



DATA SHEET

residual current circuit-breaker

DFS 4 040-4/0,50-AC V500

sensitive to residual currents Type AC, Rated voltage 290 V, 500 V

Article number 09137946



Function

Residual current circuit-breakers (RCCBs) are components for implementing protective measure "Automatic disconnection of the power supply" as per VDE 0100 part 410 or corresponding international installation regulations. Series DFS 4 devices are compact two or four-pole residual current circuit-breakers. In the standard design, they only take up four module width units of space. Although DFS 4 devices for AC and pulsating DC residual currents are actually designed for three-phase networks, they can also be used in single-phase networks. However, in addition to these, special variants are also available for single or three-phase operation in the form of the AC/DC sensitive designs (type B, type B+). 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. Switches with residual current characteristic AC only detect AC residual currents. They cannot detect pulsating DC residual currents so are not permitted for use as residual current operated protective devices in Germany. They are therefore only available as export models. Devices in design V are made for special voltages.

Mounting

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

Notes

Other special voltages available upon request

Accessories

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

Technical Data

Technical Data	DFS 4 040-4/0,50-AC V500
Series	DFS 4 AC V
Number of poles	4
Residual current type	AC
Rated current (AC)	40 A
Rated residual current $I_{\Delta n}$	0.5 A
Short-time delayed	false
Selective	false
min. Operating voltage range of test circuit	200 V
max. Operating voltage range of test circuit	550 V
Maximum disconnection times	$1 \cdot I_{\Delta n}: \leq 300 \text{ ms}; 5 \cdot I_{\Delta n}: \leq 40 \text{ ms}$
	load circuit
Specification	load disconnect contact
min. Contact opening	4 mm
Rated voltage (AC)	290 V, 500 V
Rated current (AC)	40 A

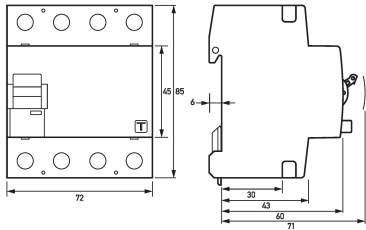
Subject to technical changes

Technical Data		DFS 4 040-4/0,50-AC V500
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		1.3 W
Thermal Backup-fuse OCPD		40 A
Short-circuit backup-fuse SCPD		100 A
Back-up fuse type		gG
		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 conductors per terminal		2 (conductors of same type and cross-section)
Cross section solid		1-wire: 1.5 mm ² ... 50 mm ² ; 2-wire: 1.5 mm ² ... 16 mm ²
Connecting capacity flexible		1-wire: 1.5 mm ² ... 50 mm ² ; 2-wire: 1.5 mm ² ... 16 mm ²
Cross section stranded		1-wire: 1.5 mm ² ... 50 mm ² ; 2-wire: 1.5 mm ² ... 16 mm ²
Cross section AWG, solid		15 ... 1
Cross section AWG, stranded		15 ... 1
Cross section AWG, flexible		15 ... 1
Cross section AWG, flexible with ferrule		15 ... 1
Tightening torque		2.5 Nm ... 3 Nm
		General data
Operating position		optional
max. Operating altitude above MSL		2000 m
Mechanical endurance		min. 5000 cycles
Electrical endurance		min. 2000 cycles
Surrounding atmosphere		normal environmental conditions
Storage temperature		-35 °C ... 75 °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		distribution board housing
Installation type		Mounting rail (35 mm)
Housing material		thermoplastic
Protection class		IP20 (installed: IP40)
sealable		true
Width		72 mm
Height		85 mm
Depth		75 mm
Installation depth		69 mm
Module widths		4
Weight		0.42 kg
Design requirements/Standards		VDE 0664-10, DIN EN 61008-1

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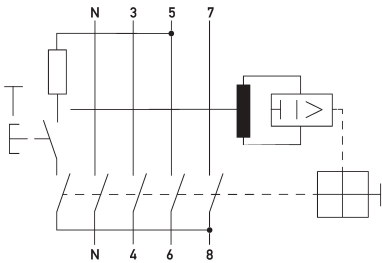
Technical Data		DFS 4 040-4/0,50-AC V500
Degree of pollution		2

Dimensions



Dimensional drawing Group view

Wiring example



Wiring diagram