



**DATA SHEET**  
Article number : 09933101

**residual current operated  
circuit-breakers with integral  
overcurrent protection**  
**DRCBO 3 Bo6/0,03/1N-AC**  
**sensitive to residual currents Type AC,  
characteristic B**

**Function**

RCCB/MCB combinations (RCBO) are residual current operated circuit-breakers with integral overcurrent protection for protecting systems in the event of a short-circuit and overload as per the requirements of VDE 0100 Part 430, and for protecting persons, farm animals and material items in the event of earth leakage currents as per VDE 0100 Part 410. Overload tripping occurs at currents in the overload range through a short-time delayed, heat-sensitive bimetal trip and at short-circuit currents through an electromagnetic instantaneous trip. The high-quality residual current operated circuit-breakers with integral overcurrent protection from series DRCBO 3 are independent of the mains voltage and have a high switching capacity of 10 kA. The green-red contact position indicator and the residual current tripping indicator allow for a quick overview of the operating status of the devices. Two features make mounting and removal easier: terminal protection against wires being lodged behind them and the tri-stable snap-in slider. Switches with residual current characteristic AC only detect AC residual currents. They cannot detect pulsating DC residual currents so are not permitted for use as residual current operated protective devices in Germany. They are therefore only available as export models. RCBOs with characteristic B ensure standard protection for lighting and socket circuits. As their short-circuit trip is three to five times the rated current, they should not be used to fuse-protect load circuits with high inrush currents. Devices in standard design are intended for monitoring circuits with a rated voltage of 230 V or 400 V and a rated frequency of 50 Hz.

**Features**

auxiliary-voltage-independent tripping, sensitive to AC residual currents (type AC), compact design for all rated currents, high short-circuit resistance, green/red switching position indicator, residual current tripping indicator, Strain-relief clamps with protection against wires being lodged behind them and wide terminal cross-section range for rail and line wiring on both connection sides, Use of conventional wiring rails possible, Neutral conductor right, tri-stable snap-in slider for easy mounting and removal, high electromagnetic compatibility (immunity to interference for industrial applications)

**Mounting**

quick fastening to mounting rail, any installation position, supply as desired

**Applications**

Power supplies to residential and purpose-built buildings as well as industrial facilities with TN-S, TT and TN-C-S networks. In IT networks, the RCBOs of this series can be set to switch off in the event of a second fault, Not permitted for use in TN-C networks and for protecting systems in which electronic equipment may cause pulsating or smooth DC residual currents or residual currents with frequencies not equal to 50 Hz. Comprehensive protection is not provided with an RCCB type AC. For these applications we recommend our residual current operated circuit-breakers with integral overcurrent protection Type A or our AC-DC sensitive RCBO Type B.

**Accessories**

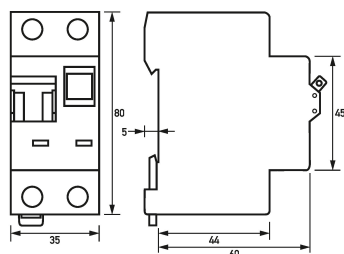
auxiliary switches DHi, wiring components RCCB and MCB busbars 2-pole, wiring components RCCB and MCB busbars 4-pole, operating current trip FAM, auxiliary switches Hi, restart locks RH-SPE

**Technical Data**

|  |                         |
|--|-------------------------|
| Series                                       | DRCBO 3                 |
| Number of poles                              | 1+N                     |
| Residual current type                        | AC                      |
| Rated current (AC)                           | 6 A                     |
| Rated residual current $I_{\Delta n}$        | 0.03 A                  |
| Short-time delayed                           | false                   |
| Selective                                    | false                   |
| min. Operating voltage range of test circuit | 196 V                   |
| max. Operating voltage range of test circuit | 253 V                   |
| Tripping characteristic                      | B                       |
|  | <b>load circuit</b>     |
| Specification                                | load disconnect contact |
| Rated voltage (AC)                           | 230 V                   |

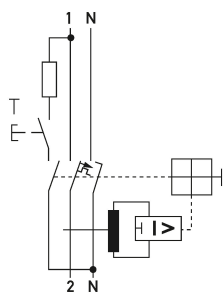
|   |   |
|---|---|
| Rated current (AC)                                      | 6 A   |
| Rated short-circuit current                             | 10 kA   |
| Surge current strength                                  | 0.25 kA   |
| max. Total rated switching capacity                     | 10 kA   |
| Rated insulation voltage                                | 440 V   |
| Rated impulse withstand voltage                         | 4 kV  |
| Rated frequency   | 50 Hz   |
| Current heat loss per current path                      | 0.9 W   |
| Back-up fuse type                                       | gG  |
| Overvoltage class                                       | III   |
|   | <b>screw-type terminal top, bottom (load circuit)</b> |
| Neutral conductor position                              | right   |
| 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 stranded                                  | 1-wire: 1 mm <sup>2</sup> ... 16 mm <sup>2</sup>      |
| Tightening torque                                       | 2 Nm ... 2.4 Nm                                       |
|   | <b>General data</b>                                   |
| mechanical endurance                                    | min. 10000 switching cycles                           |
| electrical endurance                                    | min. 4000 switching cycles                            |
| Storage temperature                                     | -40 °C ... 70 °C                                      |
| Ambient temperature                                     | -25 °C ... 40 °C                                      |
| Climate resistance                                      | According to IEC 68-2 (25–55°C / 90–95% RH)           |
| Housing type  | distribution board housing                            |
| Installation type                                       | Mounting rail (35 mm)                                 |
| Housing material  | thermoplastic   |
| Protection class  | IP20 (installed: IP40)                                |
| Width   | 35 mm   |
| Height  | 80 mm   |
| Depth   | 74 mm   |
| Installation depth                                      | 68 mm   |
| Module widths   | 2   |
| Weight  | 0.223 kg  |
| Design requirements/Standards                           | EN 61009-1, EN 61009-2-1                              |
| Power limitation category                               | 3   |
| Degree of pollution                                     | 2   |

**Dimensions**



Dimensional drawing Group view

Wiring example



Wiring diagram