Specifications | Combined RCD/MCB Devices mRB., 3+N-pole

Description

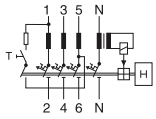
- Combined RCD/MCB Devices
- Line voltage-independent tripping
- Compatible with standard busbar
- Twin-purpose terminal (lift/open-mouthed) above and below
- Busbar positioning optionally above or below
- Free terminal space despite installed busbar
- Guide for secure terminal connection
- Switching toggle (MCB component) in colour designating the rated current
- Contact position indicator red - green
- Fault current tripping indicator white - blue
- Comprehensive range of accessories can be mounted subsequently
- The test key "T" must be pressed every 6 month. The system operator must be informed of this obligation and his responsibility in a way that can be proven (self-adhesive RCD-label enclosed). The test intervall of 6 month is valid for residential and similar applications. Under all other conditions (e.g. damply or dusty environments), it's recommended to test in shorter intervalls (e.g. monthly).
- 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 (R_E), or proper checking of the earth conductor condition redundant, which must be performed separately.
- **Type -A**: Protects against special forms of residual pulsating DC which have have not been smoothed

Accessories:

Auxiliary switch for		
subsequent installation	ZP-IHK	286052
	ZP-NHK	248437
	ZP-WHK	286053
Shunt trip release	ZP-ASA/..	248438, 248439

Connection diagram

3+N-pole



Technical Data

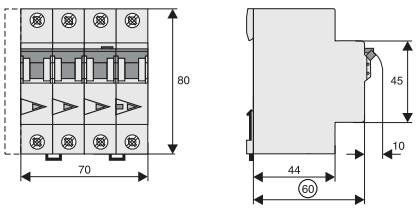
Electrical

Design according to		IEC/EN 61009
Current test marks as printed onto the device		
Tripping		
line-voltage-independent		instantaneous 250A (8/20µs) surge current proof
Rated voltage U_e		230/400V; 50Hz
Rated tripping current $I_{\Delta n}$		30, 100, 300 mA
Rated non-tripping current $I_{\Delta no}$		0.5 $I_{\Delta n}$
Sensitivity		AC and pulsating DC
Selectivity class		3
Rated breaking capacity		
mRB6		6 kA
mRB4		4.5 kA
Rated current		6 - 32 A
Rated impulse withstand voltage U_{imp}		4 kV (1.2/50µs)
Characteristic		B, C, D
Maximum back-up fuse (short circuit)		100 A gL/gG
Endurance	electrical comp.	≥ 4,000 switching op.
	mechanical comp.	≥ 20,000 switching op.

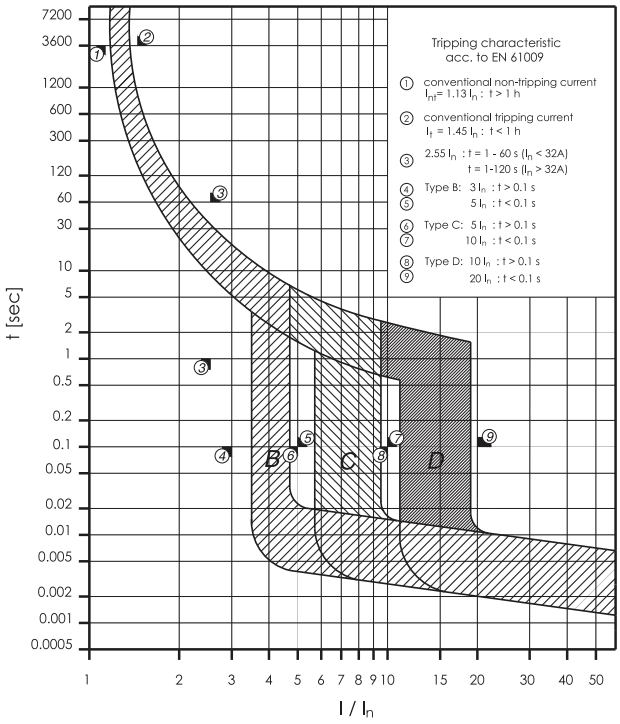
Mechanical

Frame size	45 mm
Device height	80 mm
Device width	70 mm (4MU)
Mounting	3-position DIN rail clip, permits removal from existing busbar system
Upper and lower terminals	open mouthed/lift terminals
Terminal protection	finger and hand touch safe, DGUV VS3, EN 50274
Terminal capacity	1 - 25 mm²
Busbar thickness	0.8-2 mm
Degree of protection switch	IP20
Degree of protection, built-in	IP40
Tripping temperature	-25°C to +40°C
Storage- and transport temperature	-35°C to +60°C
Resistance to climatic conditions	acc. to IEC 68-2 (25...55°C / 90...95% RH)

Dimensions (mm)



Tripping Characteristic mRB, Characteristics B, C and D



Back-up Protection between mRB. and NZM1

Short circuit currents in kA.

mRB4/mRB6	NZMB1(C1)(N1)(H1)-A...		
	U_e = 415 V		
	B	**C**	**D**
6	-	20	20
10	-	20	20
13	20	20	20
16	20	20	20
20	-	20	20
25	-	20	-

U_e = 415V: I_{cn} (mRB4) = 4.5 kA (acc. to IEC/EN 61009)
U_e = 415V: I_{cn} (mRB6) = 6 kA (acc. to IEC/EN 61009)
U_e = 400/415V: I_{cu} (NZMB1) = 25 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{cu} (NZMC1) = 36 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{cu} (NZMN1) = 50 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{cu} (NZMH1) = 100 kA (acc. to IEC/EN 60947-2)

Back-up Protection between mRB. and NZM2

Short circuit currents in kA.

mRB4/mRB6	NZMB2(C2)(N2)(H2)-A...		
	U_e = 415 V		
	B	**C**	**D**
6	-	20	20
10	-	20	20
13	20	20	20
16	20	20	20
20	-	20	20
25	-	20	-

U_e = 415V: I_{cn} (mRB4) = 4.5 kA (acc. to IEC/EN 61009)
U_e = 415V: I_{cn} (mRB6) = 6 kA (acc. to IEC/EN 61009)
U_e = 400/415V: I_{cu} (NZMB2) = 25 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{cu} (NZMC2) = 36 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{cu} (NZMN2) = 50 kA (acc. to IEC/EN 60947-2)
U_e = 400/415V: I_{cu} (NZMH2) = 150 kA (acc. to IEC/EN 60947-2)

Back-up Protection between mRB. and PLSM-OV63

Short circuit currents in kA.

mRB4/mRB6	PLSM-OV63		
	U_e = 400 V		
	B	**C**	**D**
6	-	10	10
10	-	10	10
13	10	10	10
16	10	10	10
20	-	10	10
25	-	10	-

U_e = 415V: I_{cn} (mRB4) = 4.5 kA (acc. to IEC/EN 61009)
U_e = 415V: I_{cn} (mRB6) = 6 kA (acc. to IEC/EN 61009)
U_e = 400V: I_{cu} (PLSM-OV) = 10 kA (acc. to IEC/EN 60947-2)

Back-up Protection between mRB. and PLHT-OV80

Short circuit currents in kA.

mRB4/mRB6	PLHT-OV80		
	U_e = 400 V		
	B	**C**	**D**
6	-	20	20
10	-	20	20
13	20	20	20
16	20	20	20
20	-	20	20
25	-	20	-

U_e = 415V: I_{cn} (mRB4) = 4.5 kA (acc. to IEC/EN 61009)
U_e = 415V: I_{cn} (mRB6) = 6 kA (acc. to IEC/EN 61009)
U_e = 400V: I_{cu} (PLHT-80) = 20 kA (acc. to IEC/EN 60947-2)