

Protective Devices Residual Current Devices dRCM Digital



Catalog



Powering Business Worldwide

SG08310




Description

- 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

$I_n/I_{\Delta n}$ (A)	Type Designation	Article No.	Units per package
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Type G/A

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


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4-pole

25/0.03	dRCM-25/4/003-G/A+	120834	1/30
25/0.30	dRCM-25/4/03-G/A+	120835	1/30
40/0.03	dRCM-40/4/003-G/A+	120836	1/30
40/0.30	dRCM-40/4/03-G/A+	120837	1/30
63/0.03	dRCM-63/4/003-G/A+	120838	1/30
63/0.30	dRCM-63/4/03-G/A+	120839	1/30
80/0.03	dRCM-80/4/003-G/A+	120840	1/30
80/0.30	dRCM-80/4/03-G/A+	120841	1/30

Type R

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

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4-pole

63/0.03	dRCM-63/4/003-R+	120842	1/30
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Type S/A

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

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4-pole

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

Type U

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

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4-pole

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

Type	Type Designation	Article No.	Units per package
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Sealing Cover Set Z-RC/AK

- for PFIM, PFR, PF6, PF7, dRCM

SG02011



2-pole	Z-RC/AK-2TE	285385	10/30
4-pole	Z-RC/AK-4 MU	101062	10/600

Specifications | Residual Current Devices dRCM Digital

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., 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).
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- 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 (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. 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.
- **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 -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.

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-4 MU	101062

Technical Data

		dRCM Digital
Electrical		
Design according to		IEC/EN 61008 Type G and G/A acc. 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
Minimum operational voltage electronic		50 - 254 V AC
Minimum operational voltage test circuit		196 - 264 V AC
Rated tripping current	$I_{\Delta n}$	30, 300 mA
Sensitivity		AC and pulsating DC
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 G, G/A, R, U (30mA)		3 kA (8/20 μ s) surge current proof
Type S/A, U (without 30mA)		typ. 5 kA (8/20 μ s) selective + surge current proof
Electrical isolation		> 4 mm contact space

Maximum back-up fuse dRCM

Rating	Fuses	MCB's (Characteristic B/C)
I_n [A]	Short-circuit [A]	Short-circuit [A]
25	25 gG/gI	25 gG/gI
40	63 gG/gI	40 gG/gI
63	63 gG/gI	63 gG/gI
80	80 gG/gI	80 gG/gI
	Overload [A]	Overload [A]
	25 gG/gI	C25
	40 gG/gI	C40
	63 gG/gI	C40
	80 gG/gI	—

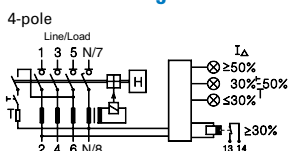
Important: In the case that the maximal possible operating current of the electrical installation don't exceed the rated current of the RCD only short-circuit protection must be implemented. Overload protection must be implemented in the case if the maximal possible operating current of the electrical installation can exceed the rated current of the RCD.

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 (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 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
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
Real contact position indicator	red / green
Tripping indicator	white / blue

Connection diagram



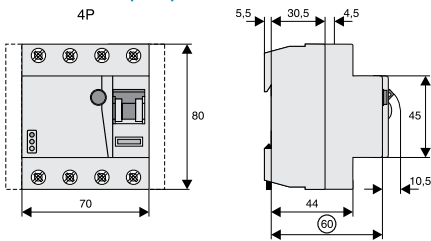
Local Indication RCCB

Status indication LED		red / yellow / green
Permanent light 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

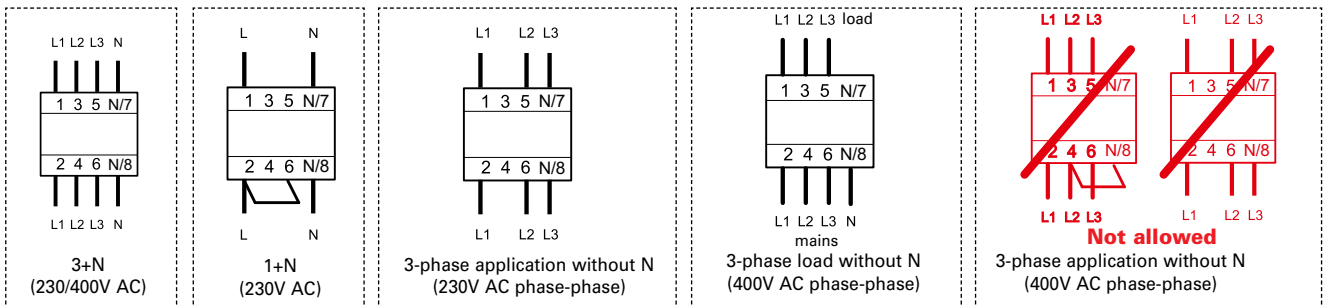
Standard Version	1 contact NO up to 230V AC, 2 terminals, 1 A ohmic load
Optional Version (available upon request)	1 NO + 1 NC up to 110V AC/contact, 2x2 terminals, 1 A ohmic load
Terminal capacity of contacts	0.25 - 1.5 mm ²

Dimensions (mm)



Correct connection

30, 300mA types:



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Eaton Industries (Austria) GmbH
Scheydgasse 42
1210 Vienna
Austria

Eaton
EMEA Headquarters
Route de la Longeraie 7
1110 Morges, Switzerland
Eaton.eu

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Printed in Austria
Publication No. CA019036EN
Article number 302715-MK
December 2020
Graphics: SRA, Schrems

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