

■ Datasheet: RCCB Residual Current Circuit Breaker series FI-D-B, type B for frequency converter



■ SCHRACK-INFO

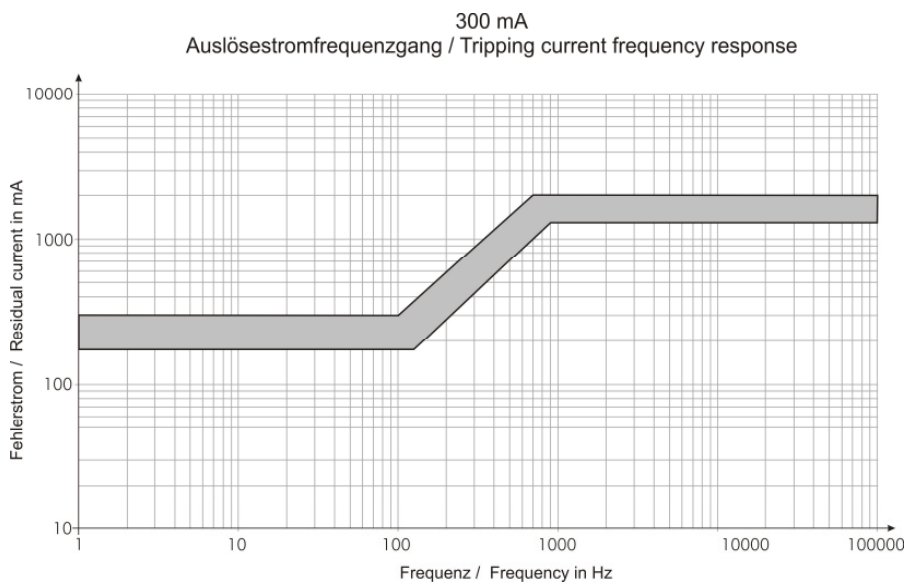
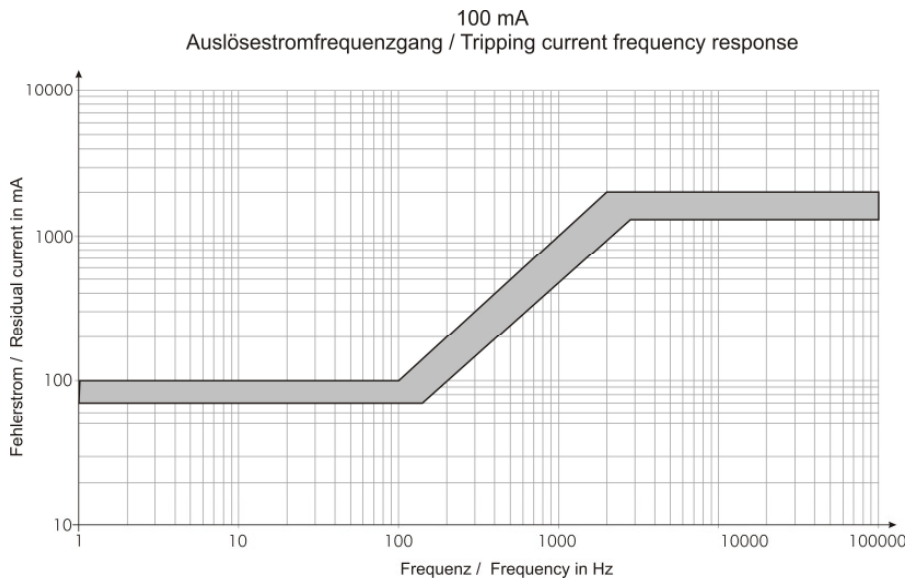
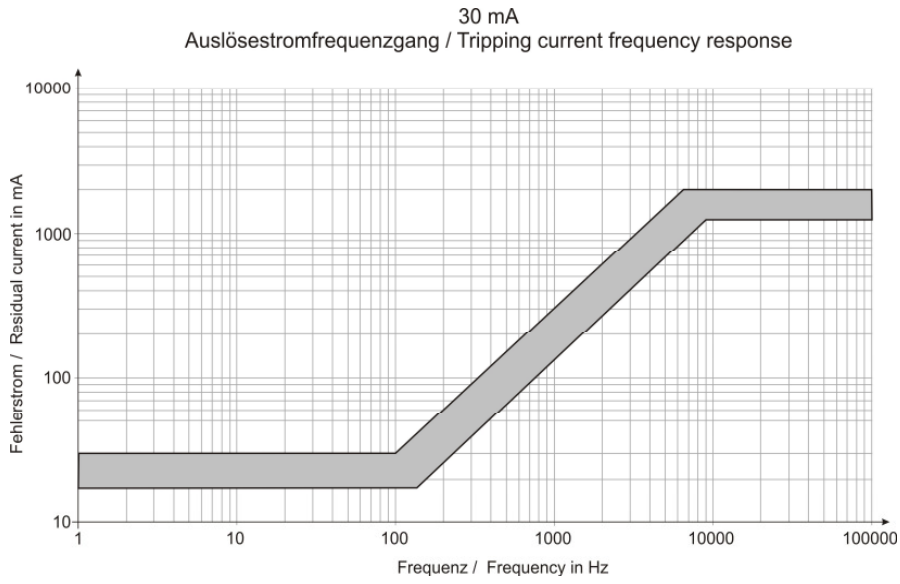
- Identification of DC and AC residual currents up to 100 kHz!
- For installations with electronic equipment, according to VDE 0160/EN 50178, such as frequency converters, UPS systems, switching power supplies or high-frequency power converters.
- Small installation size: 4 MW for all rated currents
- High insensitivity to transient leakage and residual currents by surge current strength > 5 kA
- High electromagnetic compatibility in accordance with VDE 0664 Part 30 and VDE 0839 Part 6-2 (immunity for industrial environments)
- Most common accessories: Auxiliary contact 1 CO + 1 NC

■ Technical datas

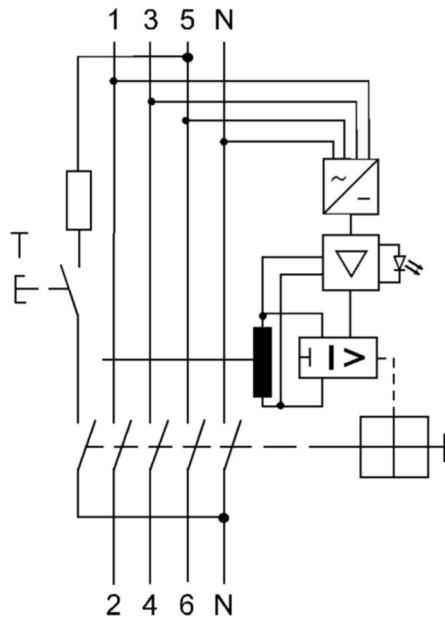
Rated current I_n	40A	63A	80A
Rated residual current $I_{\Delta n}$	0,03A / 0,1A / 0,3 A		
Tripping range, residual current Standard model FI-D/B Selective model FI-D/B S	0 – 1MHz 0 – 100kHz		
Rated voltage U_n	230/400V-AC		
Rated frequency	50Hz		
Min. operating voltage for detecting Type A/AC residual currents for detecting Type B residual currents	0V (mains voltage-independent) 30V-AC		
Own consumption	max. 3,5W		

Rated current I_n	40A	63A	80A
Working range of test circuit	185V-AC – 440V-AC		
Number of poles	4-pole		
Dissipated power P_V (typ.)	2,9W	7,2W	12W
Short-circuit fuse to VDE 0636/IEC 60269-1	100A gL/gG	100A gL/gG	125A gL/gG
Thermal prefuse	40 A	63 A	80A
Tripping times FI-D/B	1 x $I_{\Delta n} \leq 300$ ms; 5 x $I_{\Delta n} \leq 40$ ms		
Tripping times FI-D/B S	1 x $I_{\Delta n} > 130$ ms ≤ 500 ms; 5 x $I_{\Delta n} > 50$ ms ≤ 150 ms		
Rated breaking capacity I_m	500 A		
Rated fault breaking capacity $I_{\Delta m}$	500 A	630A	800A
Rated short circuit current I_{nc}	500A	630A	800A
Rated short circuit fault current $I_{\Delta c}$	10 kA		
Surge current resistance	ring wave 0.5ms / 100 kHz: 200A, impulse 8/20 μ s: 3kA		
Impact resistance	20g / 20ms duration		
Enclosure protection type	IP40 (after installation in distribution board)		
Positioning	optional		
Input side	terminals 1, 3, 5, 7		
Ambient temperature	-25°C to +40°C		
Resistance to climatic changes	conforming to IEC 68-2-30: damp/heat cyclic (25°C/55°C; 93%/97% rel.hum., 28 cycles)		
Terminals			
Round wire, solid	1 x 1.5 – 50mm ² (1-wire connect.); 2 x 1.5-16mm ² (2-wire connect.)		
Multi-core	1 x 1.5 – 50mm ² (1-wire connect.); 2 x 1.5-16mm ² (2-wire connect.)		
Fine-stranded	1 x 1.5 – 50mm ² (1-wire connect.); 2 x 1.5-16mm ² (2-wire connect.)		
Tightening torque of fastening screws	3Nm		
Service life, mechanical	> 5,000 switching cycles		
Service life, electrical	> 2,000 switching cycles		
Design requirements	IEC/EN 62423, DIN VDE 0664 T10, DIN VDE 0664 T100		
Electromagnetic compatibility	IEC 61453 (interference resistance – industrial environment)		
Weight	approx. 500g		

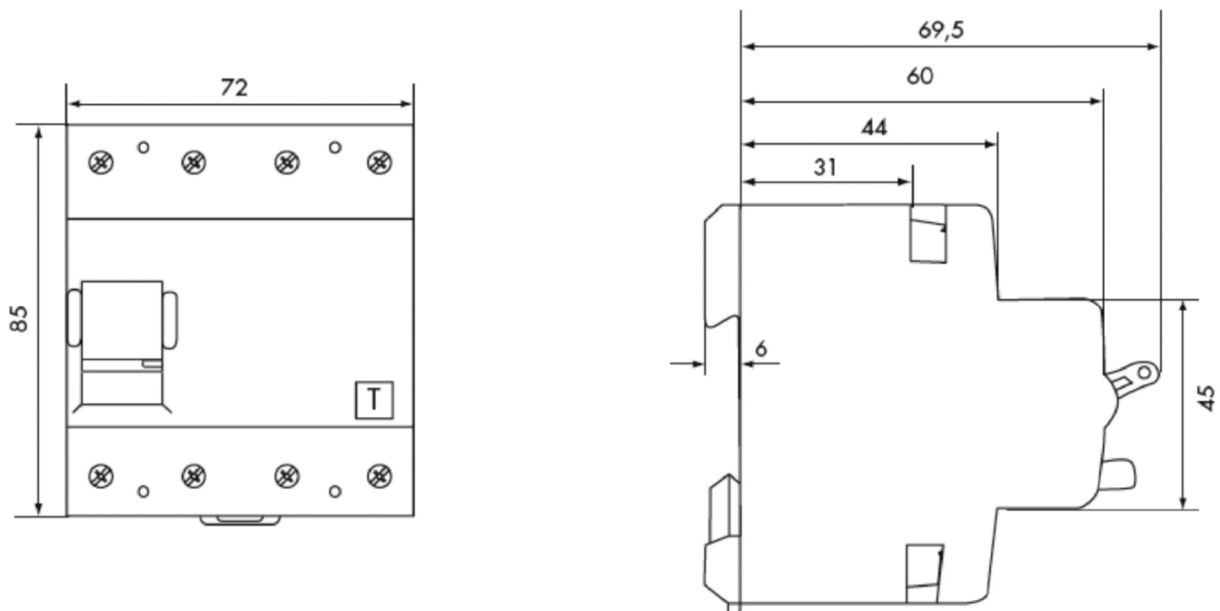
Tripping current frequency response



Wiring diagram



Dimensions



Articles

RCCB Residual Current Circuit Breaker, series FID-B / FQ, type B

RCCB Residual Current Circuit Breaker series FID-B, type B, 30mA

Description	Article
4-pole	
40A / 4 / 0,03 A	BD874103
63A / 4 / 0,03 A	BD876103
80A / 4 / 0,03 A	BD878103

RCCB Residual Current Circuit Breaker series FID-B, type B, 100mA

Description	article
4-pole	
40A / 4 / 0,1 A	BD874110
63A / 4 / 0,1 A	BD876110
80A / 4 / 0,1 A	BD878110

RCCB Residual Current Circuit Breaker series FID-B, type B, 300mA

Description	article
4-pole	
40A / 4 / 0,3 A	BD874130
63A / 4 / 0,3 A	BD876130

RCCB Residual Current Circuit Breaker, series FID-B, type B / FQ, S

RCCB Residual Current Circuit Breaker series FID-B, type B, 300mA

Description	article
4-pole	
40A / 4 / 0,3 A	BD864130
63A / 4 / 0,3 A	BD866130
80A / 4 / 0,3 A	BD868130