



symbolic image

**DATA SHEET**  
**miniature circuit-breakers**  
**MCB 3K40**  
**Characteristic K, 10 kA**  
**Article number 09915657**



**Function**

The task of miniature circuit breakers is to automatically disconnect circuits in order to protect lines and connected devices. After disconnection, they can be manually reactivated without the fuse sets having to be replaced, for example. Each of our miniature circuit breakers is equipped with a trip-free mechanism, which guarantees safe deactivation even if, for example, a switching knob is mechanically blocked. MCBK series circuit breakers have been specially developed for the Norwegian market. They are used as back-up fuses for distributors. Switches with characteristic K are optimised for fuse-protecting power circuits (motor and transformer load circuits) with high switch-on currents.

**Features**

rated switching capacity 10 kA, screw terminals with strain-relief clamps with wide terminal cross-section range for rail and line wiring on both connection sides , special quick fastening for removal of multiple miniature circuit-breakers from the bottom or top interconnection, large, folding label window for a secure hold and protection of the label, use of conventional wiring rails, ON/OFF switch position indicator on the switch toggle, accessories retro-fittable on the right, labelling software free of charge

**Mounting**

quick fastening to mounting rail, any installation position

**Applications**

suitable for use in power supplies for industrial facilities and purpose-built buildings or buildings for commercial use

**Technical Data**

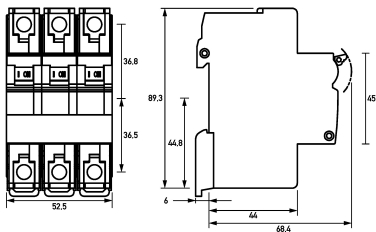
| Technical Data                                | MCB 3K40  |
|---|---|
| Series  | MCBK  |
| Number of poles                               | 3   |
| Tripping characteristic                       | K   |
| Supply side                                   | left or right   |
| Adjustment range of overload tripping         | 1.1 ... 1.35  |
| Adjustment range of short-circuit tripping    | 8 ... 12  |
| Tripping factor over frequency band           | 1.5 at DC; 1.1 at 100 Hz; 1.2 at 200 Hz; 1.3 at 300 Hz; |
| Test current factor tripping electromagnetic  | 20  |
| Test current multiplier, trip, thermal        | 1.35  |
| Test current factor retaining electromagnetic | 15  |
| Test current factor retaining thermal         | 1.1   |
| Reference temperature thermal release         | 30 °C   |

| Technical Data  | MCB 3K40  |
|---|---|
| Isolation class   | C at 250 V AC; B at 400 V AC  |
| Rated voltage (AC)                                      | 240 V, 415 V  |
| Rated current (AC)                                      | 40 A  |
| Rated short-circuit current                             | 10 kA   |
| Rated insulation voltage                                | 2 kV  |
| Rated impulse withstand voltage                         | 4 kV  |
| Rated frequency   | 50 Hz (16.67 Hz ... 60 Hz)  |
| Current heat loss per current path                      | 3.5 W   |
| short-circuit backup-fuse SCPD                          | 125 A   |
| Back-up fuse type                                       | gL, gG  |
| Back-up fuse (textual)                                  | Safety fuse as per DIN EN 6036  |
| Overtoltage class                                       | III   |
|   | <b>screw terminals with strain-relief clamp top (load circuit)</b>              |
| Protection against direct contact                       | DGUV V2, VDE 0660-514, finger and back-of-hand proof                            |
| Connection C1 Maximum number of conductors per terminal | 2 (conductors of same type and cross-section)                                   |
| Cross section solid                                     | 1-wire: 1 mm <sup>2</sup> ... 25 mm <sup>2</sup>                                |
| Connecting capacity flexible                            | 1-wire: 1 mm <sup>2</sup> ... 16 mm <sup>2</sup>                                |
| Cross section flexible with ferrule                     | 1 mm <sup>2</sup> ... 16 mm <sup>2</sup>  |
| Cross section stranded                                  | 1-wire: 1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>                              |
| Tightening torque                                       | max. 2.5 Nm   |
| Thickness busbar  | max. 3 mm   |
| Thickness busbar cable lug (combined conductors, max)   | 2 mm  |
| Cross section (busbar / busbar fork combined, max)      | 25 mm <sup>2</sup>  |
|   | <b>screw terminals with strain-relief clamp bottom (load circuit)</b>           |
| Protection against direct contact                       | DGUV V2, VDE 0660-514, finger and back-of-hand proof                            |
| Connection C2 Maximum number of conductors per terminal | 2 (conductors of same type and cross-section)                                   |
| Cross section solid                                     | 1-wire: 1 mm <sup>2</sup> ... 35 mm <sup>2</sup>                                |
| Connecting capacity flexible                            | 1-wire: 1 mm <sup>2</sup> ... 25 mm <sup>2</sup>                                |
| Cross section flexible with ferrule                     | 1 mm <sup>2</sup> ... 16 mm <sup>2</sup>  |
| Cross section stranded                                  | 1-wire: 1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>                              |
| Tightening torque                                       | max. 2.5 Nm   |
| thickness busbar cable lug (combined conductors, max)   | 2 mm  |
| cross section (busbar / busbar fork combined, max)      | 35 mm <sup>2</sup>  |
| thickness busbar  | max. 3 mm   |
|   | <b>General data</b>   |
| Operating position                                      | optional  |
| Mechanical endurance                                    | min. 20000 switching cycles   |
| Storage temperature                                     | -40 °C ... 70 °C  |
| Ambient temperature                                     | -25 °C ... 55 °C  |
| Climate resistance                                      | damp/heat: constant as per DIN EN 60068-2-78, cyclical as per DIN EN 60068-2-30 |
| Shock resistance  | 25 g / 11 ms Duration   |
| Vibration resistance                                    | > 15 g acc. to DIN EN 60068-2-59 during a load with I <sub>Δ</sub>              |
| Housing type  | distribution board housing  |

Subject to technical changes

| Technical Data                |   | MCB 3K40 |
|-------------------------------|---|----------|
| Installation type             | Mounting rail (35 mm)                                     |          |
| Housing material              | thermoplastic   |          |
| Protection class              | IP20  |          |
| sealable                      | true  |          |
| Width                         | 52.5 mm   |          |
| Height                        | 89.3 mm   |          |
| Depth                         | 74.4 mm   |          |
| Design requirements/Standards | IEC 60947-2, DIN EN 60947-2, VDE 0660-101, CSA-22.2 no 14 |          |
| Power limitation category     | 3   |          |
| Degree of pollution           | 2   |          |

Dimensions



Dimensional drawing Group view

Wiring example



Wiring diagram