



HMB180

### MCB 1P 15kA B-80A 1.5M

Product Datasheet

#### Architecture

|                           |     |
|---------------------------|-----|
| Number of protected poles | 1   |
| Number of poles           | 1 P |
| Type of pole              | 1 P |
| Curve                     | B   |

#### Functions

|                                  |    |
|----------------------------------|----|
| Concurrently switching N-neutral | no |
|----------------------------------|----|

#### 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 | 15 kA       |
| Rated operational voltage $U_e$  | 240 / 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 Ics AC according IEC 60898-1                 | 7,5 kA         |
| min/maxi threshold value of the AC thermal operation                         | 1,13 / 1,45 In |
| Magnetic regulating current  | 3 / 5 In       |
| 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 150°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 | 15 kA          |
| Rated short circuit breaking capacity Icn under 400V AC according IEC60898-1 | 15 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 | 15 kA          |
| Rated ultimate short-circuit breaking capacity Icu under 240V AC IEC 60947-2 | 15 kA          |
| Rated ultimate short-circuit breaking capacity Icu under 400V AC IEC 60947-2 | 15 kA          |
| Rated ultimate short-circuit breaking capacity Icu under 415V AC IEC 60947-2 | 15 kA          |

#### Electric current / temperature

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

#### Frequency

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

#### Power

|                           |        |
|---------------------------|--------|
| Total power loss under IN | 6,18 W |
| Power loss per pole at In | 6,18 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  | 27 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  | EN 60898-1, IEC 60947-2 |
| European directive WEEE                                      | concerned               |
| Product categories described in the W3E directive 2012/19/EU | Category 5              |

**Safety**

|                     |      |
|---------------------|------|
| Protection index IP | IP20 |
|---------------------|------|

**Use conditions**

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

**temperatur**

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