



MM509N



Motor protection circuit breaker 3P 4-6.3A ; 1.1/2.2 kW at 230/415V

Technical properties

Architecture

Type of order	Short thumb-grip
Number of poles	3 P
Type of pole	3 P
Fixing mode	DIN rail type O (symmetrical)

Configuration

Number of modules	2.5
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Main electrical features

Rated operational voltage U_e	690 V
Type of supply voltage	AC
Frequency	50/60 Hz

Voltage

Rated insulation voltage	690 V
Rated impulse withstand voltage	6000 V

Electric current

Rated current	6.3 A
Rated ultimate short-circuit breaking capacity I_{cu} under 690V AC IEC 60947-2	3 kA
Magnetic regulating current	12.4 / 15.5 / 18.6 In
Thermal trip setting with 30°	4 / 4.3 / 4.6 / 4.9 / 5.2 / 5.4 / 5.7 / 6 / 6.3 A
Rating current 0°C according to IEC 60947	6.3 A
Rating current 10°C according to IEC 60947	6.3 A
Rating current 20°C according to IEC 60947	6.3 A
Rating current 30°C according to IEC 60947	6.3 A
Rating current 40°C according to IEC 60947	6.3 A
Rating current 50°C according to IEC 60947	6.3 A
Rated service breaking capacity I_{cs} AC according IEC 60947-2	100 %
Rated ultimate short-circuit breaking capacity I_{cu} under 230V AC IEC 60947-2	150 kA
Rated ultimate short-circuit breaking capacity I_{cu} under 240V AC IEC 60947-2	150 kA
Rated ultimate short-circuit breaking capacity I_{cu} under 400V AC IEC 60947-2	150 kA
Rated ultimate short-circuit breaking capacity I_{cu} under 415V AC IEC 60947-2	100 kA
Rated ultimate short-circuit breaking capacity I_{cu} under 220V AC IEC 60947-2	150 kA

Rated ultimate short-circuit breaking capacity Icu under 380V AC IEC 60947-2	150 kA
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Dimensions

Strip length of main circuit connections	10 mm
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Frequency

Frequency	50 to 60 Hz
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Power

Total power loss under IN	5.68 W
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Standard power rating of 3 phase motor in AC3 under 230V	1.1 kW
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Standard power rating of 3 phase motor in AC3 under 400V	2.2 kW
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Rated operational power for 3P under 220-230V AC3 according IEC60947-4	1.1 kW
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Rated operational power for 3P under 240V AC3 according IEC60947-4	1.1 kW
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Rated operational power for 3P under 415V AC3 according IEC60947-4	2.2 kW
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Rated operational power for 3P under 440V AC3 according IEC60947-4	3 kW
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Rated operational power for 3P under 500V AC3 according IEC60947-4	3 kW
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Electrical specifications

Nominal tightening torque of main circuit	1.7 Nm
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Endurance

Electric endurance in number of cycles	50000
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Mechanical endurance in number of operations per hour	40
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Number of mechanical operations	100000
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Installation, mounting

Tightening torque	1,7Nm
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Type connection of power circuit	with screw
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Connection

Connection cross-section of input and output with screws, for massive conductors	1 / 6 mm ²
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Connection cross section of access and exit with screws, for flexible conductor	1 / 6 mm ²
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Cable flexibel cross section for main circuit	1x (1 - 6) mm ² / 2x (1 - 6) mm ²
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Cable rigid cross section for main circuit	1x (1 - 6) mm ² / 2x (1 - 6) mm ²
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Type of connection	with screw
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Settings

min/maxi threshold value of the AC magnetic operation	78.1 / 117.2 A
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Setting type In or Ith	IN
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Equipment

Automatic compensation of the temperature	-5 / 40 °C
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Can be accessorized	Yes
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Use cases

Category of use	AC3
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Standards

Standard text	IEC 60947-4-1 ; EN 60947-4-1
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European directive RoHs	voluntary compliance
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European directive WEEE	concerned
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Safety

Protection index IP	IP20
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REACH conform	Yes
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RoHS conform	Yes
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Halogen free	Yes
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Phase failure sensitive	Yes
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Use conditions

Operating temperature	-25...55 °C
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Degree of pollution according to IEC 60664 / IEC 60947-2	3
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Storage/transport temperature	-25...80 °C
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Temperature of calibration	30 °C
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