

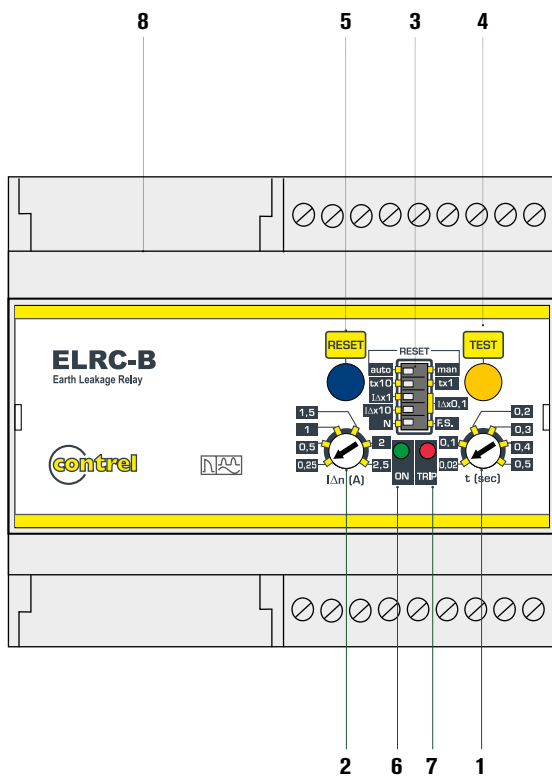
ELRC-B

EARTH LEAKAGE RELAY - MODULAR VERSION 1 MODULE, WITH INCORPORATED TOROIDAL TRANSFORMER



| ORDER CODE | RATED AUXILIARY SUPPLY VOLTAGE | OUTPUTS CONTACTS | WT [kg] |
|-------------------|--------------------------------|------------------|---------|
| ELRC-B 48 | 24-48 VAC/DC | 2 | 0.375 |
| ELRC-B 415 | 110 VAC/DC 240-415 VAC | 2 | 0.375 |

| OPTIONS | |
|----------|--|
| T | Tropicalisation |
| F | Built-in filter for 3rd harmonic (ELR-92 only) |



GENERAL CHARACTERISTICS

- Earth leakage relay type A
- Incorporated toroidal Ø28mm
- Configurable fail safe operation
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Modular DIN housing, 6 module, with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover

| ADJUSTMENTS | |
|--|---------------|
| 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. |

LEGENDA

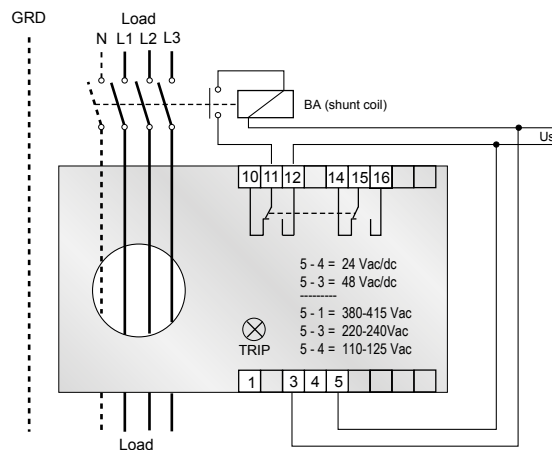
| | |
|----------|--|
| 1 | Tripping delay time adjustment |
| 2 | Fault current to earth adjustment |
| 3 | <p>Dip switches settings:</p> <p>3a - auto reset (A) - man reset (M) auto reset = automatic reset man reset = manual reset through RESET key on the front. For remote resetting, simply shut off the auxiliary supply for about 1 second</p> <p>3b - tx10 - tx1 constant selection for tripping delay time adjustment. Examples: positioning the dip switch on tx10 and the potentiometer on 0.3 we will have a tripping delay upon exceeding the $I_{\Delta n}$ threshold of $0.3 \times 10 = 3$ seconds; positioning the dip switch on tx1 and the potentiometer on 0.3 we will have a tripping delay upon exceeding the $I_{\Delta n}$ threshold of $0.3 \times 1 = 0.3$ seconds</p> <p>3c - $I_{\Delta n} \times 0.1$ - $I_{\Delta n} \times 1$ - $I_{\Delta n} \times 10$ constant selection for fault current to earth adjustment. The constants in relation to the position of the 2 dip switches are the following: - dip switch position $I_{\Delta n} \times 0.1$ and $I_{\Delta n} \times 0.1$ K = 0.1 - dip switch position $I_{\Delta n} \times 1$ and $I_{\Delta n} \times 0.1$ K = 1 - dip switch position $I_{\Delta n} \times 1$ and $I_{\Delta n} \times 10$ K = 10</p> <p>3d - N - F.S. F.S. = positive safety activated; in this condition the output relay is normally energised; therefore in the event of the lack of auxiliary voltage the output contacts move to the tripping condition. N = positive safety deactivated. Output relay normally deenergised</p> |
| 4 | TEST key. Causes tripping of the relay. |
| 5 | RESET key. To reset the relay after tripping. For remote reset, simply shut off the auxiliary supply for about 1 second. |
| 6 | ON LED. Indicates the presence of auxiliary voltage. |
| 7 | TRIP LED. Lighting up indicates the cutting in of the TRIP relay due to exceeding the $I_{\Delta n}$ set. |
| 8 | Built-in current transformer. Hole diameter 28mm. It must be crossed by the cables of the line to be controlled; insert the phases and neutral if present. The earth cable must NOT cross the current transformer |

ELRC-B

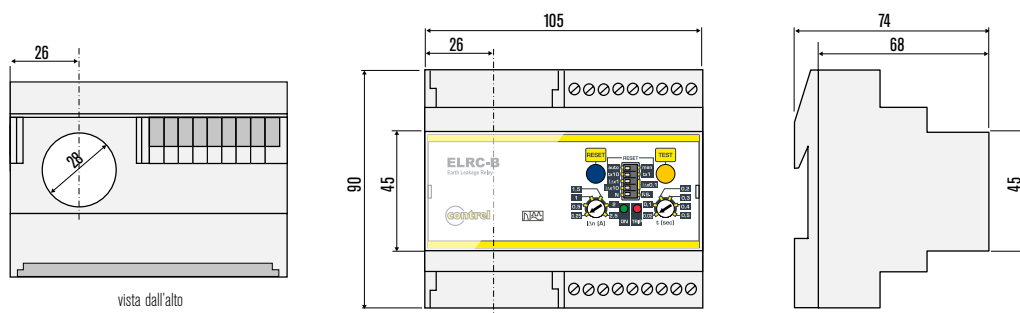
EARTH LEAKAGE RELAY - MODULAR VERSION 1 MODULE, WITH INCORPORATED TOROIDAL TRANSFORMER

| TECHNICAL CHARACTERISTICS | | ELRC-B |
|--|--|--------|
| CONTROL CIRCUIT | | |
| Toroidal transformer | Incorporated Ø 28 mm | |
| Adjustments tripping set-point (I Δ) | 0.025÷25A | |
| Adjustments tripping time (t) | 0.02÷5s | |
| AUXILIARY SUPPLY | | |
| Auxiliary voltage (Us) | 24-48 VAC/DC 110 VAC/DC-240-415 VAC | |
| Rated frequency | 50-60 Hz | |
| Maximum power consumption | 3 VA | |
| OUTPUT RELAYS | | |
| Contact arrangement | 2 changeovers (both trip) | |
| Rated contact capacity Ith | 5 A (240 VAC) | |
| INDICATIONS | | |
| Auxiliary voltage available (ON) | Green LED | |
| Relay tripping (TRIP) | Red LED | |
| INSULATION | | |
| Insulation test | 2.5kV for 1 minute | |
| AMBIENT OPERATING CONDITIONS | | |
| Operating temperature | -10÷60 °C | |
| Storage temperature | -20÷80 °C | |
| Relative humidity | ≤90% | |
| ENCLOSURE | | |
| Version | 6 modules DIN | |
| Degree of protection | IP20 terminals IP40 with protective cover | |
| CERTIFICATIONS AND COMPLIANCE | | |
| Reference standards | IEC/EN 61010, IEC/EN 61000-6-2 IEC/EN 61000-6-3, IEC/TR 60755 CEI EN 60947-2 Annex M | |

WIRING CONNECTION



MECHANICAL DIMENSIONS



ELRC-BL | ELRD-L | ELRD-L2m

EARTH LEAKAGE RELAY - MODULAR VERSION 6 MODULES (PUBLIC LIGHTING)



GENERAL CHARACTERISTICS

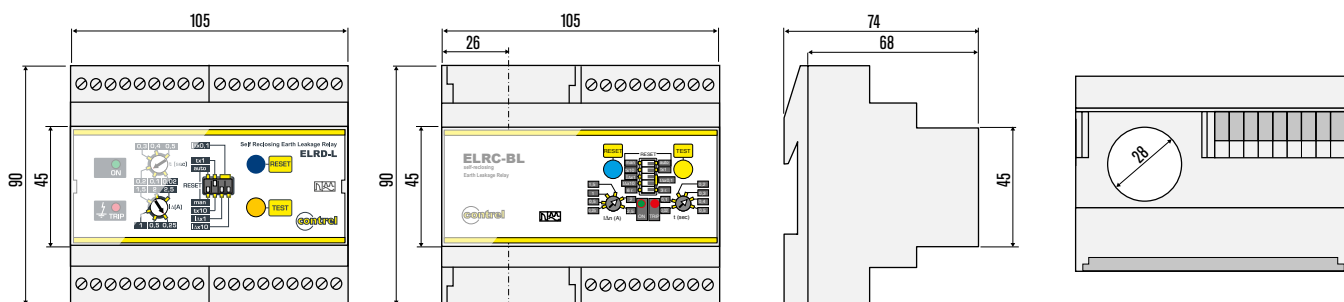
- Earth leakage relay type A
- Automatic trip and reclosing
- External toroidal (ELRD-L, ELRD-L2m only)
- Incorporated toroidal Ø28mm (ELRC-BL only)
- Green power LED indicator (ON)
- Red relay tripped LED indicator (TRIP)
- Red tripping prealarm LED indicator (ALARM) (ELRD-L2m only)
- Front TEST and RESET buttons
- Configurable automatic or manual resetting
- Flag indicator (TRIP MEMORY) (ELRD-L2m only)
- Modular DIN housing, 6 module, with transparent cover
- Degree of protection: IP20 terminals, IP40 on front with cover

| ORDER CODE | RATED AUXILIARY SUPPLY VOLTAGE | OUTPUTS CONTACTS | WT [kg] |
|------------|--------------------------------|------------------|---------|
| ELRC-BL | 240 VAC | 2 | 0,370 |
| ELRD-L | 240 VAC | 2 | 0,390 |
| ELRD-L2m | 240 VAC | 2 | 0,390 |

| OPTIONS | |
|---------|-----------------|
| T | Tropicalisation |

| ADJUSTMENTS PER | ELRC-BL | ELRD-L | ELRD-L2m |
|--|---|--|----------|
| Configurable tripping set-point ($I_{\Delta n}$) | 0,025...0,25A 0,25...2,5A 2,5...25A 25...250A (with external multiplier CT1-M) | | |
| Set-point prealarm | | fixed 70% (ELRD-L2m only) | |
| Configurable tripping delay time (t) | 0,02...0,5s 0,2...5s. | | |
| Self-closing attempts | 3 or 6 consecutive (version ELRC-BL) | 3 consecutive (version ELRD-L, ELRD-L2m) | |

MECHANICAL DIMENSIONS

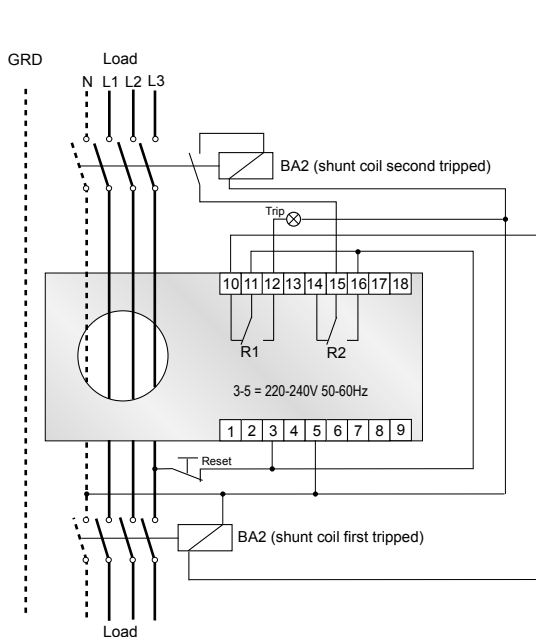


ELRC-BL | ELRD-L | ELRD-L2m

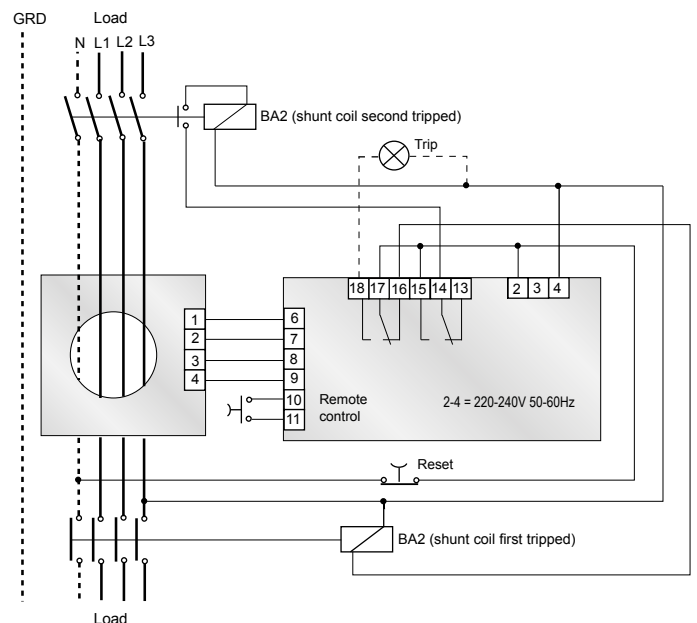
EARTH LEAKAGE RELAY - MODULAR VERSION 6 MODULES (PUBLIC LIGHTING)

| TECHNICAL CHARACTERISTICS | ELRC-BL | ELRD-L | ELRD-L2m |
|--|---|---------------------------------|---------------------------------|
| CONTROL CIRCUIT | | | |
| Toroidal transformer | External (version ELRC-BL Incorporated Ø 28 mm) | | |
| Adjustments tripping set-point (I Δ) | 0.025÷25A | | |
| Adjustments tripping time (t) | 0.02÷5s | | |
| Set-point prellarme | 70% I Δ n (fixed) (version ELRD-L2m) | | |
| Numero tentativi di ripristino | 3 o 6 consecutive | 3 consecutive | 3 consecutive |
| AUXILIARY SUPPLY | | | |
| Auxiliary voltage (Us) | 240 VAC | | |
| Rated frequency | 50-60 Hz | | |
| Maximum power consumption | 4 VA | | |
| OUTPUT RELAYS | | | |
| Contact arrangement | 2 changeovers (both trip) | 2 changeovers (1 trip, 1 alarm) | 2 changeovers (1 trip, 1 alarm) |
| Rated contact capacity Ith | 5 A (240 VAC) | | |
| INDICATIONS | | | |
| Auxiliary voltage available (ON) | Green LED | | |
| Relay tripping (TRIP) | Red LED | | |
| Alarm advance (ALARM) | red LED (versions ELRD-L, ELRD-L2m) | | |
| Mechanical flag (TRIP) | Flag indicator (version ELRD-L2m) | | |
| INSULATION | | | |
| Insulation test | 2.5kV for 1 minute | | |
| AMBIENT OPERATING CONDITIONS | | | |
| Operating temperature | -10÷60 °C | | |
| Storage temperature | -20÷80 °C | | |
| Relative humidity | ≤90% | | |
| ENCLOSURE | | | |
| Version | 6 modules DIN | | |
| Degree of protection | IP20 terminals IP40 with protective cover | | |
| CERTIFICATIONS AND COMPLIANCE | | | |
| Reference standards | IEC/EN 61010, IEC/EN 61000-6-2 | IEC/EN 61000-6-3, IEC/TR 60755 | CEI EN 60947-2 Annex M |

WIRING CONNECTION ELRC-BL

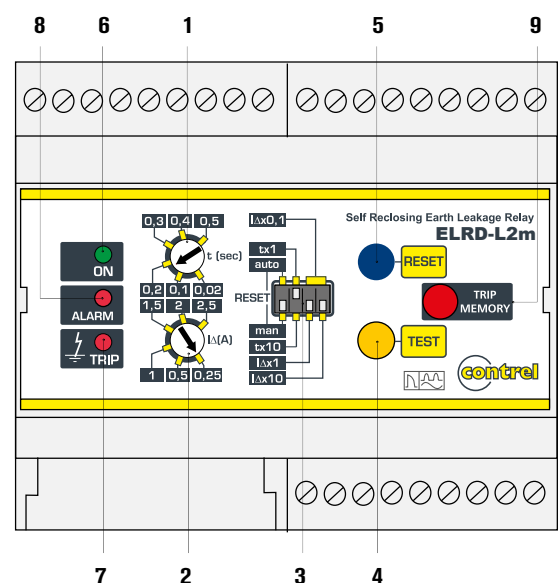
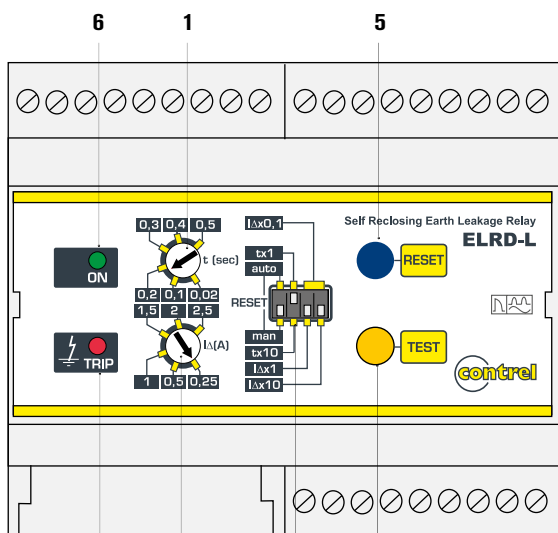
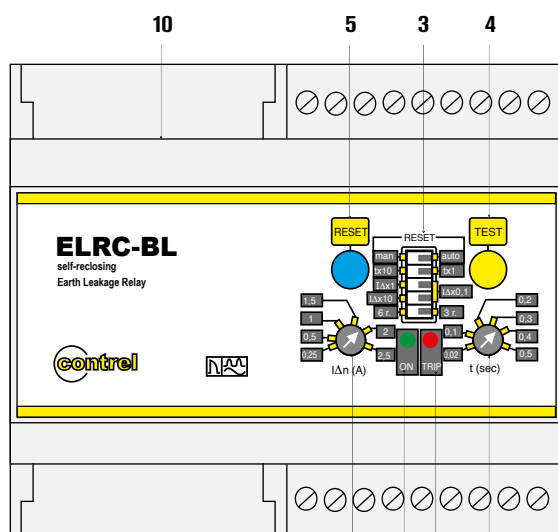


WIRING CONNECTION ELRD-L | ELRD-L2m



ELRC-BL | ELRD-L | ELRD-L2m

EARTH LEAKAGE RELAY - MODULAR VERSION 6 MODULES (PUBLIC LIGHTING)



| LEGENDA | |
|---------|---|
| 1 | Tripping delay time adjustment |
| 2 | Fault current to earth adjustment |
| 3 | <p>Dip switches settings:</p> <p>3a - auto reset (A) - man reset (M) auto reset = automatic reset man reset = manual reset through RESET key on the front. For remote resetting, simply shut off the auxiliary supply for about 1 second</p> <p>3B - tx10 - tx1 constant selection for tripping delay time adjustment. Examples: positioning the dip switch on tx10 and the potentiometer on 0.3 we will have a tripping delay upon exceeding the $I\Delta n$ threshold of $0.3 \times 10 = 3$ seconds; positioning the dip switch on tx1 and the potentiometer on 0.3 we will have a tripping delay upon exceeding the $I\Delta n$ threshold of $0.3 \times 1 = 0.3$ seconds</p> <p>3C - $I\Delta n \times 0,1$ - $I\Delta n \times 1$ - $I\Delta n \times 10$ constant selection for fault current to earth adjustment. The constants in relation to the position of the 2 dip switches are the following: - dip switch position $I\Delta n \times 0,1$ and $I\Delta n \times 0,1$ K = 0.1 - dip switch position $I\Delta n \times 1$ and $I\Delta n \times 0,1$ K = 1 - dip switch position $I\Delta n \times 1$ and $I\Delta n \times 10$ K = 10</p> <p>3D - Version ELRC-BL 6r - 3r selection for self-reclosing attempts 6r = 6 self-reclosing attempts 3r = 3 self-reclosing attempts</p> |
| 4 | TEST key. Causes tripping of the relay. |
| 5 | RESET key. To reset the relay after tripping. For remote reset, simply shut off the auxiliary supply for about 1 second. |
| 6 | ON LED. Indicates the presence of auxiliary voltage. |
| 7 | TRIP LED. Lighting up indicates the cutting in of the TRIP relay due to exceeding the $I\Delta n$ set. |
| 8 | ALARM LED (version ELRD-L2m) Lighting up depends on the dip switch programming; see the instructions of point 3a) |
| 9 | TRIP MEMORY (version ELRD-L2m) Mechanical trip relay indicator for exceeding the $I\Delta n$ set. It stores the indication also in the lack of auxiliary voltage. The flag indicator resetting can only be made with the RESET button. |
| 10 | Built-in current transformer. Hole diameter 28mm. It must be crossed by the cables of the line to be controlled; insert the phases and neutral if present. The earth cable must NOT cross the current transformer |