

**Specifications | Residual Current Devices PFIM**

**Description**

- Residual Current Devices
- Shape compatible with and suitable for standard busbar connection to other devices of the P-series
- Twin-purpose terminal (lift/open-mouthed) above and below
- Busbar positioning optionally above or below
- Free terminal space despite installed busbar
- Universal tripping signal switch, also suitable for PLS., PKN., Z-A. can be mounted subsequently
- Auxiliary switch Z-HK can be mounted subsequently
- Contact position indicator red - green
- Delayed types suitable for being used with standard fluorescent tubes with or without electronical ballast (30mA-RCD: 30 units per phase conductor, 100mA-RCD: 90 units per phase conductor).  
Notes: Depending of the fluorescent lamp ballast manufacturer partly more possible. Symmetrical allocation of the fluorescent lamp ballasts on all phases favourably. Shifting references of the fluorescent lamp ballast manufacturer consider.
- 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 the meaning of the applicable installation rules
- Mains connection at either side
- The 4-pole device can also be used for 2- or 3-pole connection. See connection possibilities.
- 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 not been smoothed.
- **Type -G:** High reliability against unwanted tripping. Suitable for any circuit where personal injury or damage to property may occur in case of unwanted tripping.
- **Type -G/A:** Additionally protects against special forms of residual pulsating DC which have not been smoothed. Special types for X-ray application PFIM-...-R.
- **Type -R:** To avoid unwanted tripping due to X-ray devices.
- **Type -S:** Selective residual current device sensitive to AC, type -S. Suitable for systems with surge arresters downstream of the RCD.
- **Type -S/A:** Additionally protects against special forms of residual pulsating DC which have not been smoothed.
- **Type -F:** 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.

**Accessories:**

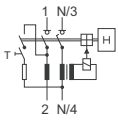
Auxiliary switch for subsequent installation to the left	Z-HK	248432
Tripping signal contact for subsequent installation to the right	Z-NHK	248434
Remote control and automatic switching device	Z-FW/LP	248296
Sealing cover set	Z-RC/AK-2TE	285385
	Z-RC/AK-4 MU	101062

## Technical Data

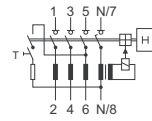
		PFIM	
<b>Electrical</b>			
Design according to		IEC/EN 61008 Type G according to ÖVE E 8601	
Current test marks as printed onto the device			
Tripping		instantaneous	
Type G, R		10 ms delay	
Type S		40 ms delay - selective disconnecting function	
Type U (only 30 mA)		10 ms delay	
Type U (without 30 mA)		40 ms delay - selective disconnecting function	
Rated voltage	$U_n$	230/400 V AC, 50 Hz	
Rated tripping current	$I_{\Delta n}$	10, 30, 100, 300, 500 mA	
Sensitivity		AC and pulsating DC	
Rated insulation voltage	$U_i$	440 V	
Rated impulse withstand voltage	$U_{imp}$	4 kV (1.2/50 $\mu$ s)	
Rated short-circuit strength	$I_{cn}$	10 kA	
Maximum back-up fuse PFIM			
<b>Rating</b>	<b>Fuses</b>	<b>MCB's (Characteristic B/C)</b>	
$I_n$ [A]	Short-circuit [A]	Overload [A]	Short-circuit [A]
16	63 gG/gI	10 gG/gI	–
25	63 gG/gI	16 gG/gI	C20
40	63 gG/gI	25 gG/gI	C25
63	63 gG/gI	40 gG/gI	C40
80	80 gG/gI	50 gG/gI	–
100	100 gG/gI	63 gG/gI	–
Type PFIM-X:			
40	63 gG/gI	40 gG/gI	C25
63	63 gG/gI	63 gG/gI	C40
<b>Important:</b> In the case that the maximal possible operating current of the electrical installation don't exceed the rated current of the RCD only short-circuit protection must be implemented. Overload protection must be implemented in the case if the maximal possible operating current of the electrical installation can exceed the rated current of the RCD.			
Rated breaking capacity	$I_m$		
Rated fault breaking capacity	$I_{\Delta m}$		
$I_n = 16-40$ A		500 A	
$I_n = 63$ A		630 A	
$I_n = 80$ A		800 A	
$I_n = 100$ A		1000 A	
Voltage range of test button			
2-pole		196 - 264 V~	
4-pole 30 mA		196 - 264 V~	
4-pole 10, 100, 300, 500 mA		196 - 456 V~	
Endurance			
electrical components		$\geq 4,000$ switching operations	
mechanical components		$\geq 20,000$ switching operations	
<b>Mechanical</b>			
Frame size	45 mm		
Device height	80 mm		
Device width	35 mm (2 MU), 70 mm (4 MU)		
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 <sup>2</sup> single wire 2 x 16 mm <sup>2</sup> multi wire		
Terminal screw	M5 (mit geschlitzter Schraube according to EN ISO 4757-Z2, Pozidriv PZ2)		
Terminal torque	2 - 2.4 Nm		
Busbar thickness	0.8 - 2 mm		
Operating 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		

Connection diagrams

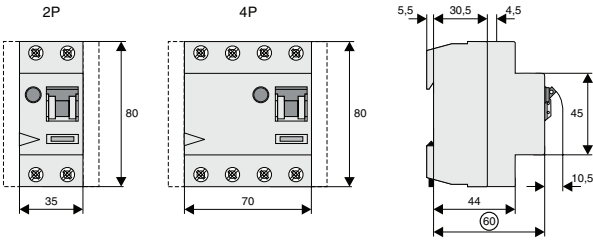
2-pole



4-pole



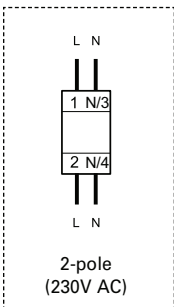
Dimensions (mm)



Correct connection

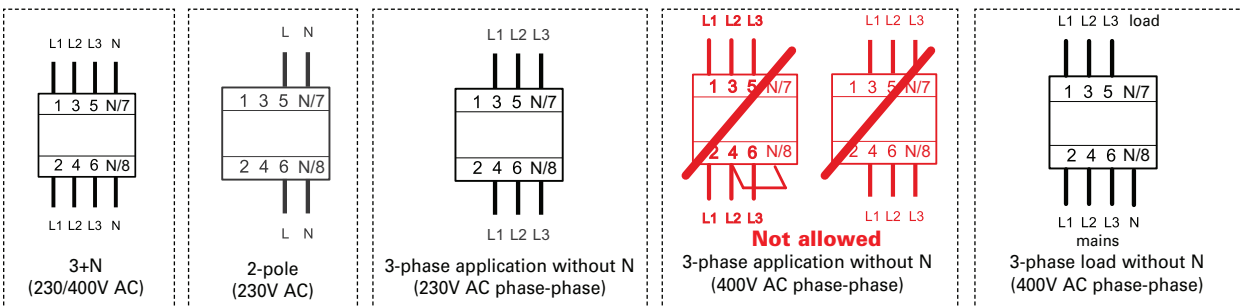
2-pole

30, 100, 300, 500mA types:

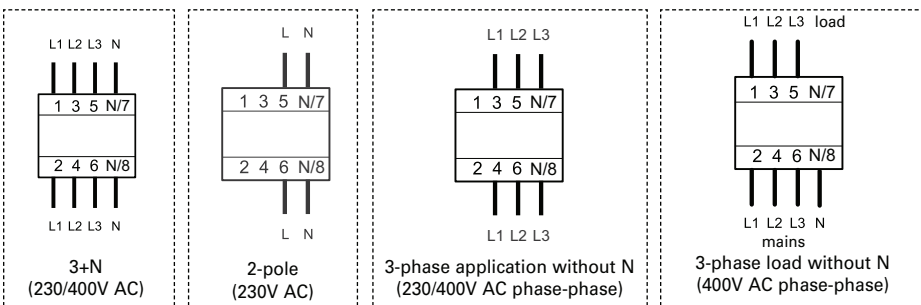


4-pole

30mA types:



10, 100, 300, 500mA types:



**Influence of the ambient temperature to the maximum continuous current (A)**

Ambient temperature	16A		25A		40A		63A		80A		100A	
	2p	4p	2p	4p	2p	4p	2p	4p	2p	4p	2p	4p
40°	16	16	25	25	40	40	63	63	80	80	100	100
45°	14	14	21	22	37	37	59	59	76	76	95	95
50°	11	11	18	19	33	34	55	55	72	72	90	90
55°	9	9	14	16	30	31	50	50	68	68	85	85
60°	– *)	–	–	–	26	27	45	45	64	64	80	80

Annotation: It has to be ensured that the values in the table are not exceeded and the back-up fuse/thermal protection works properly.

\*) not applicable