

symbolic image

UK Technical Data

*DRCBO 4 B or C ** 3 + 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

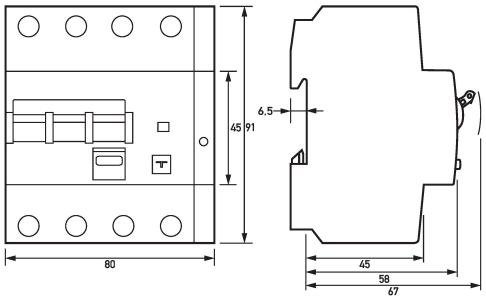
Technical Data

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Series	DRCBO 4
Number of poles	3 + 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. 440 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, 400 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	2.5 Nm ... 2.4 Nm
	General data
Operating position	any

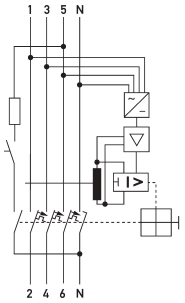
Technical Data	DRCBO 4 B or C ** 3 + N-B SK
Mechanical endurance	min. 5000 cycles
Electrical endurance	min. 2000 cycles
Storage temperature	-40 °C ... 70 °C
Ambient temperature	-25 °C ... 40 °C
Climate resistance	according to IEC 60068-2-30: humid heat / cyclic (25 °C / 55 °C; 93 % / 97 % RH)
Shock resistance	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	80 mm
Height	91 mm
Depth	73.5 mm
Installation depth	67 mm
Width (modules)	4.5
Weight	Refer to the individual product reference, data sheet available on request
Design requirements/Standards	VDE 0664-20, 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

