

symbolic image

UK Technical Data

*DFS 4 ***-4/*** A NA 230, 400V 50Hz*

sensitive to pulsating and alternating currents Type A, emergency switching-off function

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 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. Type A residual current circuitbreakers are sensitive to pulsating and alternating currents. This function is independent of the mains voltage. DFS with emergency shutoff function ('NA' variant) make it possible to connect control elements, e.g. push-buttons for disconnecting the RCCB in emergency situations. The device is connected via the compact, factory mounted module; parallel wiring of multiple DHS is also possible. The integrated LED signals tripping by a control element as well as a possible wire breakage. In this state, reclosing of the RCCB is prevented.

Features

tripping not dependent on mains and auxiliary voltage, sensitive to AC residual currents and pulsating DC residual currents (type A) , Only 1/2 module width wider than standard device, No additional power supply required for emergency switching off circuit, Full range of emergency switching off function, 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", Neutral conductor position left

Mounting

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

Applications

NA series RCCBs are especially suitable for systems where an emergency switching off circuit with disconnecter properties is required, e.g. in teaching rooms or production facilities, 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. Comprehensive protection is not provided in this case. For these applications we recommend our AC/DC sensitive residual current circuit-breakers (Type B or B+).

Accessories

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

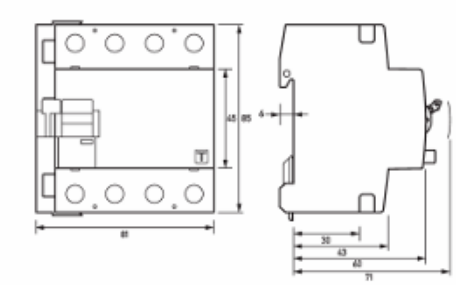
Technical Data

Technical Data	DFS 4 ***-4/***-A NA
Series	DFS 4 A NA
Number of poles	4
Residual current type	A
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	false
Selective	false
min. Operating voltage range of test circuit	250 V
max. Operating voltage range of test circuit	440 V

Technical Data	DFS 4 ***-4/***-A NA
Internal consumption	max. 1.5 W
Maximum disconnection times	Refer to the individual product reference, data sheet available on request
	Auxillary device (Emergency shut-off device)
Additional device AE1 operating V	50 V ... 440 V (AC)
Auxiliary device AE1 Voltage of the monitoring circuit	12 V (DC)
Auxiliary device AE1 Voltage of the monitoring circuit	max.1 mA (DC)
max. Auxiliary device AE1 Cable length of the monitoring circuit	500 m
	Load circuit
Specification	Load disconnect contact
min. Contact opening	4 mm
Rated voltage (AC)	230 V, 400V
Rated current (AC)	Refer to the individual product reference, data sheet available on request
Rated short-circuit current	10 kA
Surge current strength	0.25 kA
max. total rated switching capacity	Refer to the individual product reference, data sheet available on request
Rated insulation voltage	400 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
thermal Backup-fuse OCPD	Refer to the individual product reference, data sheet available on request
short-circuit backup-fuse SCPD	Refer to the individual product reference, data sheet available on request
Back-up fuse type	gG
I2t	48 k'As
Dynamic current strength Ip	6 ka
	Auxiliary switch (additional emergency shut-off device)
Specification	switching contact
Number of poles (total)	1
Contact assignment	1 CO
Rated voltage (AC)	12 V ... 230 V
Rated voltage (DC)	12 V ... 110 V
Tolerance of rated voltage	max. 5%
	Screw-type terminal top and bottom (Load circuit)
Neutral conductor position	Left
Protection against direct contact	DGUV V3, VDE 0660-514, finger-safe and safe for back-of-hand
Connection C1 Maximum number of conductors per terminal	2 (conductors of same type and cross-section)
Cross section solid	1-wire: 1.5 mm² ... 50 mm²; 2-wire: 1.5 mm² ... 16 mm²
Connecting capacity flexible	1-wire: 1.5 mm² ... 50 mm²; 2-wire: 1.5 mm² ... 16 mm²
Cross section stranded	1-wire: 1.5 mm² ... 50 mm²; 2-wire: 1.5 mm² ... 16 mm²
Cross section AWG, solid, stranded, flexible or with ferrule	15 ... 1
Tightening torque	2.5 Nm ... 3 Nm
	screw-type terminal top and bottom (Emergency shut-off device, auxiliary switches)
	DGUV V3, VDE 0660-514, finger-safe and safe for back-of-hand
Connection C1 Maximum number of conductors per terminal	2 (conductors of same type and cross-section)

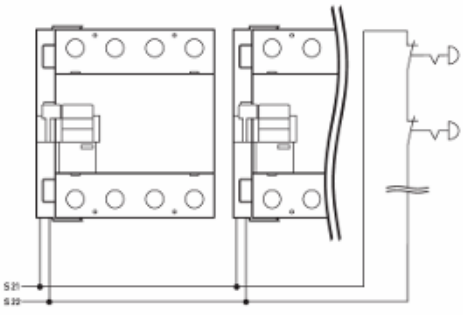
Technical Data	DFS 4 ***-4/***-A NA
Cross section solid	1-wire: 1 mm² ... 1.5 mm²; 2-wire: 1 mm² ... 1.5 mm²
Connecting capacity flexible	1 mm² ... 1.5 mm²
Cross section stranded	1-wire: 1 mm² ... 1.5 mm²; 2-wire: 1 mm² ... 1.5 mm²
Cross section AWG, solid, stranded, flexible or with ferrule	17 ... 16
Tightening torque	max. 0.8Nm
	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	-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	Distribution board housing
Mounting type	Mounting rail (35 mm)
Housing material	Thermoplastic resin
Protection class	IP20 (installed: IP40)
sealable	true
Width	81 mm
Height	85 mm
Depth	75 mm
Installation depth	69 mm
Width (modules)	4.5
Design requirements/Standards	VDE 0664-10, VDE V 0664-120, DIN EN 61008-1
Certifications	VDE
Degree of pollution according to EN 60664	2

Dimensions

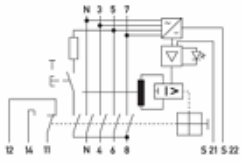


Dimensional drawing Group view

Wiring example



Wiring diagram



Wiring diagram