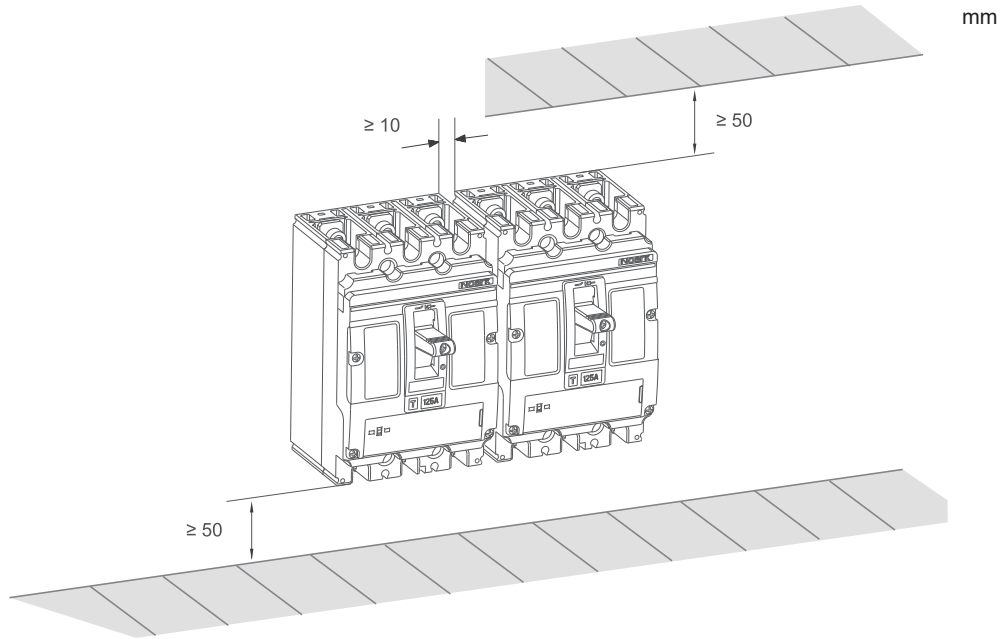
Wiring diagram



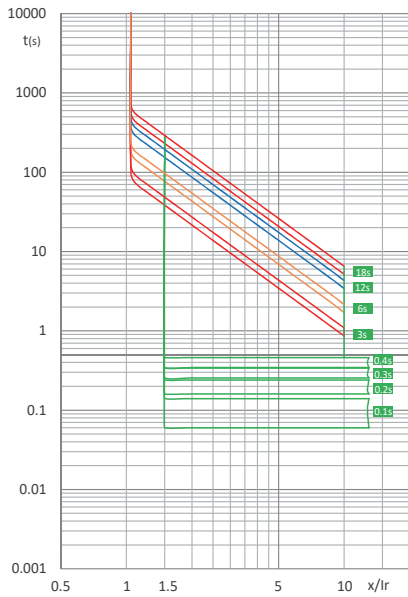
Technical Data Ex9M2 SU20S

SU20S Moulded Case Circuit Breakers up to 250 A

installation space

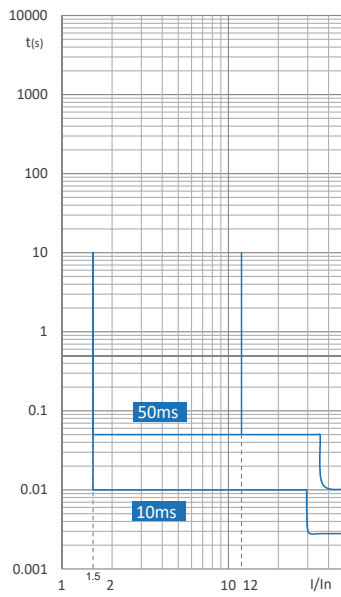


Tripping characteristics

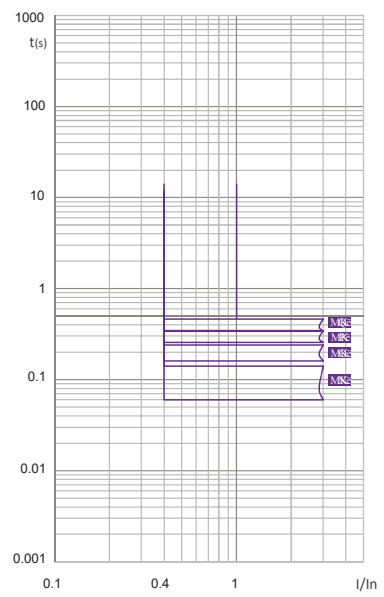


Long time delay:
 $I_r = (0.4/0.5/0.6/0.7/0.8/0.9/0.95/1)I_n$
 $T_r = (3/6/12/18)s$

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



Grounding protection:
 $I_g = (0.4 \sim 1)I_n$
 $T_g = (0.1 \sim 0.4)s$

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

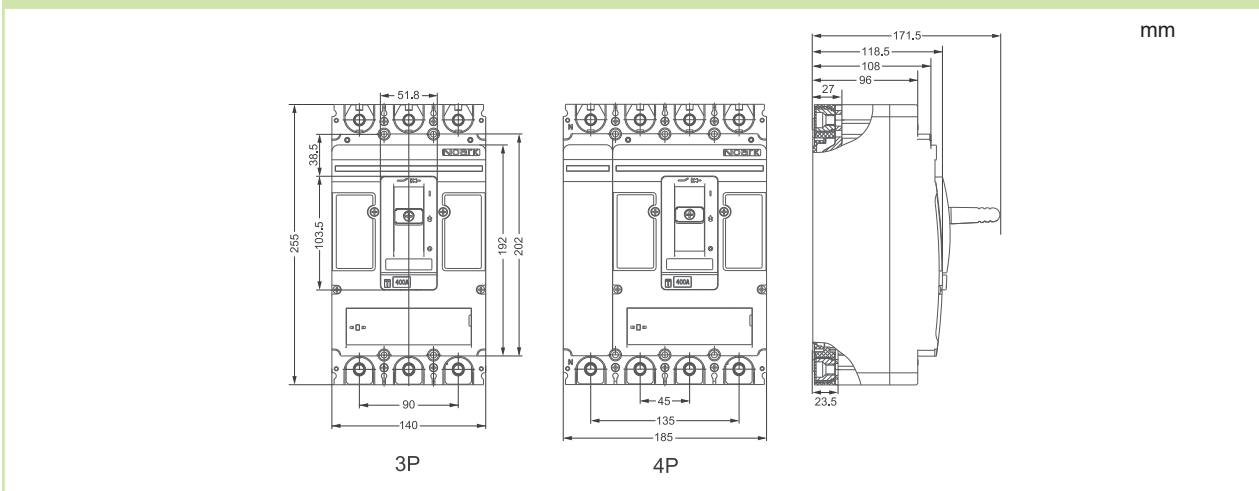
Mechanical parameters

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

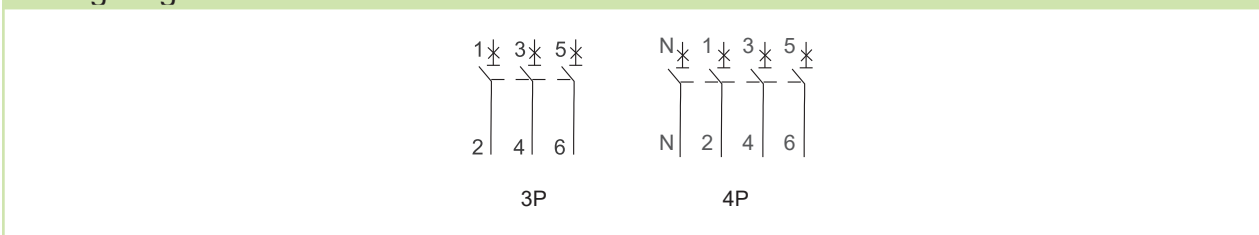
Derating coefficient of technical parameters based on altitude

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



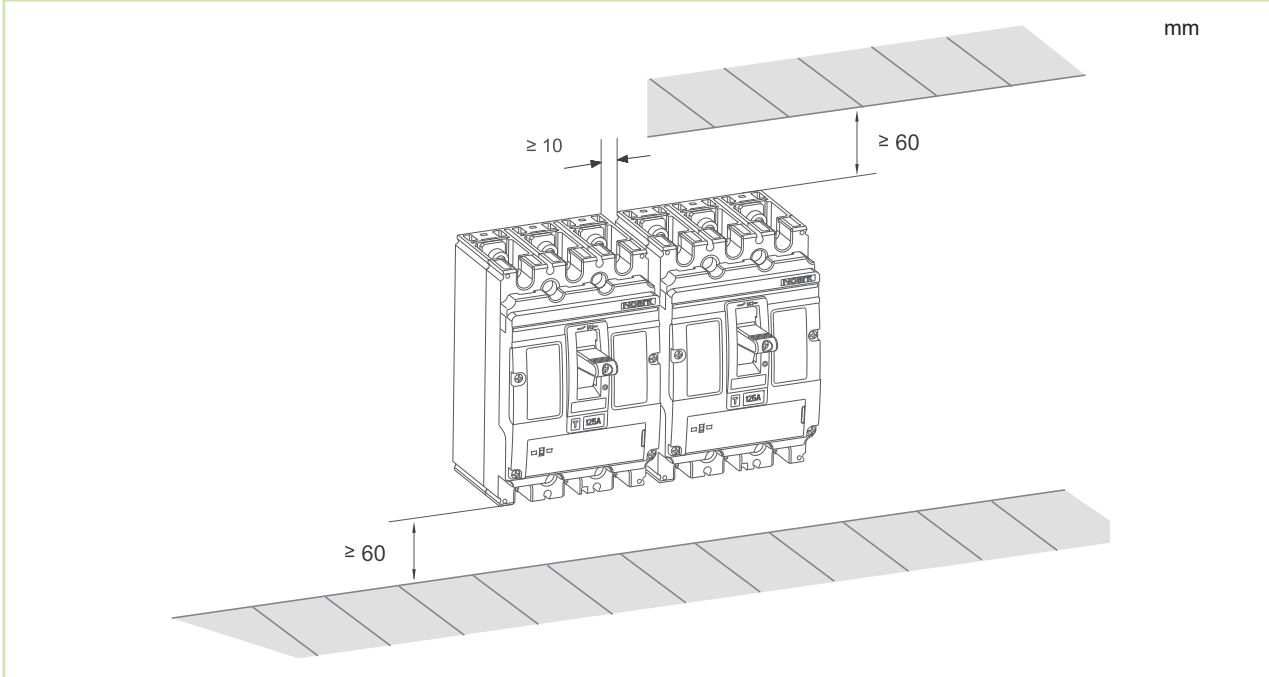
Wiring diagram



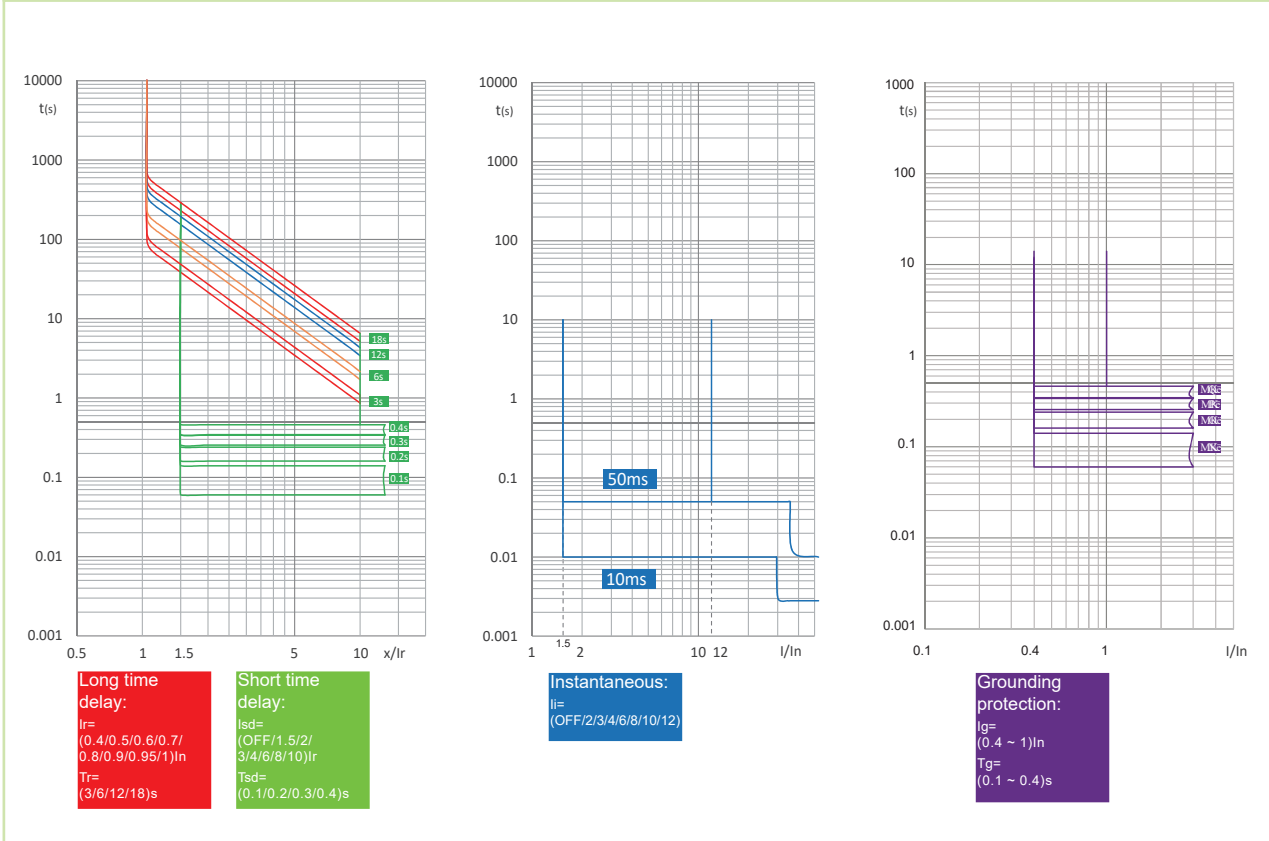
Technical Data Ex9M3 SU20S

SU20S Moulded Case Circuit Breakers up to 630 A

installation space



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

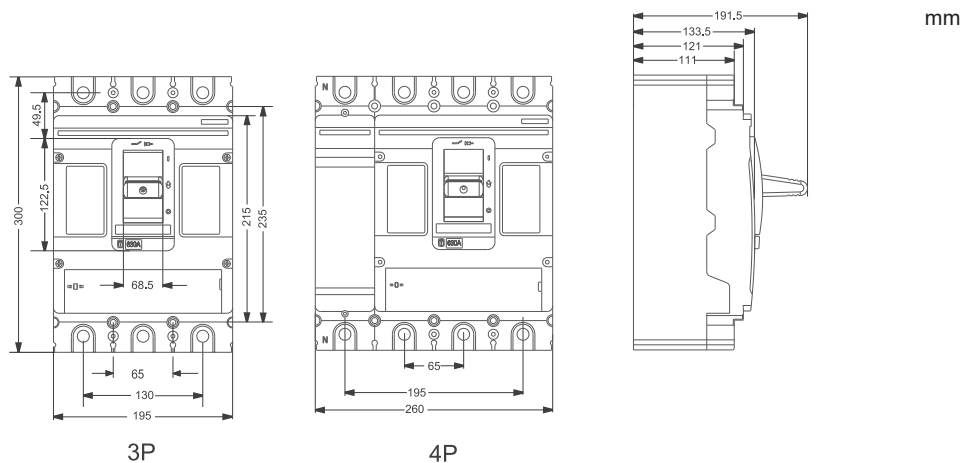
Mechanical parameters

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

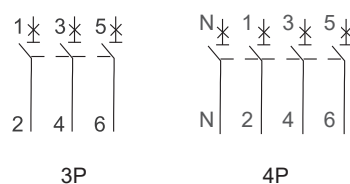
Derating coefficient of technical parameters based on altitude

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



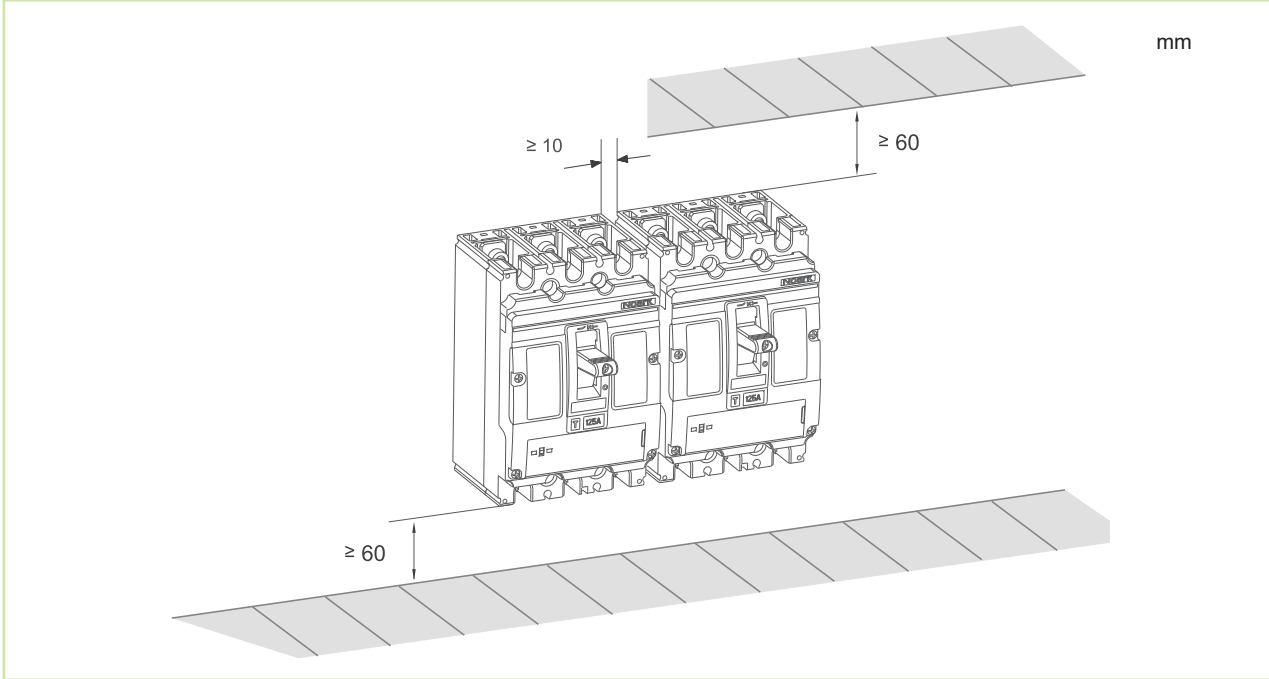
Wiring diagram



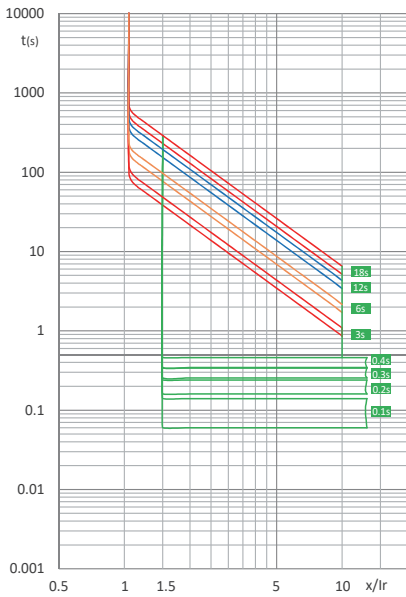
Technical Data Ex9M4 SU20S

SU20S Moulded Case Circuit Breakers up to 630 A

installation space

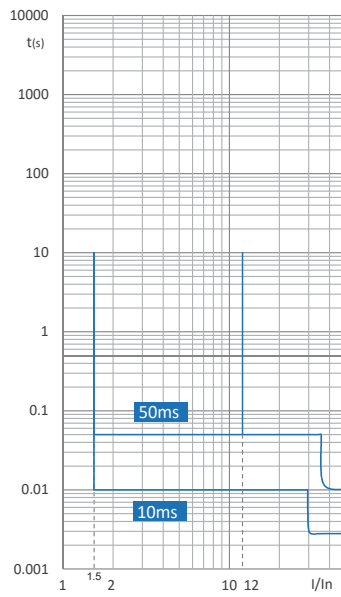


Tripping characteristics

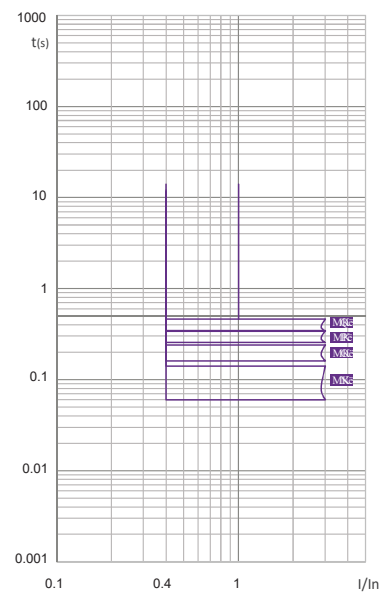


Long time delay:
I_r=
(0.4/0.5/0.6/0.7/
0.8/0.9/0.95/1)I_n
T_r=
(3/6/12/18)s

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)



Grounding protection:
I_g=
(0.4 ~ 1)I_n
T_g=
(0.1 ~ 0.4)s

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

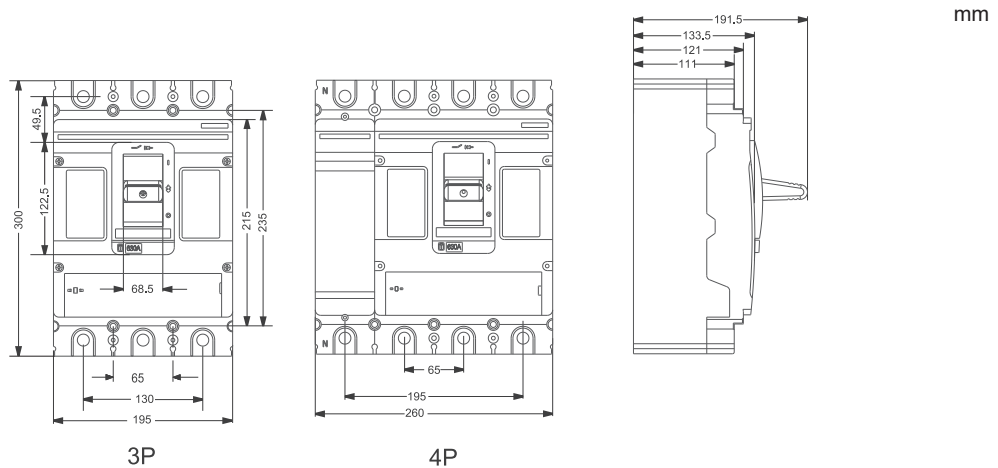
Mechanical parameters

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

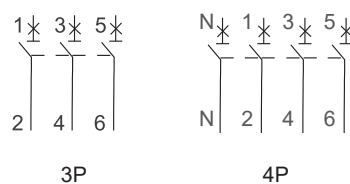
Derating coefficient of technical parameters based on altitude

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

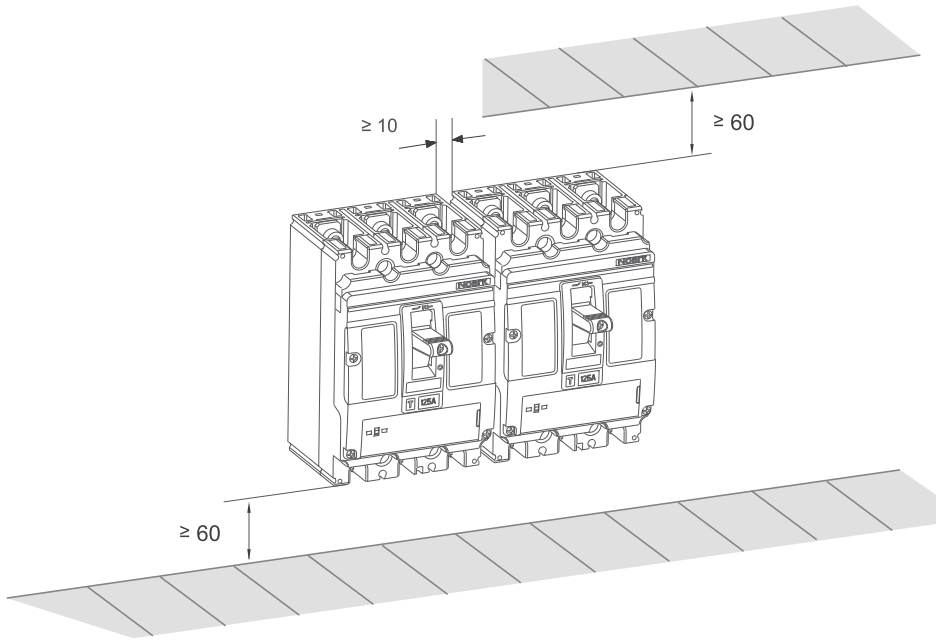


Technical Data Ex9M5 SU20S

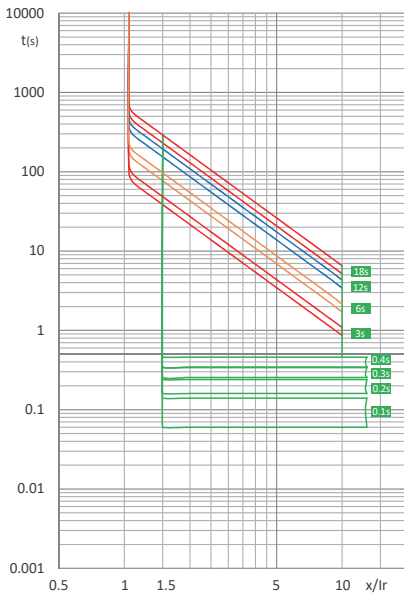
Moulded Case Circuit Breakers up to 630 A

installation space

mm

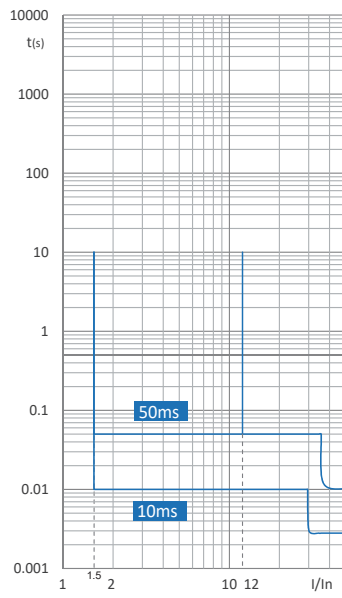


Tripping characteristics

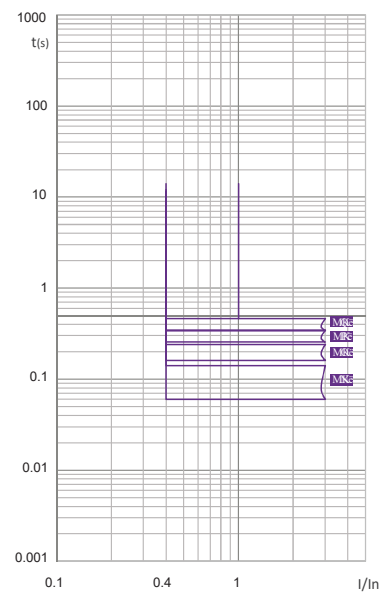


Long time delay:
 $I_r =$
 (0.4/0.5/0.6/0.7/
 0.8/0.9/0.95/1) I_n
 $T_r =$
 (3/6/12/18)s

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)



Grounding protection:
 $I_g =$
 (0.4 ~ 1) I_n
 $T_g =$
 (0.1 ~ 0.4)s

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
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 — 101415
Terminal cover, short	TCV21 3P, 4P	101439, 102372
Terminal cover, long	TCE21 3P, 4P	101440, 102373
Phase barrier	PHS21	112110
Connection terminals	MC21	103705 — 103708
DIN-rail adapter	DRA21	106319

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

Technical Data Ex9M1 AC SD

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 (m Ω)	0.8
Pole power dissipation (W)	20.5

Mechanical parameters

Device width 3P / 4P	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 3P / 4P	1.05 kg / 1.55 kg
Mounting position	vertical, can be rotated by 90° in each axis

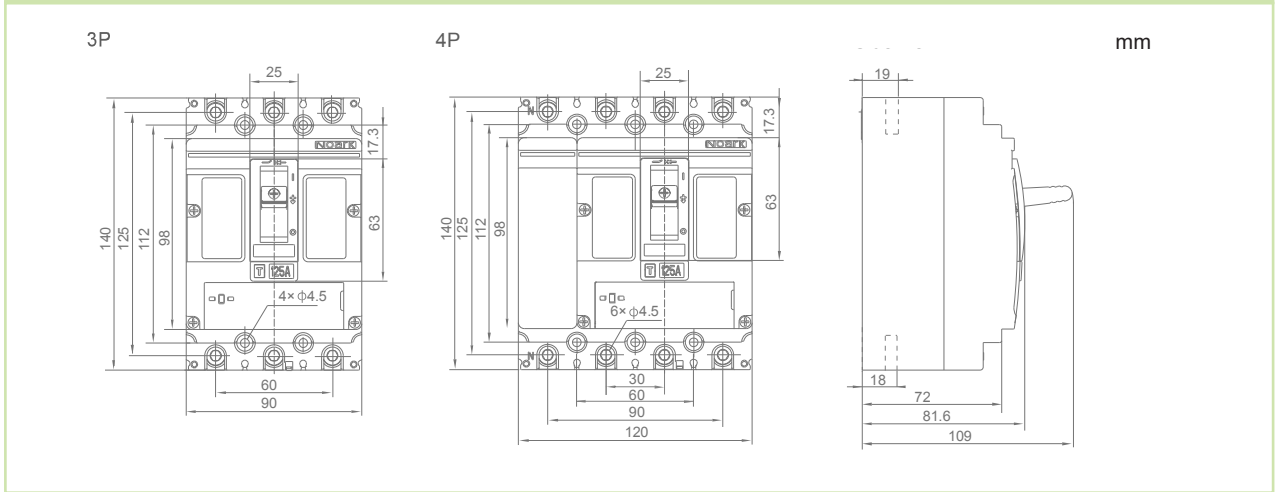
Derating coefficient of technical parameters based on altitude

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

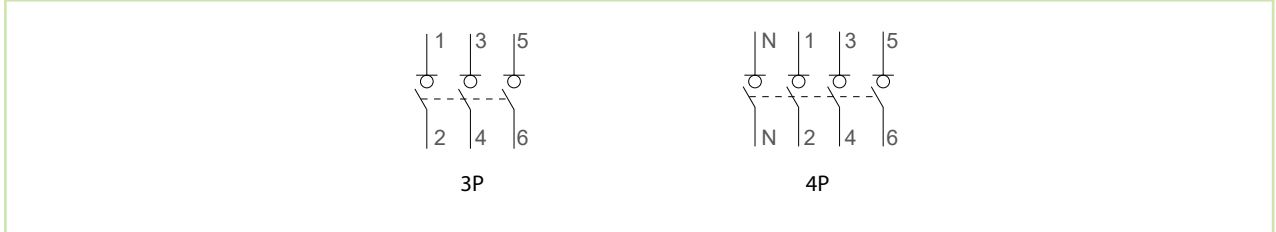
Technical Data Ex9M1SD AC

AC Moulded Case Switch Disconnectors up to 160 A

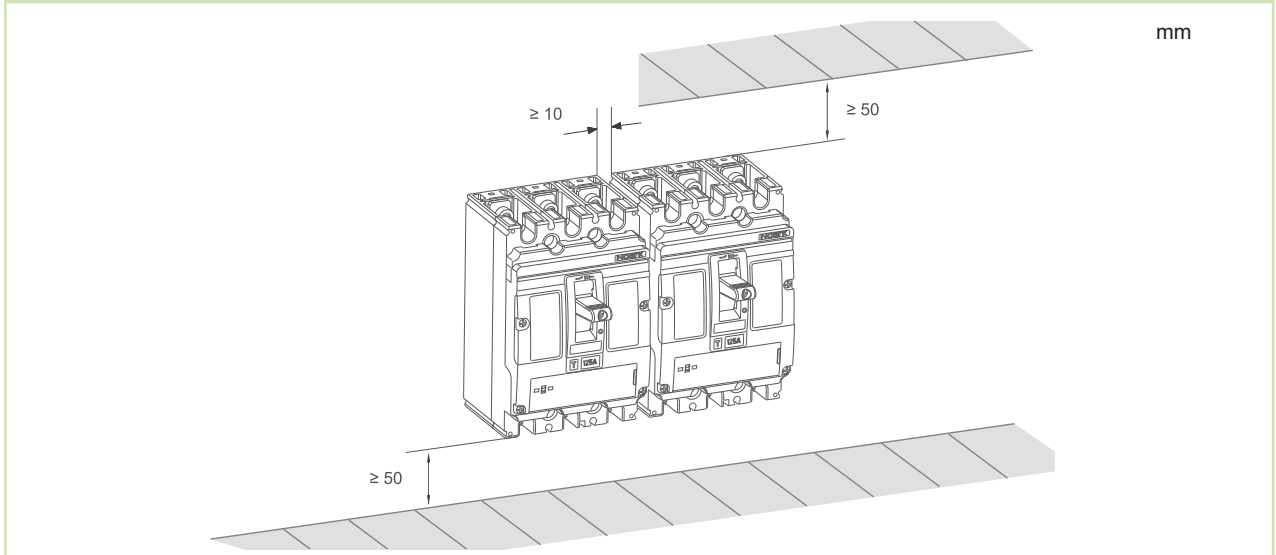
Dimensions



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
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 — 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

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 (mΩ)	0.4
Pole power dissipation (W)	25

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	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	1.85 kg / 2.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

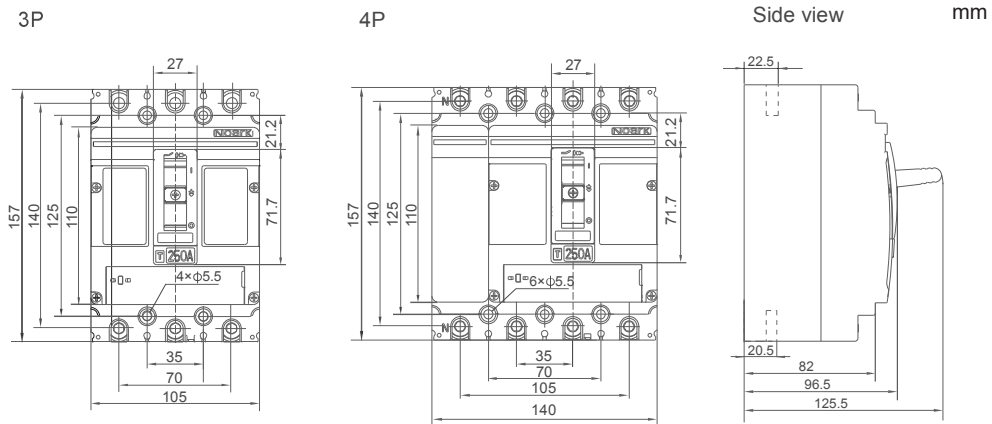
Derating coefficient of technical parameters based on altitude

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

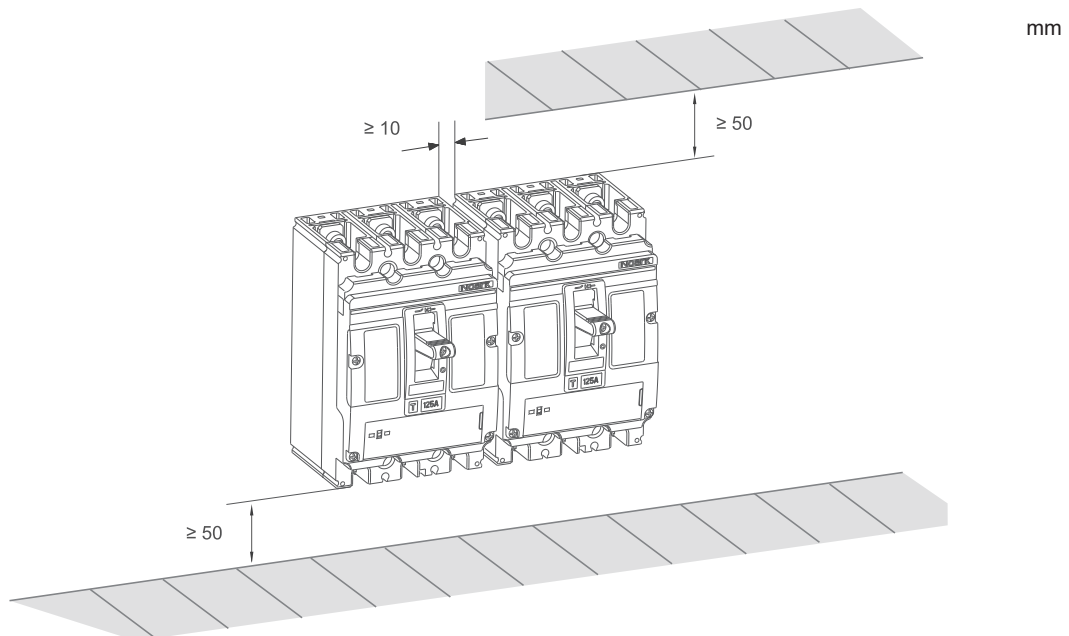
Dimensions



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 — 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

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 (m Ω)	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	\leq 8 mm
Busbar width	\leq 30 mm
Cable lug width	\leq 30 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	\leq 50 % at 40 °C, \leq 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

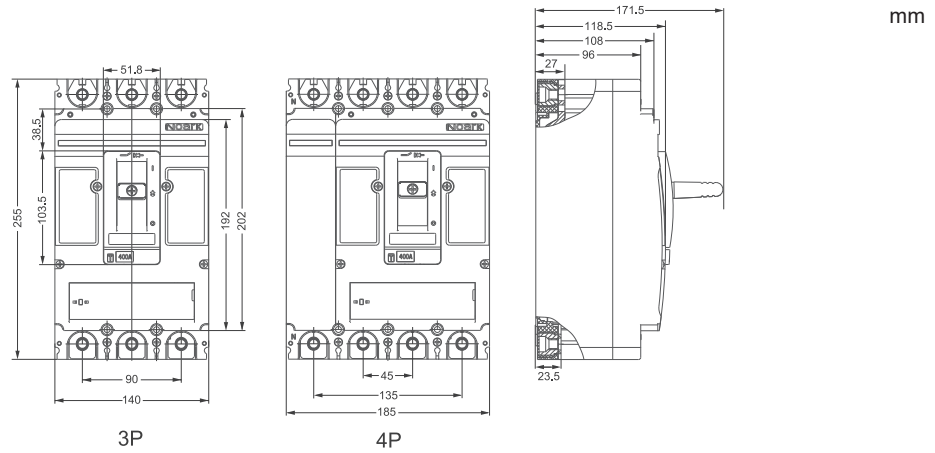
Derating coefficient of technical parameters based on altitude

Altitude	\leq 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

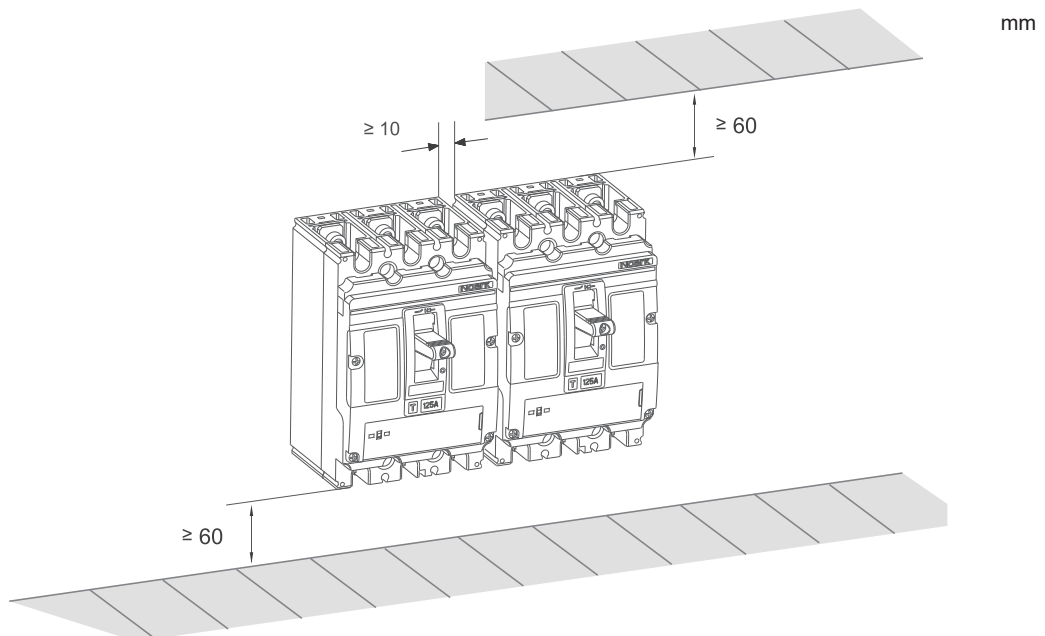
Dimensions



Wiring diagram



Installation space



Technical Data Ex9M4SD 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	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

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 (m Ω)	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	\leq 10 mm
Busbar width	\leq 50 mm
Cable lug width	\leq 50 mm
Fastening torque of terminals	30 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	\leq 50 % at 40 °C, \leq 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

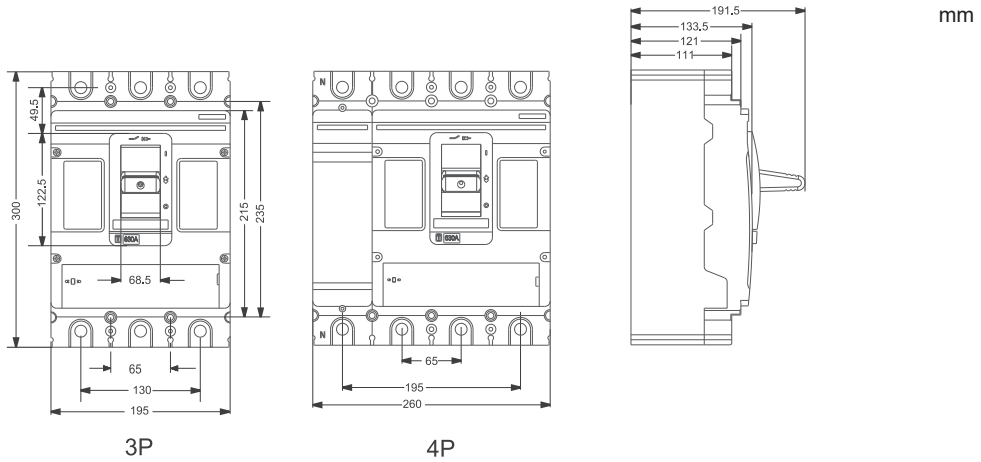
Derating coefficient of technical parameters based on altitude

Altitude	\leq 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

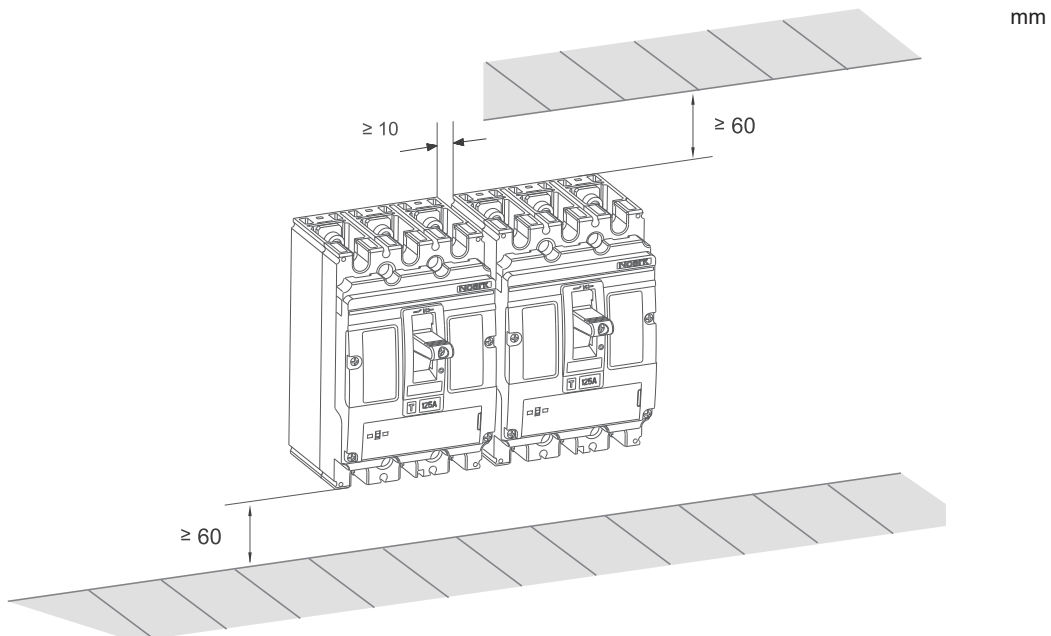
Dimensions



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	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

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 (m Ω)	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

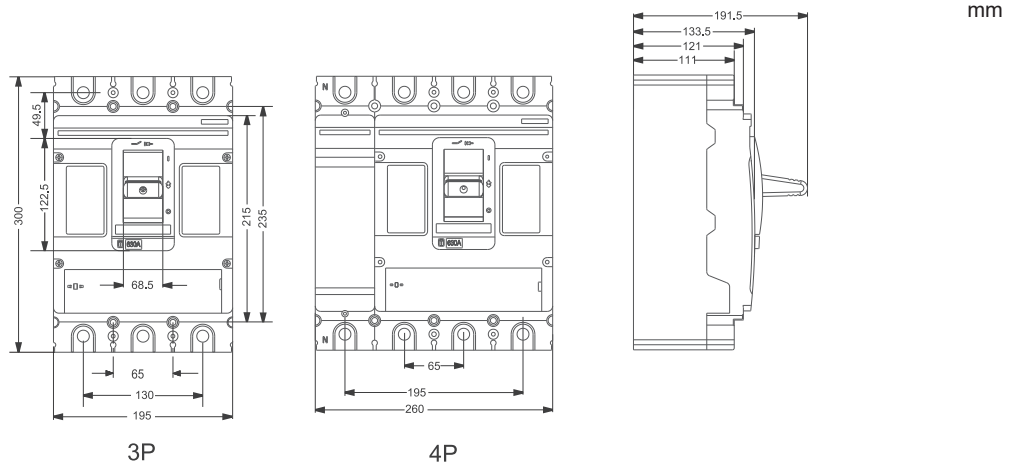
Derating coefficient of technical parameters based on altitude

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

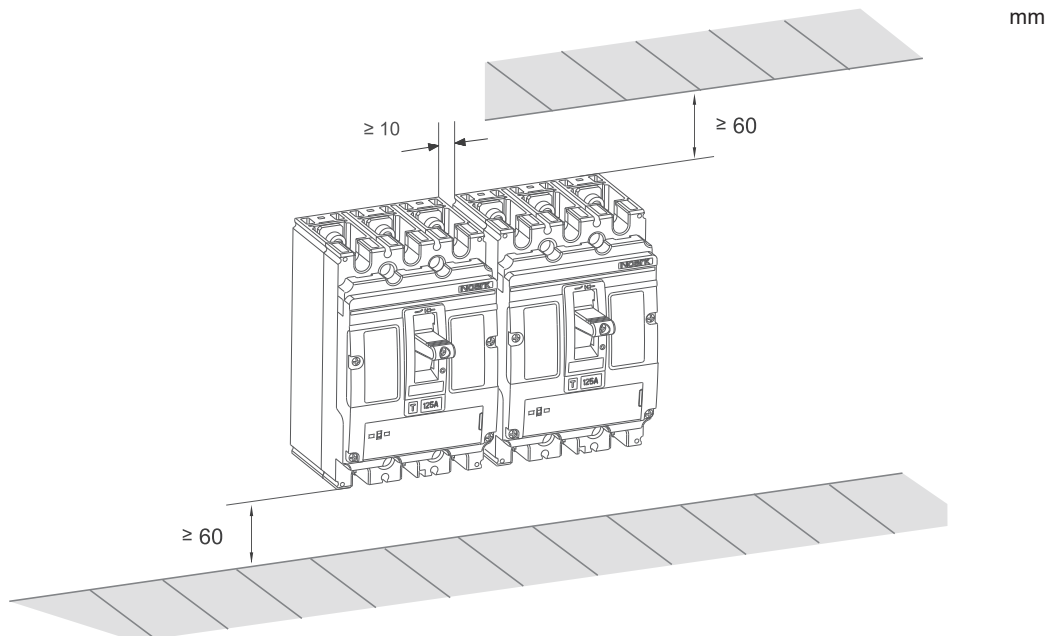
Dimensions



Wiring diagram



Installation space



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 (m Ω)	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

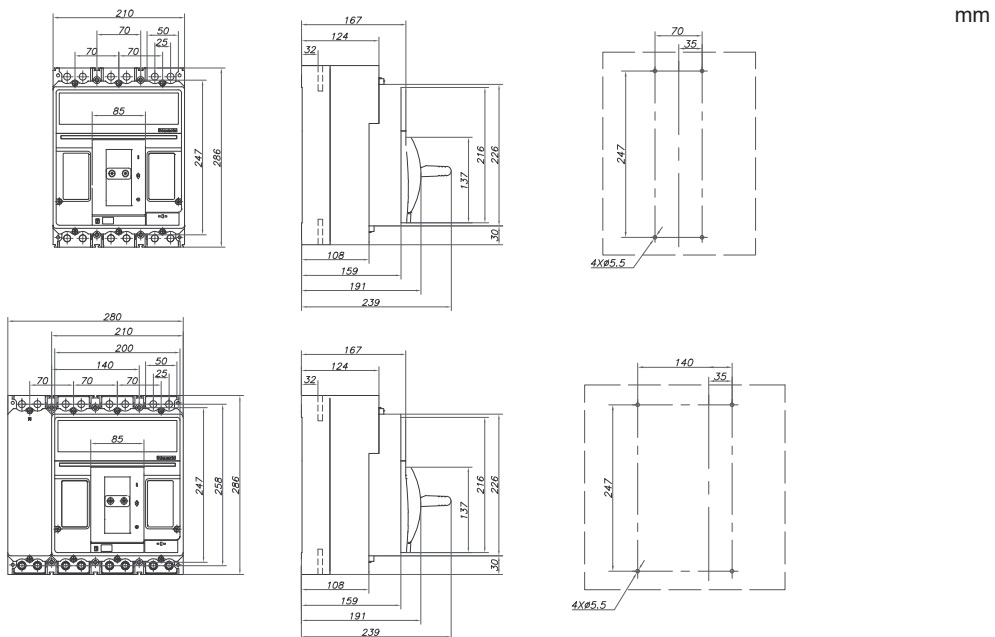
Altitude	$\leq 2 000$ m	3 000 m	4 000 m	5 000 m
Derating op. current I_n coefficient	1	0.96	0.93	0.9
Maximum rated op. voltage U_e	690 V AC	550 V AC	480 V AC	420 V AC
Rated insulation voltage U_i	1000 V AC	930 V AC	870 V AC	800 V AC
Rated impulse withstand voltage U_{imp}	8 kV	8 kV	8 kV	8 kV
Dielectric 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

3P



mm

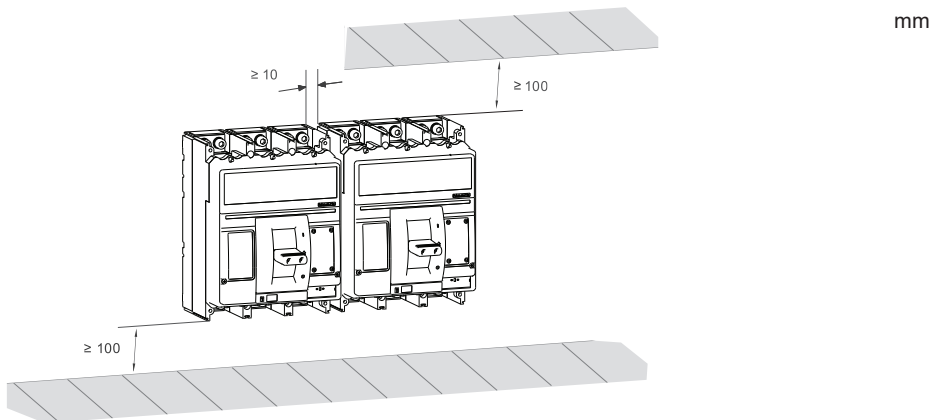
Wiring diagram



3P

4P

Installation space



mm

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 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 $10 \times I_n$

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 — 101415
Terminal cover, short	TCV21 3P, 4P	101439, 102372
Terminal cover, long	TCE21 3P, 4P	101440, 102373
Phase barrier	PHS21	112110
Connection terminals	MC21	103705 — 103708
DIN-rail adapter	DRA21	106319
Plug-in base	PIA 21	112875, 112876, 112881, 112882

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]					
	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	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

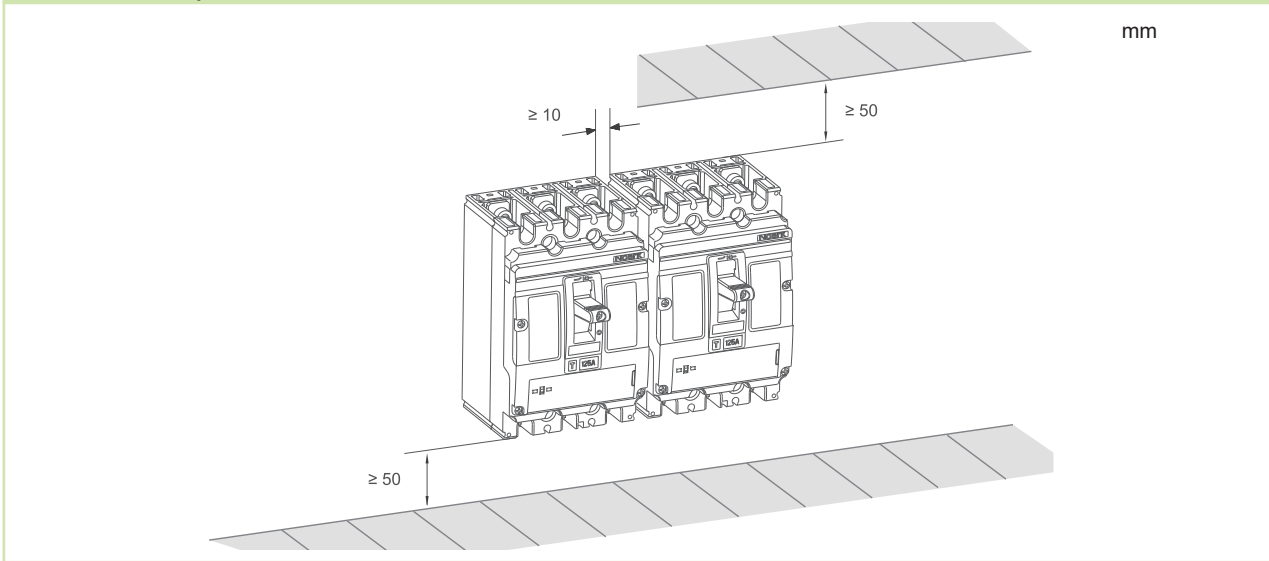
Power dissipation characteristics

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

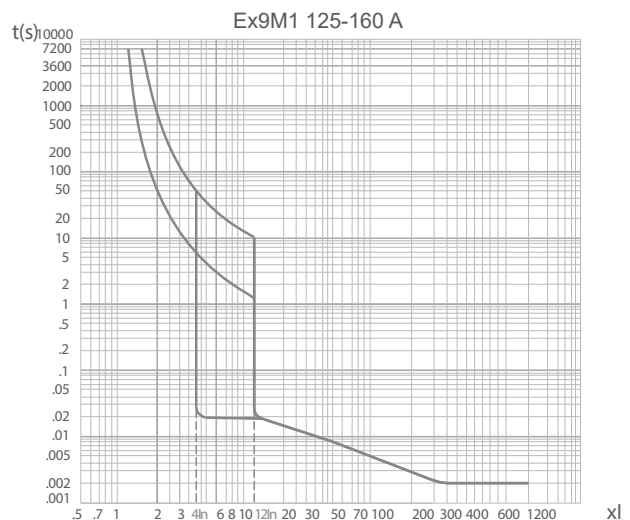
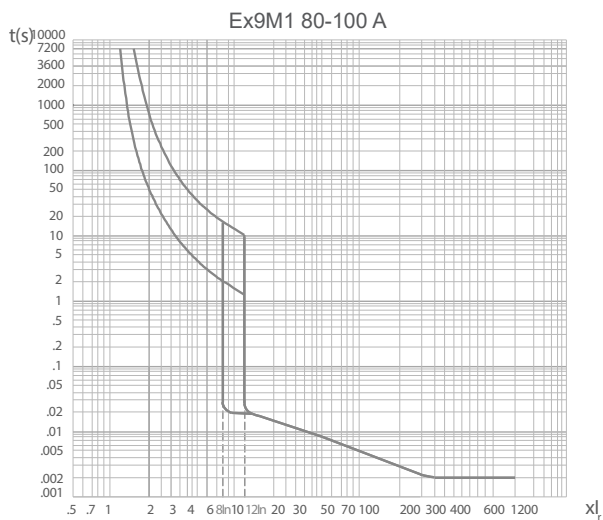
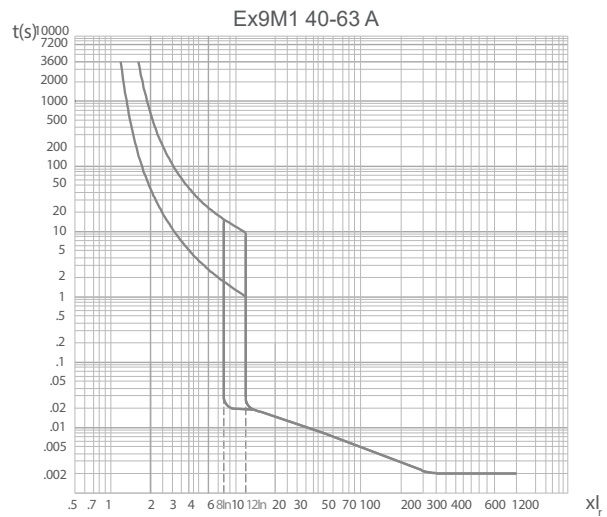
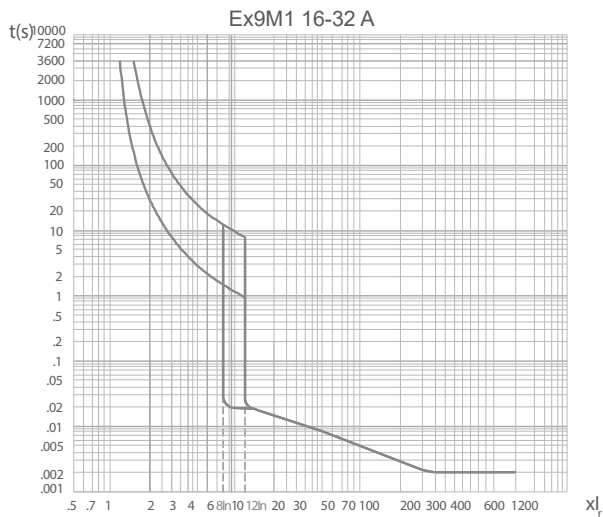
Technical Data Ex9M1 DC TM

DC TM Moulded Case Circuit Breakers up to 160 A

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 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 — 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	112877, 112878, 112883, 112884

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]					
	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	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

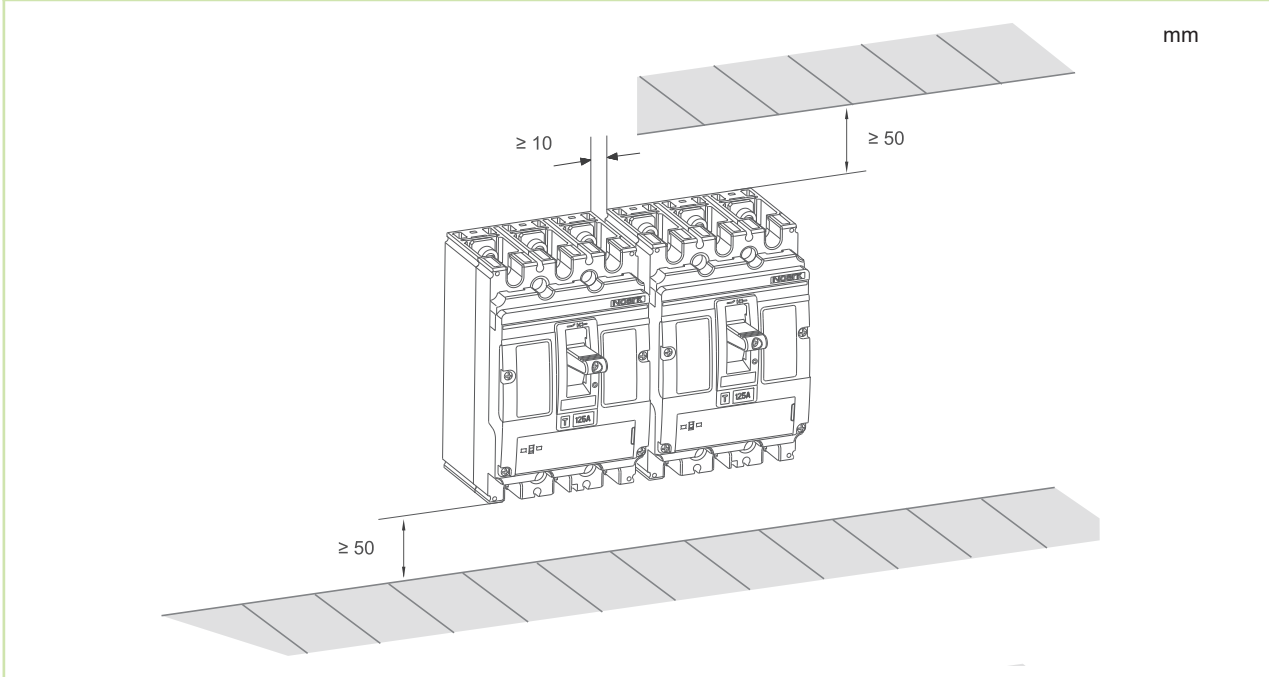
Power dissipation characteristics

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

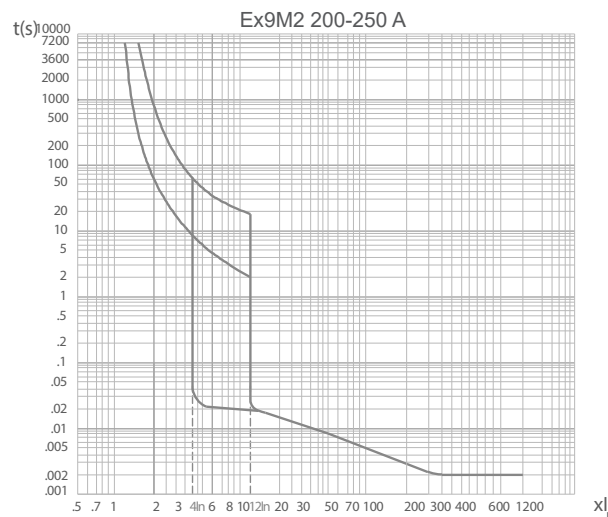
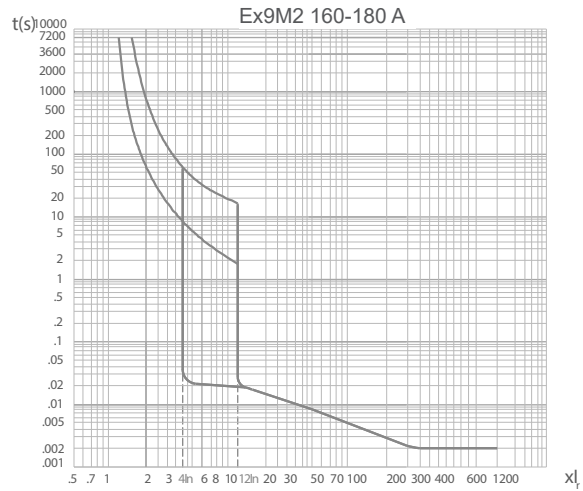
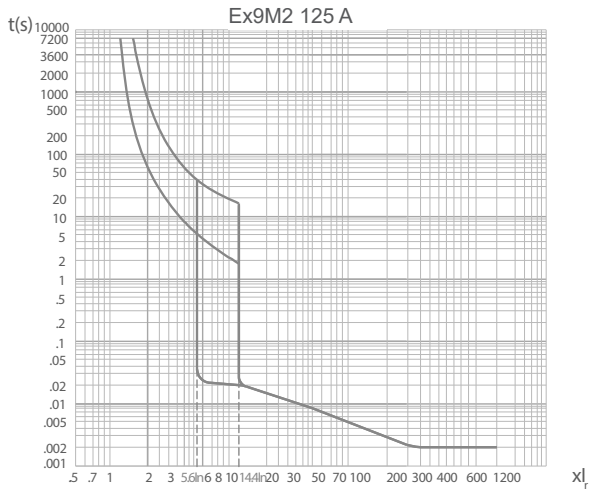
Technical Data Ex9M2 DC TM

DC TM Moulded Case Circuit Breakers up to 250 A

Installation space



Tripping characteristics



Technical Data Ex9M3 DC TM

DC 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 — 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	112879, 112880, 112885, 112886
Withdrawable base	DOB 23	108887, 108899, 108893, 108905, 108889, 108901, 108895, 108907

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 500 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 / 500 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	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 DC TM

DC TM Moulded Case Circuit Breakers up to 500 A

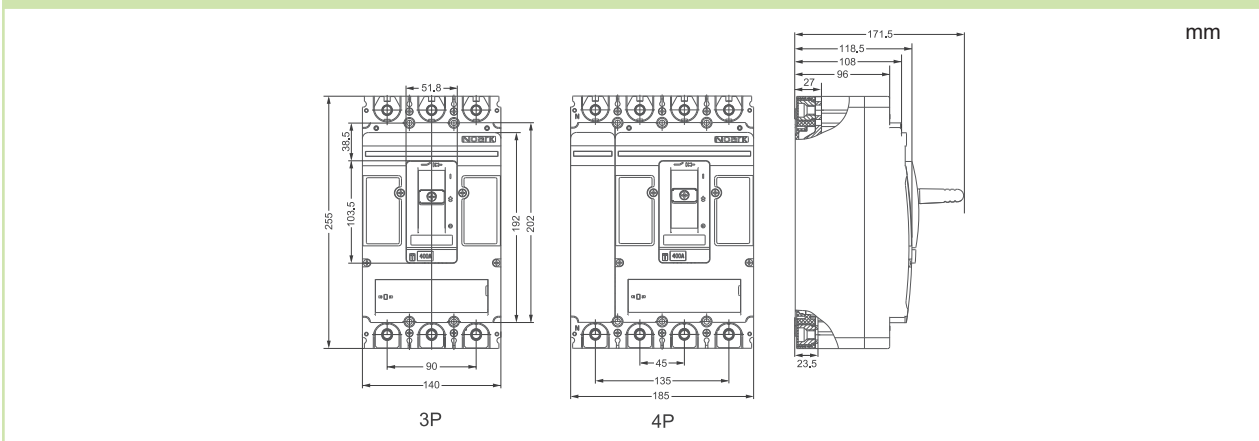
Mechanical parameters

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

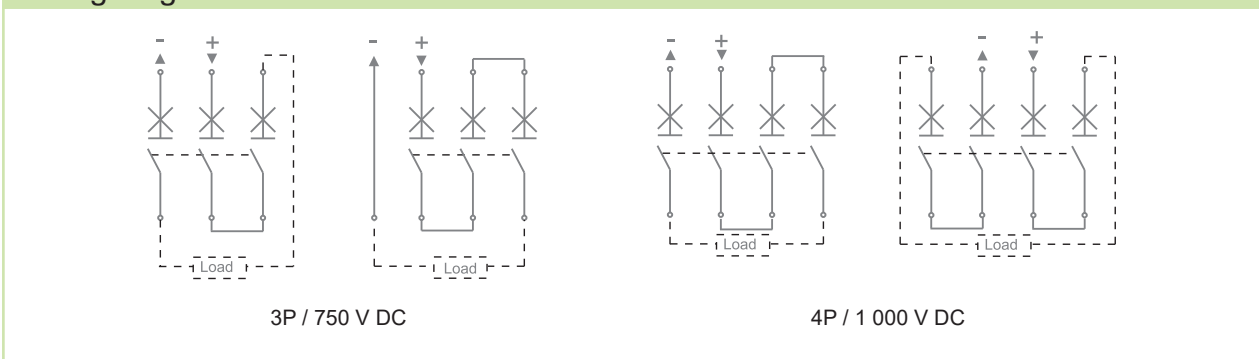
Derating coefficient of technical parameters based on altitude

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	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



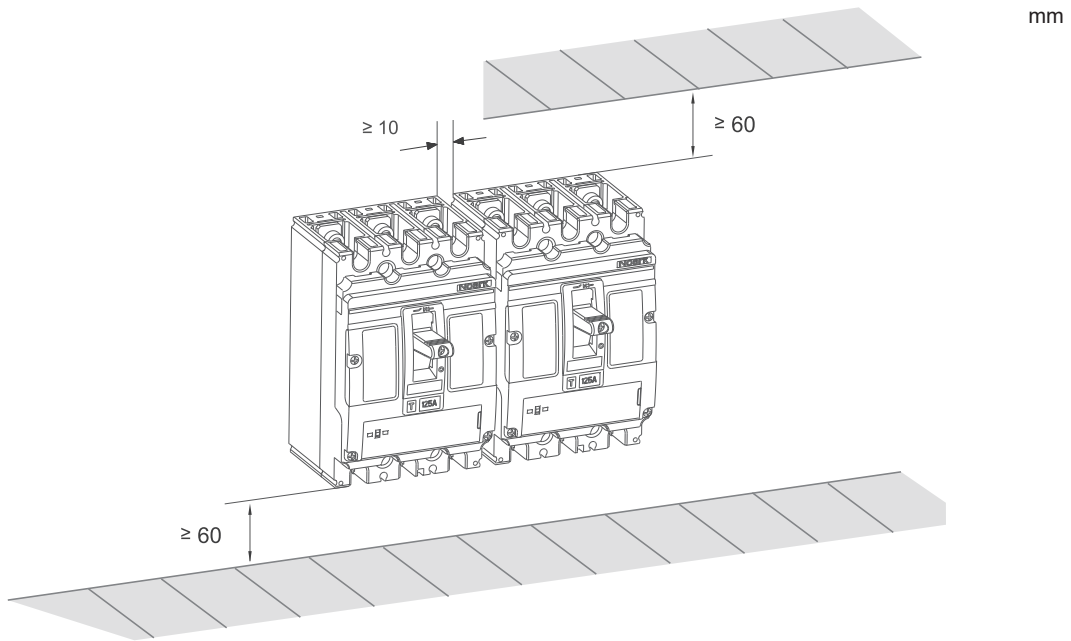
Wiring diagram



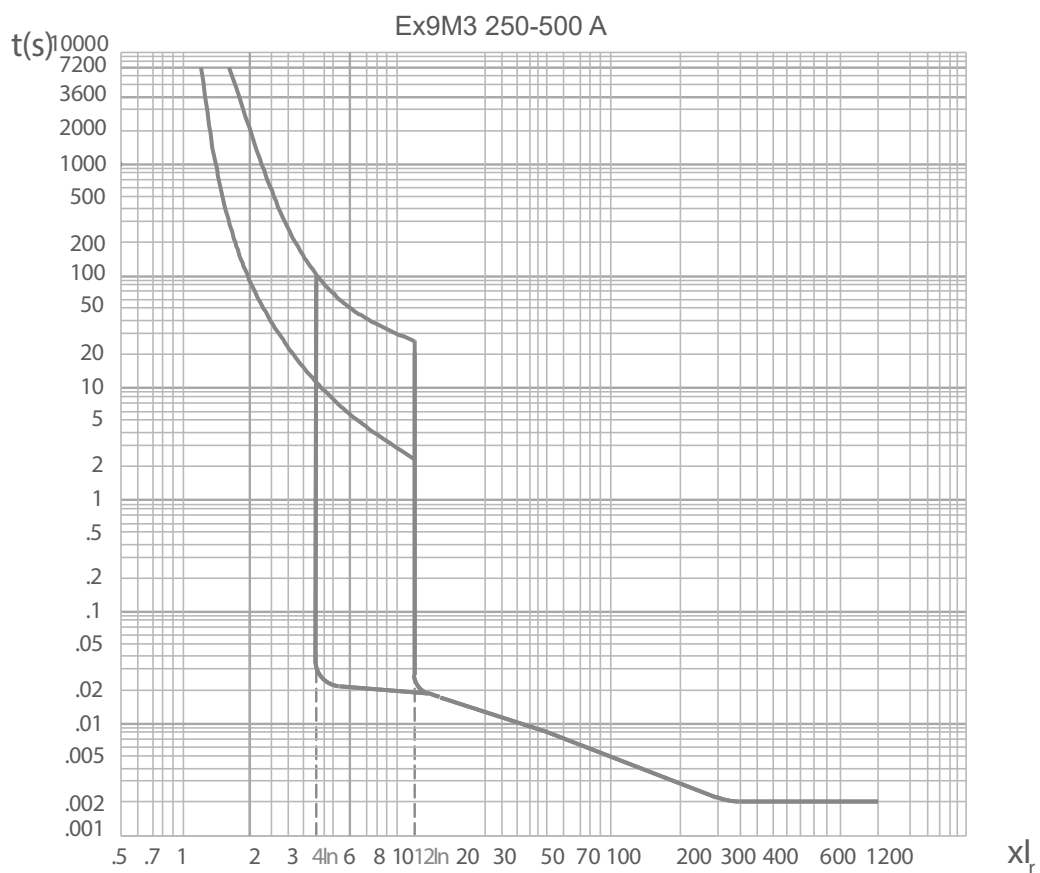
Technical Data Ex9M3 DC TM

DC TM Moulded Case Circuit Breakers up to 500 A

Installation space



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 $(5 - 10) \times I_n$

$I_{IN} = I_i$

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	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	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]		
	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

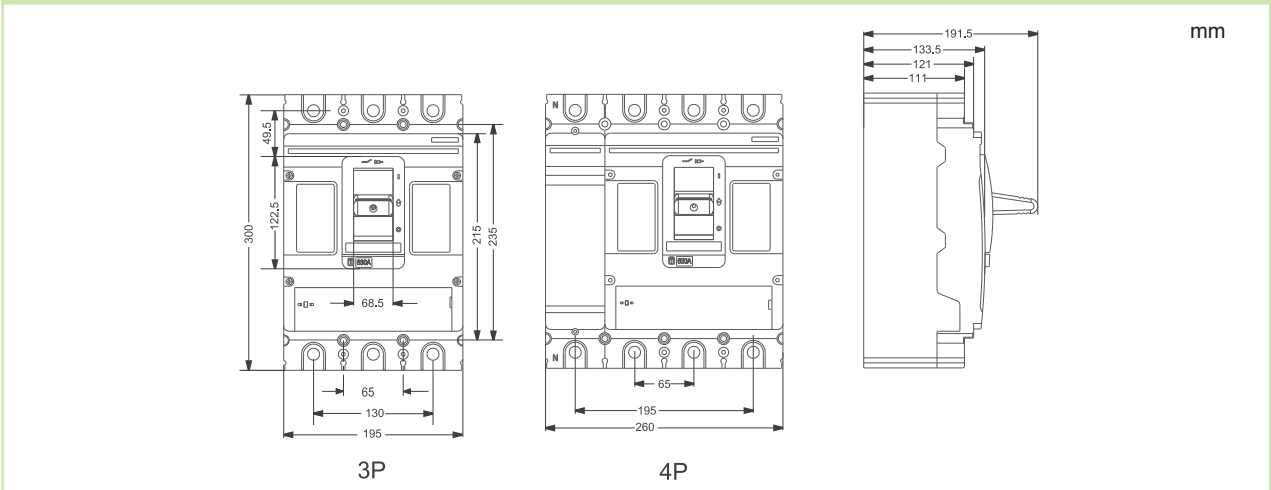
Mechanical parameters

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

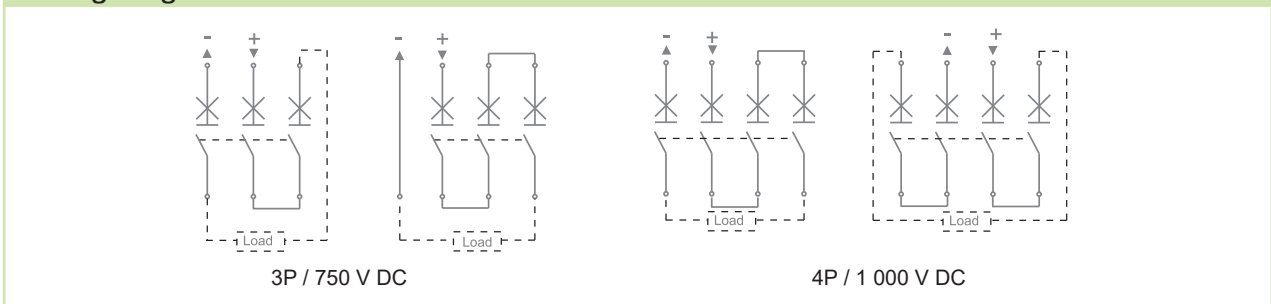
Derating coefficient of technical parameters based on altitude

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



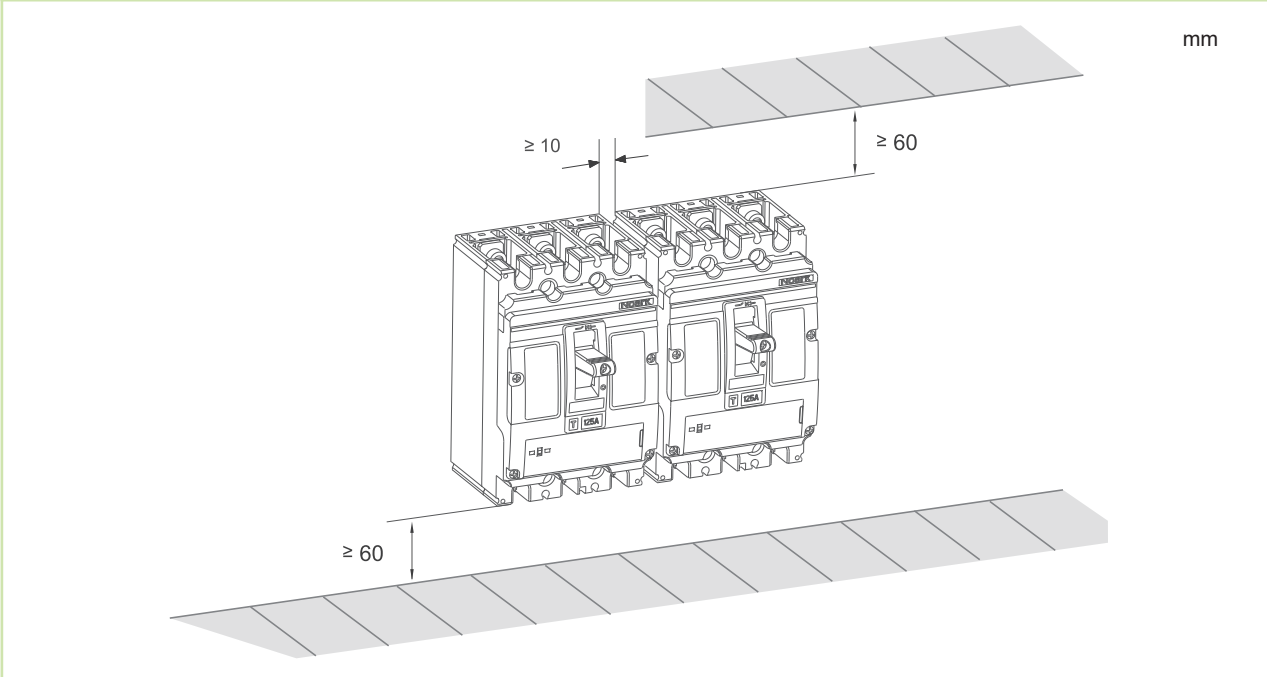
Wiring diagram



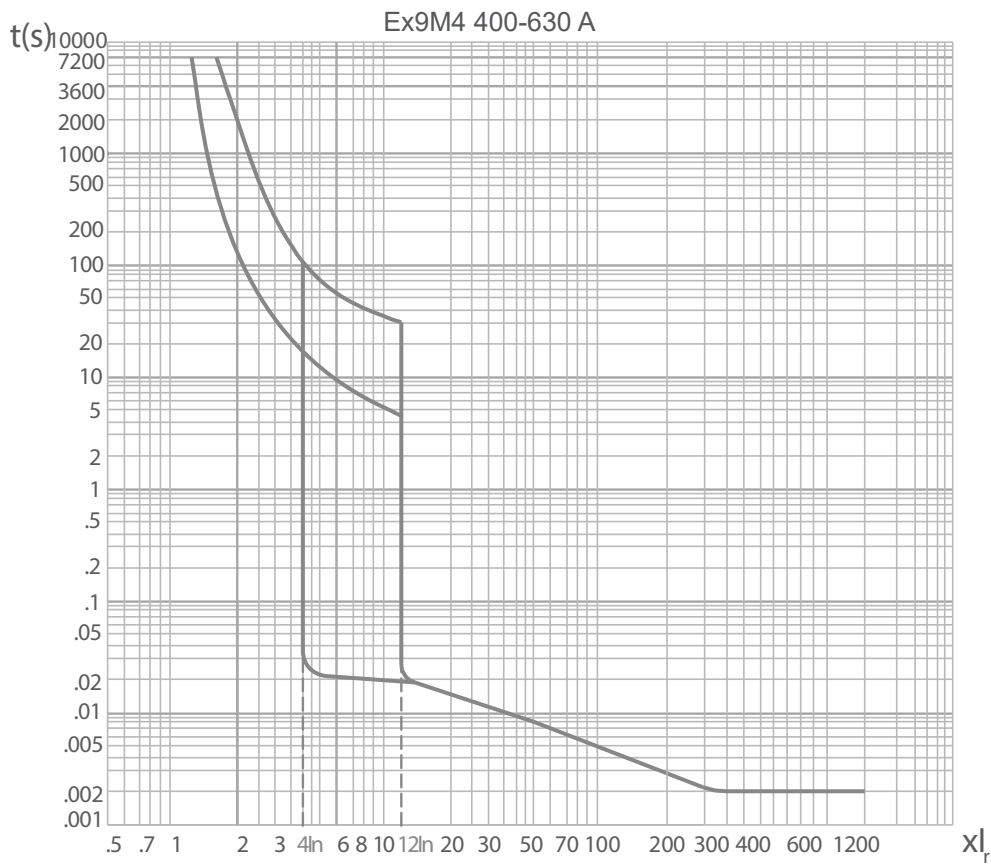
Technical Data Ex9M4 DC TM

DC TM Moulded Case Circuit Breakers up to 630 A

Installation space



Tripping characteristics



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 $(5 - 10) \times I_n$

$I_{IN} = I_i$

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	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	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	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

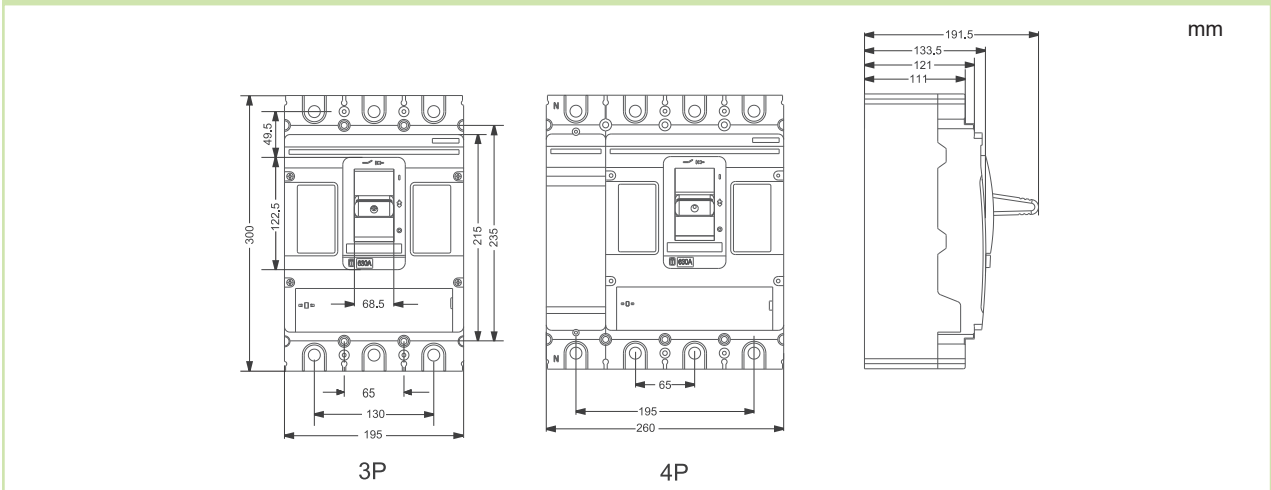
Mechanical parameters

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

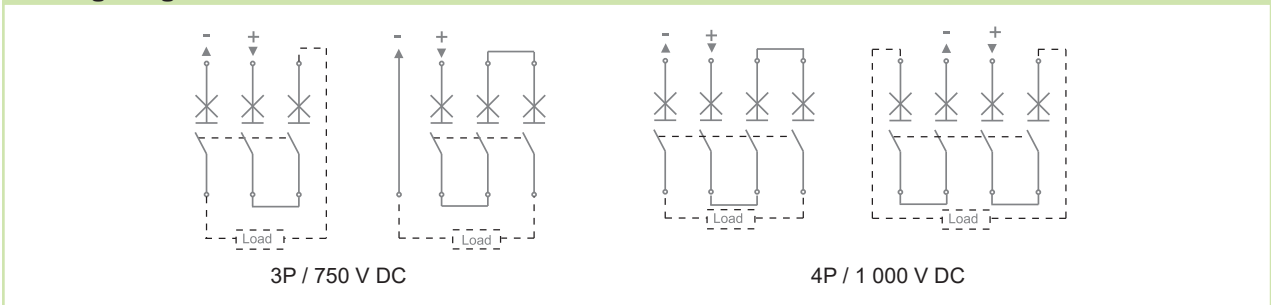
Derating coefficient of technical parameters based on altitude

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



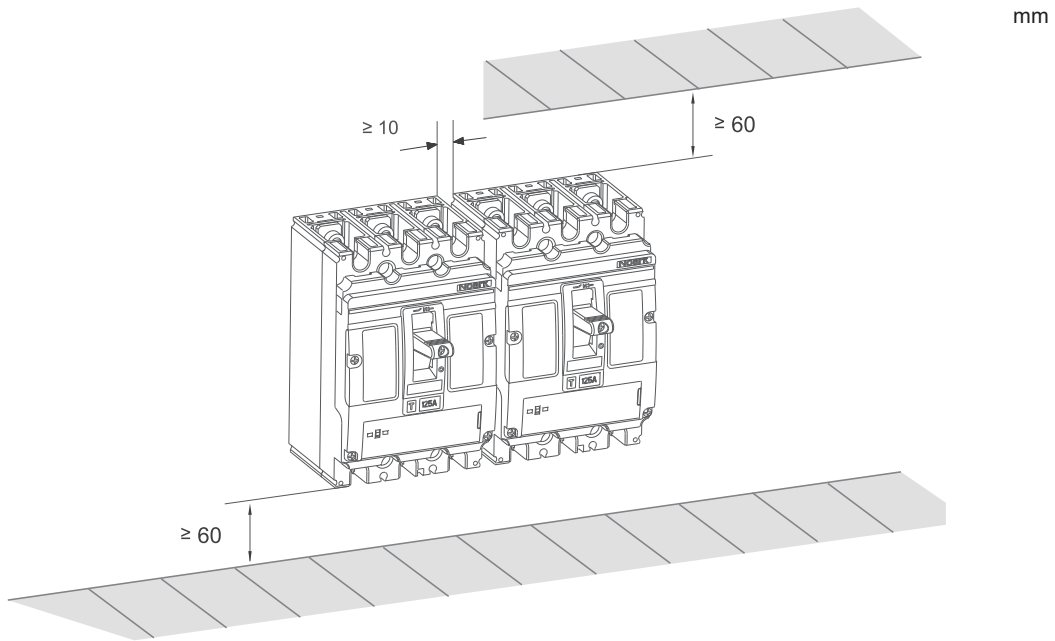
Wiring diagram



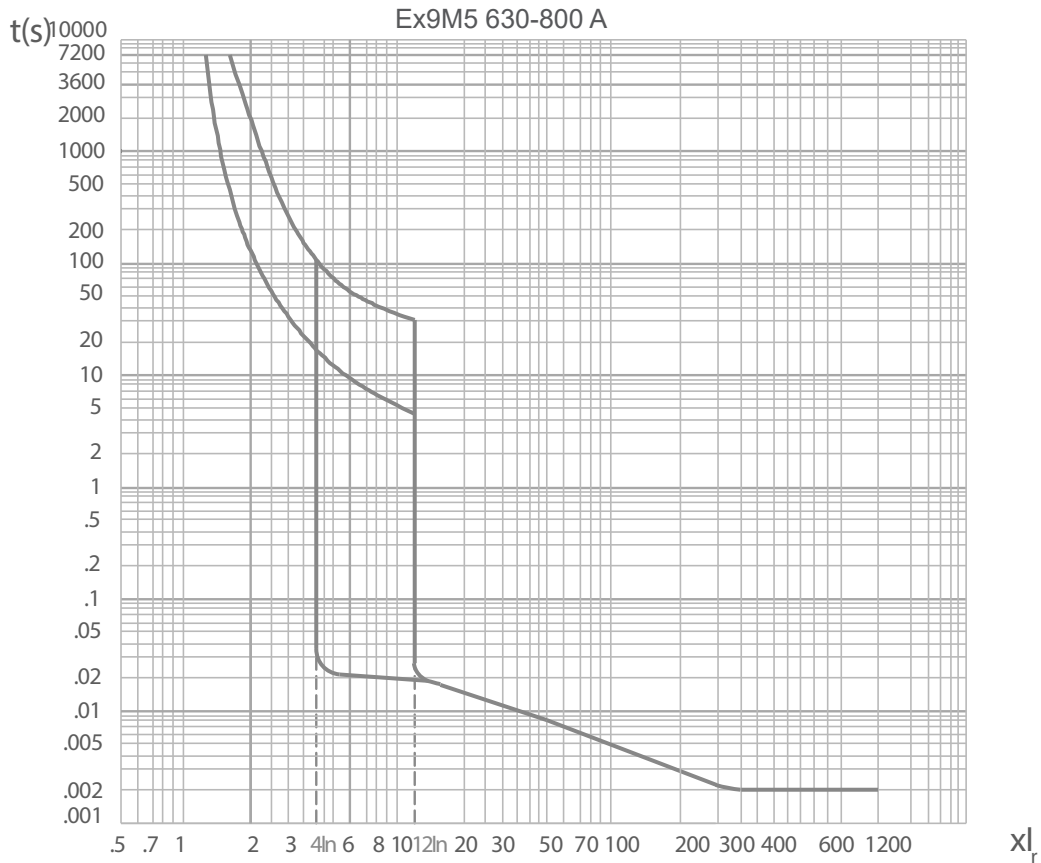
Technical Data Ex9M5 DC TM

DC TM Moulded Case Circuit Breakers up to 800 A

Installation space



Tripping characteristics



Technical Data Ex9MV2S

DC Moulded Case Circuit Breakers for photovoltaic

General parameters

Suitable for photovoltaics application

Internal accessories

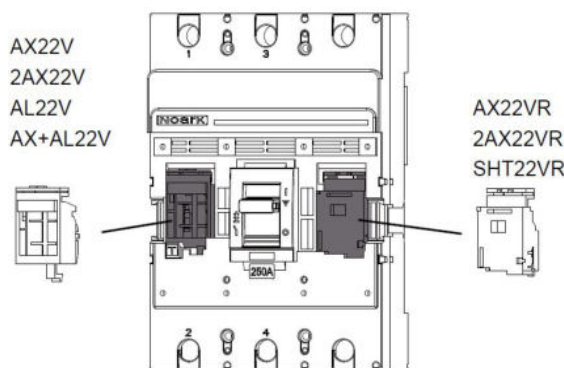
Left auxiliary contact unit	AX22V	110199
	2AX22V	110200
Right auxiliary contact unit	AX22VR	110206
	2AX22VR	110207
Left alarm contact unit	AL22V	110201
Left auxiliary + alarm contact unit	AX+AL22V	110202
Right shunt trip releases	SHT22VR	110208-110210

External accessories

Extended rotary handle	ERH-1	110211
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Mounting screws as well as phase barriers in the scope of delivery

Accessories position



Electrical parameters

Tested according to	IEC/EN 60947-2			
Rated op. voltage U_e	1500 V DC			
Rated insulation voltage U_i	1500 V			
Rated impulse withstand voltage U_{imp}	12 kV			
Rated ultimate short-circuit breaking capacity I_{cu}	15 kA			
Rated service short-circuit breaking capacity I_{cs}	15 kA			
Rated current	125 A, 160 A, 200 A, 225 A, 250 A			
Utilization category	A			
Electrical service life	2 000 operation cycles			
Maximum frequency of switch. cycles	120 cycles per hour			
Total disconnection time at short circuit	< 40 ms			
Power loss per pole	max 32 W			
Altitude	2000 m	3000 m	4000 m	5000 m
Rated operational current I_n	$1x I_n$	$0.97x I_n$	$0.93x I_n$	$0.89x I_n$
Rated operational voltage U_e	1500 V DC	1350 V DC	1200 V DC	1050 V DC
Rated insulation voltage U_i	1500 V	1500 V	1500 V	1500 V
Dielectric properties	3110 V DC	2890 V DC	2700 V DC	2500 V DC

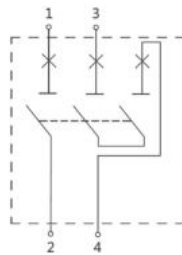
Technical Data Ex9MV2S

DC Moulded Case Circuit Breakers for photovoltaic

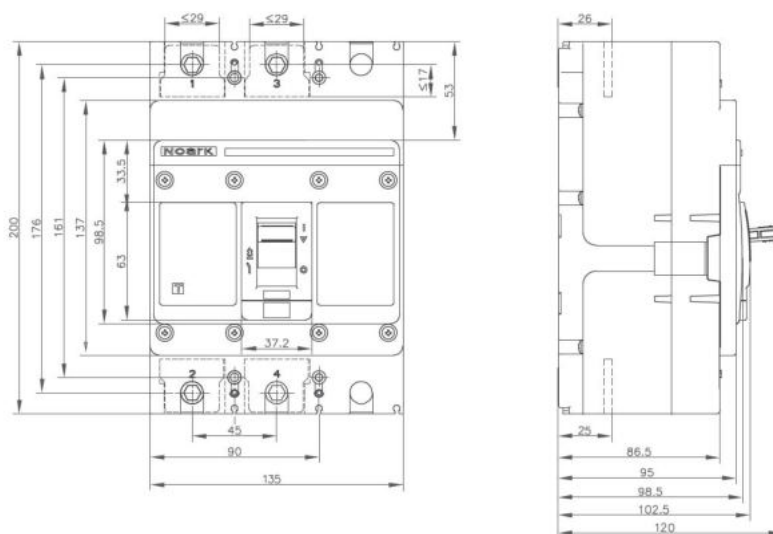
Mechanical parameters

Device width	135 mm
Device height	200 mm
Device depth	103 mm
Mounting	onto panel
Degree of protection	IP20
Mechanical service life	10 000 operation cycles
Terminals	M10 screws
Busbar thickness	≤ 4 mm
Busbar width	≤ 29 mm
Cable lug width	≤ 50 mm
Fastening torque of terminals	25 Nm
Ambient temperature	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % at 20 °C
Pollution degree	3
Weight	3.3 kg
Mounting position	vertical, can be rotated by 90° in each axis

Wiring diagram



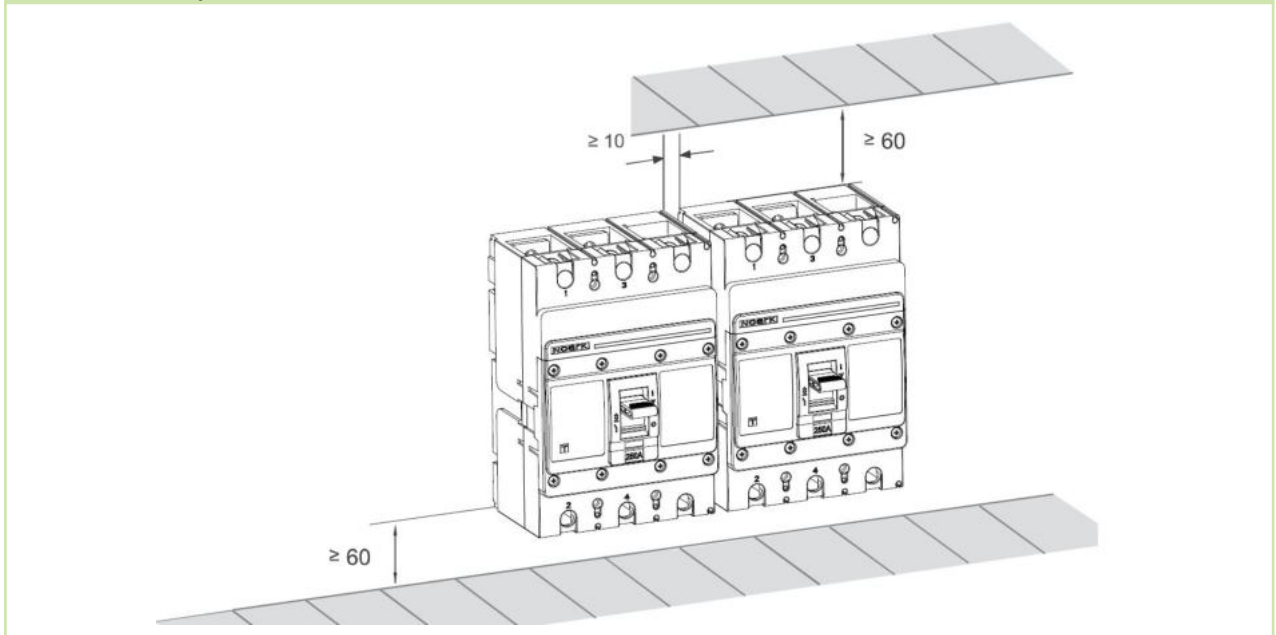
Dimensions



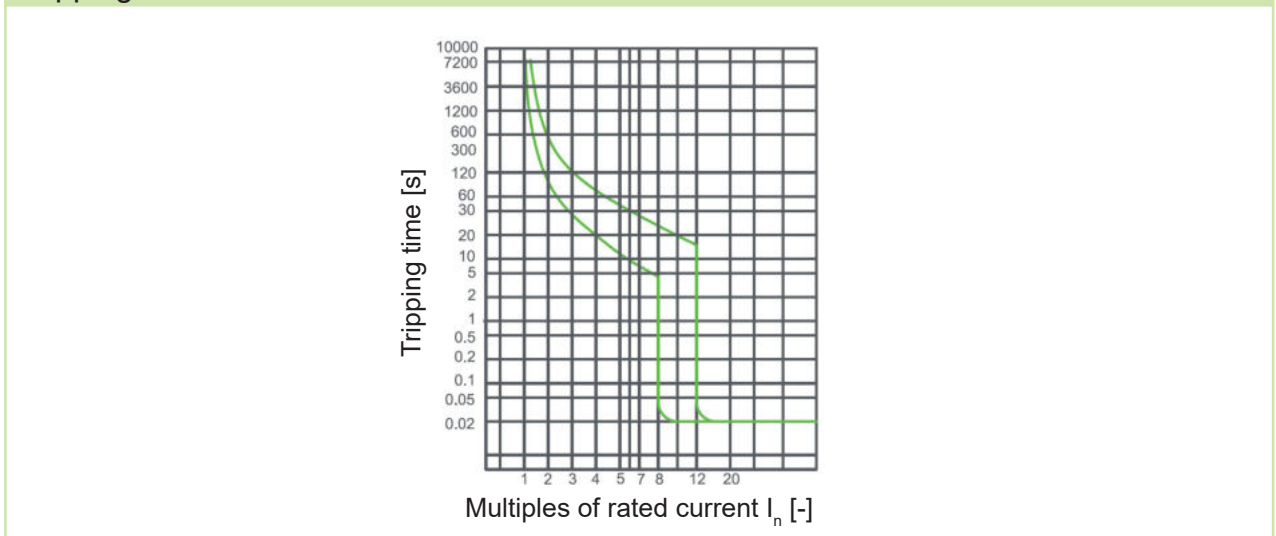
Technical Data Ex9MV2S

DC Moulded Case Circuit Breakers for photovoltaic

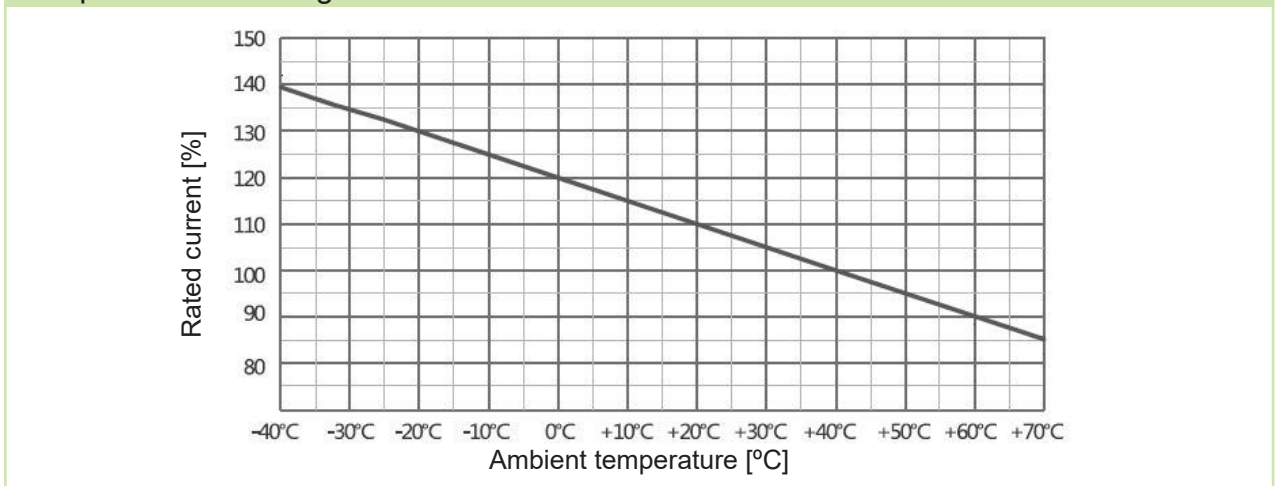
Installation space



Tripping characteristics



Temperature derating curve



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
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 — 101415
Terminal cover, short	TCV21 3P, 4P	101439, 102372
Terminal cover, long	TCE21 3P, 4P	101440, 102373
Phase barrier	PHS21	112110
Connection terminals	MC21	103705 — 103708
DIN-rail adapter	DRA21	106319

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

Technical Data Ex9M1 AC SD

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 (m Ω)	0.8
Pole power dissipation (W)	20.5

Mechanical parameters

Device width 3P / 4P	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 3P / 4P	1.05 kg / 1.55 kg
Mounting position	vertical, can be rotated by 90° in each axis

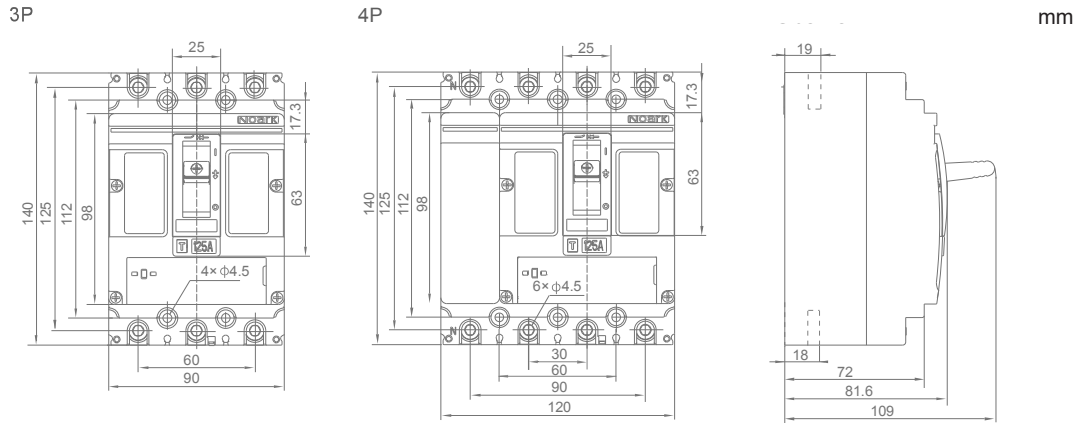
Derating coefficient of technical parameters based on altitude

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

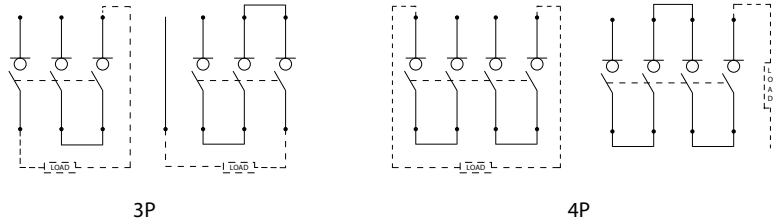
Technical Data Ex9M1SD DC

DC Moulded Case Switch Disconnectors up to 160 A

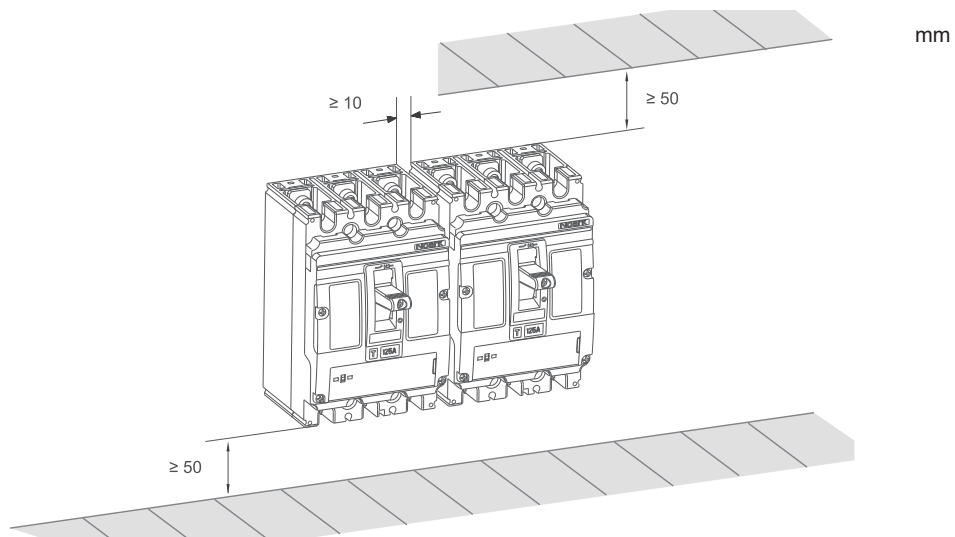
Dimensions



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

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 — 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

Mounting screws, screw type 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 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	-40 — +70 °C
Relative humidity	≤ 50 % at 40 °C, ≤ 90 % monthly average
Pollution degree	3
Weight 3P / 4P	1.85 kg / 2.5 kg
Mounting position	vertical, can be rotated by 90° in each axis

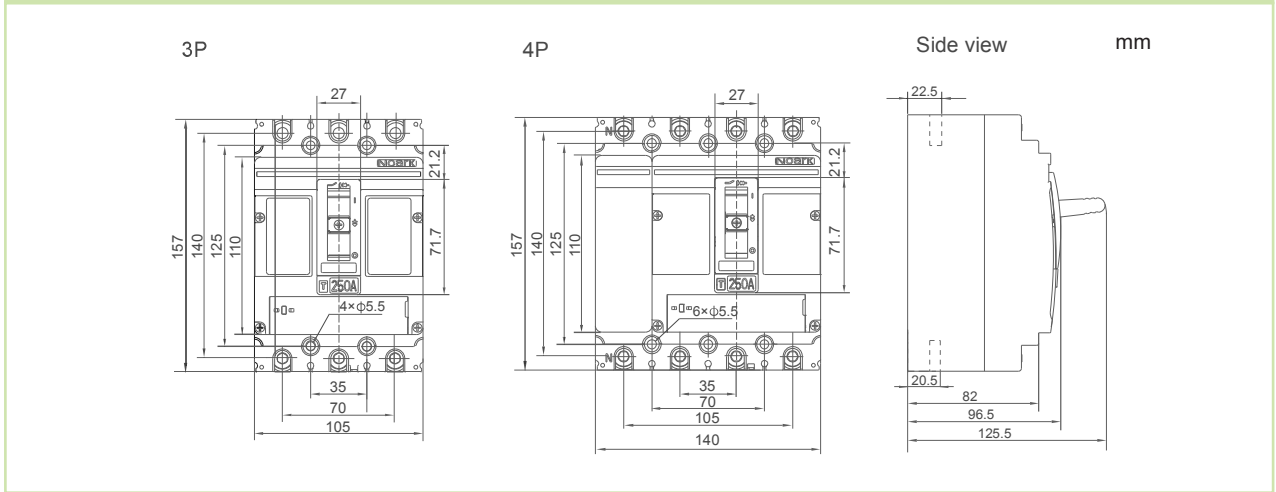
Derating coefficient of technical parameters based on altitude

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

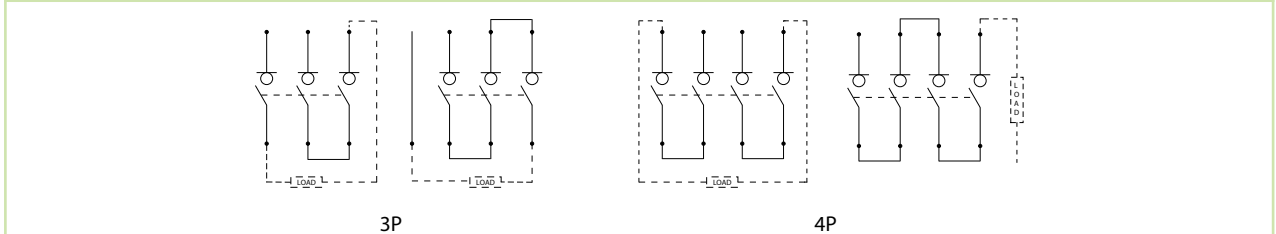
Technical Data Ex9M2SD DC

DC Moulded Case Switch Disconnectors up to 250 A

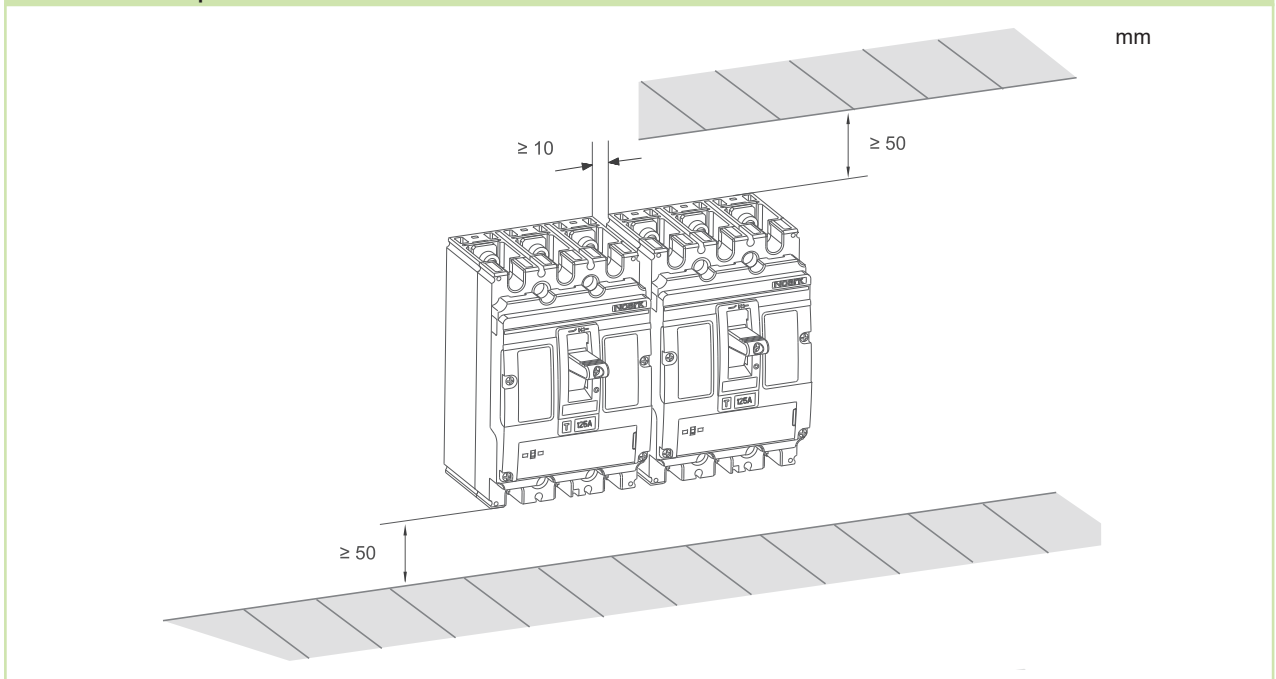
Dimensions



Wiring diagram



Installation space



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 — 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

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 (m Ω)	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

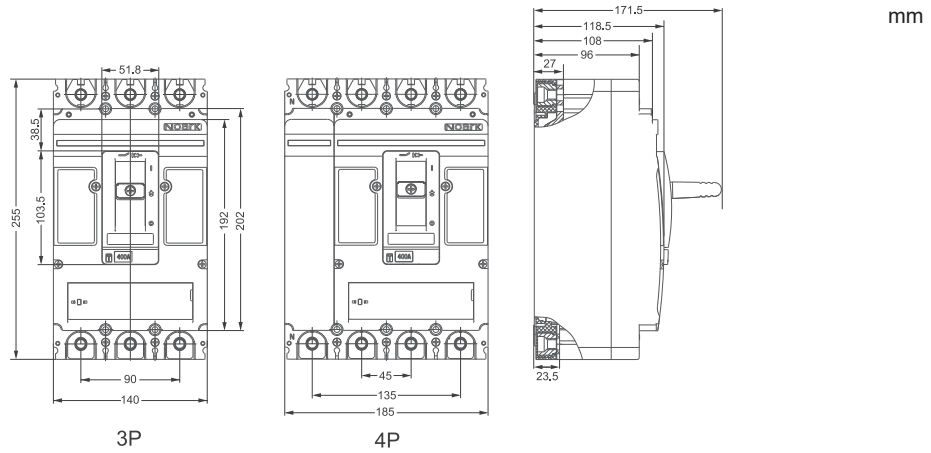
Derating coefficient of technical parameters based on altitude

Altitude	$\leq 2\ 000$ 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

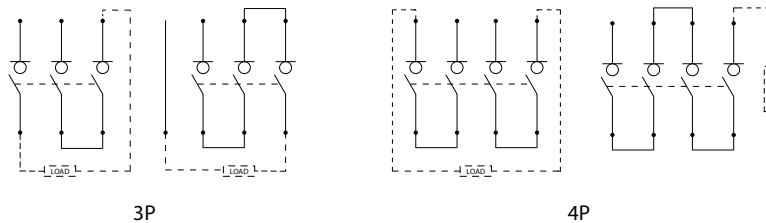
Technical Data Ex9M3SD DC

DC Moulded Case Switch Disconnectors up to 400 A

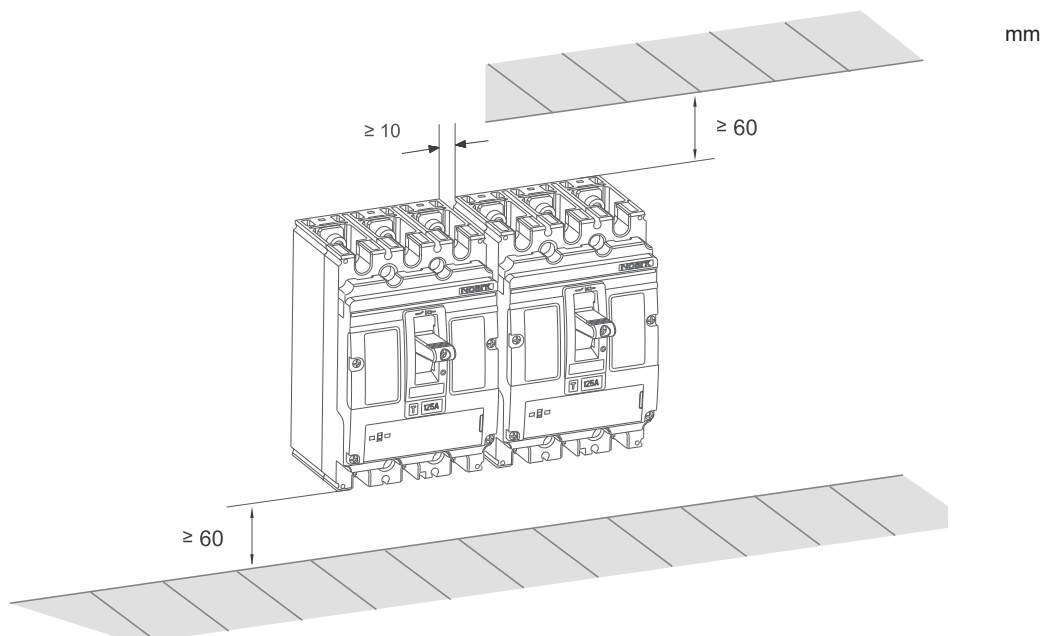
Dimensions



Wiring diagram



Installation space



Technical Data Ex9M4SD 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	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

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 (m Ω)	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

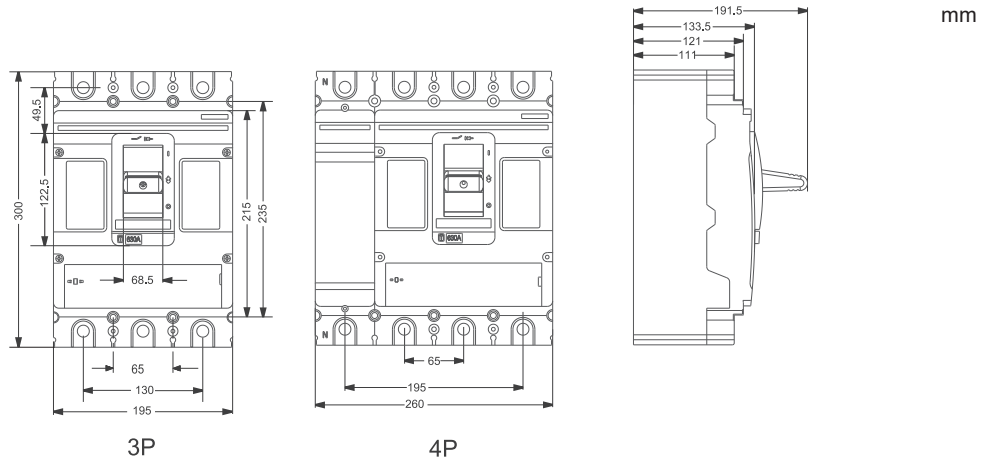
Derating coefficient of technical parameters based on altitude

Altitude	$\leq 2\ 000$ 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

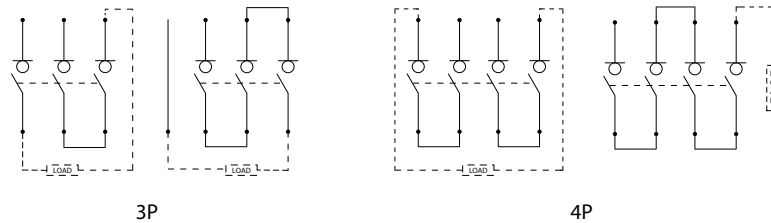
Technical Data Ex9M4SD DC

DC Moulded Case Switch Disconnectors up to 630 A

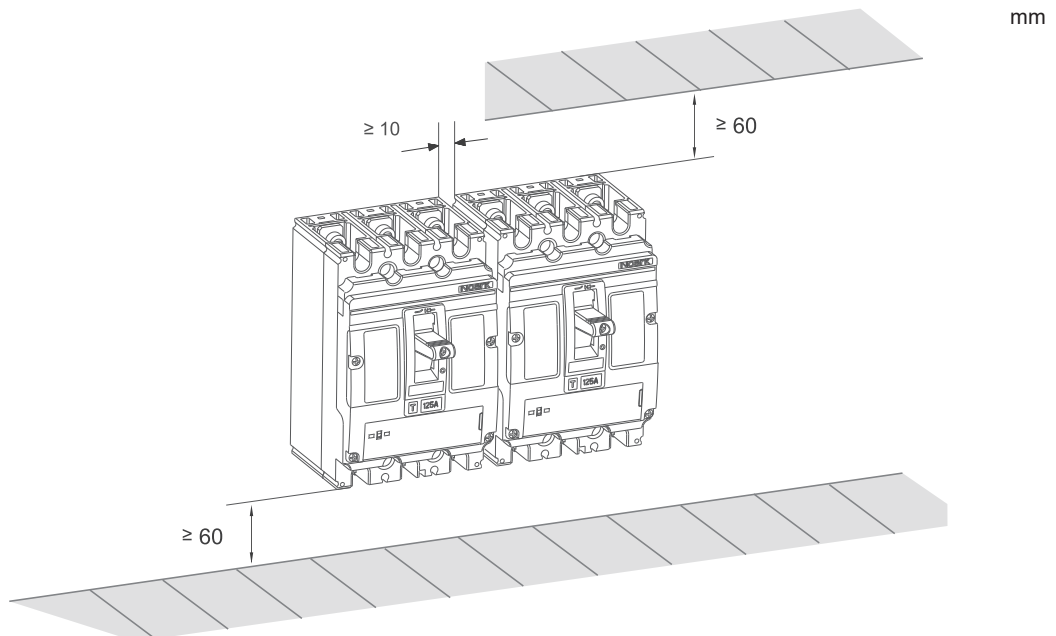
Dimensions



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	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

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 (m Ω)	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

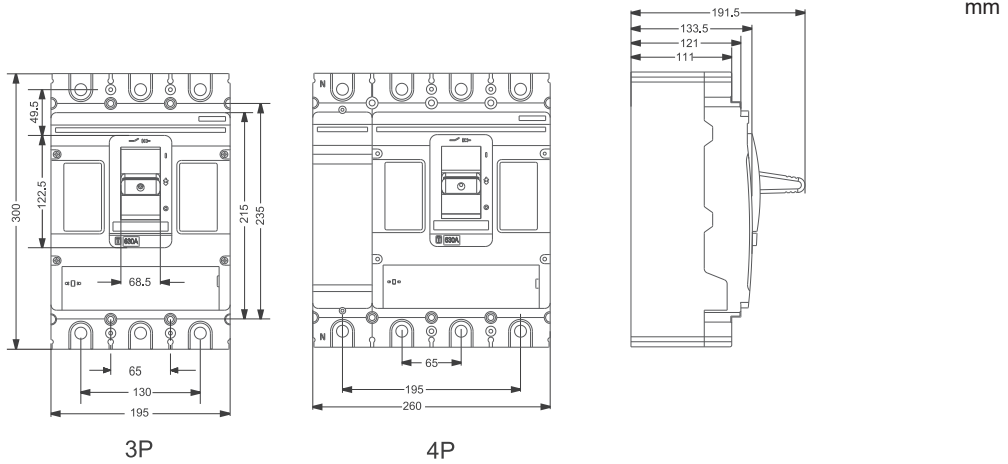
Derating coefficient of technical parameters based on altitude

Altitude	$\leq 2\,000$ 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

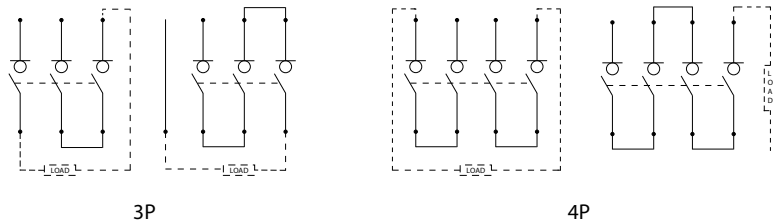
Technical Data Ex9M5SD DC

DC Moulded Case Switch Disconnectors up to 800 A

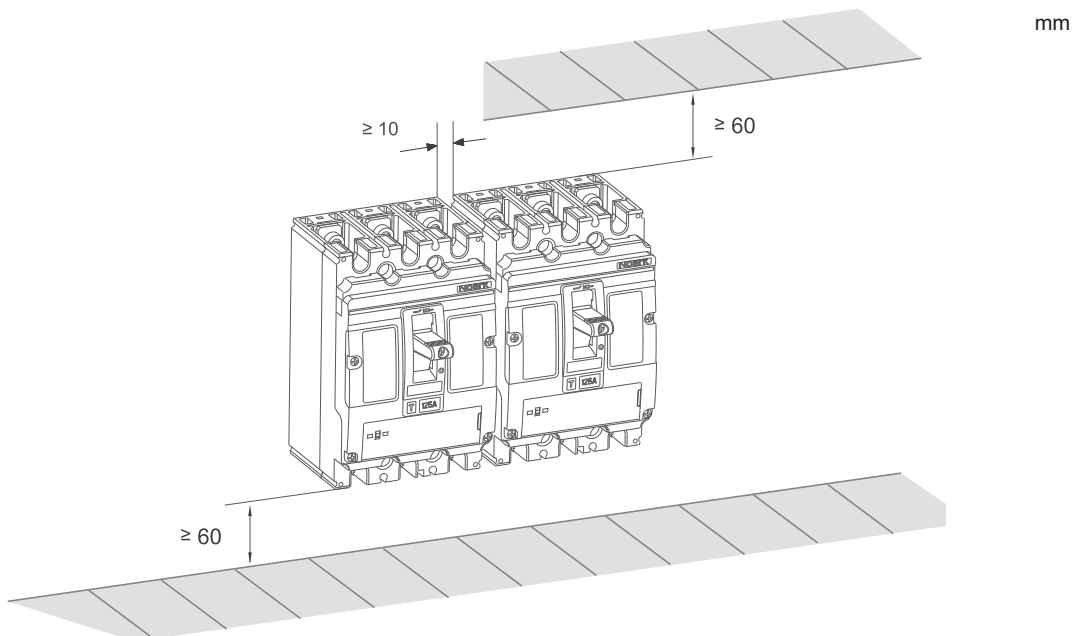
Dimensions



Wiring diagram



Installation space



DC Switch
Disconnectors

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 (m Ω)	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

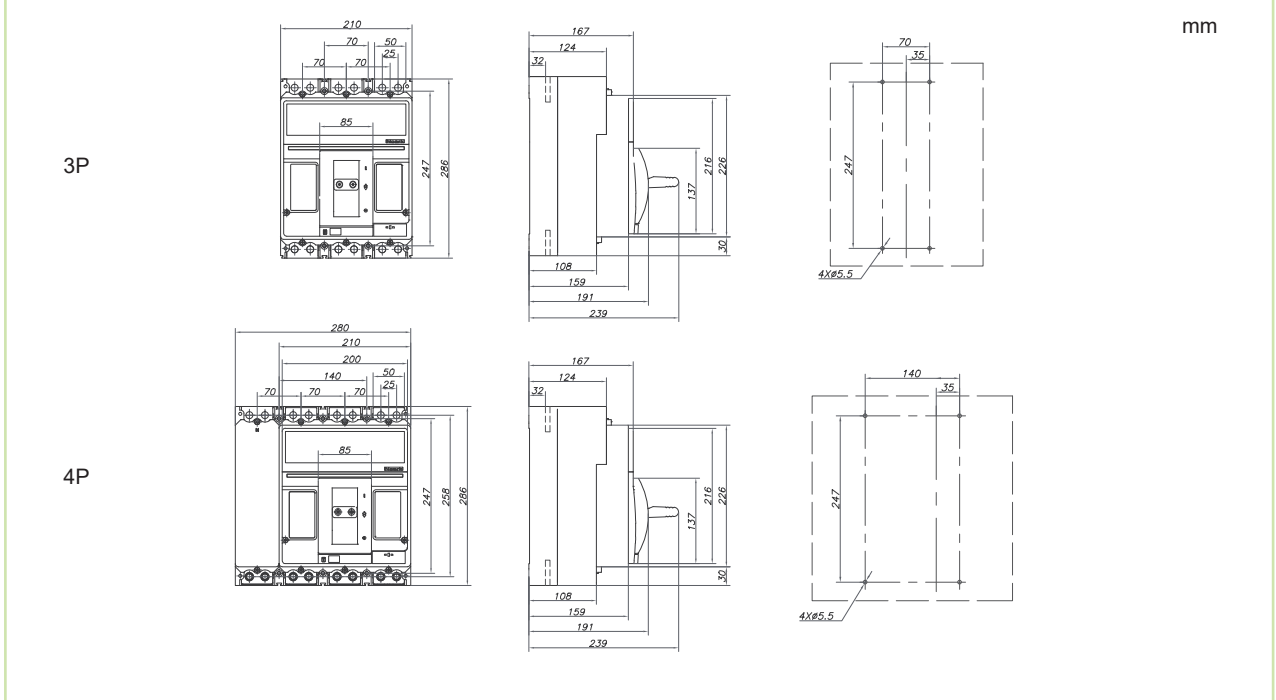
Derating coefficient of technical parameters based on altitude

Altitude	$\leq 2 000$ 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

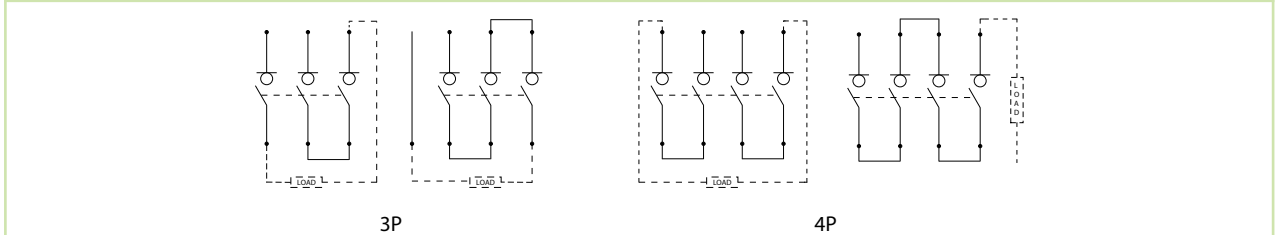
Technical Data Ex9M6SD DC

DC Moulded Case Switch Disconnectors up to 1 600 A

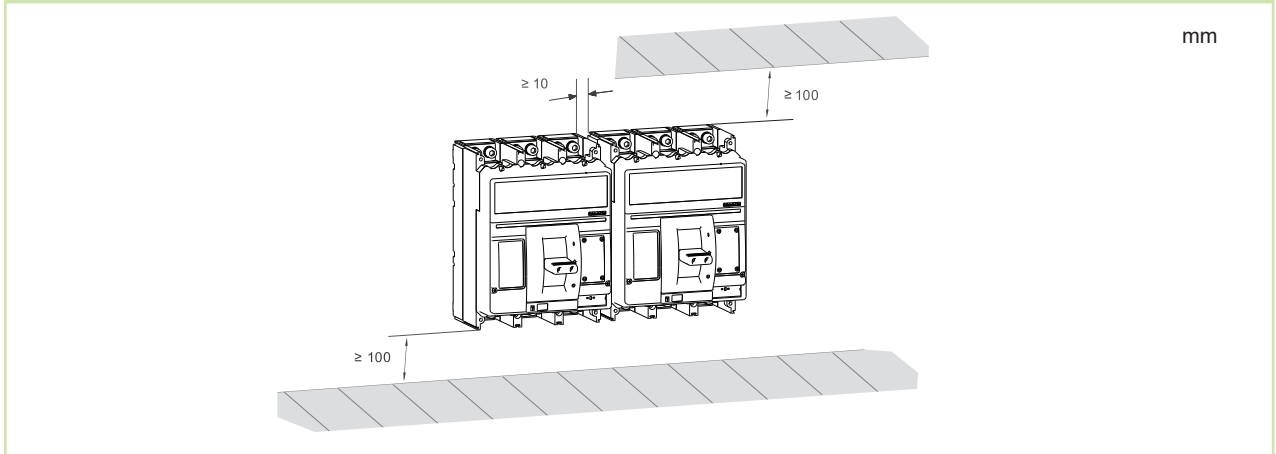
Dimensions



Wiring diagram



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)

With connection wires

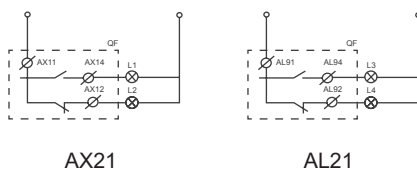
Electrical parameters

	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 _o AC	5 A (240 V), 2 A (415 V)	
Rated op. current I _o DC	1 A (110 V), 0.25 A (220 V)	
Rated thermal current I _{th}	5 A	
Rated op. current I _o , ut. cat. AC-15	5 A (240 V), 2 A (415 V)	
Rated op. current I _o , ut. cat. DC-13	1 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	equipped with connection wires	

Wiring diagrams



Technical Data Ex9M Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Early-make auxiliary contacts EC 2i

General parameters

Early-make auxiliary contacts

Contact unit EC 21 is installed in the special place in the MCCB (M1, M2 frame size), unit EC 23 as two connected contact units. One in special place and second in AL place (limit use of AL in M3, M4, M5)

Does not limit using of voltage releases and motor operator

Equipped with connection wires

Compatible with MCCB devices produced from 3/2014 only!

Please, note the requirement for early-make contact function in the order of MCCB!

Electrical parameters

	EC 21	EC 23
Contacts	1 NO	1 NO
Contact function	early-make auxiliary	
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	5 A (240 V), 2 A (415 V)	
Rated op. current I _e DC	1 A (110 V), 0.25 A (220 V)	
Rated thermal current I _{th}	5 A	
Rated op. current I _e , ut. cat. AC-15	5 A (240 V), 2 A (415 V)	
Rated op. current I _e , ut. cat. DC-13	1 A (110 V), 0.25 A (220 V)	
Rated insulation voltage U _i	500 V	
Early make function	M1, ON -> OFF: 10 ms M1, OFF -> ON: 15 ms M2, ON -> OFF: 16 ms M2, OFF -> ON: 18 ms	M3, ON -> OFF: 68 ms M3, OFF -> ON: 75 ms M4/M5, ON -> OFF: 82 ms M4/M5, OFF -> ON: 90 ms

Mechanical parameters

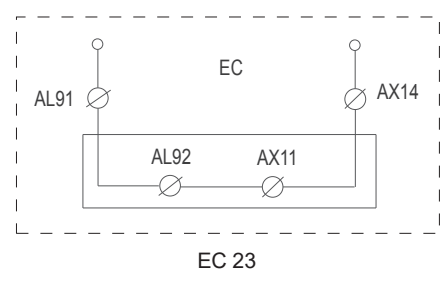
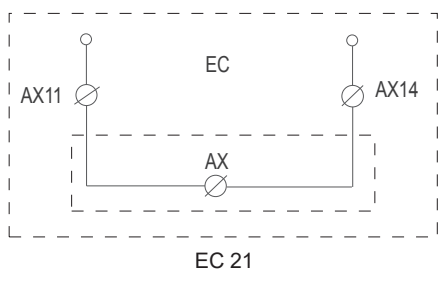
	EC 21	EC 23
Suitable for	M1, M2	M3, M4, M5
Connection	equipped with connection wires	

Technical Data Ex9M Accessories

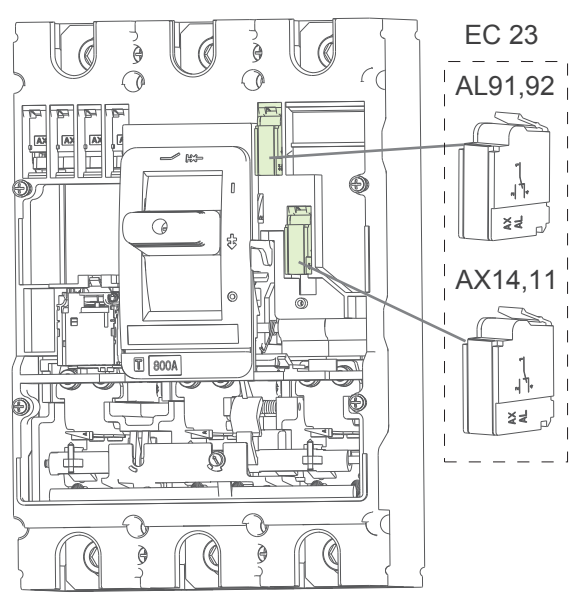
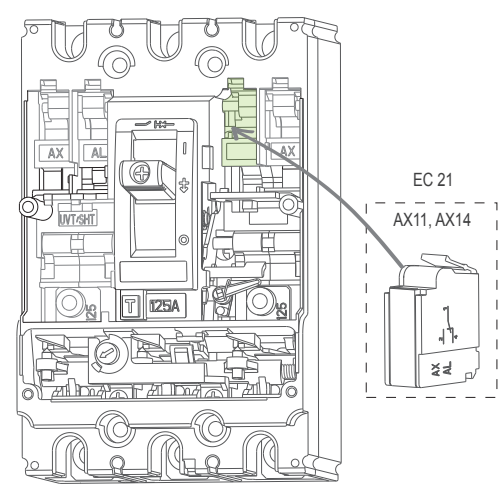
Accessories for Moulded Case Circuit Breakers Ex9M

Early-make auxiliary contacts EC 2i

Wiring diagrams



Mounting position



Matching order of the contact units and respective chambers has to be kept!

Accessories

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

With connection wires

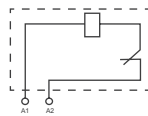
Electrical parameters

	SHT21	SHT22	SHT24
Tested according to	IEC/EN 60947-1, IEC/EN 60947-5-1		
Rated operating voltage U (according to type)	48 V AC 110 V AC 220 — 240 V AC 380 — 415 V AC 24 V DC 48 V DC 110 V DC 220 V DC	48 V AC 110 V AC 220 — 240 V AC 380 — 415 V AC 24 V DC 48 V DC 110 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 48 V DC
Rated frequency	50/60 Hz DC		
Rated insulation voltage U	500 V		
Tripping time	< 20 ms	< 20 ms	< 30 ms

Mechanical parameters

	SHT21	SHT22	SHT24
Suitable for	M1	M2, M3	M4, M5
Connection	equipped with connection wires		

Wiring diagrams



SHT2*i*

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)

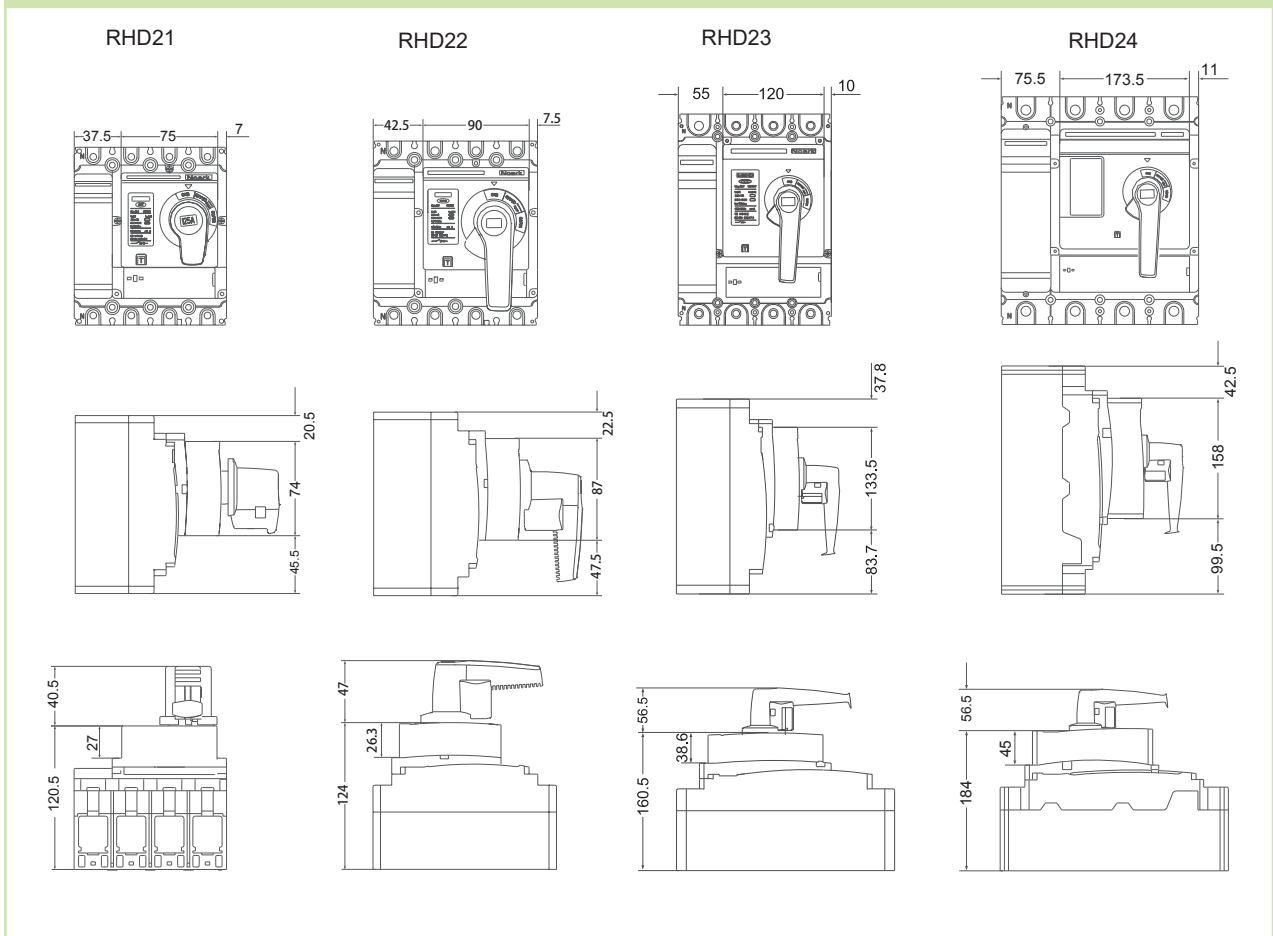
Electrical parameters

	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)

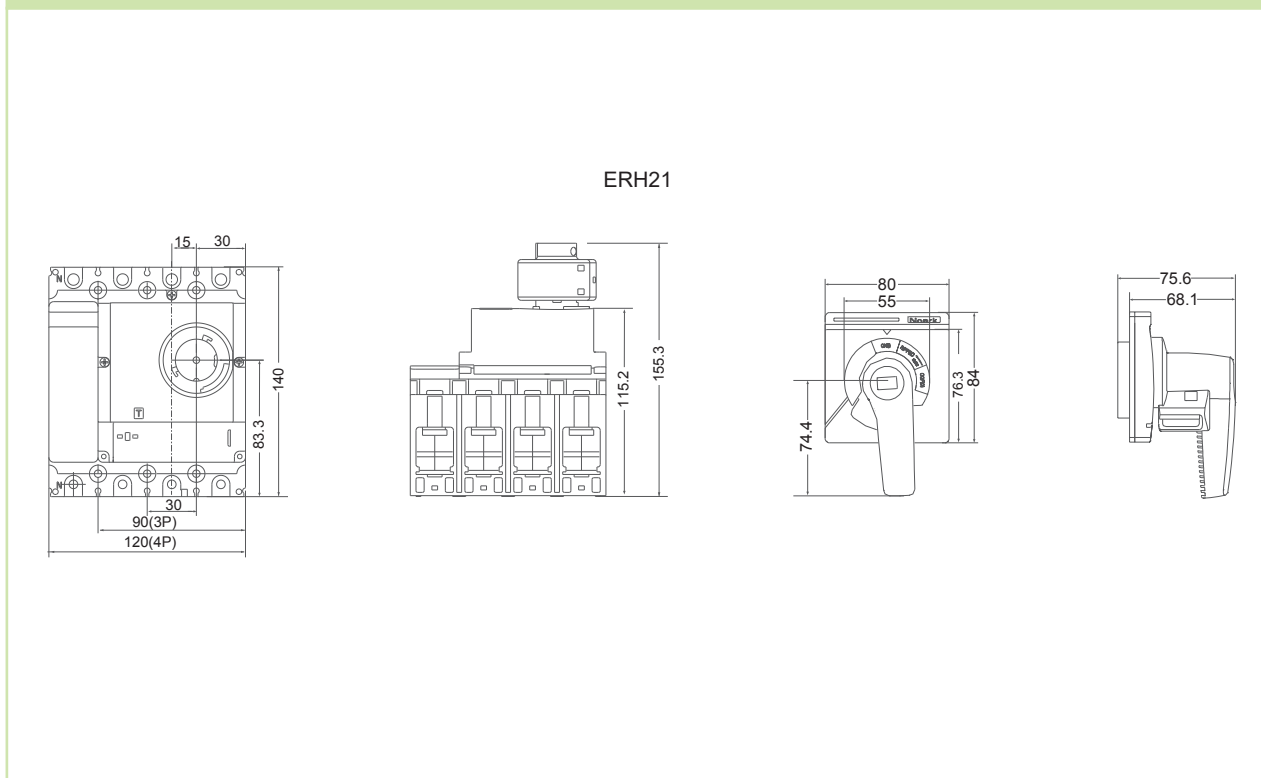
Electrical parameters

	ERH21	ERH22	ERH23	ERH24
Tested according to	IEC/EN 60947-3			
Degree of protection	IP54			

Mechanical parameters

	ERH21	ERH22	ERH23	ERH24
Suitable for	M1	M2	M3	M4, M5
Length of the extension shaft	300 mm	300 mm	300 mm	300 mm
Mechanical shock resistance	IK08			
Indication	connected breaker status ON-OFF-TRIP			
Mounting	directly onto breaker			
Toggle colour	grey			

Dimensions

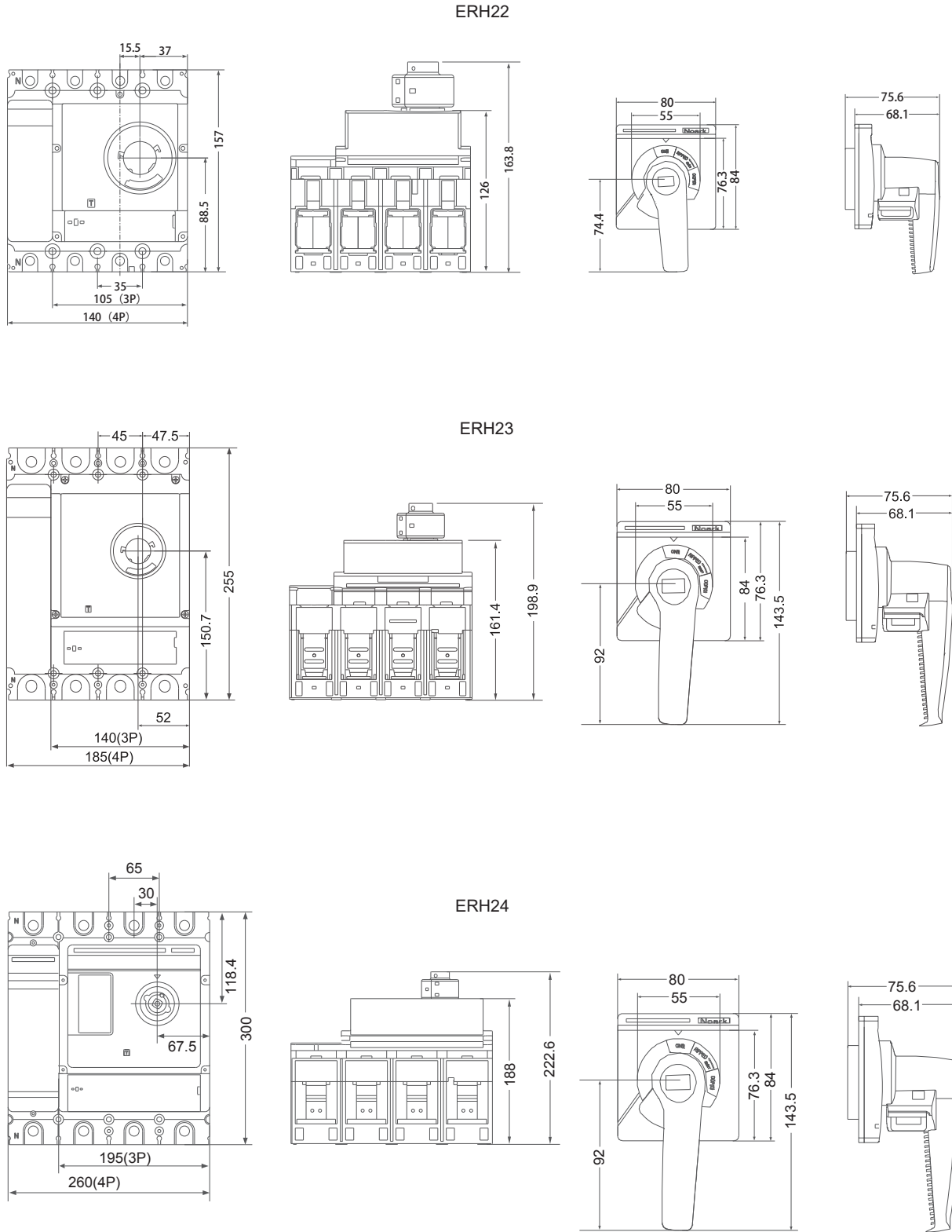


Technical Data Ex9M Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Extended rotary handles ERH2i

Dimensions



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

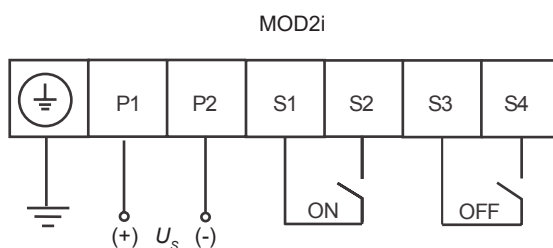
Electrical parameters

	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	75 ms	75 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

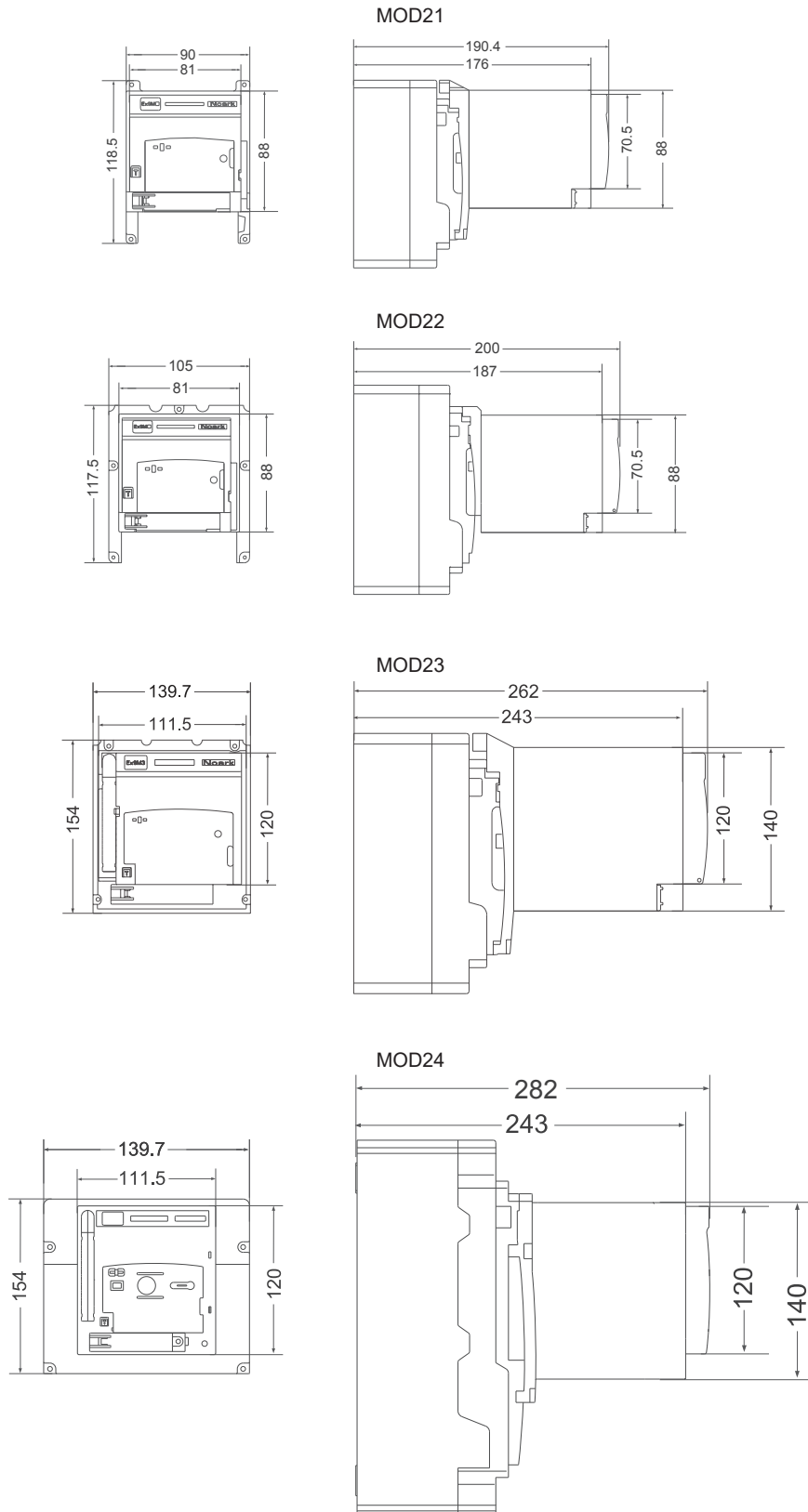


Technical Data Ex9M Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

Remote motor operators MOD2*i*

Dimensions



Technical Data Ex9M Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

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	25 Nm	35 Nm	35 Nm

Drawings - box terminals



MC21(22)

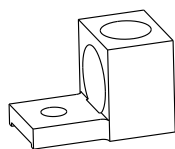


MC23

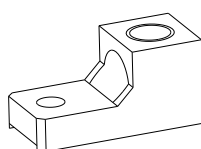
Mechanical parameters - tunnel terminals

	MC21 W	MC22 W	MC22 W2	MC22 W6	MC23 W2	MC23 W4	MC24 W2
Suitable for	M1	M2	M2	M2	M3	M3	M4, M5
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
Fastening torque of terminals (to MCCB)	10 - 15 Nm	15 Nm	15 Nm	15 Nm	35 Nm	35 Nm	35 Nm
Fastening torque of terminals (wires)	10 Nm	30 Nm	30 Nm	10 Nm	35 Nm	30 Nm	35 Nm

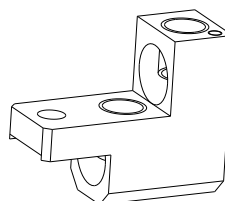
Drawings - tunnel terminals



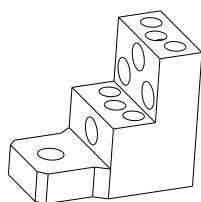
MC21 W



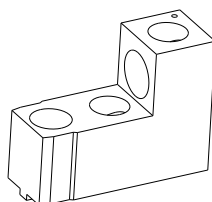
MC22 W



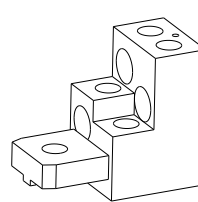
MC22 W2



MC22 W6



MC23 W2



MC23 W4

Ordering information p. 95

Technical Data Ex9M Accessories

Accessories for Moulded Case Circuit Breakers Ex9M

DIN-rail adaptors DRA2i

General parameters

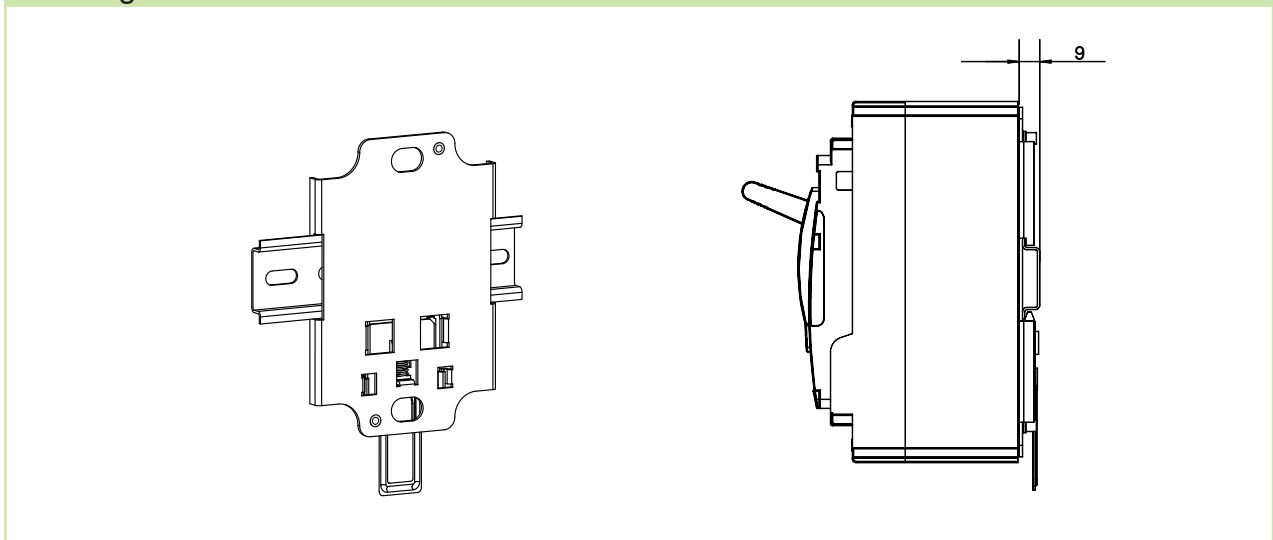
Adaptors for mounting of MCCBs and MCCB Switch Disconnectors onto 35 mm device DIN-rail

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

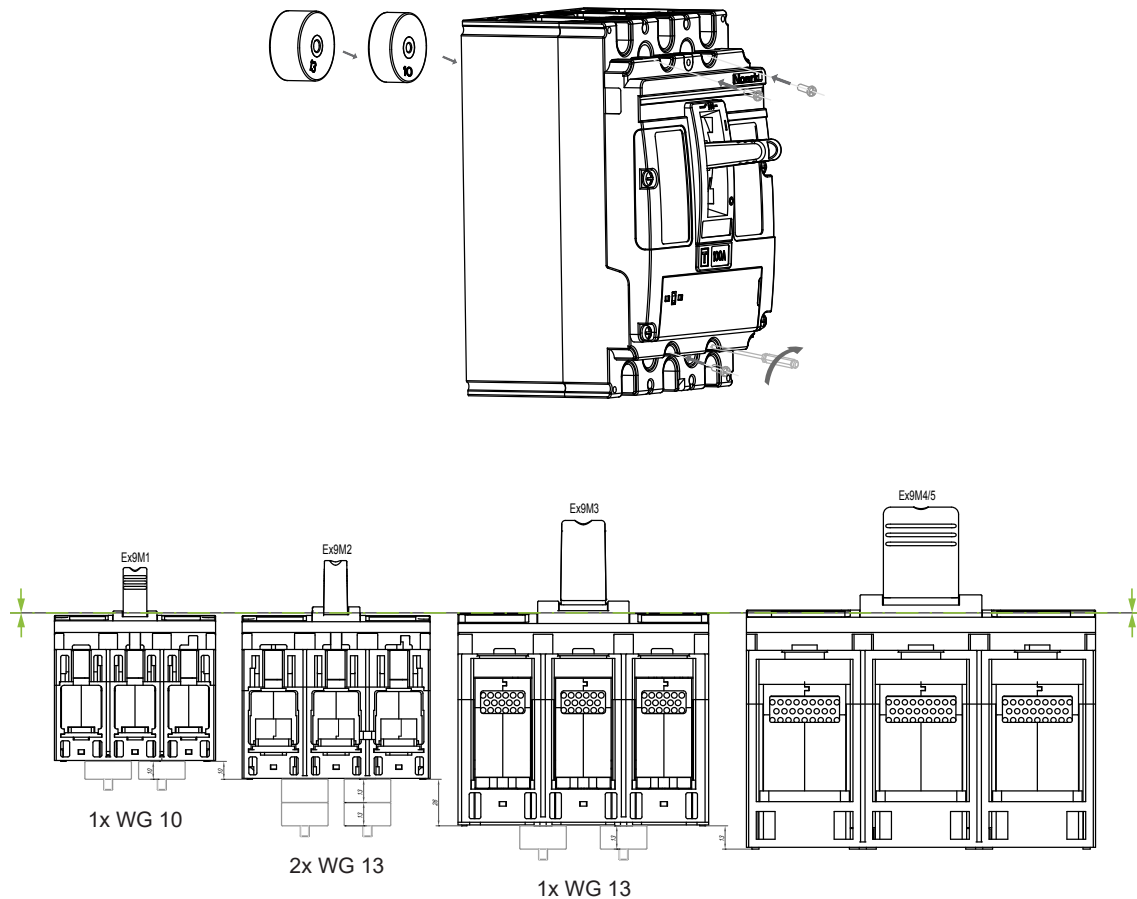
Suitable for all variants of MCCBs and MCCB Switch Disconnectors

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



Ex9M WG	9M1/9M2	9M1/9M3	9M1/9M4	9M2/9M3	9M2/9M4	9M3/9M4
WG10	4X	4X	4X			
WG13		8X	12X	8X	12X	4X

Technical Data Ex9M6 Accessories

Accessories for electronic Moulded Case Circuit Breakers Ex9M6

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)

With connection wires

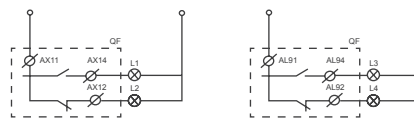
Electrical parameters

	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	5 A (240 V), 2 A (415 V)	
Rated op. current I _e DC	1 A (110 V), 0.25 A (220 V)	
Rated thermal current I _{th}	5 A	
Rated op. current I _e , ut. cat. AC-15	5 A (240 V), 2 A (415 V)	
Rated op. current I _e , ut. cat. DC-13	1 A (110 V), 0.25 A (220 V)	
Rated insulation voltage U _i	500 V	

Mechanical parameters

	AX21	AL21
Suitable for MCCBs size	M1, M2, M3, M4, M5, M6	M1, M2, M3, M4, M5, M6
Connection	equipped with connection wires	

Wiring diagrams



AX21

AL21

Technical Data Ex9M6 Accessories

Accessories for electronic Moulded Case Circuit Breakers Ex9M6

Shunt trip releases SHT26

General parameters

Remotely opens the breaker after supplying of control impulse

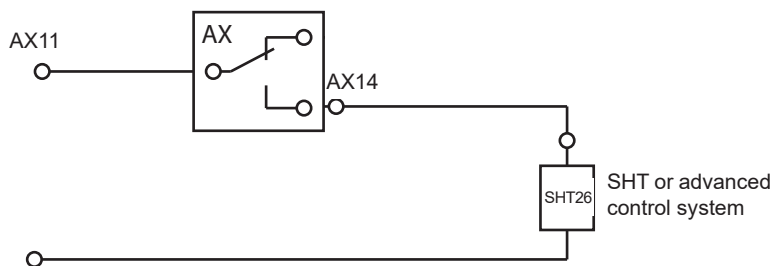
Operating voltage range 85-110 % of nominal value U_e . Maximum allowed control command length 2 s (can be blocked e.g. by means of NO auxiliary contact)

Electrical parameters

Operating voltage U_e	48 V AC 110 V AC 220-240 V AC 380-415 V AC 24 V DC 48 V DC 110 V DC 220 V DC
Operating threshold	70 - 110% U_e
Pick-up power time 100ms AC DC	200 VA 200 W
Power consumption AC DC	5 VA 5 W
Minimum duration of control impuls	0.2 s
Max. allowed duration of control impuls	2 s
Circuit breaker opening time	< 30 ms
Breaking time	50 ± 10 ms
Insulation voltage	415 V
Peak current	6 x I_n

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 Ex9M6 Accessories

Accessories for electronic Moulded Case Circuit Breakers Ex9M6

Shunt trip releases UVT26

General parameters

Opens the breaker when the voltage drops or power off to prevent the load from damage caused by undervoltage
The control power supply of UVT could be from the primary side of circuit breaker or from independent supply
The undervoltage release instantaneously opens the circuit breaker when its supply voltage drops to a value between 35 % and 70 % of its rated voltage
If the voltage is less than 35 % of supply voltage U_e , it is impossible to close the circuit breaker
Circuit breaker can be closed when the supply voltage of the release is 85 % - 110 % of supply voltage U_e

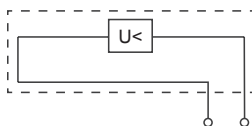
Electrical parameters

Operating voltage U_e	220 - 240 V AC 380 - 415 V AC
Operating threshold not close actuation closing	< 35 % U_e 35 - 70 % U_e 85 - 110 % U_e
Pick-up power	200 VA
Power consumption	50 VA
Accuracy	± 20 %
Insulation voltage	415 V

Mechanical parameters

	UVT26
Suitable for	Ex9M6
Connection	equipped with connection wires

Wiring diagrams



UVT26

Technical Data Ex9M6 Accessories

Accessories for electronic Moulded Case Circuit Breakers Ex9M6

Extended rotary handles ERH26

General parameters

Rotary handle with extension shaft

Scope of delivery: mechanism block, extension shaft, rotary handle

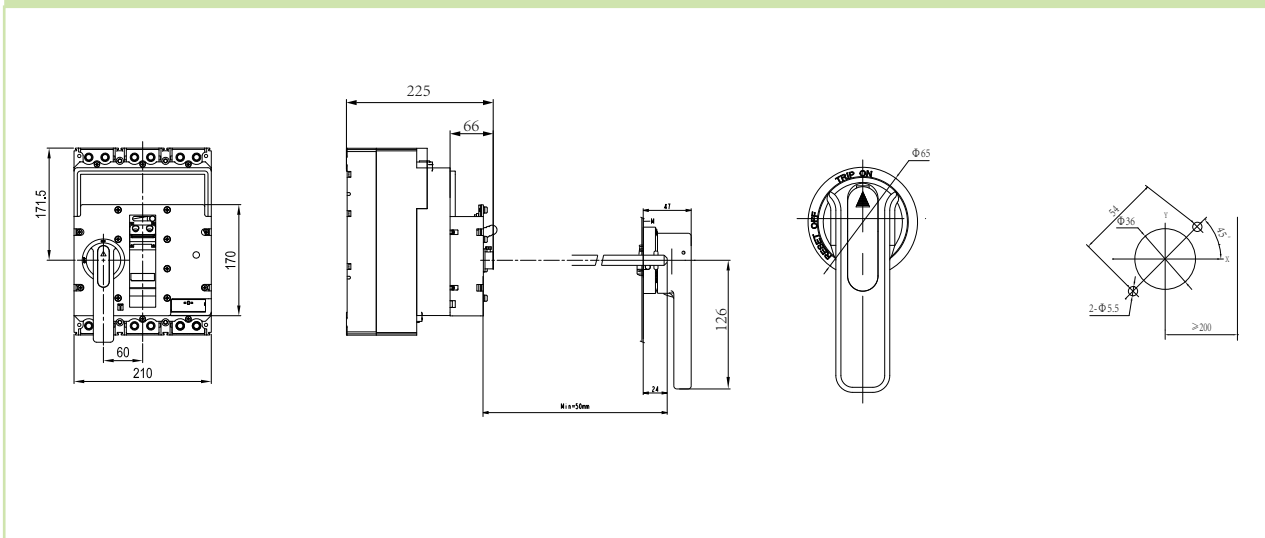
Can be locked in ON and OFF position with up to three padlocks (not in the scope of delivery)

Extension shaft can be shortened

Mechanical parameters

	ERH26
Suitable for	Ex9M6
Length of the extension shaft	150 mm min
Indication	connected breaker status ON-OFF-TRIP
Degree of protection	IP30
Mounting	directly onto breaker
Toggle colour	black

Dimensions



Technical Data Ex9M6 Accessories

Accessories for electronic Moulded Case Circuit Breakers Ex9M6

Extended handle LHD26

General parameters

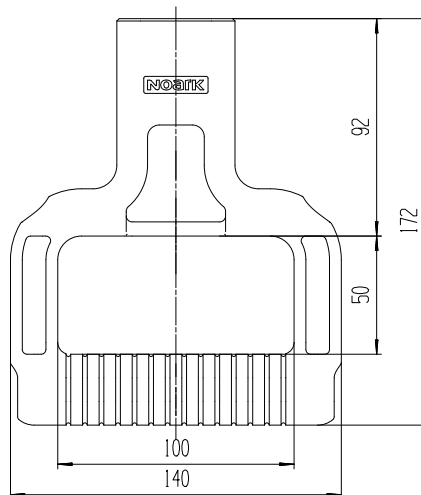
Extended handle for easier operation of the device

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 Ex9MV2S Accessories

Accessories for Moulded Case Circuit Breakers Ex9MV2S

Auxiliary and signal contact units AX22V, AL22V and combinations

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)

With connection wires

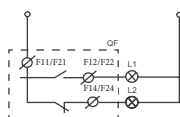
Electrical parameters

	AX22V	2AX22V	AL22V	AX+AL22V	AX22VR	2AX22VR
Contacts	1 changeover (CO)	2 changeover (CO)	1 changeover (CO)	2 changeover (CO)	1 changeover (CO)	2 changeover (CO)
Contact function	auxiliary left	auxiliary left	signal left	auxiliary + signal left	auxiliary right	auxiliary right
Maximum op. voltage U	AC400V/DC220V					
Rated frequency	50/60 Hz					
Rated op. current I _e AC	1.5A					
Rated op. current I _e DC	0.15A					
Rated thermal current I _{th}	3 A					
Rated op. current I _e , ut. cat. AC-15	5 A (240 V), 2 A (415 V)					
Rated op. current I _e , ut. cat. DC-13	1 A (110 V), 0.25 A (220 V)					
Rated insulation voltage U _i	400 V					

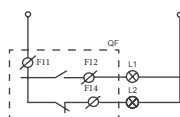
Mechanical parameters

	AX22V	2AX22V	AL22V	AX+AL22V	AX22VR	2AX22VR
Suitable for	Ex9MV2S					
Connection	Equipped with connection wires					

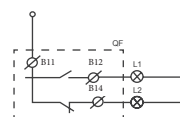
Wiring diagrams



2AX22V
2AX22VR



AX22V
AX22VR
AX+AL22V



AL22V
AX+AL22V

Technical Data Ex9MV2S Accessories

Accessories for Moulded Case Circuit Breakers Ex9MV2S

Shunt trip releases SHT22VR

General parameters

It is possible to use one unit of shunt trip release SHT22VR on the right side of the MCCB

Can be used for remote switch off

With connection wires

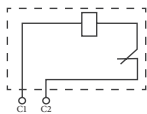
Electrical parameters

	SHT22VR
Rated operating voltage U_e (according to type)	24 V DC 230 V AC 400 V AC
Rated frequency	50/60 Hz
Rated insulation voltage U_i	400 V
Tripping time	≤ 500 ms

Mechanical parameters

	SHT22VR
Suitable for	Ex9MV2S
Connection	Equipped with connection wires

Wiring diagrams



SHT22VR

Technical Data Ex9MV2S Accessories

Accessories for Moulded Case Circuit Breakers Ex9MV2S

Extended rotary handles ERH-1

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 padlocks (not in the scope of delivery)
Extension shaft can be shortened

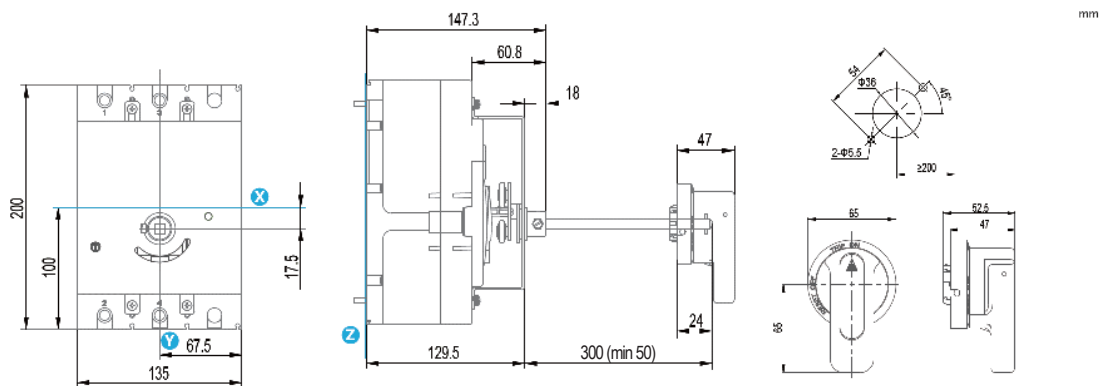
Electrical parameters

	ERH-1
Degree of protection	IP20

Mechanical parameters

	ERH-1
Suitable for	Ex9MV2S
Length of the extension shaft	300 mm (min 50 mm if shorted)
Indication	Connected breaker status ON-OFF-TRIP
Mounting	Directly onto breaker
Toggle colour	Black

Dimensions



Index

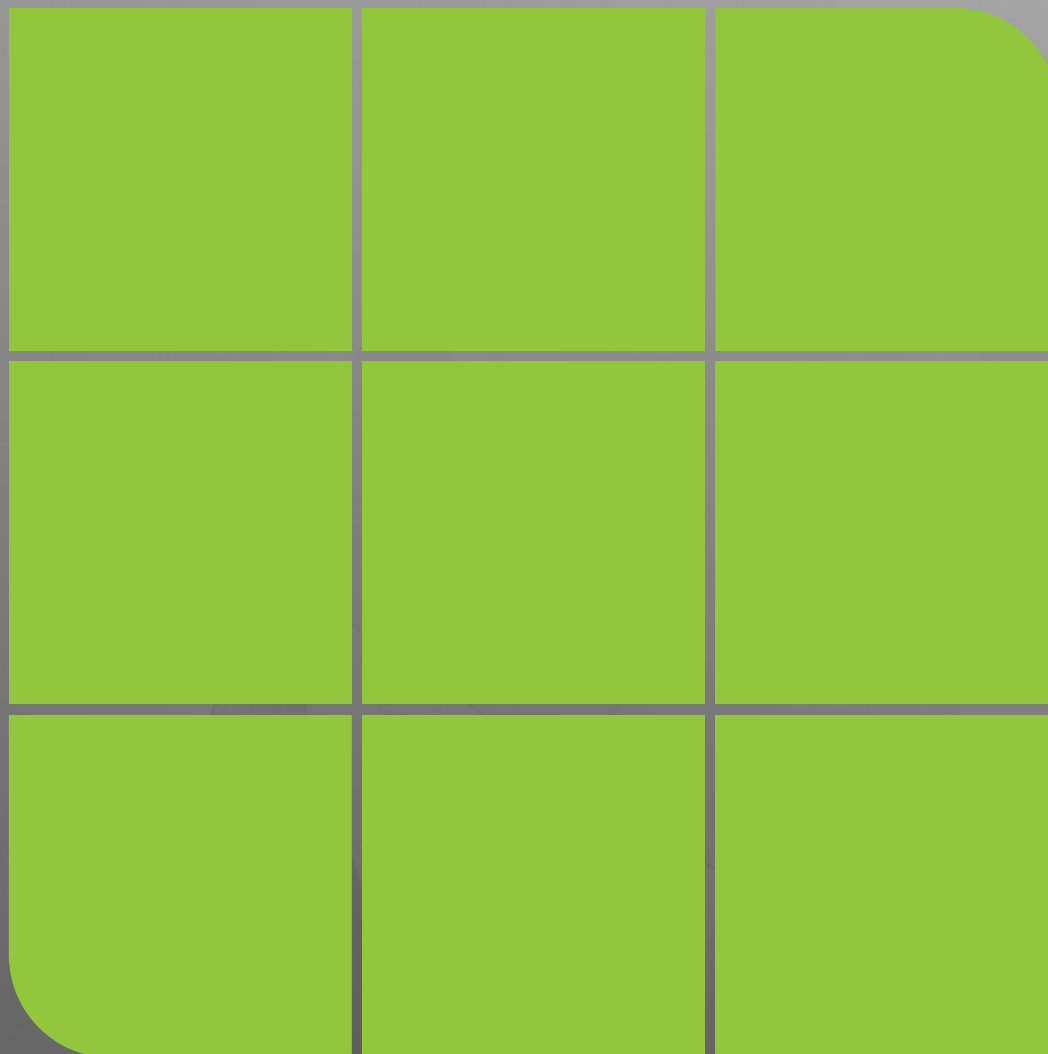
Type	Ordering data	Technical data	Type	Ordering data	Technical data
AL21M	62	180	WG	66	192
AX21M	62	180	XF26		110
AX22	73	198			
DRA2	66	191			
EC 2	62	181			
ERH-1	73	210			
ERH2	65	186			
ERH26	70	196			
Ex9M1	8	105			
Ex9M1SD AC	28	129			
Ex9M1SD DC	60	165			
Ex9M2	10	108			
Ex9M2SD AC	28	132			
Ex9M2SD DC	60	168			
Ex9M3	12	111			
Ex9M3SD AC	28	135			
Ex9M3SD DC	60	171			
Ex9M4	14	114			
Ex9M4SD AC	28	138			
Ex9M4SD DC	60	174			
Ex9M5	16	117			
Ex9M5SD AC	28	141			
Ex9M5SD DC	60	177			
Ex9M6	22	120			
Ex9M6 MOD	26	124			
Ex9M6SD AC	39	144			
Ex9MD1	43	147			
Ex9MD2	46	150			
Ex9MD3	47	153			
Ex9MD4	49	156			
Ex9MD5	51	159			
Ex9MV2S	55	162			
JP26	70				
LHD26	70	197			
MC2	65	190			
MOD2	47	188			
MOD		128			
PB2	65				
RHD2	65	185			
SHT2	62	183			
SHT22	73	199			
SHT26	69	194			
TCE2	66				
TCV2	65				
UVT2	47	184			
UVT26	69	195			

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10 REASONS FOR NOARK

- 1 RELIABILITY
- 2 FIVE YEAR WARRANTY
- 3 SIMPLE INSTALLATION
- 4 FUNCTIONAL DESIGN
- 5 MANUFACTURING QUALITY
- 6 UNBEATABLE SUPPORT
- 7 INDIVIDUAL APPROACH
- 8 WIDE DISTRIBUTION NETWORK
- 9 FLEXIBILITY
- 10 TRUSTED BY CUSTOMERS





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