

## DATA SHEET

Article number: 09114810

# residual current circuit-breaker DFS 4 016-4/0,03-A Twin

puls- und wechselstromsensitiv Typ A, unterbrechungsfreie Prüfung





#### **Function**

Residual current circuit-breakers (RCCBs) are components for implementing protective measure "Automatic disconnection of the power supply" as per IEC 60364-4-41 or corresponding national installation regulations. Series DFS 4 devices are compact two or four-pole residual current circuit-breakers. In spite of the compact dimensions, a number of different tripping currents and characteristics are available at rated currents, depending on the design, up to 125 A. They also have large two-tier terminals for large conductor cross-sections, a practical multi-functional switch toggle and can be provided with labels using free-of-charge software. The twin design is a combination of two complete RCCBs, which allows for a function test to be performed on every single sub-RCCB without switching off the load circuit. It provides complete residual current protection during the function test, in which each of the RCCBs working in parallel can carry the full rated short-circuit current. The continual flow of current during the test procedure is achieved through parallel switching of the switching contacts of both sub-RCCBs, i.e. when both RCCBs are switched on, one of the two sub-switches can be tripped using its test key, while the second switch takes on the power supply. If the function test shows that a faulty RCCB does not trip, the effectiveness of the protection can be restored by switching on the intact RCCB. A faulty device can be secured against switching on again in this case with the restart interlock WES 2 mounted at the factory. Type A residual current circuit-breakers are sensitive to pulsating and alternating currents. This function is independent of the mains voltage. Devices in the standard design are intended for monitoring circuits with a rated voltage of 230 V, 400 V and a rated frequency of 50 Hz.

#### Features

function test for residual current circuit-breaker without interrupting power, residual current protection complies with standard even during testing procedure, no costs during system downtime, high system availability, tripping not dependent on mains and auxiliary voltage, sensitive to AC residual currents and pulsating DC residual currents (type A), compact design for all rated currents, high short-circuit resistance, double-sided two-tier terminals for large conductor cross-section and busbar, switch position indicator, viewing window for labels, multifunction switch toggle with three positions: "on", "off" and "tripped"

#### Mounting

quick fastening to mounting rail, any installation position, supply from any direction

#### **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 residual current circuit-breakers of this series can be set to switch off in the event of a second fault, The twin design allows regularly prescribed function tests to be performed without disconnecting the power, Excluded is the application in TN-C systems and for the protection of installations in which electronic equipment could generate smooth DC currents or residual currents with frequencies other than 50 Hz.

#### Notes

WES 2 restart interlock mounted at factory

## Accessories

terminal caps KA, information stickers HAS, auxiliary switches DHi, restart locks DFS WES, software DBS

#### Technical data

Series	DFS 4 A Twin
Number of poles	4
Residual current type	A
Rated current (AC)	16 A
Rated residual current I∆n	o.o <sub>3</sub> A
Short-time delayed	false
Selective	false
min. Operating voltage range of test circuit	250 V
max. Operating voltage range of test circuit	440 V

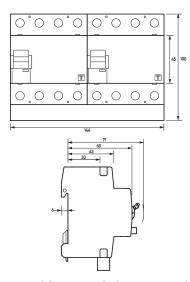
Technical changes reserved 2025\_10\_25 doepke\_09114810\_dbl\_en.pdf 1/3

Maximum disconnection times	1 · I∆n: ≤ 300 ms; 5 · I∆n: ≤ 40 ms
	load circuit
Specification	load disconnect contact
Number	2
min. Contact opening	4 mm
Rated voltage (AC)	230 V, 400 V
Rated current (AC)	16 A
Rated short-circuit current	10 kA
Surge current strength	0.25 kA
max. Total rated switching capacity	500 A
Rated insulation voltage	400 V
Rated impulse withstand voltage	4 kV
Rated frequency	50 Hz
Current heat loss per current path	0.2 W
Thermal Backup-fuse OCPD	16 A
Short-circuit backup-fuse SCPD	100 Å
Back-up fuse type	qG
Duck op 103c type	screw-type terminal top and bottom (load circuit)
Neutral conductor position	left
Protection against direct contact	DGUV V3, VDE 0660-514, finger and back-of-hand proof
Connection C1 Maximum number of	2 (conductors of same type and cross-section)
conductors per terminal	2 (conductors of same type and cross-section)
Cross section solid	1-wire: 1.5 mm <sup>2</sup> 50 mm <sup>2</sup> ; 2-wire: 1.5 mm <sup>2</sup> 16 mm <sup>2</sup>
Connecting capacity flexible	1-wire: 1.5 mm <sup>2</sup> 50 mm <sup>2</sup> ; 2-wire: 1.5 mm <sup>2</sup> 16 mm <sup>2</sup>
Cross section stranded	1-wire: 1.5 mm <sup>2</sup> 50 mm <sup>2</sup> ; 2-wire: 1.5 mm <sup>2</sup> 16 mm <sup>2</sup>
Cross section AWG, solid	15 1
Cross section AWG, stranded	151
Cross section AWG, strained  Cross section AWG, flexible	151
Cross section AWG, flexible with ferrule	151
Tightening torque	2.5 Nm 3 Nm
rightening torque	General data
Operating position	optional
max. Operating altitude above MSL	2000 m
Mechanical endurance	min. 5000 cycles
Electrical endurance	min. 2000 cycles
	-40 °C 70 °C
Storage temperature Ambient temperature	-40 ℃ /0 ℃ -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	distribution board housing
Installation type	Mounting rail (35 mm)
Housing material	thermoplastic
Protection class	IP20 (installed: IP40)
sealable	true
Width	144 mm
Height	100 mm
Depth	77 mm
nstallation depth	69 mm
Module widths	8
Weight	o.854 kg
Design requirements/Standards	VDE 0664-10, DIN EN 61008-1

2

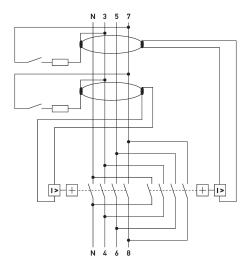
Degree of pollution

# **Dimensions**



Dimensioned drawing residual current circuit-breaker DFS 4 o16-4/o,o3-A Twin

# Wiring example



Wiring example residual current circuit-breaker DFS 4 016-4/0,03-A Twin

Technical changes reserved 2025\_10\_25 doepke\_09114810\_dbl\_en.pdf 3/3