



HMX450

MCB 4P 50kA C-50A 6M

Product Datasheet

Architecture

Number of protected poles	4
Number of poles	4 P
Type of pole	4 P
Curve	C

Functions

Concurrently switching N-neutral	no
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Connectivity

Top connection alignment for modular devices	Aligned terminal
Bottom connection alignment for modular devices	Aligned terminal

Main electrical features

Rated short circuit breaking capacity I _{cn} AC according IEC60898-1	50 kA
Rated operational voltage U _e	415 V
Type of supply voltage	AC
Frequency	50/60 Hz

Voltage

Rated insulation voltage	500 V
Rated impulse withstand voltage	6000 V

Electric current

Rated current	50 A
min/maxi threshold value of the AC thermal operation	1,05 / 1,3 In
Magnetic regulating current	5 / 10 In
Rating current -10°C according to IEC 60947	65,79 A
Rating current -15°C according to IEC 60947	67,17 A
Rating current -20°C according to IEC 60947	68,52 A
Rating current -25°C according to IEC 60947	69,84 A
Rating current -5°C according to IEC 60947	64,39 A
Rating current 0°C according to IEC 60947	62,95 A
Rating current 10°C according to IEC 60947	59,98 A
Rating current 150°C according to IEC 60947	58,43 A
Rating current 20°C according to IEC 60947	56,85 A
Rating current 25°C according to IEC 60947	55,21 A
Rating current 30°C according to IEC 60947	53,53 A
Rating current 35°C according to IEC 60947	51,8 A
Rating current 40°C according to IEC 60947	50 A
Rating current 45°C according to IEC 60947	48,14 A
Rating current 5°C according to IEC 60947	61,48 A
Rating current 50°C according to IEC 60947	46,2 A
Rating current 55°C according to IEC 60947	44,17 A
Rating current 60°C according to IEC 60947	42,05 A
Rating current 65°C according to IEC 60947	39,82 A
Rating current 70°C according to IEC 60947	37,45 A
Rated ultimate short-circuit breaking capacity Icu AC IEC 60947-2	50 kA
Breaking capacity on 1 pole for IT 400V NF 60947-2	4,5 kA
Breaking capacity on 1 pole for IT 415V NF 60947-2	4,5 kA
Rated service breaking capacity Ics AC according IEC 60947-2	50 %
Rated ultimate short-circuit breaking capacity Icu under 230V AC IEC 60947-2	50 kA
Rated ultimate short-circuit breaking capacity Icu under 240V AC IEC 60947-2	50 kA
Rated ultimate short-circuit breaking capacity Icu under 400V AC IEC 60947-2	50 kA
Rated ultimate short-circuit breaking capacity Icu under 415V AC IEC 60947-2	50 kA

Current correction factors

Correction factor of rating current for 2 devices placed side-by-side	1
Correction factor of rating current for 3 devices placed side-by-side	0,95
Correction factor of rating current for 4 and 5 devices placed side-by-side	0,9
Correction factor of rating current for 6 devices placed side-by-side	0,85

Frequency

Frequency	50 to 60 Hz
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Power

Total power loss under IN	14,76 W
Power loss per pole at In	3,87 W

Endurance

Electric endurance in number of cycles	4000
Number of mechanical operations	20000

Dimensions

Depth of installed product	70 mm
Height of installed product	90 mm
Width of installed product	106 mm

Installation, mounting

Type of top connection for modular devices	with screw
Tightening torque	3,5 to 5Nm
Type of top rail clip for modular devices	Plastic
Type of bottom rail clip for modular devices	plastic
Type of Bottom Connection for modular devices	with screw
Top removability for modular devices	yes
Bottom removability for modular devices	yes
360° product mounting position	yes

Connection

Connection cross-section at output with screw, for flexible conductor	1 / 50 mm ²
Connection cross-section at output with screw, for massive conductor	1 / 70 mm ²
Connection cross-sect. flexible conductor	50mm ²
Connection cross-sect. rigid cable	70mm ²
Connection cross-section for rigid conductor, upstream terminals with screws	1 / 70 mm ²
Connection cross-section of the access with screws, with flexible conductor	1 / 50 mm ²
Connection cross-section of input and output with screws, for massive conductors	1 / 70 mm ²
Connection cross section of access and exit with screws, for flexible conductor	1 / 50 mm ²
Type of connection	terminal with tightening compensation system
Nominal tightening torque bottom terminal	3,6 Nm
Nominal tightening torque top terminal	3,6 Nm

Standards

Standard text	IEC 60947-2
European directive WEEE	concerned
Product categories described in the W3E directive 2012/19/EU	Category 5

Safety

Protection index IP	IP20
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Use conditions

Degree of pollution according to IEC 60664 / IEC 60947-2	3
Class of energy limitation I ² t	3
Altitude	2000 m
Air humidity protection	for all climates

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Temperature of calibration	40 °C
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