



HMF480

**MCB 4P 10kA C-80A 6M**

**Technical properties**

**Architecture**

|                           |     |
|---------------------------|-----|
| Number of protected poles | 4   |
| Number of poles           | 4 P |
| Curve                     | C   |

**Functions**

|                                  |    |
|----------------------------------|----|
| Concurrently switching N-neutral | No |
|----------------------------------|----|

**Configuration**

|                   |   |
|-------------------|---|
| Number of modules | 6 |
|-------------------|---|

**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   | 80 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                       | 112 A             |
| Rating current -15°C according to IEC 60947                       | 115 A             |
| Rating current -20°C according to IEC 60947                       | 118 A             |
| Rating current -25°C according to IEC 60947                       | 122 A             |
| Rating current -5°C according to IEC 60947                        | 109 A             |

|  |        |
|--|--------|
| Rating current 0°C according to IEC 60947                                    | 106 A  |
| Rating current 10°C according to IEC 60947                                   | 99.2 A |
| Rating current 15°C according to IEC 60947                                   | 96 A   |
| Rating current 20°C according to IEC 60947                                   | 92.8 A |
| Rating current 25°C according to IEC 60947                                   | 89.6 A |
| Rating current 30°C according to IEC 60947                                   | 86.4 A |
| Rating current 35°C according to IEC 60947                                   | 83.2 A |
| Rating current 40°C according to IEC 60947                                   | 80 A   |
| Rating current 45°C according to IEC 60947                                   | 77.6 A |
| Rating current 5°C according to IEC 60947                                    | 102 A  |
| Rating current 50°C according to IEC 60947                                   | 75.1 A |
| Rating current 55°C according to IEC 60947                                   | 72.6 A |
| Rating current 60°C according to IEC 60947                                   | 70 A   |
| Rating current 65°C according to IEC 60947                                   | 67.2 A |
| Rating current 70°C according to IEC 60947                                   | 64.3 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 -25°C   | 115 A  |
| Rating current -20°C   | 112 A  |
| Rating current -15°C   | 109 A  |
| Rating current -10°C   | 106 A  |
| Rating current -5°C  | 102 A  |
| Rating current 0°C   | 99.2 A |
| Rating current 5°C   | 96 A   |
| Rating current 10°C  | 92.8 A |
| Rating current 15°C  | 89.6 A |
| Rating current 20°C  | 86.4 A |
| Rating current 25°C  | 83.2 A |
| Rating current 30°C  | 80 A   |
| Rating current 35°C  | 77.6 A |
| Rating current 40°C  | 75.1 A |
| Rating current 45°C  | 72.6 A |
| Rating current 50°C  | 70 A   |

Subject to technical modifications

|                     |        |
|---------------------|--------|
| Rating current 55°C | 67.2 A |
| Rating current 60°C | 64.3 A |

### 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 |

### Dimensions

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

### Frequency

|           |             |
|-----------|-------------|
| Frequency | 50 to 60 Hz |
|-----------|-------------|

### Power

|                           |         |
|---------------------------|---------|
| Total power loss under IN | 25.71 W |
| Power loss per pole at In | 6.68 W  |

### Endurance

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

### 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        |

### 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-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 |

**Standards**

Standard text

EN 60898-1 ; IEC 60947-2

**Safety**

|                     |      |
|---------------------|------|
| Protection index IP | IP20 |
| REACH conform       | Yes  |
| RoHS conform        | Yes  |
| Halogen free        | No   |

**Use conditions**

|  |                  |
|--|------------------|
| 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 |

**temperatur**

|                            |       |
|----------------------------|-------|
| Temperature of calibration | 30 °C |
|----------------------------|-------|