



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 over current 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.

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

### 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 mm<sup>2</sup>.  
 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 $\Delta$ n	0.03 A
Short-time delayed	true
Selective	false

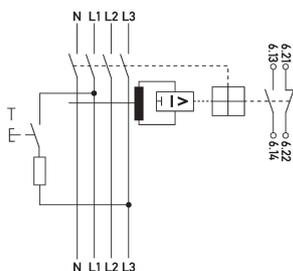
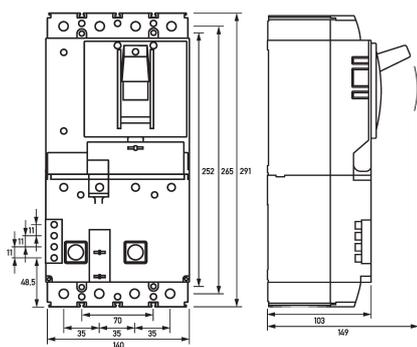
Technical Data	DFL 8 ***-4/0,03-A
min. Operating voltage range of test circuit	280 V
max. Operating voltage range of test circuit	759 V
Non-trip time	10 ms
Selectivity adjustable	false
Response delay	$1 \cdot I\Delta n: 0 \text{ ms} < T \leq 300 \text{ ms}; 5 \cdot I\Delta n: 0 \text{ ms} < T \leq 40 \text{ ms}$
Adjustment range of overload tripping	0.8 ... 1
Adjustment range of short-circuit tripping	6 ... 10
Power dissipation P <sub>v</sub> release	Refer to the individual product reference, data sheet available on request
Rated operation short-circuit disconnecting capacity I <sub>cs</sub>	85 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (240 V AC); 50 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (400/415 V AC); 35 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (440 V AC); 25 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (525 V AC) 5 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (690 V AC)
Rated short-circuit disconnecting capacity limit I <sub>cu</sub>	85 kA at Rated short-circuit disconnecting capacity limit I <sub>cu</sub> (240 V AC); 50 kA at Rated short-circuit disconnecting capacity limit I <sub>cu</sub> (400/415 V AC); 35 kA at Rated short-circuit disconnecting capacity limit I <sub>cu</sub> (440 V AC); 25 kA at Rated short-circuit disconnecting capacity limit I <sub>cu</sub> (525 V AC) 20 kA at Rated short-circuit disconnecting capacity limit I <sub>cu</sub> (690 V AC)
Rated short-circuit connection and disconnection capacity I <sub>dm</sub>	85 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (240 V AC); 50 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (400/415 V AC); 35 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (440 V AC); 25 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (525 V AC) 20 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (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 <sub>cu</sub>	85 kA at Rated short-circuit disconnecting capacity limit I <sub>cu</sub> (240 V AC); 50 kA at Rated short-circuit disconnecting capacity limit I <sub>cu</sub> (400/415 V AC); 35 kA at Rated short-circuit

Technical Data	DFL 8 ***-4/0,03-A
	disconnecting capacity limit I <sub>cu</sub> (440 V AC); 25 kA at Rated short-circuit disconnecting capacity limit I <sub>cu</sub> (525 V AC) 20 kA at Rated short-circuit disconnecting capacity limit I <sub>cu</sub> (690 V AC)
Rated operation short-circuit disconnecting capacity I <sub>cs</sub>	85 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (240 V AC); 50 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (400/415 V AC); 35 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (440 V AC); 25 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (525 V AC) 5 kA at Rated operation short-circuit disconnecting capacity I <sub>cs</sub> (690 V AC)
Rated short-circuit connection and disconnection capacity I <sub>dm</sub>	85 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (240 V AC); 50 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (400/415 V AC); 35 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (440 V AC); 25 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (525 V AC) 20 kA at Rated short-circuit connection and disconnection capacity I <sub>dm</sub> (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 <sup>2</sup> ... 185 mm <sup>2</sup>
Connection C1 Maximum number of conductors per terminal	2
Cross section solid	1-wire: 4 mm <sup>2</sup> ... 16 mm <sup>2</sup> ; 2-wire: 4 mm <sup>2</sup> ... 16 mm <sup>2</sup>
Cross section stranded	1-wire: 25 mm <sup>2</sup> ... 185 mm <sup>2</sup> ; 2-wire: 25 mm <sup>2</sup> ... 70 mm <sup>2</sup>
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 <sup>2</sup> ... 2.5 mm <sup>2</sup>
Connection C2 Maximum number of conductors per terminal	2
Cross section solid	1-wire: 0.75 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> ; 2-wire: 0.75 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Connecting capacity flexible	2-wire: 0.75 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Cross section flexible with ferrule	0.75 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Cross section stranded	1-wire: 0.75 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> ; 2-wire: 0.75 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
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

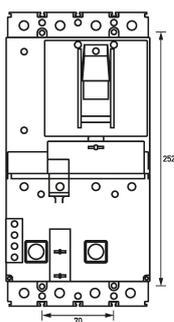
Technical Data	DFL 8 ***-4/0,03-A
Installation depth	149 mm
Design requirements/Standards	EN 60947-2, EN 60947-2 Appendix B, VDE 0660-101
Degree of pollution according to EN 60664	3

**Dimensions**

**Wiring example**



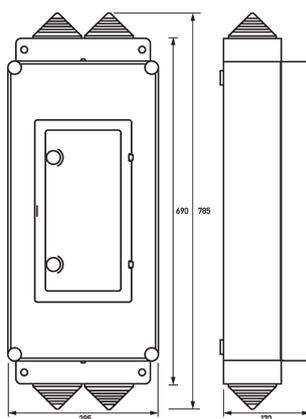
Wiring diagram



Dimensional drawing Group view

STEP file

Dimensional drawing Drilling template



DFL8 Enclosure