


*symbolic image*

# *UK Technical Data*

## *DRCBO 4 B or C **1 + N-B SK*

### *AC/DC sensitive Type 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 DRCBO 4 have a rated switching capacity of 6 kA. They provide a labelling area in addition to the tripping indicator. Type B circuit-breakers are AC-DC sensitive. Type B residual current circuit-breakers detect smooth DC residual currents and all other residual currents at frequencies up to 150,000 Hz. The operating voltage required for this is tak Residual current circuitbreakers with the tripping characteristic curve SK ensure residual current protection and a high system availability. They are characterised by a lower response sensitivity at higher frequencies. The characteristic curve SK is optimised for systems in which no fire protection is required. They detect residual currents with frequencies up to 150,000 Hz. RCBOs with tripping characteristic C are primarily suitable for power circuits with high switch-on or peak currents, as their short-circuit trip value is five to ten times the rated current. 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*

AC/DC sensitive for residual currents with frequencies of 0 Hz (smooth direct current) up to 150 kHz, mains-voltage-independent tripping when type A residual currents occur, compact design for all rated currents, switch position indicator, separate indication of tripping cause, strain-relief clamps with a wide terminal cross-section range on both connection sides, neutral conductor right, labelling area

### *Mounting*

Quick fastening to mounting rail, any installation position, supply preferably from above

### *Applications*

commercial and industrial installations with TT, TN-S and TN-C-S systems, where power electronics equipment is used without galvanic isolation from the mains, e.g. frequency converters, switching power supplies, high-frequency converters, photovoltaic installations and UPS equipment with frequency converters without transformers, Type B+ and type B RCBOs with characteristic curve NK should be used where fire protection is legally required.

### *Notes*

suitable for use in 50 Hz AC networks, RCBOs are also available for other frequencies upon request, not designed for use in direct current networks or on the output side of controlled electrical equipment such as frequency converters

### *Accessories*

auxiliary switches DRCBO 4 Hi 2, wiring components DRCBO 4-busbars 2-pole, wiring components DRCBO 4-busbars 4-pole

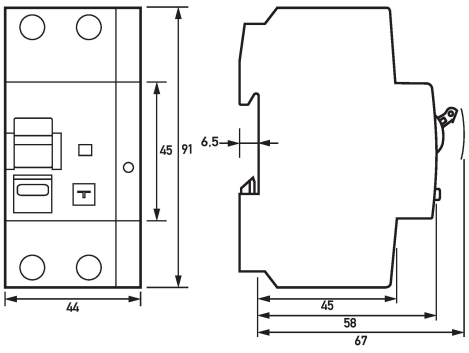
### *Technical Data*

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| Technical Data | DRCBO 4 B or C **1 + N-B SK |
|---|---|
| Series | DRCBO 4 |
| Number of poles | 1 + N |
| Residual current type | B |
| Tripping characteristic curve | SK |
| Rated current (AC) | Refer to the individual product reference, data sheet available on request |
| Rated residual current IΔn | Refer to the individual product reference, data sheet available on request |
| Short-time delayed | true |
| Selective | false |
| min. Operating voltage range of test circuit | 170 V |
| max. Operating voltage range of test circuit | 250 V |
| Minimum rated operating voltage (Type A/AC operation) | 0 V AC |
| Minimum rated operating voltage (Type B operation) | 50 V AC |
| Non-trip time | 10 ms |
| Tripping frequency | 0 Hz ... 150 kHz |
| Maximum disconnection times | 1 · IΔn: ≤ 300 ms; 5 · IΔn: ≤ 40 ms |
| Tripping characteristic | B or C |
| Supply side | up |
| Operating voltage | max. 253 V |
| Internal consumption | Refer to the individual product reference, data sheet available on request |
| | **Load circuit** |
| Specification | Load switch contact |
| Rated voltage (AC) | 230 V |
| Rated current (AC) | Refer to the individual product reference, data sheet available on request |
| Rated short-circuit current | 6 kA |
| Surge current strength | 3 kA |
| max. total rated switching capacity | Refer to the individual product reference, data sheet available on request |
| Rated insulation voltage | 440 V |
| Rated impulse withstand voltage | 4 kV |
| Rated frequency | 50 Hz |
| Current heat loss per current path | Refer to the individual product reference, data sheet available on request |
| Back-up fuse type | gG |
| Overvoltage class | III |
| | **Screw-type terminal top and bottom (Load circuit)** |
| 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 mm² ... 35 mm²; 2-wire: 1 mm² ... 10 mm² |
| Connecting capacity flexible | 1-wire: 1 mm² ... 25 mm²; 2-wire: 1 mm² ... 10 mm² |
| Cross section stranded | 1-wire: 1 mm² ... 25 mm²; 2-wire: 1 mm² ... 10 mm² |
| Tightening torque | 2 Nm ... 2.4 Nm |
| | **General data** |
| Operating position | any |

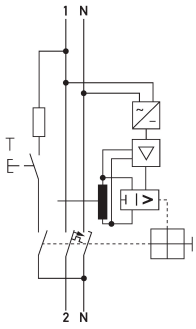
| Technical Data | DRCBO 4 B or C **1 + N-B SK |
|---|---|
| Mechanical endurance | min. 5000 cycles |
| Electrical endurance | min. 2000 cycles |
| Storage temperature | -40 °C ... 70 °C |
| Ambient temperature | -25 °C ... 40 °C |
| Climate resistance | according to IEC 60068-2-30: humid heat / cyclic (25 °C / 55 °C; 93 % / 97 % RH) |
| Shock resistance | 20 g / 20 ms Duration |
| Fatigue limit | > 5 g (f ≤ 80 Hz, duration > 30 min.) |
| Housing type | Distributor housing |
| Mounting type | Mounting rail (35 mm) |
| Housing material | Thermoplastic resin |
| Protection class | IP20 (installed: IP40) |
| Width | 44 mm |
| Height | 91 mm |
| Depth | 73.5 mm |
| Installation depth | 67 mm |
| Width (modules) | 2.5 |
| Weight | 0.276 kg |
| Design requirements/Standards | VDE 0664-10, VDE 0664-40, ÖVE/ÖNORM E 8601. EN 61009-1, EN 62423 |
| Degree of pollution according to EN 60664 | 2 |

## *Dimensions*




*Dimensional drawing Group view*

## *Wiring example*




*Wiring diagram*

## *Tripping characteristics*

