



HMX220

### MCB 2P 50kA C-20A 3M

Product Datasheet

#### Architecture

Number of protected poles	2
Number of poles	2 P
Type of pole	2 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	20 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	27,95 A
Rating current -15°C according to IEC 60947	28,84 A
Rating current -20°C according to IEC 60947	29,6 A
Rating current -25°C according to IEC 60947	30,37 A
Rating current -5°C according to IEC 60947	27,32 A
Rating current 0°C according to IEC 60947	26,55 A
Rating current 10°C according to IEC 60947	25,03 A
Rating current 150°C according to IEC 60947	24,27 A
Rating current 20°C according to IEC 60947	23,5 A
Rating current 25°C according to IEC 60947	22,74 A
Rating current 30°C according to IEC 60947	22,5 A
Rating current 35°C according to IEC 60947	21,22 A
Rating current 40°C according to IEC 60947	20 A
Rating current 45°C according to IEC 60947	19,69 A
Rating current 5°C according to IEC 60947	25,79 A
Rating current 50°C according to IEC 60947	18,93 A
Rating current 55°C according to IEC 60947	18,17 A
Rating current 60°C according to IEC 60947	17,4 A
Rating current 65°C according to IEC 60947	16,64 A
Rating current 70°C according to IEC 60947	15,88 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	3,96 W
Power loss per pole at In	2 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	53 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 <sup>2</sup>
Connection cross-section at output with screw, for massive conductor	1 / 70 mm <sup>2</sup>
Connection cross-sect. flexible conductor	50mm <sup>2</sup>
Connection cross-sect. rigid cable	70mm <sup>2</sup>
Connection cross-section for rigid conductor, upstream terminals with screws	1 / 70 mm <sup>2</sup>
Connection cross-section of the access with screws, with flexible conductor	1 / 50 mm <sup>2</sup>
Connection cross-section of input and output with screws, for massive conductors	1 / 70 mm <sup>2</sup>
Connection cross section of access and exit with screws, for flexible conductor	1 / 50 mm <sup>2</sup>
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**

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

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Temperature of calibration	40 °C
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