



HMF390



## MCB 3P 10kA C-100A 4.5M

### Technical properties

#### Architecture

Number of protected poles	3
Number of poles	3 P
Curve	C

#### Functions

Concurrently switching N-neutral	No
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#### Configuration

Number of modules	4.5
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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	10 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	100 A
Rated service breaking capacity $I_{cs}$ AC according IEC 60898-1	7.5 kA
min/maxi threshold value of the AC thermal operation	1.13 / 1.45 $I_n$
Magnetic regulating current	5 / 10 $I_n$
Rating current 10°C according to IEC 60947	124 A
Rating current 15°C according to IEC 60947	120 A
Rating current 20°C according to IEC 60947	116 A
Rating current 25°C according to IEC 60947	112 A
Rating current 30°C according to IEC 60947	108 A
Rating current 35°C according to IEC 60947	104 A
Rating current 40°C according to IEC 60947	100 A

Rating current 45°C according to IEC 60947	96.6 A
Rating current 50°C according to IEC 60947	93.1 A
Rating current 55°C according to IEC 60947	89.4 A
Rating current 60°C according to IEC 60947	85.6 A
Rating current 65°C according to IEC 60947	81.6 A
Rating current 70°C according to IEC 60947	77.5 A
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 short circuit breaking capacity Icn under 230V AC according IEC60898-1	10 kA
Rated short circuit breaking capacity Icn under 400V AC according IEC60898-1	10 kA
Rated service breaking capacity Ics AC according IEC 60947-2	75 %
Rated ultimate short-circuit breaking capacity Icu under 230V AC IEC 60947-2	10 kA
Rated ultimate short-circuit breaking capacity Icu under 240V AC IEC 60947-2	10 kA
Rated ultimate short-circuit breaking capacity Icu under 400V AC IEC 60947-2	10 kA
Rated ultimate short-circuit breaking capacity Icu under 415V AC IEC 60947-2	10 kA
<b>Electric current / temperature</b>	
Rating current 0°C	124 A
Rating current 5°C	120 A
Rating current 10°C	116 A
Rating current 15°C	112 A
Rating current 20°C	108 A
Rating current 25°C	104 A
Rating current 30°C	100 A
Rating current 35°C	96.6 A
Rating current 40°C	93.1 A
Rating current 45°C	89.4 A
Rating current 50°C	85.6 A
Rating current 55°C	81.6 A
Rating current 60°C	77.5 A
<b>Current correction factors</b>	
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
<b>Dimensions</b>	
Depth of installed product	70 mm
Height of installed product	90 mm

Width of installed product	80 mm
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### Frequency

Frequency	50 to 60 Hz
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### Power

Total power loss under IN	21.66 W
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Power loss per pole at In	7.98 W
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### Endurance

Electric endurance in number of cycles	4000
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Number of mechanical operations	20000
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### Installation, mounting

Type of top connection for modular devices	with screw
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Tightening torque	3,5 to 5Nm
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Type of top rail clip for modular devices	Plastic
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Type of bottom rail clip for modular devices	plastic
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Type of Bottom Connection for modular devices	with screw
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Top removability for modular devices	Yes
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Bottom removability for modular devices	Yes
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### Connection

Connection cross-section at output with screw, for flexible conductor	1 / 50 mm <sup>2</sup>
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Connection cross-section at output with screw, for massive conductor	1 / 70 mm <sup>2</sup>
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Connection cross-section for rigid conductor, upstream terminals with screws	1 / 70 mm <sup>2</sup>
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Connection cross-section of the access with screws, with flexible conductor	1 / 50 mm <sup>2</sup>
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Connection cross-section of input and output with screws, for massive conductors	1 / 70 mm <sup>2</sup>
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Connection cross section of access and exit with screws, for flexible conductor	1 / 50 mm <sup>2</sup>
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Type of connection	terminal with tightening compensation system
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### Standards

Standard text	EN 60898-1 ; IEC 60947-2
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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	No
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### Use conditions

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