

DATA SHEET

residual current operated circuit-breakers with integral overcurrent protection DRCBO 4 C4o/o,o3/3N-A



sensitive to pulsating and alternating currents Type A, characteristic C
Article number 09945128



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 A residual current circuit-breakers are sensitive to pulsating and alternating currents. This function is independent of the mains voltage. 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

pulsating current-sensitive and AC current-sensitive, mains-voltage-independent tripping, 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 as desired

Applications

Protection of circuits in residential and purpose-built buildings as well as industrial facilities with TN-S, TT and TN-C-S networks. In IT networks, the RCCB/MCBs can be set to switch off in the event of a second earth fault, Not permitted for use in systems with TN-C networks; not permitted for protecting circuits in which the power electronics equipment may cause smooth DC residual currents or residual currents with frequencies not equal to 50/60 Hz.

Accessories

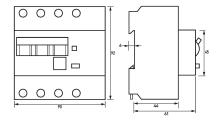
auxiliary switches DRCBO 4 Hi 1

Technical Data

Technical Data	DRCBO 4 C40/0,03/3N-A
Series	DRCBO 4
Number of poles	3+N
Residual current type	A
Rated current (AC)	40 A
Rated residual current I∆n	o.o3 A
Short-time delayed	false
Selective	false
min. Operating voltage range of test circuit	170 V
max. Operating voltage range of test circuit	250 V
Tripping characteristic	С
Operating voltage (AC)	max. 440 V

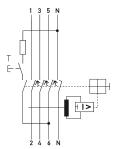
Ioad circuit	Technical Data	DRCBO 4 C40/0,03/3N-A
Rated voltage (AC) Rated current (AC) Rated current (AC) Rated current (AC) Rated short-circuit current Rated shor		
Rated current (AC) Rated short-circuit current Rated short-circuit current Rated short-circuit current Rated short-circuit current Rated insulation voltage Rated Ra	Specification	load disconnect contact
Rated short-circuit current Surge current strength 0.25 kA max. Total rated switching capacity Rated insulation voltage Rated insulation voltage Rated insulation voltage Rated insulation voltage Rated frequency 50 Hz, 60 Hz Current heat loss per current path Back-up fuse type GG Overvoltage class III Screw-type terminal top, bottom (load circuit) Neutral conductor position Connection C3 Maximum number of conductors per terminal Cross section solid 1-wire: 1 mm² 35 mm², 2-wire: 1 mm² 10 mm² Consecting capacity flexible 1-wire: 1 mm² 25 mm², 2-wire: 1 mm² 10 mm² General data Operating position Operating position Deptating position Installation type distribution board housing Installation type Mounting raid (35 mm) Housing material Protection class IP20 (installed: IP40) Width G8 mm Module widths 5 Weight Oesign requirements/Standards EN 61009-2-1, VDE 0664-20 Power limitation category 3	Rated voltage (AC)	230 V, 400 V
Surge current strength max. Total rated switching capacity Rated insulation voltage Rated insulation voltage Rated insulation voltage Rated frequency So Hz, 6o Hz Current heat loss per current path Back-up fuse type Govervoltage class III screw-type terminal top, bottom (load circuit) Neutral conductor position right Connection Ca Maximum number of conductors per terminal Cross section solid 1-wire: 1 mm² 35 mm²; 2-wire: 1 mm² 10 mm² Consecting 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 General data Operating position Fight General data Operating position General data Operating position General data Operating position Fight General data Operating position General data Operating position General data Operating position Fight General data Operating position General data Operati	Rated current (AC)	40 A
max. Total rated switching capacity Rated insulation voltage Rated frequency 50 Hz, 60 Hz 7W path Back-up fuse type GG Overvoltage class III screw-type terminal top, bottom (load circuit) Neutral conductor position right Connection C1 Maximum 2 (conductors of same type and cross-section) number of conductors per terminal 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 General data Operating position Protection class Fig. (installed: IP40) Width General data Deport Ty4 mm Installation type Mounting rail (35 mm) Housing material Frotection class Fig. (installed: IP40) Width General data Fig. (installed: IP40) Width General data Fig. (installed: IP40) Width General data General data Fig. (installed: IP40) Width General data Fig. (installed: IP40) Fig. (installed: IP4	Rated short-circuit current	6 kA
capacity Rated insulation voltage Rated insulation voltage Rated frequency So Ptz, 6o Hz Current heat loss per current path Back-up fuse type QG Overvoltage class III Screw-type terminal top, bottom (load circuit) Neutral conductor position Ca Maximum number of conductors per terminal Connection Ca Maximum number of conductors per terminal Cross section solid 1-wire: 1 mm² 35 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 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 General data Operating position Operating position Operating position Electrical endurance min. 2000 switching cycles Ambient temperature 1-25 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing material thermoplastic Protection class IP20 (installed: IP40) Width 90 mm Height 92 mm Depth 74 mm Installation depth Module widths 5 Weight 0.605 kg Deser limitation category 8 BN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 9	Surge current strength	0.25 kA
Rated insulation voltage Rated impulse withstand voltage Rated frequency Current heat loss per current path Back-up fuse type GG Overvoltage class III Screw-type terminal top, bottom (load circuit) right Connection C ₁ Maximum number of conductors per terminal Cross section solid Consecting capacity flexible 1-wire: 1 mm² 35 mm²; 2-wire: 1 mm² 10 mm² Cross section stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² General data Operating position General data Operating position General cendurance Ambient temperature 1-25 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing material Protection class IP20 (installed: IP40) Width 90 mm Height 92 mm Depth 1-stallation depth 68 mm Module widths 5 Weight 0.605 kg Power limitation category 8 GN 80 Housing vipe GN	max. Total rated switching	6 kA
Rated impulse withstand voltage Rated frequency So Hz, 66 Hz Current heat loss per current path Back-up fuse type Governotage class III Neutral conductor position Connection C1 Maximum number of conductors per terminal Cross section solid Connecting capacity flexible Consecting specific in the solid specif		
Rated frequency Current heat loss per current path path Back-up fuse type Go Overvoltage class III Neutral conductor position 2 (conductors of same type and cross-section) number of conductors per terminal Cross section solid 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 General data Operating position Optional Electrical endurance min. 2000 switching cycles Ambient temperature 7-25 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing material Protection class IP20 (installed: IP40) Width 90 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 5 Weight 0.665 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Rated insulation voltage	440 V
Current heat loss per current path Back-up fuse type gG Overvoltage class III Neutral conductor position Connection C1 Maximum number of conductors per terminal Cross section solid 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Connecting capacity flexible 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consecting capacity flexible 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consecting capacity flexible 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consection stranded 1-wire		<u> </u>
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Back-up fuse type Overvoltage class III Neutral conductor position Connection C1 Maximum number of conductors per terminal 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 Consecting capacity flexible 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consecting section stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Consecting transposition Operating position Electrical endurance Ambient temperature 1-25 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing material Protection class IP20 (installed: IP40) Width 90 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 5 Weight 0.605 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3		7 W
Screw-type terminal top, bottom (load circuit) Neutral conductor position right	•	
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Neutral conductor position Connection C1 Maximum number of conductors per terminal 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 Cross section stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² General data Operating position Operating position Electrical endurance min. 2000 switching cycles Ambient temperature -25 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing material thermoplastic Protection class IP20 (installed: IP40) Width 90 mm Height 92 mm Depth 74 mm Installation depth Module widths 5 Weight 0.605 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Overvoltage class	···
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Ambient temperature -25 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing material thermoplastic Protection class IP20 (installed: IP40) Width 90 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 5 Weight Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3		·
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Installation depth 68 mm Module widths 5 Weight 0.605 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	3	
Module widths 5 Weight 0.605 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	•	`
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Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3		
Power limitation category 3		
	Degree of pollution	2

Dimensions



Dimensional drawing Group view

Wiring example



Wiring diagram