



HMX140

## MCB 1P 50kA C-40A 1.5M

Product Datasheet

### Architecture

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

### 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 | 50 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  | 40 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                                  | 54,8 A        |
| Rating current -15°C according to IEC 60947                                  | 56,07 A       |
| Rating current -20°C according to IEC 60947                                  | 57,31 A       |
| Rating current -25°C according to IEC 60947                                  | 58,52 A       |
| Rating current -5°C according to IEC 60947                                   | 53,51 A       |
| Rating current 0°C according to IEC 60947                                    | 52,18 A       |
| Rating current 10°C according to IEC 60947                                   | 49,42 A       |
| Rating current 150°C according to IEC 60947                                  | 47,98 A       |
| Rating current 20°C according to IEC 60947                                   | 46,49 A       |
| Rating current 25°C according to IEC 60947                                   | 44,96 A       |
| Rating current 30°C according to IEC 60947                                   | 43,37 A       |
| Rating current 35°C according to IEC 60947                                   | 41,72 A       |
| Rating current 40°C according to IEC 60947                                   | 40 A          |
| Rating current 45°C according to IEC 60947                                   | 38,21 A       |
| Rating current 5°C according to IEC 60947                                    | 50,82 A       |
| Rating current 50°C according to IEC 60947                                   | 36,32 A       |
| Rating current 55°C according to IEC 60947                                   | 34,34 A       |
| Rating current 60°C according to IEC 60947                                   | 32,23 A       |
| Rating current 65°C according to IEC 60947                                   | 29,97 A       |
| Rating current 70°C according to IEC 60947                                   | 27,53 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 |
|-----------|-------------|

### Power

|                           |        |
|---------------------------|--------|
| Total power loss under IN | 3,64 W |
| Power loss per pole at In | 3,64 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  | 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**

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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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