



DATA SHEET
miniature circuit-breakers
MCB 3K50
Characteristic K, 10 kA
Article number 09915658



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. MCBK series circuit breakers have been specially developed for the Norwegian market. They are used as back-up fuses for distributors. Switches with characteristic K are optimised for fuse-protecting power circuits (motor and transformer load circuits) with high switch-on currents.

Features

rated switching capacity 10 kA, screw terminals with strain-relief clamps with wide terminal cross-section range for rail and line wiring on both connection sides , special quick fastening for removal of multiple miniature circuit-breakers from the bottom or top 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

quick fastening to mounting rail, any installation position

Applications

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

Technical Data

Technical Data	MCB 3K50
Series	MCBK
Number of poles	3
Tripping characteristic	K
Supply side	left or right
Adjustment range of overload tripping	1.1 ... 1.35
Adjustment range of short-circuit tripping	8 ... 12
Tripping factor over frequency band	1.5 at DC; 1.1 at 100 Hz; 1.2 at 200 Hz; 1.3 at 300 Hz;
Test current factor tripping electromagnetic	20
Test current multiplier, trip, thermal	1.35
Test current factor retaining electromagnetic	15
Test current factor retaining thermal	1.1
Reference temperature thermal release	30 °C
Isolation class	C at 250 V AC; B at 400 V AC

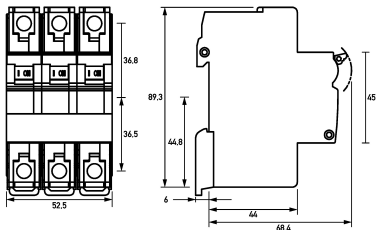
Subject to technical changes

Technical Data	MCB 3K50
Rated voltage (AC)	240 V, 415 V
Rated current (AC)	50 A
Rated short-circuit current	10 kA
Rated insulation voltage	2 kV
Rated impulse withstand voltage	4 kV
Rated frequency	50 Hz (16.67 Hz ... 60 Hz)
Current heat loss per current path	4.9 W
short-circuit backup-fuse SCPD	125 A
Back-up fuse type	gL, gG
Back-up fuse (textual)	Safety fuse as per DIN EN 6036
Overtoltage class	III
screw terminals with strain-relief clamp top (load circuit)	
Protection against direct contact	DGUV V2, VDE 0660-514, finger and back-of-hand proof
Connection C1 Maximum number of conductors per terminal	2 (conductors of same type and cross-section)
Cross section solid	1-wire: 1 mm ² ... 25 mm ²
Connecting capacity flexible	1-wire: 1 mm ² ... 16 mm ²
Cross section flexible with ferrule	1 mm ² ... 16 mm ²
Cross section stranded	1-wire: 1.5 mm ² ... 25 mm ²
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 mm ²
screw terminals with strain-relief clamp bottom (load circuit)	
Protection against direct contact	DGUV V2, VDE 0660-514, finger and back-of-hand proof
Connection C2 Maximum number of conductors per terminal	2 (conductors of same type and cross-section)
Cross section solid	1-wire: 1 mm ² ... 35 mm ²
Connecting capacity flexible	1-wire: 1 mm ² ... 25 mm ²
Cross section flexible with ferrule	1 mm ² ... 16 mm ²
Cross section stranded	1-wire: 1.5 mm ² ... 35 mm ²
Tightening torque	max. 2.5 Nm
thickness busbar cable lug (combined conductors, max)	2 mm
cross section (busbar / busbar fork combined, max)	35 mm ²
thickness busbar	max. 3 mm
General data	
Operating position	optional
Mechanical endurance	min. 20000 switching cycles
Storage temperature	-40 °C ... 70 °C
Ambient temperature	-25 °C ... 55 °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
Vibration resistance	> 15 g acc. to DIN EN 60068-2-59 during a load with I ₁
Housing type	distribution board housing
Installation type	Mounting rail (35 mm)

Subject to technical changes

Technical Data		MCB 3K50
Housing material		thermoplastic
Protection class		IP20
sealable		true
Width		52.5 mm
Height		89.3 mm
Depth		74.4 mm
Design requirements/Standards		IEC 60947-2, DIN EN 60947-2, VDE 0660-101, CSA-22.2 no 14
Power limitation category		3
Degree of pollution		2

Dimensions



Wiring example



Wiring diagram

Dimensional drawing Group view