

# ELRC-B

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



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

OPTIONS	
<b>T</b>	Tropicalisation
<b>F</b>	Built-in filter for 3rd harmonic (ELR-92 only)

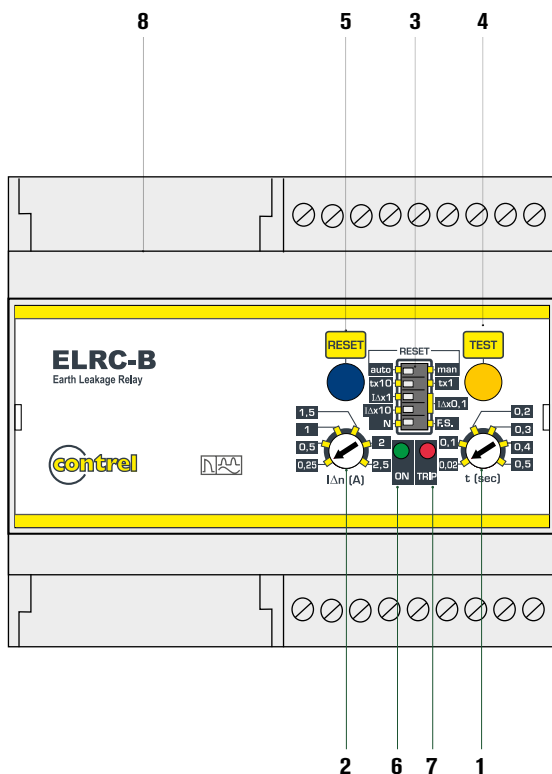
## GENERAL CHARACTERISTICS

- 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	
<b>Configurable tripping set-point (<math>I_{\Delta n}</math>)</b>	0.025...0.25A
	0.25...2.5A
	2.5...25A
<b>Configurable tripping delay time (t)</b>	0.02...0.5s
	0.2...5s.

## LEGENDA

<b>1</b>	Tripping delay time adjustment
<b>2</b>	Fault current to earth adjustment
<b>3</b>	<p>Dip switches settings:</p> <p><b>3a</b> - 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><b>3b</b> - 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 <math>I_{\Delta n}</math> threshold of <math>0.3 \times 10 = 3</math> seconds; positioning the dip switch on tx1 and the potentiometer on 0.3 we will have a tripping delay upon exceeding the <math>I_{\Delta n}</math> threshold of <math>0.3 \times 1 = 0.3</math> seconds</p> <p><b>3c</b> - <math>I_{\Delta n} \times 0.1</math> - <math>I_{\Delta n} \times 1</math> - <math>I_{\Delta n} \times 10</math> 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 <math>I_{\Delta n} \times 0.1</math> and <math>I_{\Delta n} \times 0.1</math> K = 0.1            - dip switch position <math>I_{\Delta n} \times 1</math> and <math>I_{\Delta n} \times 0.1</math> K = 1            - dip switch position <math>I_{\Delta n} \times 1</math> and <math>I_{\Delta n} \times 10</math> K = 10</p> <p><b>3d</b> - 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>
<b>4</b>	TEST key. Causes tripping of the relay.
<b>5</b>	RESET key. To reset the relay after tripping. For remote reset, simply shut off the auxiliary supply for about 1 second.
<b>6</b>	ON LED. Indicates the presence of auxiliary voltage.
<b>7</b>	TRIP LED. Lighting up indicates the cutting in of the TRIP relay due to exceeding the $I_{\Delta n}$ set.
<b>8</b>	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

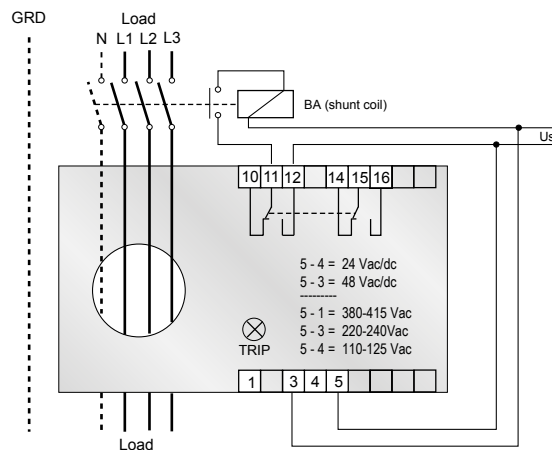


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## EARTH LEAKAGE RELAY - MODULAR VERSION 1 MODULE, WITH INCORPORATED TOROIDAL TRANSFORMER

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

