

## Residual Current Devices dRCM Digital


- Line voltage independent RCCB for fault or additional protection with additional digital features.
- System Monitoring: Preventive information / warning before the RCD trips in case of leakage currents.
  - Integrated auxiliary contact(s)
  - Local Indication
- New level of accuracy -> Reduced unwanted tripping
- Local status indication of residual current through 3 LEDs
- No monthly test required
- Comprehensive range of accessories
- Real contact position indicator
- Fault current tripping indicator
- Automatic re-setting possible
- Transparent designation plate

SG08310



# Protective Devices

## Residual Current Devices dRCM


Surge current-proof 3 kA, sensitive to residual pulsating DC, type G/A (ÖVE E 8601) 

SG08310



$I_n/I_{\Delta n}$ (A)	Type Designation	Article No.	Units per package
<b>4-pole</b>			
25/0.03	dRCM-25/4/003-G/A+	120834	1 / 30
25/0.3	dRCM-25/4/03-G/A+	120835	1 / 30
40/0.03	dRCM-40/4/003-G/A+	120836	1 / 30
40/0.3	dRCM-40/4/03-G/A+	120837	1 / 30
63/0.03	dRCM-63/4/003-G/A+	120838	1 / 30
63/0.3	dRCM-63/4/03-G/A+	120839	1 / 30
80/0.03	dRCM-80/4/003-G/A+	120840	1 / 30
80/0.3	dRCM-80/4/03-G/A+	120841	1 / 30

## Residual Current Devices dRCM


Surge current-proof 3 kA, X-ray application, type R 

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$I_n/I_{\Delta n}$ (A)	Type Designation	Article No.	Units per package
<b>4-pole</b>			
63/0.03	dRCM-63/4/003-R+	120842	1 / 30

## Residual Current Devices dRCM


Selective + surge current-proof typ. 5 kA, sensitive to residual pulsating DC, type S/A 

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$I_n/I_{\Delta n}$ (A)	Type Designation	Article No.	Units per package
<b>4-pole</b>			
40/0.30	dRCM-40/4/03-S/A+	120843	1 / 30
63/0.30	dRCM-63/4/03-S/A+	120844	1 / 30
80/0.30	dRCM-80/4/03-S/A+	120845	1 / 30

## Residual Current Devices dRCM

Selective + surge current-proof typ. 5 kA, frequency converter-proof, type U 

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$I_n/I_{\Delta n}$ (A)	Type Designation	Article No.	Units per package
<b>4-pole</b>			
40/0.03 *)	dRCM-40/4/003-U+	120850	1 / 30
40/0.30	dRCM-40/4/03-U+	120851	1 / 30
63/0.03 *)	dRCM-63/4/003-U+	120846	1 / 30
63/0.30	dRCM-63/4/03-U+	120847	1 / 30
80/0.30	dRCM-80/4/03-U+	120848	1 / 30

\*) Short time delayed + surge current-proof 3 kA

xPole

# Protective Devices

## Sealing Cover Set Z-RC/AK

- for PFIM, PFR, PF6, PF7, CF16, dRCM (not to use for PFDM)

	Type Designation	Article No.	Units per package
2-pole	Z-RC/AK-2TE	285385	10 / 30
4-pole	Z-RC/AK-4TE	101062	10 / 600

xPole

# Protective Devices

## Residual Current Devices dRCM - digital

- 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., ZP-A. can be mounted subsequently
- Auxiliary switch Z-HK can be mounted subsequently
- Contact position indicator red - green
- Tripping indicator white - blue
- Additional Safety
  - possibility to seal
  - possibility to lock in ON and OFF position
- 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)
 

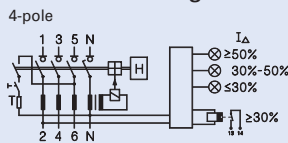
Notes: Depending of the fluorescent lamp ballast manufacturer partly more possible. Symmetrical allocation of the fluorescent lamp ballasts on all phases favourably. Shifting references of the fluorescent lamp ballast manufacturer consider.
- The device functions irrespective of the position of installation
- Tripping is line voltage-independent. Consequently, the RCD is suitable for "fault current/residual current protection" and "additional protection" within the meaning of the applicable installation rules
- Mains connection at either side
- The 4-pole device can also be used for 3-pole connection: See connection possibilities.
- The 4-pole device can also be used for 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 recommended 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 ( $R_E$ ), 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 -A:** Protects against special forms of residual pulsating DC which have not been smoothed
- Type -G:** 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).
- Type -G/A:** Additionally protects against special forms of residual pulsating DC which have not been smoothed.
- Type -R:** To avoid unwanted tripping due to X-ray devices.
- Type -S:** Selective residual current device sensitive to AC, type -S. Compulsory for systems with surge arresters downstream of the RCD (ÖVE/ÖNORM E 8001-1 § 12.1.5).
- Type -S/A:** Additionally protects against special forms of residual pulsating DC which have not been smoothed.
- Type -U:** 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. See also explanation "Frequency Converter-Proof RCDs - What for?" Application according to ÖVE/ÖNORM E 8001-1 and Decision EN 219 (1989), VDE 0100, SEV 1000.

### 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
Compact enclosure	KLV-TC-4	276241
Sealing cover set	Z-RC/AK-4TE	101062
Switching interlock	IS/SPE-1TE	101911

### Connection diagram



## Technical Data

Electrical		Maximum back-up fuse	Short circuit and overload protection
Design according to	IEC/EN 61008 Type G and G/A acc. to ÖVE E 8601	$I_n = 16-63A$ $I_n = 80A$ $I_n = 100A$	63 A gG/gL 80 A gG/gL 100 A gG/gL
Current test marks as printed onto the device		Endurance	
Tripping	instantaneous	electrical comp.	≥ 4,000 operating cycles
Type G, R	10 ms delay	mechanical comp.	≥ 20,000 operating cycles
Type S	40 ms delay - with selective disconnecting function	<b>Mechanical</b>	
Type U (only 30 mA)	10 ms delay	Frame size	45 mm
Type U (without 30 mA)	40 ms delay - with selective disconnecting function	Device height	80 mm
Rated voltage $U_n$	230/400 and 240/415 V AC, 50/60 Hz	Device width	70 mm (4MU)
Operation voltage electronic	50 - 254V AC	Mounting	quick fastening with 2 lock-in positions on DIN rail IEC/EN 60715
Operation voltage test circuit	184 - 440V AC	Degree of protection, built-in	IP40
Rated tripping current $I_{\Delta n}$	30, 300 mA	Deg. of prot. in moisture-proof encl.	IP54
Sensitivity	AC and pulsating DC	Upper and lower terminals	open mouthed/lift terminals
Rated insulation voltage $U_i$	440 V	Terminal protection	finger and hand touch safe, BGV A3, ÖVE-EN 6
Rated impulse withstand voltage $U_{imp}$	4 kV (1.2/50 $\mu$ s)	Terminal capacity	1.5 - 35 mm <sup>2</sup> single wire 2 x 16 mm <sup>2</sup> multi wire
Rated short circuit capacity $I_{nc}$	10 kA	Terminal screw	M5 (Pozidriv PZ2)
Peak withstand current		Terminal capacity warning contact(s)	0.25-1.5 mm <sup>2</sup> (plug in terminals)
Type G, G/A, R, U (30mA)	3 kA (8/20 $\mu$ s) surge current proof	Terminal torque	2 - 2.4 Nm
Type S/A, U (except 30mA)	typ. 5 kA (8/20 $\mu$ s) selective + surge current proof	Busbar thickness	0.8 - 2 mm
Electrical isolation	> 4 mm contact space	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 acc. to IEC 60068-2
		Contact position indicator	red / green
		Tripping indicator	white / blue

# Protective Devices

## 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

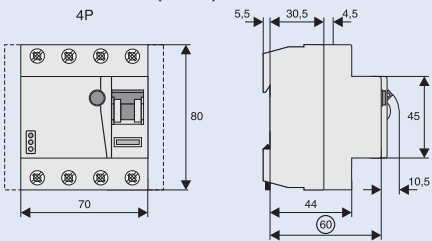
Optional Version: (available upon request)

1 NO + 1 NC up to 110V AC/contact, 2x2 terminals, 1 A ohmic load

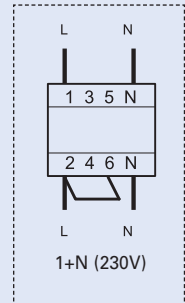
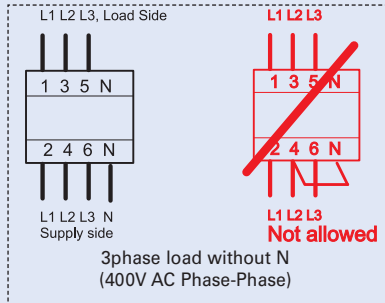
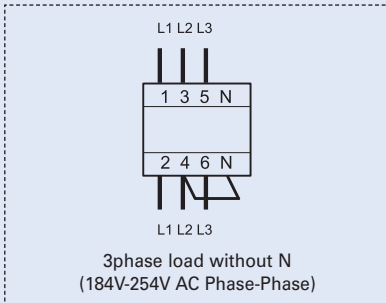
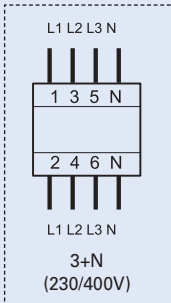
Terminal capacity of contacts:

0.25 - 1.5 mm<sup>2</sup>

## Dimensions (mm)



## Correct connection



Test button works within 184V – 440V AC !, Electronic works within 50-254V AC !