

Moulded Case Circuit Breakers Ex9M DC TM



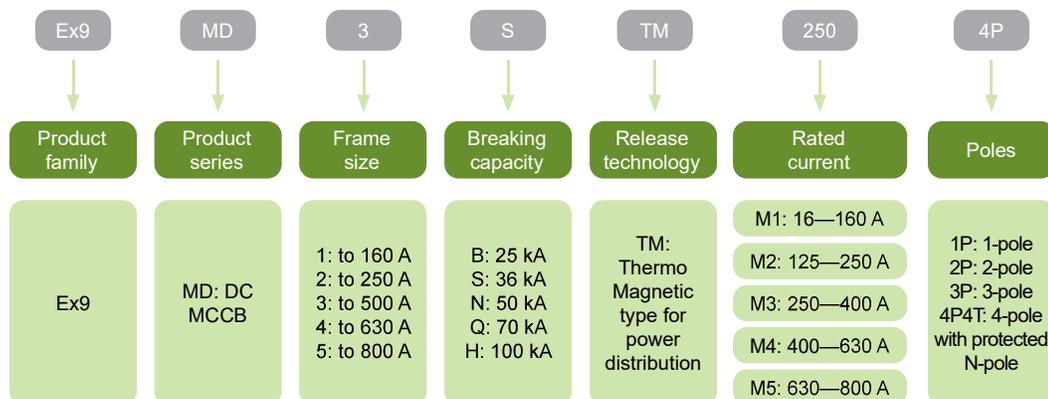
- Thermo-magnetic tripping unit for power distribution
- Frame sizes M1-M5
- Rated operating current up to 800 A
- 1, 2, 3 and 4-pole versions
- Rated ultimate short circuit breaking capacity $I_{cu} = I_{cs}$ up to 100 kA
- Rated voltage 250 V DC (1-pole), 500 V DC (2-pole), 750 V DC (3-pole) and 1000 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

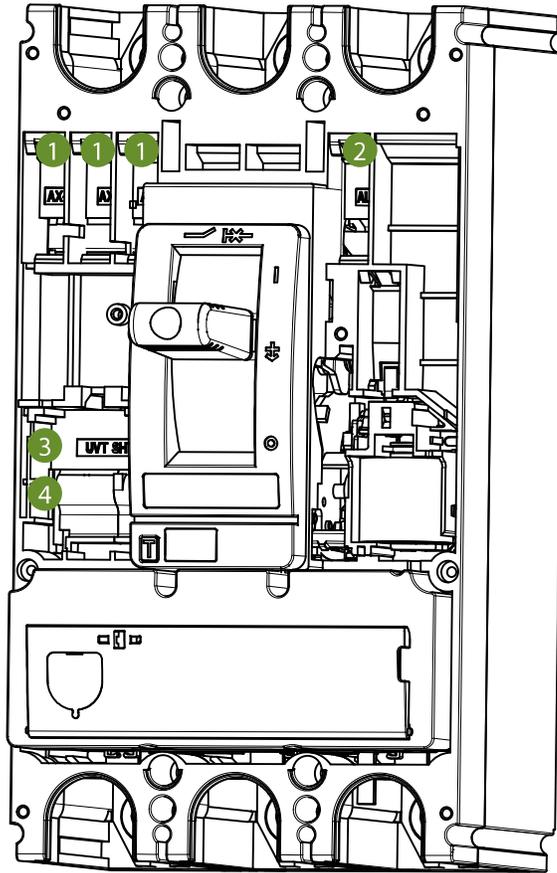


Certification marks



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

Signal contact AL21M

Shunt trip releases SHT2i

Undervoltage releases UVT2i

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

Moulded Case Circuit Breakers Ex9M DC TM

External accessories Ex9M1-M5 DC TM



Phase barriers
PHS2i



Terminal cover, short
TCV2i



Terminal cover, long
TCE2i



Remote operator
MOD2i



Direct rotary handle
RHD2i



Extended rotary handle
ERH2i



Draw-Out Base
DOB 2i F/B



Plug-In Base
PIA 2i F/B

Phase barriers PHS2i

Terminal cover, short TCV2i

Terminal cover, long TCE2i

Remote operators MOD2i

Direct rotary handles RHD2i

Extended rotary handles ERH2i

Draw-Out Base DOB 2i F/B

Plug-In Base PIA 2i F/B

Moulded Case Circuit Breakers Ex9M DC TM

External accessories Ex9M1-M5 DC TM



Tunnel terminals
MC2i W



Mounting depth spacers
WG i



Box terminals
MC2i



Screw terminals
MCS2i



Din rail adapter
DRA2i



Front plate connection
JP 2i



Rear connection plate
RCP 2i



Off position toggle key
lock
KLK 2i



Mechanical interlock
MIT 2i

Tunnel terminals MC2i W

Mounting depth spacers WG i

Box terminals MC2i

Screw terminals MCS2i

Din rail DRA2i

Front plate connection JP 2i

Rear connection plate RCP 2i

Off position toggle key lock KLK 2i

Mechanical interlock MIT 2i

Moulded Case Circuit Breakers Ex9M DC TM

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

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 25$ kA at 1000 V DC
- $I_r(1.0)$ Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_r(10)$ range not adjustable (1 and 2 Pole)
- I_r can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



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

Moulded Case Circuit Breakers Ex9M DC TM

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

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36$ kA at 1000 V DC
- I_r (1.0) Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_r (10) range not adjustable (1 and 2 Pole)
- I_r can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



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

Moulded Case Circuit Breakers Ex9M DC TM

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

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 1000 V DC
- $I_r(1.0)$ Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_r(10)$ range not adjustable (1 and 2 Pole)
- I_r can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



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

Moulded Case Circuit Breakers Ex9M DC TM

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

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



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

Moulded Case Circuit Breakers Ex9M DC TM

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

- 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 100$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- $I_r(10)$ range not adjustable (2 Pole)
- I_r can be set in range $(5 - 10) \times I_n$ for 125 A and 160 A types, otherwise is fixed at $10 \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



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

Moulded Case Circuit Breakers Ex9M DC TM

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

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



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

Moulded Case Circuit Breakers Ex9M DC TM

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

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 36$ kA at 1000 V DC
- I_r (1.0) Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_r (10) range not adjustable (1 and 2 Pole)
- I_r can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



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

Moulded Case Circuit Breakers Ex9M DC TM

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

- 1 (up to 250 V DC), 2 (up to 500 V DC), 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 50 \text{ kA}$ at 1000 V DC
- I_r (1.0) Not adjustable (1 Pole)
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_r (10) range not adjustable (1 and 2 Pole)
- I_r can be set in range $(7 - 12) \times I_n$ for 125 A and $(5 - 10) \times I_n$ for other devices up to 250 A
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



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

Moulded Case Circuit Breakers Ex9M DC TM

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

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



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

Moulded Case Circuit Breakers Ex9M DC TM

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

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



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

Moulded Case Circuit Breakers Ex9M DC TM

Version Ex9MD3B up to 400 A, $I_{cu} = 25$ 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_r 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_r 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_r 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_t 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_t	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_t 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_t	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_t 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_t	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_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



Poles	Rated current I_n	Overcurrent release I_r	instant. release I_i	Article No.	Type	Packing
3	400 A	280-400 A	2000-4000 A	112739	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_i can be set in range $(5 - 10) \times I_n$
- Mounting screws, screw type terminals as well as phase barriers in the scope of delivery



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

Moulded Case Circuit Breakers Ex9M DC TM

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

- 3 (up to 750 V DC) and 4-pole (up to 1 000 V DC) Moulded Case Circuit Breakers
- $I_{cs} = I_{cu} = 25$ kA at 1000 V DC
- I_r can be set in range $(0.7 - 1.0) \times I_n$
- I_t 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_t	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_t 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_t	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_t 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_t	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

Technical Data Ex9M1 DC TM

DC TM Moulded Case Circuit Breakers up to 160 A

General parameters

Suitable for commercial as well as industrial applications

I_r (1.0) Not adjustable (1 Pole)

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

I_r (10) range not adjustable (1 Pole)

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

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

Internal accessories

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

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

External accessories

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

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

Derating coefficient of Tripping Characteristics on accessories combination

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

Technical Data Ex9M1 DC TM

DC TM Moulded Case Circuit Breakers up to 160 A

Electrical parameters

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

Dependence of Tripping Characteristics on Ambient Temperature

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

Power dissipation characteristics

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

Technical Data Ex9M1 DC TM

DC TM Moulded Case Circuit Breakers up to 160 A

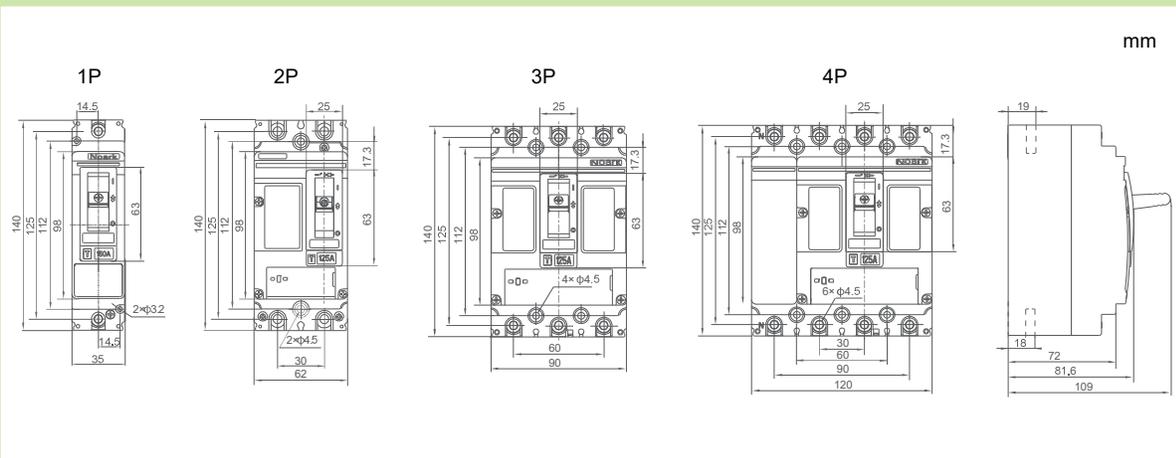
Mechanical parameters

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

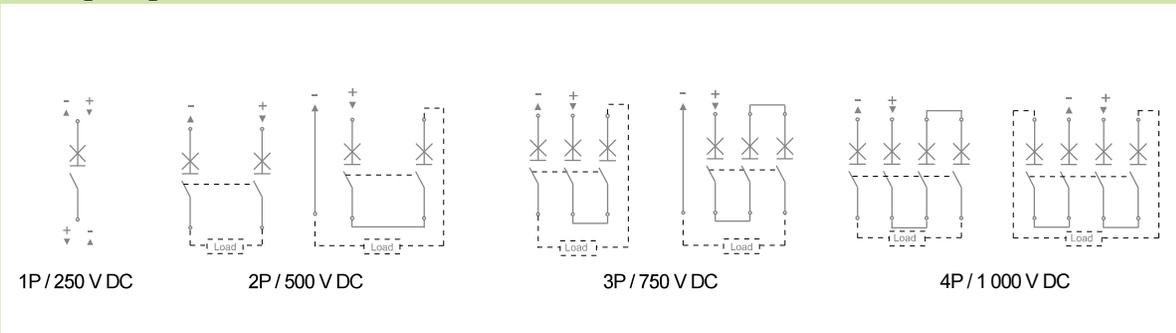
Derating coefficient of technical parameters based on altitude

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

Dimensions



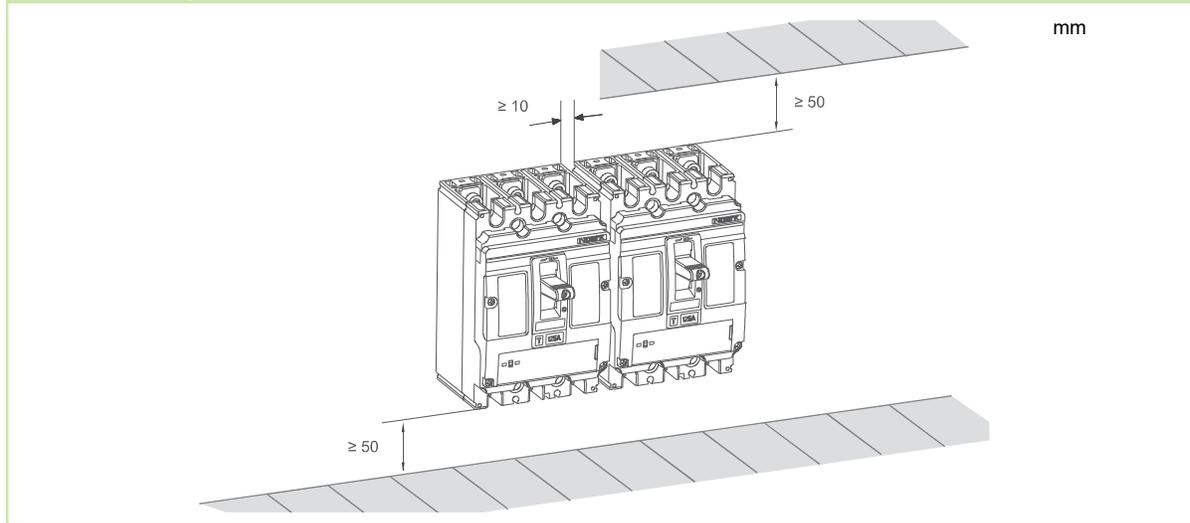
Wiring diagram



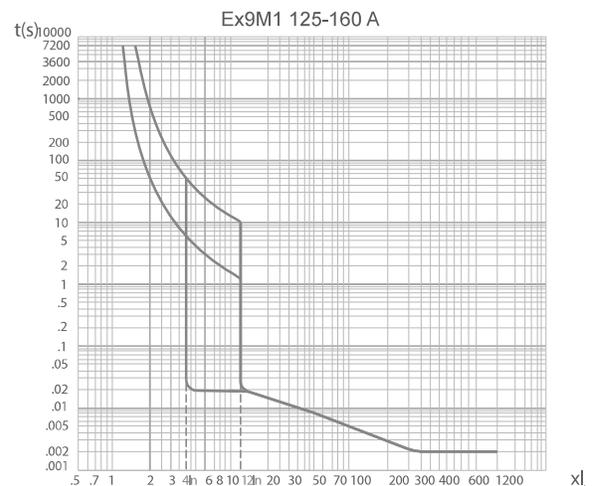
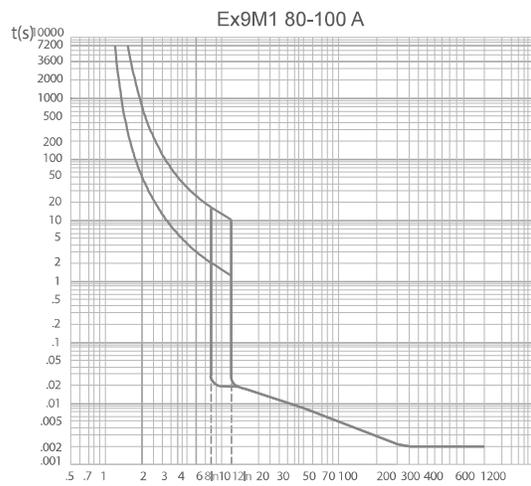
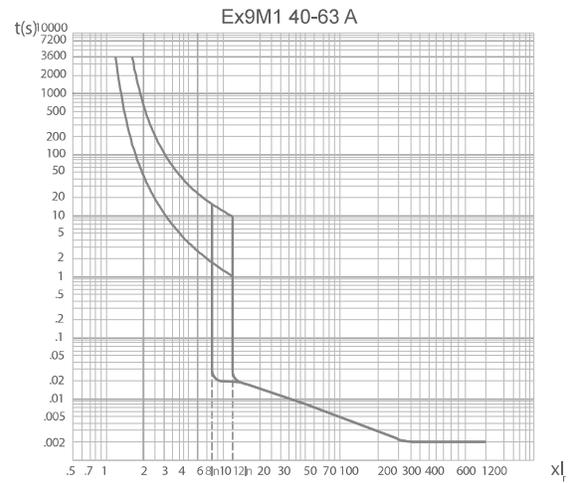
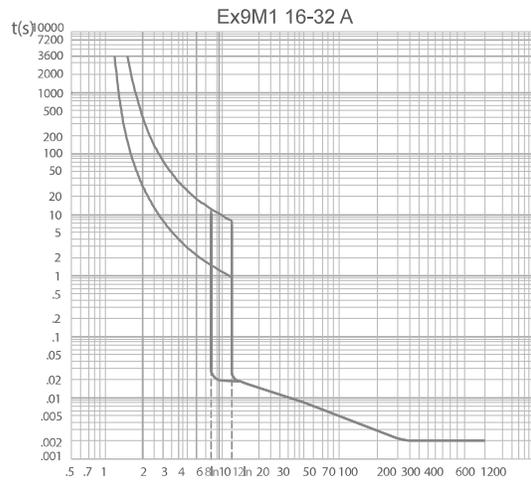
Technical Data Ex9M1 DC TM

DC TM Moulded Case Circuit Breakers up to 160 A

Installation space



Tripping characteristics



Technical Data Ex9M2 DC TM

DC TM Moulded Case Circuit Breakers up to 250 A

General parameters

Suitable for commercial as well as industrial applications

I_r (1.0) Not adjustable (1 Pole)

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

I_r (10) range not adjustable (1 Pole)

I_r 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

$I_{IN} = I_r$

Internal accessories

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

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

External accessories

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

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

Derating coefficient of Tripping Characteristics on accessories combination

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

Technical Data Ex9M2 DC TM

DC TM Moulded Case Circuit Breakers up to 250 A

Electrical parameters

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

Dependence of Tripping Characteristics on Ambient Temperature

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

Power dissipation characteristics

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

Technical Data Ex9M2 DC TM

DC TM Moulded Case Circuit Breakers up to 250 A

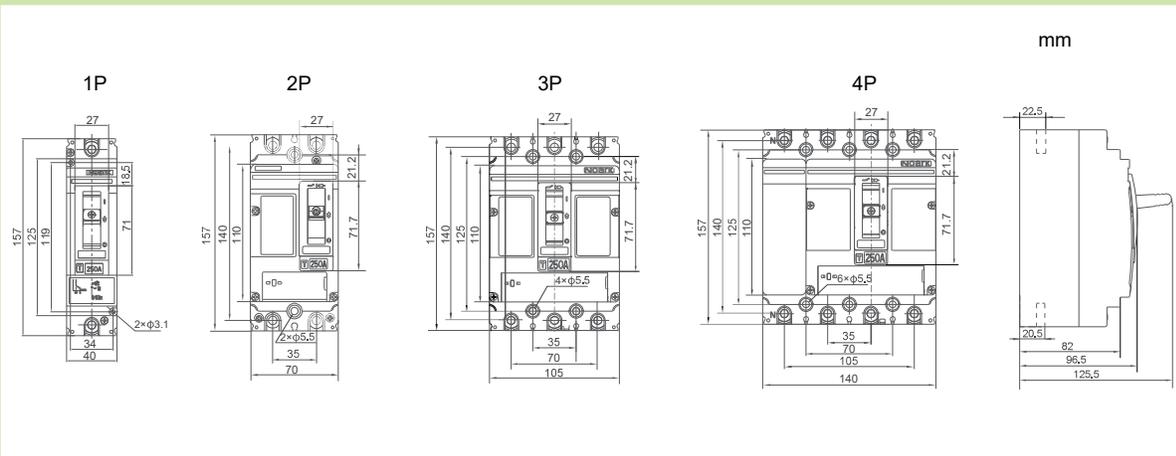
Mechanical parameters

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

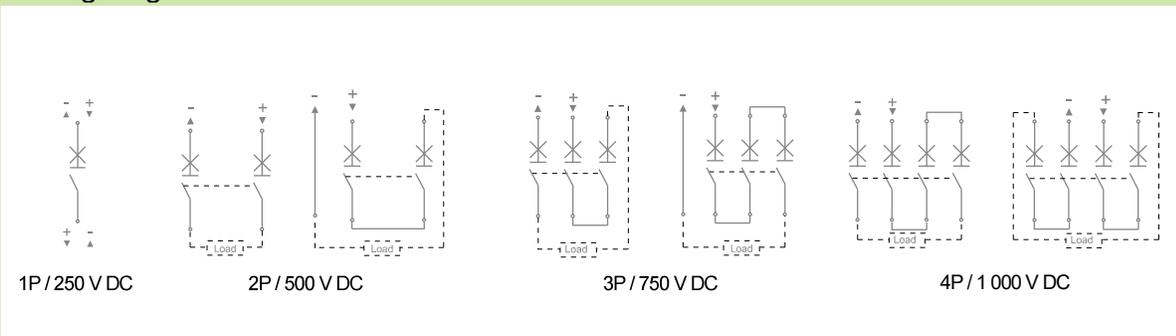
Derating coefficient of technical parameters based on altitude

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

Dimensions



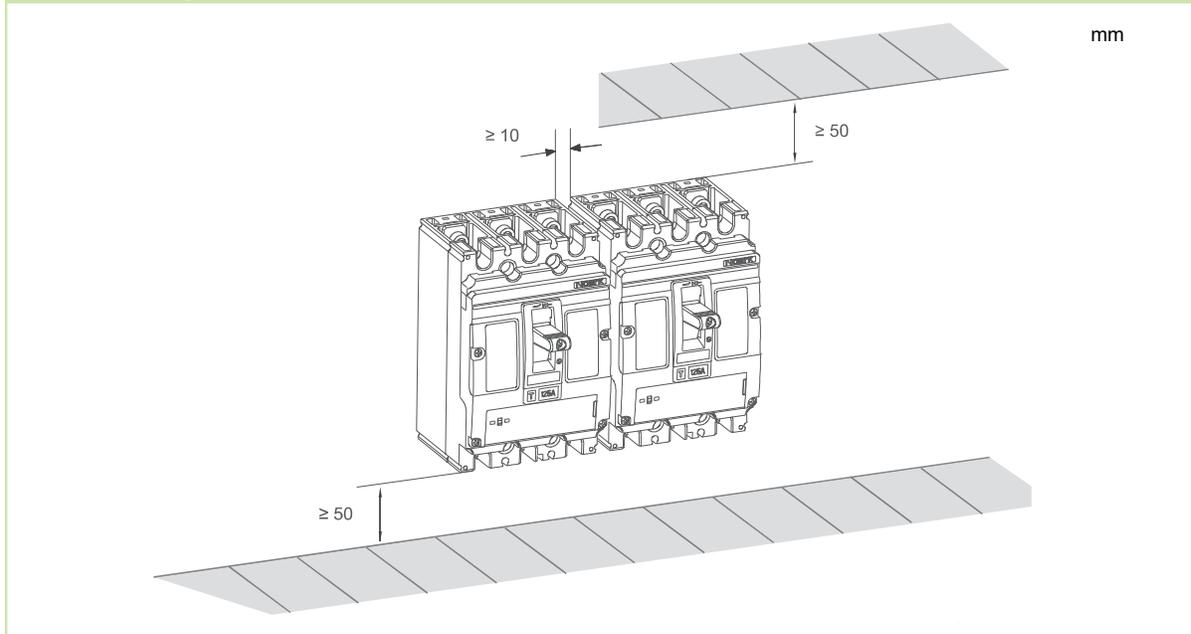
Wiring diagram



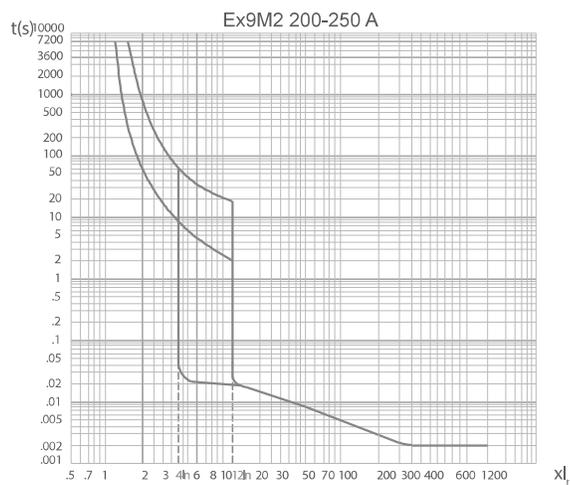
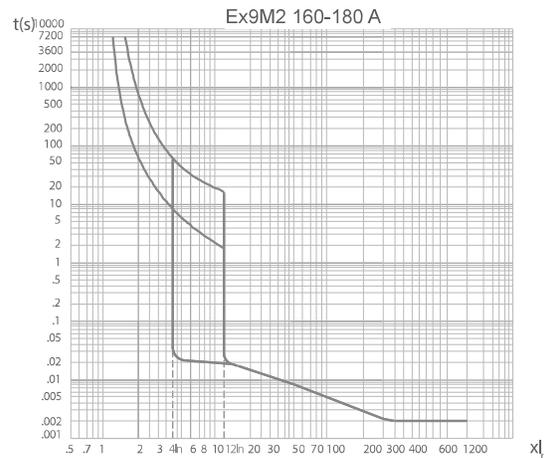
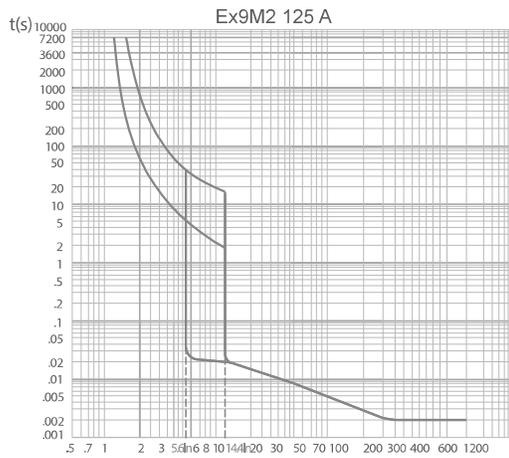
Technical Data Ex9M2 DC TM

DC TM Moulded Case Circuit Breakers up to 250 A

Installation space



Tripping characteristics



Technical Data Ex9M3 DC TM

DC TM Moulded Case Circuit Breakers up to 400 A

General parameters

Suitable for commercial as well as industrial applications

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

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

$I_{th} = I_r$

Internal accessories

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

External accessories

Direct rotary handle	RHD23	101483
Extended rotary handle	ERH23	101482
Remote motor operators	MOD23	101484, 101485, 112081, 101488
Terminal cover, short	TCV23 3P, 4P	101489, 102376
Terminal cover, long	TCE23 3P, 4P	101490, 102377
Phase barrier	PHS23	112112
Box terminals	MC23	103715
Tunnel terminal	MC23 W	103719, 103721
Plug-in base	PIA 23	112879, 112880, 112885, 112886
Withdrawable base	DOB 23	108887, 108899, 108893, 108905, 108889, 108901, 108895, 108907
Off position toggle key lock	KLK23	108854
Front plate connection	JP23	108861, 108867
Rear connection plate	RCP23	108873, 108877
Mechanical interlock	MIT23	108857
Draw-Out Base	DOB23	108877, 108899, 108893, 108905, 108889, 108901, 108895, 108907
Mounting depth spacers	WG10, WG13	106131, 106132

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

Derating coefficient of Tripping Characteristics on accessories combination

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

Technical Data Ex9M3 DC TM

DC TM Moulded Case Circuit Breakers up to 400 A

Electrical parameters

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

Dependence of Tripping Characteristics on Ambient Temperature

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

Power dissipation characteristics

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

Technical Data Ex9M3 DC TM

DC TM Moulded Case Circuit Breakers up to 400 A

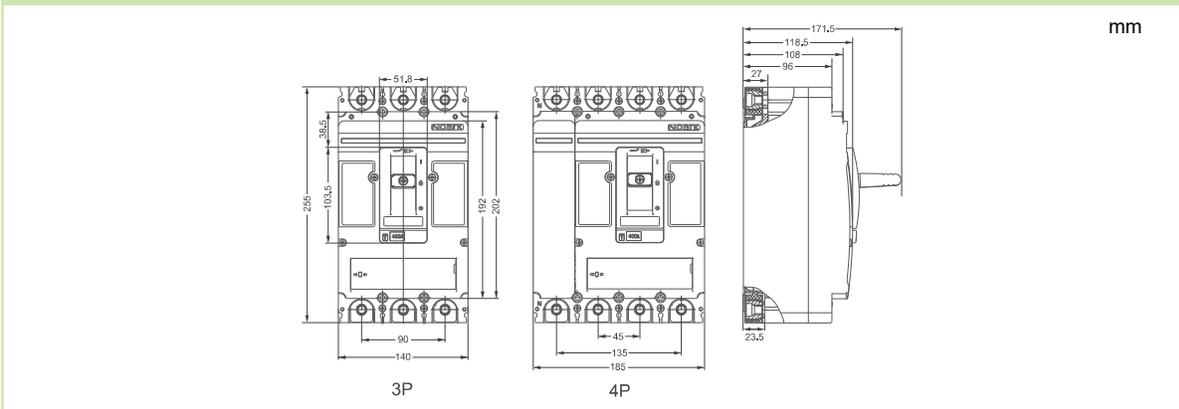
Mechanical parameters

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

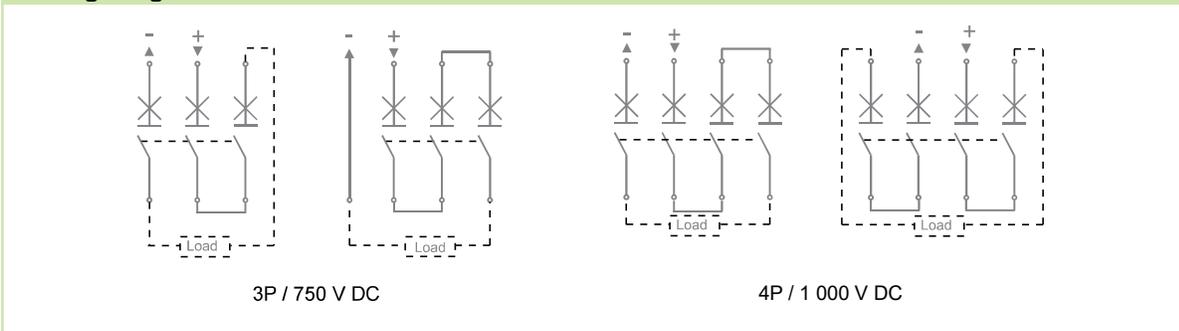
Derating coefficient of technical parameters based on altitude

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

Dimensions



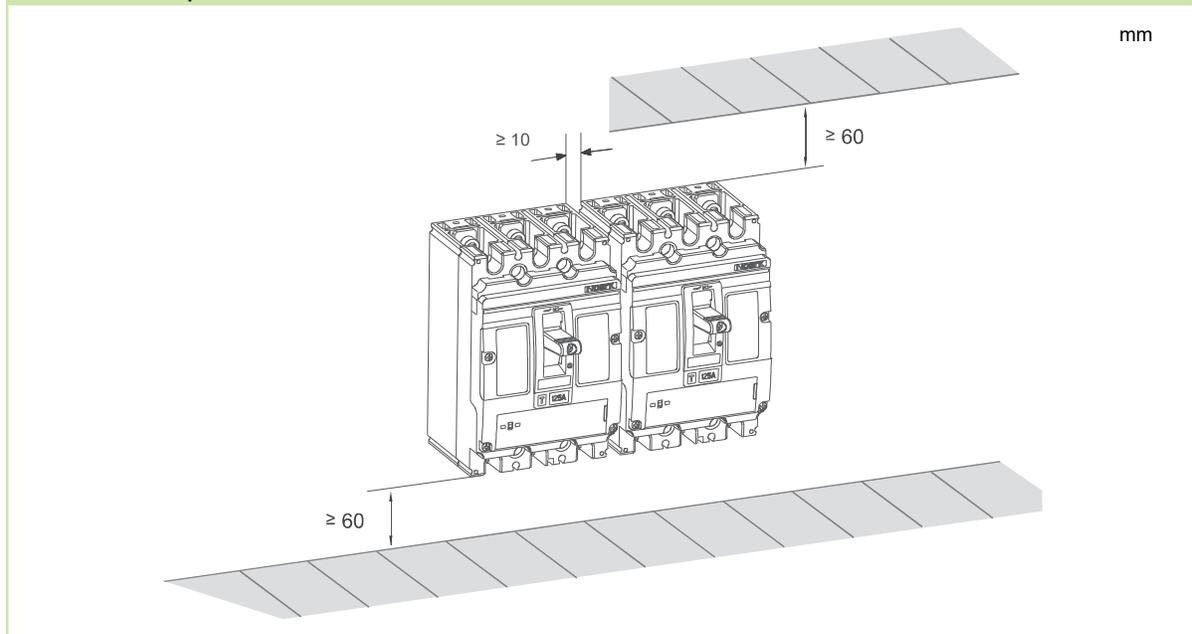
Wiring diagram



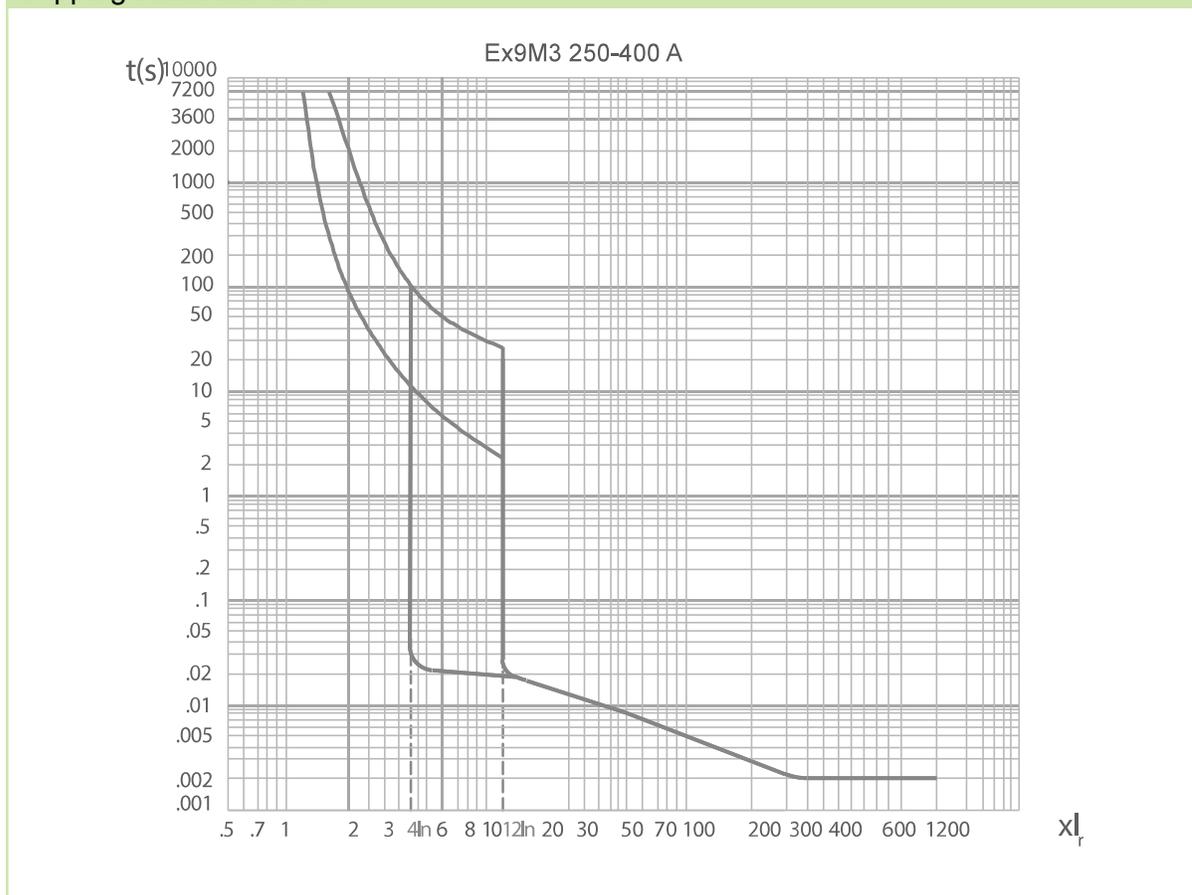
Technical Data Ex9M3 DC TM

DC TM Moulded Case Circuit Breakers up to 400 A

Installation space



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_f can be set in range $(5 — 10) \times I_n$

$I_{th} = I_r$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723 — 103730
Undervoltage releases	UVT24	103722 — 103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		

External accessories

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

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

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]		
	400 A	530 A	630 A
DOB 24	0,95	0,95	0,95

Technical Data Ex9M4 DC TM

DC TM Moulded Case Circuit Breakers up to 630 A

Electrical parameters

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

Dependence of Tripping Characteristics on Ambient Temperature

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

Power dissipation characteristics

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

Technical Data Ex9M4 DC TM

DC TM Moulded Case Circuit Breakers up to 630 A

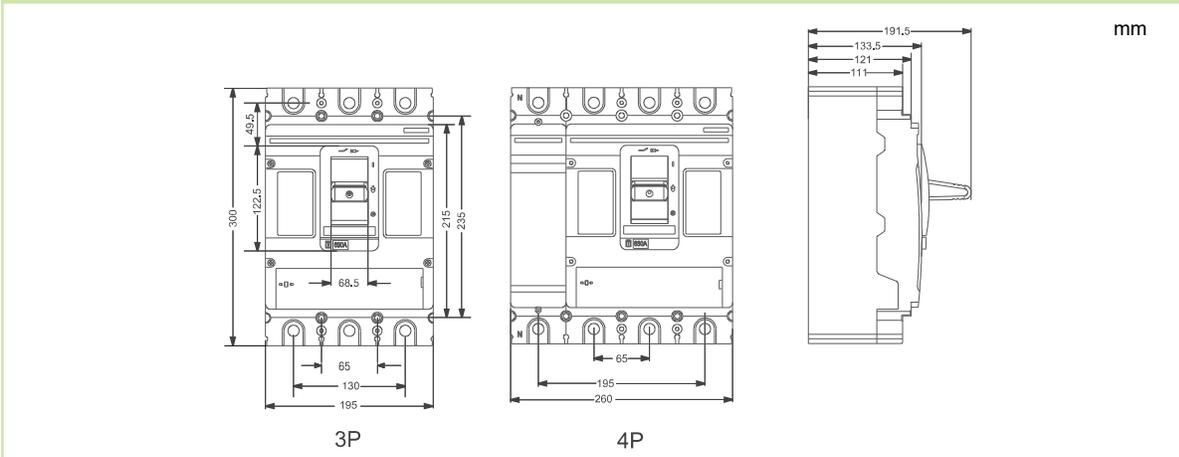
Mechanical parameters

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

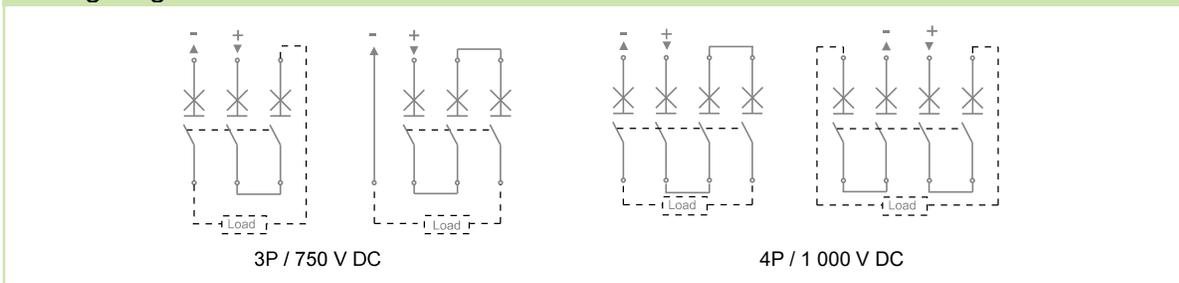
Derating coefficient of technical parameters based on altitude

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

Dimensions



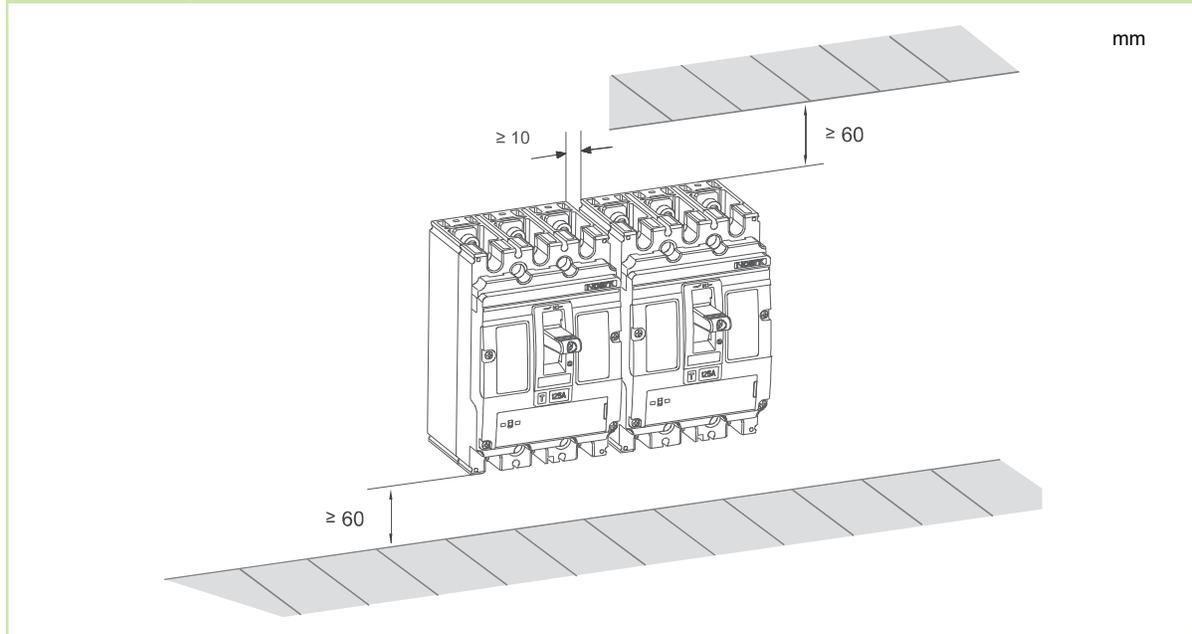
Wiring diagram



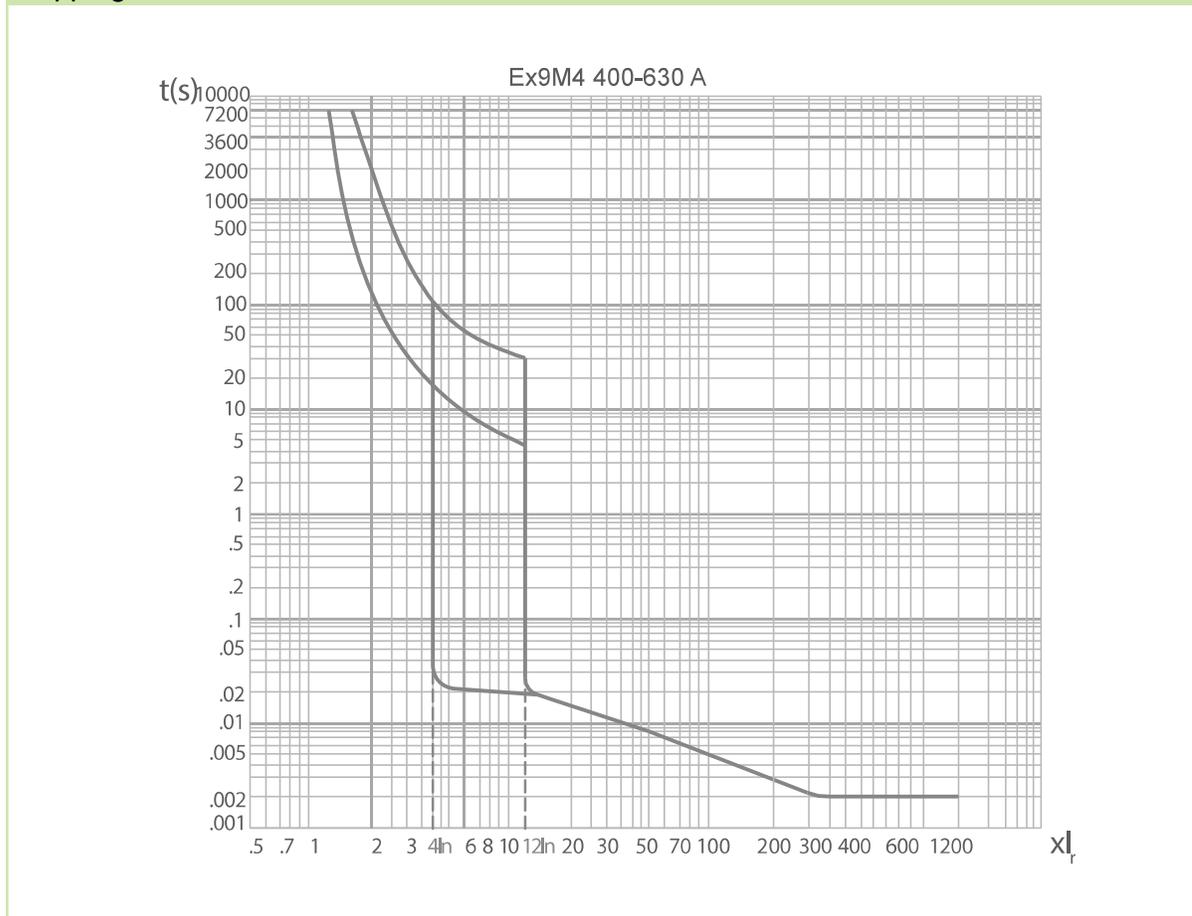
Technical Data Ex9M4 DC TM

DC TM Moulded Case Circuit Breakers up to 630 A

Installation space



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_f can be set in range $(5 — 10) \times I_n$

$I_{dV} = I_r$

Internal accessories

Auxiliary contact unit	AX21M	112071
Alarm contact unit	AL21M	112072
Shunt trip releases	SHT24	103723-103730
Undervoltage releases	UVT24	103722-103740
Max. number of installed internal accessories is 2 pcs of AX21M, 1 pc of AL21M and 1 pc of a release (SHT24 or UVT24)		

External accessories

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

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

Derating coefficient of Tripping Characteristics on accessories combination

Combined accessory	I_n (T) [A]		
	630 A	700 A	800 A
DOB 24	0,95	0,95	0,9

Technical Data Ex9M5 DC TM

DC TM Moulded Case Circuit Breakers up to 800 A

Electrical parameters

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

Dependence of Tripping Characteristics on Ambient Temperature

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

Power dissipation characteristics

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

Technical Data Ex9M5 DC TM

DC TM Moulded Case Circuit Breakers up to 800 A

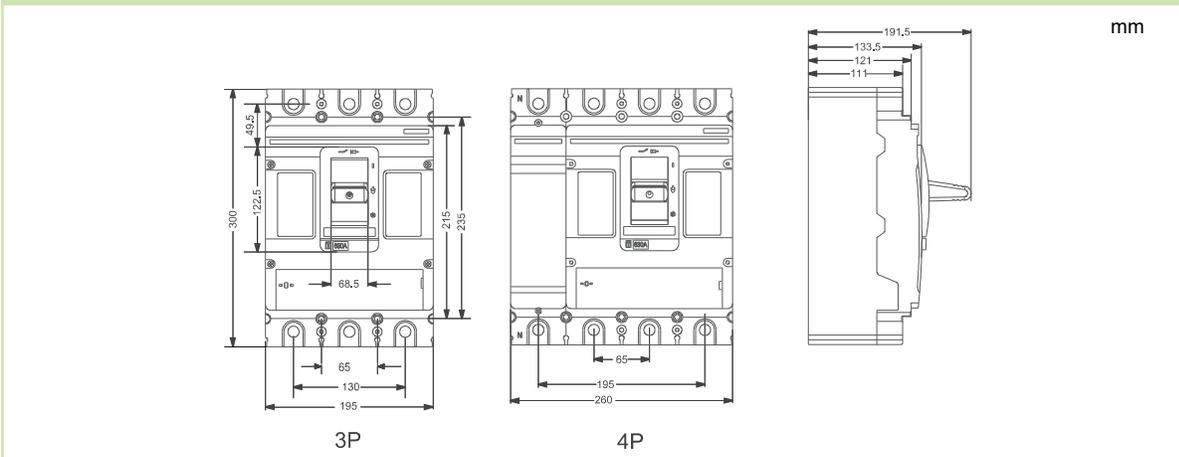
Mechanical parameters

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

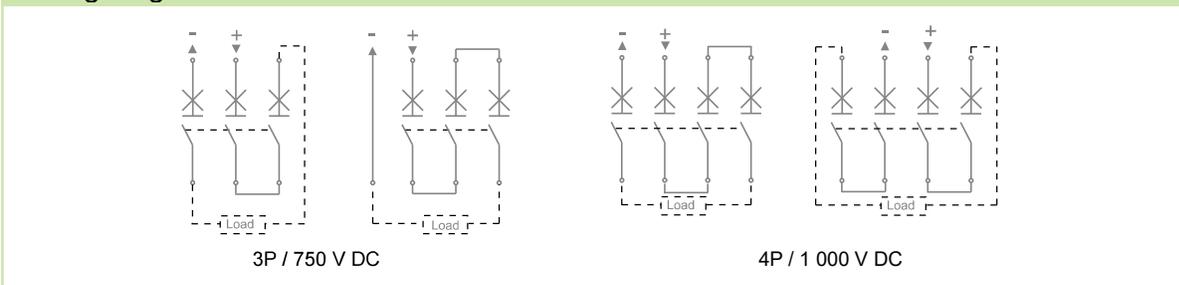
Derating coefficient of technical parameters based on altitude

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

Dimensions



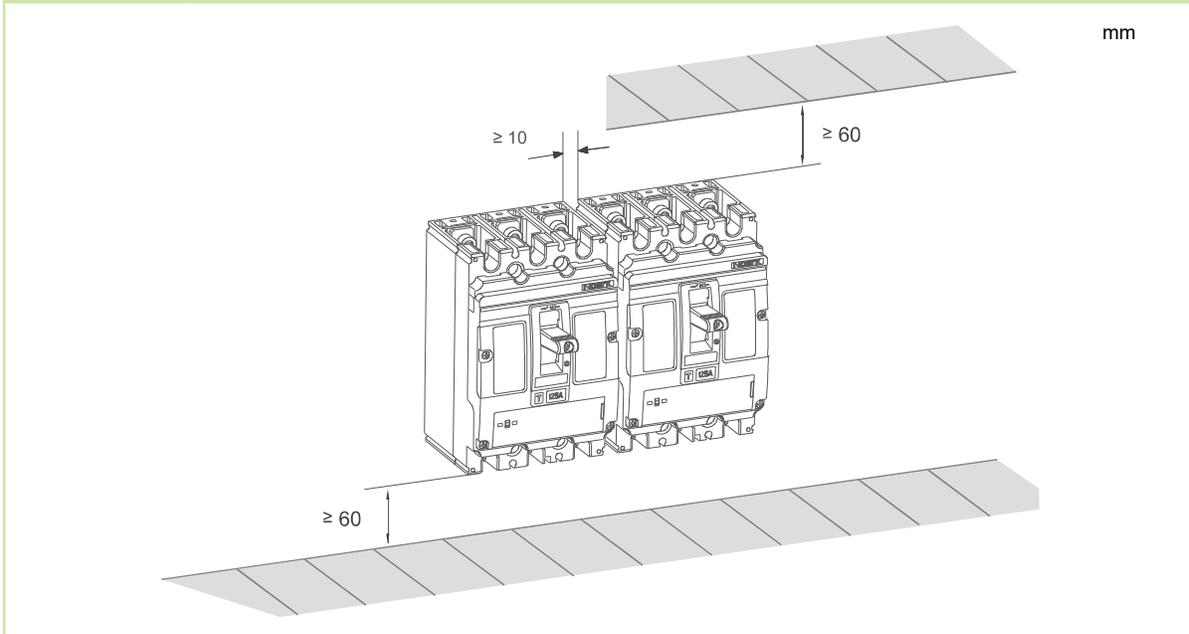
Wiring diagram



Technical Data Ex9M5 DC TM

DC TM Moulded Case Circuit Breakers up to 800 A

Installation space



Tripping characteristics

