



Description



- Residual Current Devices
- Twin-purpose terminal (lift/open-mouthed) above and below
- Busbar positioning optionally above or below
- Free terminal space despite installed busbar
- Contact position indicator red - green
- Tripping indicator white - blue
- Additional safety
 - possibility to seal
 - possibility to lock in ON and OFF position
- The device functions irrespective of the position of installation
- Tripping is line voltage-independent. Consequently, the RCD is suitable for "fault current/residual current protection" and "additional protection" within the meaning of the applicable installation rules
- The 4-pole device can also be used for 3- and 2-pole connection. See connection possibilities.
- The test key "T" must be pressed every year. The system operator must be informed of this obligation and his responsibility in a way that can be proven. The yearly test interval is only valid for residential and similar applications. Under all other conditions (e.g. damply or dusty environment), it's precommended to test in shorter intervals (e.g. monthly). A test is further needed if red and yellow LED are on together.
- Pressing the test key "T" serves the only purpose of function testing the residual current device (RCD). This test does not make earthing resistance measurement (RE), or proper checking of the earth conductor condition redundant, which must be performed separately.

- Functioning
 - The green LED becomes active at 0-30% $I_{\Delta n}$
 - The yellow LED becomes active at 30-50% $I_{\Delta n}$
 - The red LED becomes active at >50% $I_{\Delta n}$
- Potential-free relay (NO contact, in parallel with the yellow LED, up to 1 A ohmic load / 230 V~) for external prewarning function. Bistabile, means the warning stays on also when the breaker trips, until reset.
- Type -GB: High reliability against unwanted tripping. Compulsory for any circuit where personal injury or damage to property may occur in case of unwanted tripping (ÖVE/ÖNORM E 8001-1 § 12.1.6). Protection against all types of fault currents.
- Type -SB: Selective residual current device. Protection against all types of fault currents.
- Type -GBFQ: Suitable for speed-controlled drives with frequency converters in household, trade, and industry. Unwanted tripping is avoided thanks to a tripping characteristic designed particularly for frequency converters. Protection against all types of fault currents.
- Type -SBFQ: Selective and suitable for speed-controlled drives with frequency converters in household, trade, and industry. Unwanted tripping is avoided thanks to a tripping characteristic designed particularly for frequency converters. Protection against all types of fault currents.

Accessories:

Auxiliary switch for subsequent installation to the left	Z7HK	248432
Tripping signal contact for subsequent installation to the right	ZP9NHNK	156906
Remote control and automatic switching device	FW7LP	248296

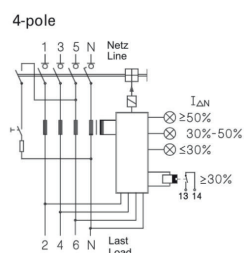
Residual Current Devices F9 Digital Type B - Technical Data

Technical data

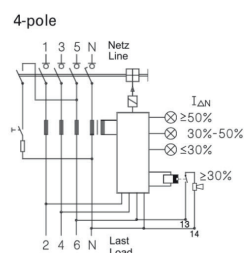
Electrical

Design according to	IEC/EN 61008, IEC / EN62423	
Current test marks as printed onto the device		
Tripping		
Type GB, GBFQ	10 ms delay	
Type SB, SBFQ	40 ms delay - selective disconnecting function	
Rated voltage	U_n	230/400 V AC, 50 Hz
Minimum operational voltage electronic	50 - 254 V AC	
Operational voltage test circuit	184 - 440 V AC (300mA) 184 - 264 V AC (30mA)	
Rated tripping current	$I_{\Delta n}$	30, 300 mA
Sensitivity	Alternating, pulsed and direct currents	
Rated insulation voltage	U_i	440 V
Rated impulse withstand voltage	U_{imp}	4 kV (1.2/50 μ s)
Rated short circuit strength	I_{cn}	10 kA
Peak withstand current		
Type GB, GBFQ	3 kA (8/20 μ s) surge current proof	
Type SB, SBFQ	typ. 5 kA (8/20 μ s) selective + surge current proof	
Electrical isolation	> 4 mm contact space	
Maximum back-up fuse	Short circuit and overload protection	
$I_n = 16-63$ A	63 A gG/gL	
$I_n = 80$ A	80 A gG/gL	
Endurance		
electrical components	$\geq 4,000$ switching operations	
mechanical components	$\geq 20,000$ switching operations	
Mechanical		
Frame size	45 mm	
Device height	80 mm	
Device width	70 mm (4MU)	
Mounting	quick fastening with 2 lock-in positions on DIN rail IEC/EN 60715	
Degree of protection, built-in	IP40	
Degree of protection in moisture-proof enclosure	IP54	
Upper and lower terminals	open mouthed/lift terminals	
Terminal protection	finger and hand touch safe, DGUV VS3, EN 50274	
Terminal capacity	1.5 - 35 mm ² single wire 2 x 16 mm ² multi wire	
Terminal screw	M5 (Pozidriv PZ2)	
Terminal torque	2 - 2.4 Nm	
Terminal capacity warning contact(s)	0.25 - 1.5 mm ² (plug in terminals)	
Busbar thickness	0.8 - 2 mm	
Tripping temperature	-25°C to +40°C	
Storage- and transport temperature	-35°C to +60°C	
Resistance to climatic conditions	25-55°C/90-95% relative humidity according to IEC 60068-2	
Real contact position indicator	red / green	
Tripping indicator	white / blue	

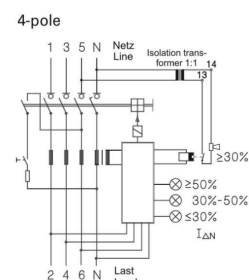
Connection diagram



① Basic diagram



② Signalisation without Isolation Transformer 1:1 (IEC/EN 60664)



③ Signalisation with Isolation Transformer 1:1 (IEC/EN 60664)

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Local Indication RCCB

Status indication LED

Permanent light green



red / yellow / green

Normal operation

Permanent light yellow



The measured residual current is bigger than 30% of the nominal tripping value.

Permanent light red

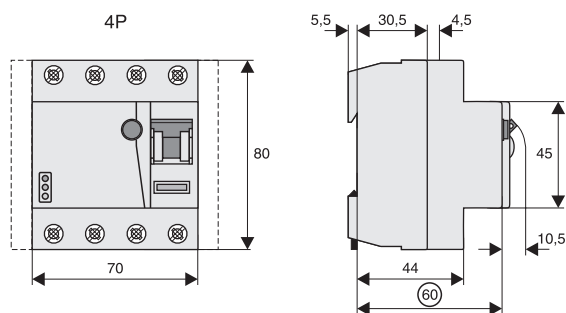


The measured residual current is bigger than 50% of the nominal tripping value.

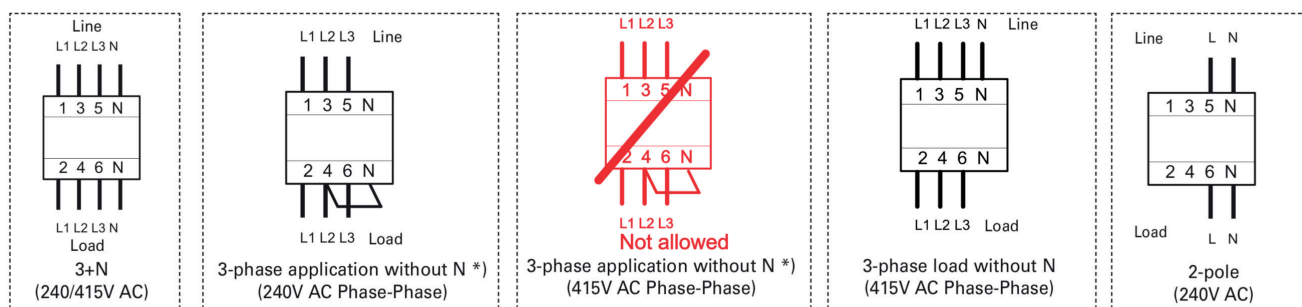
Remote Indication

Standard Version	1 contact NO up to 230V AC, 2 terminals, 1 A ohmic load
Terminal capacity of contacts	0.25 - 1.5 mm ²

Dimensions (mm)



Correct connection



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Product range

I_n (A)	$I_{\Delta n}$ (mA)	Code	Article	Remark
25	30	192725	F9254003GB	Standard model
25	300	192726	F925403GB	Standard model
40	30	192728	F9404003GB	Standard model
40	300	192729	F940403GB	Standard model
63	30	192731	F9634003GB	Standard model
63	300	192732	F963403GB	Standard model
25	300	192727	F925403SB	Selective
40	300	192730	F940403SB	Selective
63	300	192733	F963403SB	Selective
25	30	192734	F9254003GBFQ	For environments with speed controllers
25	300	192735	F925403GBFQ	For environments with speed controllers
40	30	192737	F9404003GBFQ	For environments with speed controllers
40	300	192738	F940403GBFQ	For environments with speed controllers
63	30	192740	F9634003GBFQ	For environments with speed controllers
63	300	192741	F963403GBFQ	For environments with speed controllers
25	300	192736	F925403SBFQ	Selective, for environments with speed controllers
40	300	192739	F940403SBFQ	Selective, for environments with speed controllers
63	300	192742	F963403SBFQ	Selective, for environments with speed controllers