



symbolic image

UK Technical Data 01

DFL 8 *-4/0,03-A 400/690V 50Hz**
sensitive to pulsating and alternating currents Type A



Function

Circuit-breakers with adjustable thermal and magnetic trips + integral residual current protection (CBR) with 30 mA fixed characteristic. For implementing the protective measure "Automatic disconnection of the power supply" as per BS 7671 - 411 and overcurrent protection as per 431, in circuits maintained by electrically instructed persons - see 531.3.4.2.

Available in ratings from 100A < 250A, for use in 3 phase + N circuits from 400V to 690V 50Hz.

The 30 mA version has a fixed characteristic as per EN 60947-2 Appendix B, to provide additional protection in accordance with 415.1.

Features

Fixed rated residual current of 30 mA, detection of AC residual currents and pulsating DC residual currents Type A.
Rated currents from 100 A to 250 A, four-pole.
Rated voltage 400/690V 50Hz.
High short-circuit switching capacity- refer to the data sheet.
Terminal capacity < 185 mm².
Transient resistant feature.

Mounting

Screw directly to a mounting plate, supply from top or bottom of the device.

Applications

Power supplies to purpose-built buildings as well as industrial facilities with TN-S, TT and TN-C-S networks with high short-circuit power, In IT networks, the residual current trip of the CBR can be set to switch off in the event of a second earth fault.

Not suitable for use in TN-C networks or for the protection of installations in which electronic equipment could generate smooth DC currents or residual currents with frequencies other than 50 Hz: Refer to BS 7671 - 531.3.3 Types of RCD / see DFL8 BNK or BSK.

Accessories

Housings N-7 / DFL8 Enclosure - Insulated IP54

Technical Data

Technical Data	DFL 8 ***-4/0,03-A
Series	DFL 8 A
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 I Δ n	0.03 A
Short-time delayed	true
Selective	false

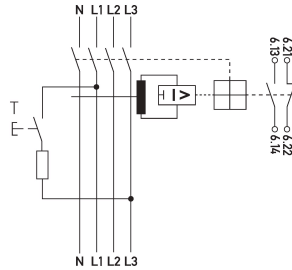
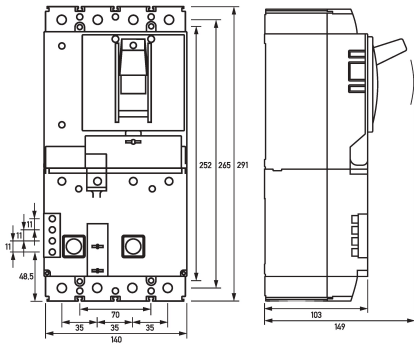
Technical Data	DFL 8 ***-4/0,03-A
min. Operating voltage range of test circuit	280 V
max. Operating voltage range of test circuit	759 V
Non-trip time	10 ms
Selectivity adjustable	false
Response delay	$1 \cdot I\Delta n: 0 \text{ ms} < T \leq 300 \text{ ms}; 5 \cdot I\Delta n: 0 \text{ ms} < T \leq 40 \text{ ms}$
Adjustment range of overload tripping	0.8 ... 1
Adjustment range of short-circuit tripping	6 ... 10
Power dissipation P_v release	Refer to the individual product reference, data sheet available on request
Rated operation short-circuit disconnecting capacity I_{cs}	85 kA at Rated operation short-circuit disconnecting capacity I_{cs} (240 V AC); 50 kA at Rated operation short-circuit disconnecting capacity I_{cs} (400/415 V AC); 35 kA at Rated operation short-circuit disconnecting capacity I_{cs} (440 V AC); 25 kA at Rated operation short-circuit disconnecting capacity I_{cs} (525 V AC) 5 kA at Rated operation short-circuit disconnecting capacity I_{cs} (690 V AC)
Rated short-circuit disconnecting capacity limit I_{cu}	85 kA at Rated short-circuit disconnecting capacity limit I_{cu} (240 V AC); 50 kA at Rated short-circuit disconnecting capacity limit I_{cu} (400/415 V AC); 35 kA at Rated short-circuit disconnecting capacity limit I_{cu} (440 V AC); 25 kA at Rated short-circuit disconnecting capacity limit I_{cu} (525 V AC) 20 kA at Rated short-circuit disconnecting capacity limit I_{cu} (690 V AC)
Rated short-circuit connection and disconnection capacity I_{dm}	85 kA at Rated short-circuit connection and disconnection capacity I_{dm} (240 V AC); 50 kA at Rated short-circuit connection and disconnection capacity I_{dm} (400/415 V AC); 35 kA at Rated short-circuit connection and disconnection capacity I_{dm} (440 V AC); 25 kA at Rated short-circuit connection and disconnection capacity I_{dm} (525 V AC) 20 kA at Rated short-circuit connection and disconnection capacity I_{dm} (690 V AC)
Operating voltage (AC)	690 V (max. 759 V)
Operating frequency	50 Hz
Type	Display Output state Operating lever (black)
Specification	Load circuit Load switch contact
Rated voltage (AC)	400 V, 690 V
Tolerance of rated voltage	max. 10 %
Rated current (AC)	Refer to the individual product reference, data sheet available on request
Surge current strength	5 kA
Rated impulse withstand voltage	8 kV
Rated frequency	50 Hz
Electrical endurance AC-1	7500 Schaltspiele
short-circuit backup-fuse SCPD	Refer to the individual product reference, data sheet available on request
Back-up fuse type	gG
Back-up fuse (textual)	only required if the short-circuit current to be expected at the installation location exceeds the switching capacity of the circuit-breaker
Overvoltage class	III
Specification	Auxiliary switch Switching contact
Rated insulation voltage	500 V
rated impulse withstand voltage	6 kV
Allowed utilization category	AC-15, DC-13
Rated current (AC-15)	6 A (230 V); 4 A (400 V) 2 A (500 V)
Rated current (DC-13)	3 A (24 V); 0.8 A (110 V) 0.3 A (220 V)
Rated short-circuit disconnecting capacity limit I_{cu}	85 kA at Rated short-circuit disconnecting capacity limit I_{cu} (240 V AC); 50 kA at Rated short-circuit disconnecting capacity limit I_{cu} (400/415 V AC); 35 kA at Rated short-circuit

Technical Data	DFL 8 ***-4/0,03-A
	disconnecting capacity limit Icu (440 V AC); 25 kA at Rated short-circuit disconnecting capacity limit Icu (525 V AC) 20 kA at Rated short-circuit disconnecting capacity limit Icu (690 V AC)
Rated operation short-circuit disconnecting capacity Ics	85 kA at Rated operation short-circuit disconnecting capacity Ics (240 V AC); 50 kA at Rated operation short-circuit disconnecting capacity Ics (400/415 V AC); 35 kA at Rated operation short-circuit disconnecting capacity Ics (440 V AC); 25 kA at Rated operation short-circuit disconnecting capacity Ics (525 V AC) 5 kA at Rated operation short-circuit disconnecting capacity Ics (690 V AC)
Rated short-circuit connection and disconnection capacity IΔm	85 kA at Rated short-circuit connection and disconnection capacity IΔm (240 V AC); 50 kA at Rated short-circuit connection and disconnection capacity IΔm (400/415 V AC); 35 kA at Rated short-circuit connection and disconnection capacity IΔm (440 V AC); 25 kA at Rated short-circuit connection and disconnection capacity IΔm (525 V AC) 20 kA at Rated short-circuit connection and disconnection capacity IΔm (690 V AC)
	Box terminal top and bottom (Load circuit)
Neutral conductor position	left
Protection against direct contact	finger-safe and safe for back-of-hand
Allowed types of wires	Aluminium conductors, Copper conductors, massive conductors, flexible conductors, stranded conductors
Clamping area	4 mm ² ... 185 mm ²
Connection C1 Maximum number of conductors per terminal	2
Cross section solid	1-wire: 4 mm ² ... 16 mm ² ; 2-wire: 4 mm ² ... 16 mm ²
Cross section stranded	1-wire: 25 mm ² ... 185 mm ² ; 2-wire: 25 mm ² ... 70 mm ²
Tightening torque	max. 14 Nm
	Screw-type terminal left (Auxiliary switch)
Protection against direct contact	finger-safe and safe for back-of-hand
Clamping area	0.75 mm ² ... 2.5 mm ²
Connection C2 Maximum number of conductors per terminal	2
Cross section solid	1-wire: 0.75 mm ² ... 2.5 mm ² ; 2-wire: 0.75 mm ² ... 1.5 mm ²
Connecting capacity flexible	2-wire: 0.75 mm ² ... 1.5 mm ²
Cross section flexible with ferrule	0.75 mm ² ... 2.5 mm ²
Cross section stranded	1-wire: 0.75 mm ² ... 2.5 mm ² ; 2-wire: 0.75 mm ² ... 1.5 mm ²
Tightening torque	max. 0.8 Nm
	General data
Operating position	tilted 90°, vertical
max. Operating altitude above MSL	2000 m
Mechanical endurance	min. 2000 switching cycles
Electrical endurance	min. 2000 switching cycles
Surrounding atmosphere	normal environmental conditions
Storage temperature	-25 °C ... 70 °C
Ambient temperature	-25 °C ... 70 °C
Climate resistance	constant as per IEC 60068-2-78, cyclical as per IEC 60068-2-30
Shock resistance	20 g / 20 ms Duration
Fatigue limit	1,0 g (f = 2 - 100 Hz) (IEC 60068-2-6)
Housing type	wall-mounted housing
Mounting type	Wall mounting
Protection class	IP20 (installed: IP40)
sealable	true
Width	140 mm
Height	291 mm
Depth	103 mm

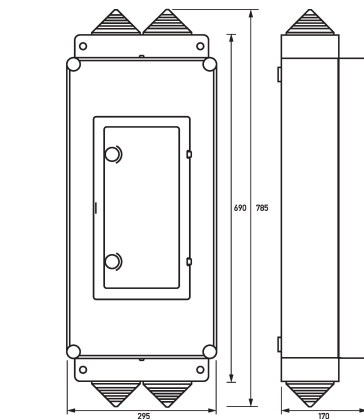
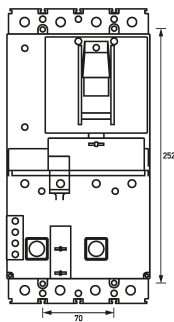
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Installation depth	149 mm
Design requirements/Standards	DIN IEC 60755, EN 60947-2, EN 60947-2 Appendix B, VDE 0660-101
Degree of pollution according to EN 60664	3

Dimensions

Wiring example



Wiring diagram



DFL8 Enclosure

Dimensional drawing Group view

STEP file

Dimensional drawing Drilling template