

DATA SHEET

residual current operated circuit-breakers with integral overcurrent protection DRCBO 4 C16/0,30/3N-A



sensitive to pulsating and alternating currents Type A, characteristic C
Article number 09945134



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

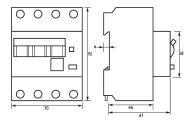
auxiliary switches DRCBO 4 Hi 2, wiring components RCCB and MCB busbars 4-pole

Technical Data

Technical Data	DRCBO 4 C16/0,30/3N-A
Series	DRCBO 4
Number of poles	3+N
Residual current type	A
Rated current (AC)	16 A
Rated residual current I∆n	0.3 A
Short-time delayed	false
Selective	false
min. Operating voltage range of test circuit	100 V
max. Operating voltage range of test circuit	254 V
Tripping characteristic	С
Operating voltage (AC)	max. 440 V

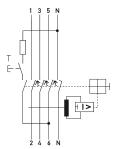
Ioad circuit Specification Ioad disconnect contact	Technical Data	DRCBO 4 C16/0,30/3N-A
Rated voltage (AC) Rated current (AC) Rated current (AC) Rated current (AC) Rated short-circuit current 6 kA Surge current strength 0.25 kA max. Total rated switching capacity Rated insulation voltage Rated insulation voltage Rated insulation voltage Rated frequency So Hz, 66 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 right Connection (1 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 Tightening torque 2 Nm 24 Nm General data Operating position General data Operating position Reterical endurance min. 2000 switching cycles Ambient temperature 2-25 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing type Mounting rail (35 mm) Housing material Helight 92 mm Depth 92 mm Module widths 4 Weight 9-Esign requirements/Standards EN 61009-12, NDE 0664-20 Power limitation category 3		
Rated voltage (AC) Rated current (AC) Rated current (AC) Rated current (AC) Rated short-circuit current 6 kA Surge current strength 0.25 kA max. Total rated switching capacity Rated insulation voltage Rated impulse withstand voltage Rated impulse withstand voltage Rated frequency So HZ, 66 HZ Current heat loss per current patch pat	Specification	load disconnect contact
Rated current (AC) Rated short-circuit current 6 kA Surge current strength max. Total rated switching capacity Rated insulation voltage Rated insulation voltage Rated insulation voltage Rated insulation woltage Rated insu	Rated voltage (AC)	230 V, 400 V
Rated short-circuit current 5 kA Surge current strength 5 kA 5 kA 5 kA 5 kA 5 kA 6 kV 8	Rated current (AC)	
max. Total rated switching capacity capacity Rated insulation voltage Rated frequency So Hz, 6o Hz Current heat loss per current path Back-up fuse type GG Overvoltage class III Connection can Maximum Roundctor position Right Connection can Maximum Roundctor's per terminal terminal Roundctor's per terminal Roundctor's per terminal Roundctor's per terminal terminal Rou	Rated short-circuit current	6 kA
max. Total rated switching capacity capacity Rated insulation voltage Rated frequency So Hz, 6o Hz Current heat loss per current path Back-up fuse type GG Overvoltage class III Connection can Maximum Roundctor position Right Connection can Maximum Roundctor's per terminal terminal Roundctor's per terminal Roundctor's per terminal Roundctor's per terminal terminal Rou	Surge current strength	0.25 kA
Rated insulation voltage 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 Go Overvoltage class III Screw-type terminal top, bottom (load circuit) Neutral conductor position Connection C1 Maximum 12 (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 Cross section standed 1-wire: 1 mm² 25 mm², 2-wire: 1 mm² 10 mm² Tightening torque Querting torque Querting position General data Operating position General data Operating position General data Operating position Optional Electrical endurance Mini 2000 switching cycles Arnbient temperature 2-25 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing material thermoplastic Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight Design requirements/Standards EN 61009-12, FN 61009-2-1, VDE 0664-20 Power limitation category 3	max. Total rated switching	
Rated impulse withstand voltage Rated frequency So Hz, 60 Hz Current heat loss per current path Back-up fuse type Govervoltage class III Sorew-type terminal top, bottom (load circuit) 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 Tightening torque Reneral data Operating position Operating position Operating position Electrical endurance Ambient temperature Housing type Mounting rail (35 mm) Housing material Protection class IP20 (installed: IP40) Width Protection class IP20 (installed: IP40) Width Popth Installation depth Module widths 4 Weight Operal installadors EN 61009-12, EN 61009-2-1, VDE 0664-20 Power limitation category 8 G	capacity	
Rated frequency Current heat loss per current path based by the path based based by the path based based based by the path based based based by the path based bas	Rated insulation voltage	440 V
Current heat loss per current path Back-up fuse type 9 gG Overvoltage class III Neutral conductor position right Connection Ca 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 Cross section stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Class section 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 torque 2 Nm 2-4, Nm General data Operating borstion optional Electrical endurance min. 2000 switching cycles Ambient temperature 2-5 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing material thermoplastic Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1-1, VDE 0664-20 Power limitation category 3	Rated impulse withstand voltage	4 kV
path Back-up fuse type gG Overvoltage class III Neutral conductor position right Connection C1 Maximum 2 (conductors of same type and cross-section) number of conductors per terminal top, bottom (load circuit) 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 Tightening torque 2 Nm 2.4 Nm General data Operating position optional 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 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Rated frequency	50 Hz, 60 Hz
Screw-type terminal top, bottom (load circuit) Neutral conductor position Connection C1 Maximum	Current heat loss per current path	2.3 W
screw-type terminal top, bottom (load circuit) 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 Tightening torque Ceneral data Operating position Operating position Electrical endurance Ambient temperature 1-25 °C 40 °C Housing type distribution board housing Installation type Housing material Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth 74 mm Installation depth Module widths 4 Weight 0-5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Back-up fuse type	gG
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 Tightening torque 2 Nm 2.4 Nm General data Operating position Operating position Electrical endurance 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 70 mm Height 92 mm Depth 74 mm Installation depth Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Overvoltage class	III
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 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 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 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 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 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 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 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 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 Cross section stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² Cross section stranded 1-wire: 1 mm² 20 mm²		screw-type terminal top, bottom (load circuit)
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 2 Nm 2.4 Nm General data Operating position Electrical endurance 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 70 mm Height Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0-5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Neutral conductor position	right
Connecting capacity flexible 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² 1-ghtening torque 2 Nm 2.4 Nm General data Operating position Optional Electrical endurance Ambient temperature -25 °C 40 °C Housing type distribution board housing Installation type Mounting rail (35 mm) Housing material thermoplastic Protection class IP 20 (installed: IP 40) Width 70 mm Height 92 mm Depth 74 mm Installation depth Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Connection C1 Maximum number of conductors per terminal	2 (conductors of same type and cross-section)
Cross section stranded 1-wire: 1 mm² 25 mm²; 2-wire: 1 mm² 10 mm² 2 Nm 2.4 Nm General data Operating position Optional Electrical endurance Ambient temperature Housing type Gistribution board housing Installation type Housing material Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth 174 mm Installation depth Module widths 4 Weight O.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Cross section solid	1-wire: 1 mm ² 35 mm ² ; 2-wire: 1 mm ² 10 mm ²
Tightening torque 2 Nm 2.4 Nm General data Operating position Electrical endurance Ambient temperature -25 °C 40 °C Housing type Installation type Mounting rail (35 mm) Housing material Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Connecting capacity flexible	1-wire: 1 mm ² 25 mm ² ; 2-wire: 1 mm ² 10 mm ²
General data Operating position optional 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 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Cross section stranded	1-wire: 1 mm ² 25 mm ² ; 2-wire: 1 mm ² 10 mm ²
Operating position Electrical endurance Ambient temperature -25 °C 40 °C Housing type Housing type Mounting rail (35 mm) Housing material Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Tightening torque	2 Nm 2.4 Nm
Electrical endurance 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 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3		General data
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 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Operating position	optional
Housing type Installation type Installation type Mounting rail (35 mm) Housing material Housing material Housing material Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Electrical endurance	min. 2000 switching cycles
Installation type Mounting rail (35 mm) Housing material Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Ambient temperature	-25 °C 40 °C
Housing material thermoplastic Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Housing type	distribution board housing
Protection class IP20 (installed: IP40) Width 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Installation type	Mounting rail (35 mm)
Width 70 mm Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Housing material	thermoplastic
Height 92 mm Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Protection class	IP20 (installed: IP40)
Depth 74 mm Installation depth 68 mm Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Width	70 mm
Installation depth Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Height	92 mm
Module widths 4 Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Depth	74 mm
Weight 0.5 kg Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Installation depth	68 mm
Design requirements/Standards EN 61009-1, EN 61009-2-1, VDE 0664-20 Power limitation category 3	Module widths	4
Power limitation category 3	Weight	o.5 kg
	Design requirements/Standards	EN 61009-1, EN 61009-2-1, VDE 0664-20
Degree of pollution 2	Power limitation category	3
	Degree of pollution	2

Dimensions



Dimensional drawing Group view

Wiring example



Wiring diagram