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- FLUSH-MOUNT VERSION
R1D TYPE**
- 1 operation threshold
 - External toroidal transformer
 - Adjustable tripping $I_{\Delta n}$ and delay time.



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- FLUSH-MOUNT VERSION
R2D TYPE**
- 2 operation thresholds
 - External toroidal transformer
 - Configurable fail safe operation
 - Adjustable tripping $I_{\Delta n}$ and delay time.
- R3D TYPE**
- 2 operation thresholds
 - External toroidal transformer
 - Configurable fail safe operation
 - Flag indicator
 - Adjustable tripping $I_{\Delta n}$ and delay time.



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- FLUSH-MOUNT VERSION
R4D TYPE**
- 2 operation thresholds
 - External toroidal transformer
 - Configurable fail safe operation
 - Fault current measurement
 - Digital display
 - Flag indicator
 - Shunt tripping circuit
 - Adjustable tripping $I_{\Delta n}$ and delay time.

- ◆ *Modular, flush and internal panel mount version, with or without flag indicator, configurable prealarm indication and fail safe operation*
- ◆ *Versions with automatic toroid connection control*
- ◆ *Choice of supply voltage ranges*
- ◆ *Adjustable fault current $I_{\Delta n}$*
- ◆ *Adjustment and choice of tripping range for both fault current and delay time.*



PLANET - DIN



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- MODULAR VERSION
RM1 TYPE**
- 1 operation threshold
 - External toroidal transformer
 - Fixed tripping $I_{\Delta n}$ and delay time.

- RM TYPE**
- 1 operation threshold
 - External toroidal transformer
 - Adjustable tripping $I_{\Delta n}$ and delay time.



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- MODULAR VERSION
RMT TYPE**
- 1 operation threshold
 - Incorporated toroidal transformer
 - Adjustable tripping $I_{\Delta n}$ and delay time.



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- COMPACT INTERNAL PANEL VERSION
RC TYPE**
- 1 operation threshold
 - Incorporated toroidal transformer
 - Adjustable tripping $I_{\Delta n}$ and delay time.

Earth leakage relays

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| With 1 operation threshold | 13- | 2 |
| With 2 operation thresholds | 13- | 3 |
| Toroidal current transformers | 13- | 3 |
| External multiplier | 13- | 3 |



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- TOROIDAL CURRENT TRANSFORMERS
RT TYPE**
- Solid core
 - 35mm to 210mm diameter.
- RTA TYPE**
- Split core
 - 110mm and 210mm diameter.



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- EXTERNAL MULTIPLIER
RX10 TYPE**
- 10-fold multiplier.

Relays with 1 operation threshold



R1D...

| Order code | Rated auxiliary supply voltage | Output contacts | Qty per pkg | Wt |
|---|--------------------------------|-----------------|-------------|-------|
| | [V] | $\frac{4}{1}$ | n° | [kg] |
| 1 OPERATION THRESHOLD. Flush mount. External CT. | | | | |
| R1D 48 | 24-48VAC/DC | 1 | 1 | 0.180 |
| R1D 415 | 110-240-415V ① | 1 | 1 | 0.180 |

① Supply voltage:
110-125VAC (50/60Hz)/DC
220-240VAC (50/60Hz)
380-415VAC (50/60Hz).

General characteristics

- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Flush mount 96x96mm housing with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover.

ADJUSTMENTS FOR R1D

- Configurable tripping set-point ($I_{\Delta n}$): 0.025-0.25A
0.25-2.5A
2.5-25A
25-250A (with external multiplier RX10)
- Configurable tripping delay time (t): 0.02-0.5s
0.2-5s

Reference standards

Compliant with standards: IEC/EN 62020; IEC/EN 61543.



RM1...

moduLo

| Order code | Rated auxiliary supply voltage | Output contacts | Qty per pkg | Wt |
|--|--------------------------------|-----------------|-------------|-------|
| | [V] | $\frac{4}{1}$ | n° | [kg] |
| 1 OPERATION THRESHOLD. Modular, 35mm DIN (EN 50022) rail mounting. External CT. Fixed tripping set point and time. | | | | |
| RM1 48 | 24-48VAC/DC | 1 | 1 | 0.078 |
| RM1 415 | 110-240-415V AC ① | 1 | 1 | 0.078 |

1 OPERATION THRESHOLD.
Modular, 35mm DIN (EN 50022) rail mounting. External CT.

| | | | | |
|-----------|-------------------|---|---|-------|
| 31 RM 48 | 24-48VAC/DC | 1 | 1 | 0,078 |
| 31 RM 415 | 110-240-415V ① | 1 | 1 | 0,078 |

1 OPERATION THRESHOLD.
Modular, 35 mm DIN rail (EN 50022) mounting.
Ø 28 mm incorporated CT. Configurable fail safe.

| | | | | |
|------------|-------------------|-----|---|-------|
| 31 RMT 48 | 24-48VAC/DC | 2 ② | 1 | 0,259 |
| 31 RMT 415 | 110-240-415V ① | 2 ② | 1 | 0,259 |

① Supply voltage:
110-125VAC (50/60Hz)/DC
220-240VAC (50/60Hz)
380-415VAC (50/60Hz).

② 2 output relays each with 1 changeover contact.

General characteristics

- Configurable fail safe operation for RMT type only
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Modular DIN 43880 housing, 2modules, with transparent cover, suitable for fixing on 35mm DIN rail (IEC/EN 60715)
- Degree of protection: IP20 terminals, IP40 on front with cover.

SETTINGS FOR RM1

- Selectable tripping set point ($I_{\Delta n}$): fixed 0.3A or 0.5A
- Selectable tripping time (t): fixed 0.02s or 0.5s

ADJUSTMENTS FOR RM AND RMT

- Configurable tripping set-point ($I_{\Delta n}$): 0.025-0.25A
0.25-2.5A
2.5-25A
25-250A (with external multiplier RX10 for RM only)
- Configurable tripping delay time (t): 0.02-0.5s
0.2-5s

Reference standards

Compliant with standards: IEC/EN 62020; IEC/EN 61543.



31 RM...

moduLo



31 RMT...

moduLo



31 RC60...

| Order code | Rated auxiliary supply voltage | Output contacts | Qty per pkg | Wt |
|---|--------------------------------|-----------------|-------------|-------|
| | [V] | $\frac{4}{1}$ | n° | [kg] |
| 1 OPERATION THRESHOLD. Compact panel mount. CT incorporated. | | | | |
| 31 RC② 48 | 24-48VAC/DC | 1 | 1 | 0.278 |
| 31 RC② 415 | 110-240-415V ① | 1 | 1 | 0.278 |

① Supply voltage:
110-125VAC (50/60Hz)/DC
220-240VAC (50/60Hz)
380-415VAC (50/60Hz).

② Replace with the digit of the required diameter (35-60-80-110mm).

General characteristics

- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Compact housing for fixing on panel mounting plate
- Degree of protection: IP20 terminals.

ADJUSTMENTS FOR RC

- Configurable tripping set-point ($I_{\Delta n}$): 0.025-0.25A
0.25-2.5A
2.5-25A
- Configurable tripping delay time (t): 0.02-0.5s
0.2-5s

Reference standards

Compliant with standards: IEC/EN 62020; IEC/EN 61543.



31 RC110...

Relays with 2 operation thresholds



R2D...



R3D...



R4D...

| Ordering code | Rated auxiliary supply voltage | Output contacts | Qty per pkg | Wt |
|---------------|--------------------------------|-----------------|-------------|------|
| | [V] | 2 | n° | [kg] |

2 OPERATION THRESHOLDS.
Flush mount. External CT. Fail safe.

| | | | | |
|----------------|---------------------------|---|---|-------|
| R2D 48 | 24-48VAC/DC | 2 | 1 | 0.350 |
| R2D 415 | 110-240-415V ^① | 2 | 1 | 0.350 |

2 OPERATION THRESHOLDS.
Flush mount. External CT.
Fail safe. Flag Indicator.

| | | | | |
|----------------|---------------------------|---|---|-------|
| R3D 48 | 24-48VAC/DC | 2 | 1 | 0.360 |
| R3D 415 | 110-240-415V ^① | 2 | 1 | 0.360 |

2 OPERATION THRESHOLDS.
Flush mount. External CT.
Fault current measurement. Digital display.
Fail safe. Flag indicator.

| | | | | |
|----------------|---------------------------|---|---|-------|
| R4D 48 | 24-48VAC/DC | 2 | 1 | 0.440 |
| R4D 415 | 110-240-415V ^① | 2 | 1 | 0.440 |

① Supply voltage:
110-125VAC (50/60Hz)
220-240VAC (50/60Hz)
380-415VAC (50/60Hz).

General characteristics

- 2 output relays each with changeover contact, configurable 2 tripping or 1 tripping and 1 alarm
- Configurable fail safe prealarm and operation
- Automatic toroid connection control
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Red tripping prealarm LED indicator (ALARM)
- Front TEST button
- Manual resetting by front RESET button or remote contact closing
- Automatic resetting by remote contact closing or rear jumper connection
- Constant toroid-relay circuit control
- Flag indicator (TRIP MEMORY) (R3D-R4D only)
- Digital fault current measurement and display with configurable tripping value memory (R4D only)
- Shunt tripping circuit operating test (TCS) (R4D only)
- Flush mount 96x96mm housing with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover.

ADJUSTMENTS FOR R2D and R3D

- Configurable tripping set-point (I_{Δn}): 0.025-0.25A
0.25-2.5A
2.5-25A
25-250A (with external multiplier RX10)
- Prealarm set point fixed 70%
- Configurable tripping delay time (t): 0.02-0.5s
0.2-5s

ADJUSTMENTS FOR R4D

- Configurable tripping set-point (I_{Δn}): 0.03-0.3A
0.3-3A
3-30A
30-300A (with external multiplier RX10)
- Prealarm set point fixed 70%
- Configurable tripping delay time (t): 0.03-0.5s
0.3-5s

Reference standards

Compliant with standards: IEC/EN 62020; IEC/EN 61543.

Toroidal current transformers



31 RT...



31 RTA...

| Order code | Diameter | Openable | Qty per pkg | Wt. |
|-------------------|----------|----------|-------------|-------|
| | [mm] | | n° | [kg] |
| 31 RT 35 | 35 | No | 1 | 0.230 |
| 31 RT 60 | 60 | No | 1 | 0.280 |
| 31 RT 80 | 80 | No | 1 | 0.450 |
| 31 RT 110 | 110 | No | 1 | 0.410 |
| 31 RT 210 | 210 | No | 1 | 1.600 |
| 31 RTA 60 | 60 | Yes | 1 | 0.540 |
| 31 RTA 110 | 110 | Yes | 1 | 0.540 |
| 31 RTA 210 | 210 | Yes | 1 | 1.850 |

Reference standards

Compliant with standards: IEC/EN 62020; IEC/EN 61543.

External multiplier

| Order code | Description | Qty per pkg | Wt |
|-----------------|--|-------------|-------|
| | | n° | [kg] |
| 31 RX 10 | 10-fold multiplier suitable for R1D, RM, R2D, R3D and R4D types only | 1 | 0.183 |

General characteristics

- Dimensions: refer to RT35 toroidal transformer on page D-48.
- To connect between toroid and relay.

Reference standards

Compliant with standards: IEC/EN 62020; IEC/EN 61543.