Doepke

Expert line protection

DLS 6 —— low heat dissipation
——— large terminals
——— available with various characteristics and different current ratings
——— including a wide range of accessories such as shunt trips and auxiliary/fault signaling blocks

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Always safer with Doepke

Miniature circuit-breakers (MCBs) protect cable, line and installation devices against overload and short circuiting and therefore from damage and premature ageing.

DLS 6

The DLS 6 series provides a large selection of different types for use in residential and purpose-built buildings as well as the industrial sector. Its compact design leaves ample room for wiring.
The miniature circuit-breakers DLS 6 can be easily installed due to their large terminal clamps and have universal applications thanks to the wide range of accessories available.

Protection elements

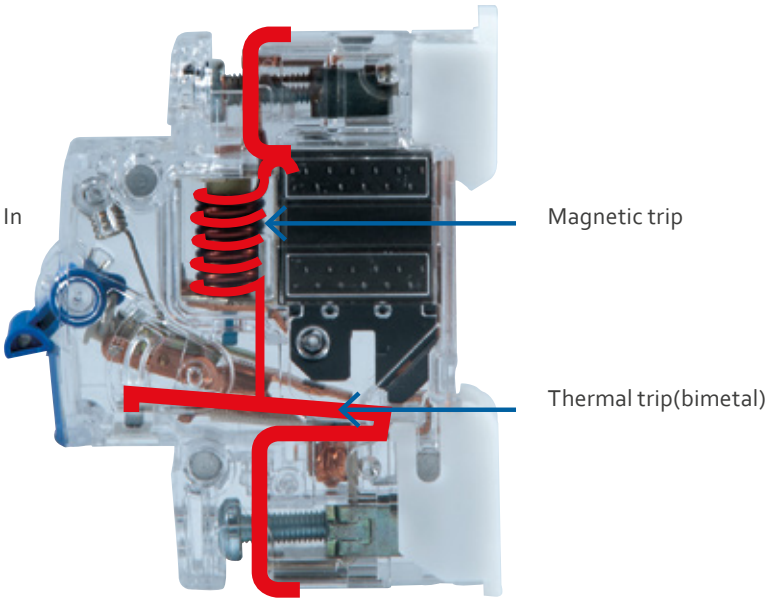
The structure of the miniature circuit-breaker consists of two protection elements.

Electromagnetic tripping

If the overload increases to the point that it enters the short-circuit range (higher than or equal to the magnetic threshold), the magnet trip instantly reacts.

Thermal tripping

The circuit is interrupted if the rated current is exceeded for a prolonged period and is below the magnetic tripping threshold. The miniature circuit-breaker will not react in the event of brief, minor over currents.



Overload protective equipment, circuit-breaker, structure

Switch-off mechanism

Tripping due to overload

If the prescribed nominal value of current flowing through the miniature circuit-breaker is exceeded for a prolonged period, the switch-off mechanism trips. The time it takes to trip depends on the extent of the overload.
Bimetal is used for tripping as it becomes deformed when heated by the current flowing through it and the switch-off mechanism trips (thermal tripping).

B characteristic example:

– The current of 1.13 times the nominal value must not be switched off within an hour.
– The current of 1.45 times the nominal value must be switched off within an hour at the latest.

Electromagnetic tripping through short-circuit

If a short circuit occurs within a system, the switch-off is triggered in just a few milliseconds by an electromagnet that has current flowing through it.

B characteristic short-circuit trip time example:

3 x I n	> 0.1 s	No trip
5 x I n	< 0.1 s	Tripping

Manual tripping

Electrical circuits can be manually switched off at the miniature circuit-breaker for maintenance work or for temporary decommissioning.

Tripping through additional modules

In addition to auxiliary switches, there are also plug-in undervoltage and operating current trips for our miniature circuit-breakers that can be used to switch them off.

Trip-free mechanism

Particularly notable is the positively trip-free mechanism.
It ensures that in the event of a short-circuit a trip instantly occurs even when the switch lever is held or in the on position.

Product range

The fact that the system components are designed with different functions and power means that the range offers the ideal solution for a variety of applications:

DLS 6h — The DLS 6h design for skilled trade and conventional residential buildings which features a rated breaking capacity of 6 kA is ideal for distributor and final circuits.

DLS 6hsl — The DLS 6hsl screwless design for industrial/commercial application which features a rated breaking capacity of 6 kA is ideal for distributor and final circuits. It is particularly easy to handle thanks to its upper, screwless plug-in terminals.

DLS 6hdc — The DLS 6hdc with its rated breaking capacity of 6 kA is ideal for applications in DC networks of up to 250 V DC.

DLS 6i — The design of the DLS 6i with its rated breaking capacity of 10 kA is particularly suitable for industrial applications and manufacturing.

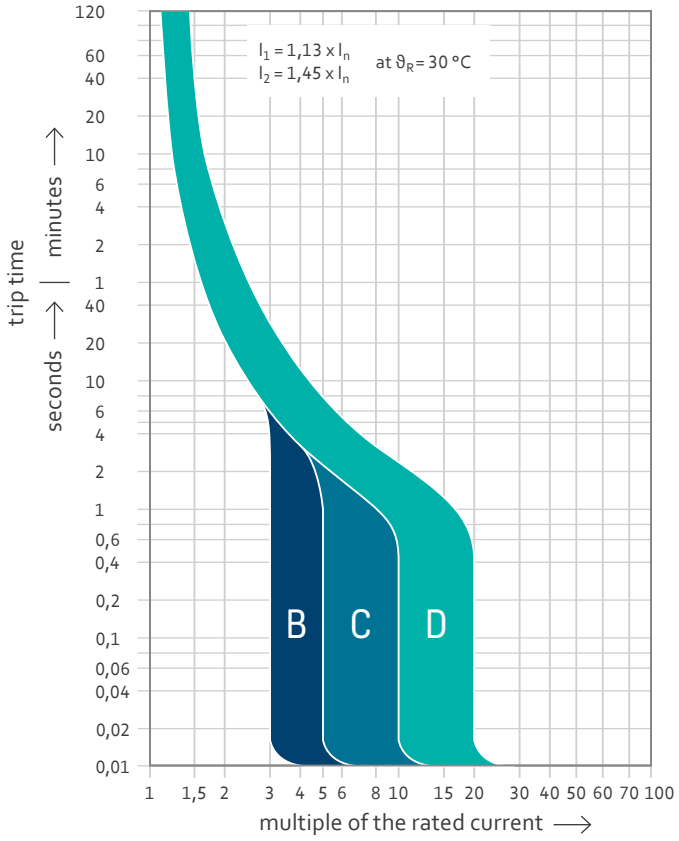
Comparison of the different variants

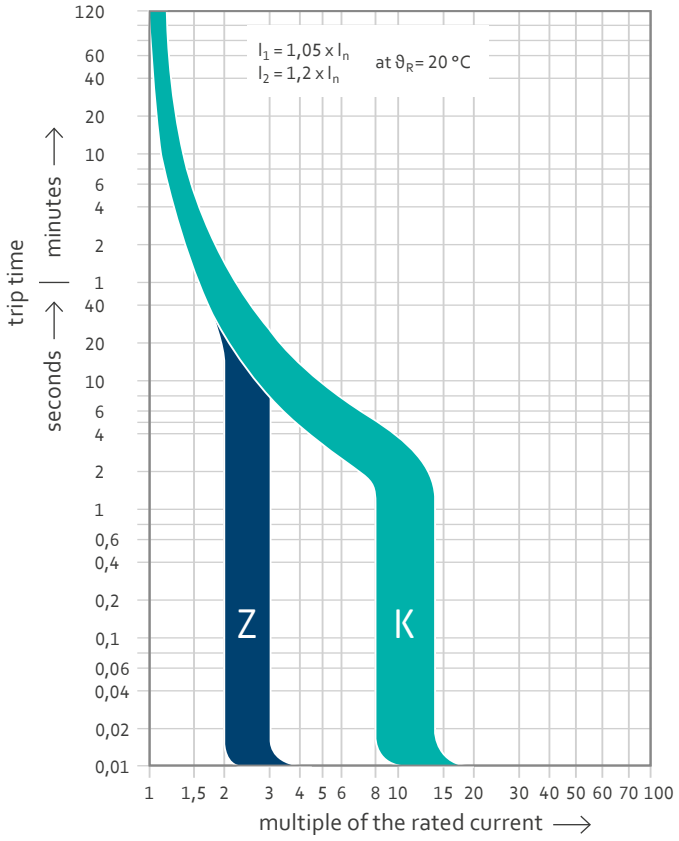
	DLS 6h	DLS 6hsl	DLS 6hdc	DLS 6i
Breaking capacity	6 kA	6 kA	6 kA	10 kA
Detachable from the din rail	only from the bottom	only from the bottom	only from the bottom	top and bottom
Eurovario from RCD to circuit-breaker	only from the bottom	only from the bottom	only from the bottom	only from the bottom
Protection against accidental contact	yes	yes	yes	yes
Tripping characteristic	B, C	B, C	B, C	B, C, D, K, Z

Characteristics and current strengths

	DLS 6h				DLS 6hsl		DLS 6hdc		DLS 6i					
Ratings	6–32 A				6–20 A		B 1–63 A C 0.5–63 A		B 1–63 A C/D/K 0.3–63 A Z 0.3–32 A			(only 1- and 3-pole)		
Number of poles	1	2	3	4	1	3	1	2	1	2	3	4	1+N	3+N
B characteristic	■	■	■	■	■	■	■	■	■	■	■	■	■	■
C characteristic	■	■	■	■	■	■	■	■	■	■	■	■	■	■
D characteristic									■	■	■	■	■	■
K characteristic									■	■	■	■	■	■
Z characteristic									■	■	■			

Tripping characteristic curves





Label marking software

Software BS DLS/DFS — Simple-to-use programs, easy-to-read documents and other tools make it easier to use our products.
The labelling software means that line and residual current circuit-breakers can be labelled in a standardised and easy-to-read way. It is compatible with Microsoft Windows operating systems, is simple to use and provides the option of producing your own designs on a standard A4 sheet. The labelling software can be downloaded from www.doepke.de.

- Can choose from one module width up to four module widths
- Icons (symbols) or custom lettering can be inserted
- Labels and distribution lists can be printed from the preview
- Icons and lettering available to be cut out

In the distribution list you can also:
– number the PE and N terminals
– enter company and address details
– insert comments

D A4 preview

Kitchen Bathroom Hallway Living room

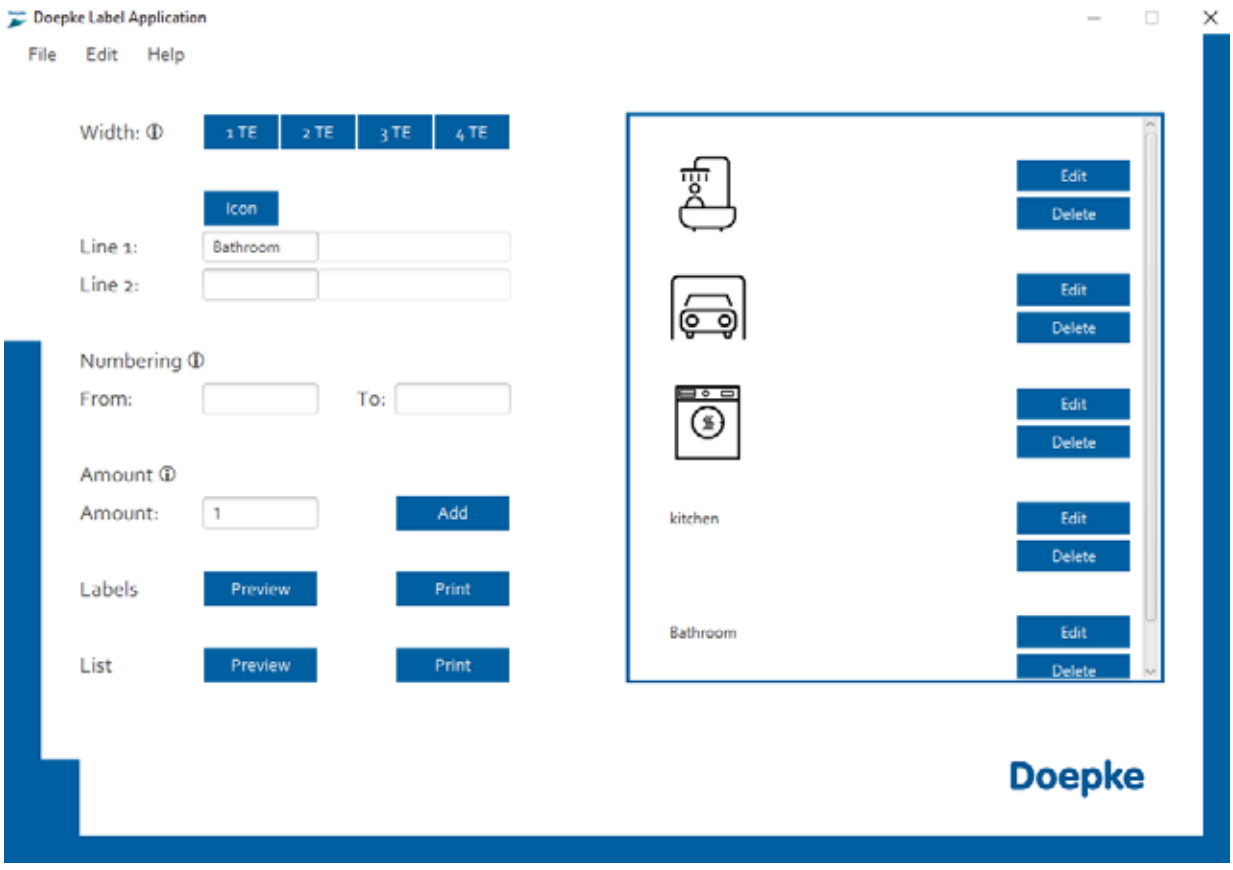
Accessories for miniature circuit-breakers

Shunt-trip DASA — The shunt-trip enables remote tripping of circuit-breakers. This shunt-trip is suitable for the DLS 6 MCB series. Following activation by the operating current of an external voltage source, they mechanically disconnect the coupled DLS 6/MCB.

Auxiliary switch DHi — Auxiliary switches report the status of the main devices to which they are fitted. The auxiliary switches DHi 3 to DHi 8 are suitable for the DLS 6 series of miniature circuit-breakers. They trip in parallel to the miniature circuit-breaker when switched off by hand or because of overload or short-circuit.

Trip-indicating auxiliary contact DHi-S Auxiliary switches report the status of the main devices to which they are fitted. The trip-indicating auxiliary contact DHi-S is suitable for the DLS 6 series of miniature circuit-breakers. It trips during an overload or short-circuit. Error messages can be displayed through the use of further signalling devices.

Restart locking facilities DEASS — Restart locking facilities prevent the unintentional activation of switching devices. The DEASS prevent the DLS 6 series miniature circuit-breakers from being switched on or off. They provide protection during maintenance work and prevents sensitive circuits such as those in IT systems from being switched off accidentally. The protective function of the circuit breaker is not affected.



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