

UK Technical Data

DLS 6i D 2 > 40A

D characteristics, 6 kA

Function

The task of miniature circuit breakers is to automatically disconnect circuits in order to protect lines and connected devices. After disconnection, they can be manually reactivated without the fuse sets having to be replaced, for example. Each of our miniature circuit breakers is equipped with a trip-free mechanism, which guarantees safe deactivation even if, for example, a switching knob is mechanically blocked. A key requirement of DIN VDE 0100 is the protection of cables, conductors, and installation devices against overload and short circuit. This can be achieved through the use of miniature circuit breakers (MCBs). In industrial installations as well as in commercial applications, they often also provide protection for equipment and devices, which generally results in higher requirements than in residential installations. Miniature circuit breakers utilize both the magnetic and thermal effects of electric current: if the current rises very rapidly to an excessive level in the event of a short circuit, the MCB interrupts the circuit via the magnetic field of an energized coil. In the case of a sustained overload, the resulting heat causes deformation of the bimetal, triggering the switch. The DLS 6 miniature circuit breaker series is characterized by a wide range of different types for diverse applications. In addition to breakers for residential and commercial buildings, it also includes breakers for industrial use. The low overall height provides ample space for wiring, while the large terminal capacity, together with the option of using standard busbars, ensures easy installation. The series also features a large, hinged labeling window for labels and a clearly marked status indication. A wide range of accessories, such as shunt trips, auxiliary switches, and alarm switches, enables universal use of the miniature circuit breakers. The DLS 6i design allows for the removal of individual devices from an interconnection thanks to the snap-in sliders on both sides. With their rated switching capacity of 6 kA, they meet the requirements for domestic installation. The large selection of rated currents and tripping characteristics also allow the use of the miniature circuit-breaker in many applications. Switches with the tripping characteristic D are optimised for electric circuits with strongly inductive consumers, such as lamp groups or power transformers. Their short-circuit trip value is significantly above the value for classic line protection.

Features

rated switching capacity 6 kA, screw terminals with strain-relief clamps with wide terminal cross-section range for rail and line wiring on both connection sides , quick fastening for removal of multiple miniature circuit-breakers from the bottom interconnection, large, folding label window for a secure hold and protection of the label, use of conventional wiring rails, ON/OFF switch position indicator on the switch toggle, accessories retro-fittable on the right, labelling software free of charge.

Mounting

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Applications

suitable for use in power supplies for industrial facilities and purpose-built buildings or buildings for commercial use

Accessories

software DBS, restart locks DEASS, auxiliary switches DHi, trip-indicating auxiliary contact DHi-S, operating current trip DASA

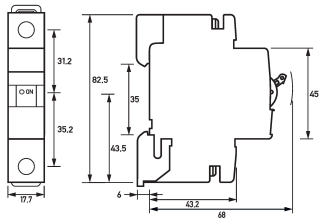
Technical Data

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. Õ Í ÂÅÔ ÏÆ ÐÏÌÅÓ	X ÔÏ Ï
4ÒÉÐÐÉÎÇ ÃÈÁÒÁÃÔÅÒÉÓÔÉÃ	$
3ÕÐÐÌÙ ÓÉÄÅ	Left or right
! ÄËÕÓÔ Í ÂÎÔ ÒÁÎÇÅ ÏÆ ÏÖÅÒÌÏÁÄ ÔÒÉÐÐÉÎÇ	X8XΩ 888 X8ÏŸ

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Adjustment range of short-circuit tripping	10 ... 20
Tripping factor over frequency band	1.5 at DC; 1.1 at 100 Hz; 1.2 at 200 Hz; 1.3 at 300 Hz:, 1.4 at 400 HZ
Reference temperature thermal release	30 °C
Number	Refer to the individual product reference, data sheet available on request
	Load circuit
Specification	Load disconnect contact
Rated voltage (AC)	230 V, 400 V
Rated voltage (DC)	60 V
Rated current (AC)	Refer to the individual product reference, data sheet available on request
Rated current (DC)	Refer to the individual product reference, data sheet available on request
Rated short-circuit current	6 kA
Rated insulation voltage	2 kV
Rated impulse withstand voltage	4 kV
Rated frequency	50 Hz , 60 Hz
Current heat loss per current path	Refer to the individual product reference, data sheet available on request
Overvoltage class	III
	Strain relief clamp top (Load circuit)
Protection against direct contact	DGUV V2, 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: 0.5 mm² ... 25 mm²
Connecting capacity flexible	1-wire: 1 mm² ... 16 mm²
Cross section flexible with ferrule	0.5 mm² ... 16 mm²
Cross section stranded	1-wire: 1.5 mm² ... 25 mm²
Tightening torque	max. 2.5 Nm
Thickness busbar	max. 3 mm
Thickness busbar cable lug (combined conductors, max)	2 mm
Cross section (busbar / busbar fork combined, max)	25 mm²
	Strain relief clamp bottom (Load circuit)
Protection against direct contact	DGUV V2, VDE 0660-514, finger-safe and safe for back-of-hand
Connection C2 Maximum number of conductors per terminal	2 (conductors of same type and cross-section)
Cross section solid	1-wire: 0.5 mm² ... 35 mm²
Connecting capacity flexible	1-wire: 1 mm² ... 25 mm²
Cross section flexible with ferrule	0.5 mm² ... 16 mm²
Cross section stranded	1-wire: 1.5 mm² ... 35 mm²
Tightening torque	max. 2.5 Nm
thickness busbar cable lug (combined conductors, max)	2 mm
Cross section (busbar / busbar fork combined, max)	35 mm²
thickness busbar	max. 3 mm

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	General data
Operating position	any
Mechanical endurance	min. 20000 switching cycles
Storage temperature	-40 °C ... 70 °C
Ambient temperature	-25 °C ... 70 °C
Climate resistance	damp/heat: constant as per DIN EN 60068-2-78, cyclical as per DIN EN 60068-2-30
Shock resistance	25 g / 11 ms Duration
Housing type	Distributor housing
Mounting type	Mounting rail (35 mm)
Housing material	Thermoplastic resin
Protection class	IP20
sealable	true
Width	Refer to the individual product reference, data sheet available on request
Height	Refer to the individual product reference, data sheet available on request
Depth	Refer to the individual product reference, data sheet available on request
Installation depth	Refer to the individual product reference, data sheet available on request
Width (modules)	Refer to the individual product reference, data sheet available on request
Weight	IEC 60898-1, DIN EN 60898-1, VDE 0641-11
Certifications	VDE
Energy limiting class	3
Degree of pollution according to EN 60664	2

Dimensions



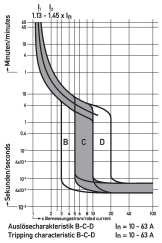
Dimensional drawing Group view

Wiring example



Wiring diagram

Diagrams



Characteristic Char. B, C, D