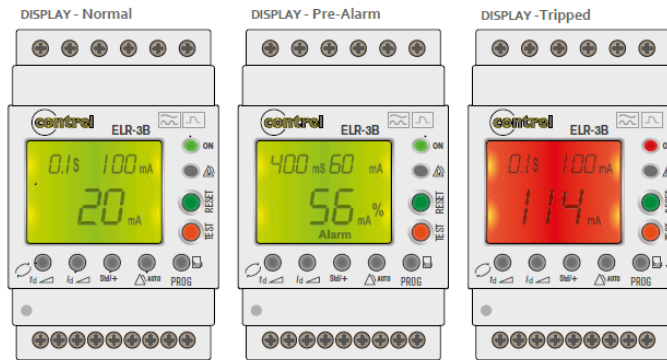


UK Technical Data 10 ELR-3B and 3B10 Earth Leakage Relay - Type B



Operational set parameters and Alarm visual indication



Function

ELR-3B.. units are designed for mounting in control assemblies e.g. EN61439-2 or similar, for use with separate fault breaking devices (see EN947 -2 Annex M). To meet the requirements of EN947 -2 Annex M, the OEM must set the relay and test the assembled combination within the panel, to verify the total breaking time (operation of the ELR + Shunt-trip + CB combined). We recommend sealing the transparent cover after completing the set up and testing of the ELR -3b.. unit.

ELR-3Bs are suitable for use on sites or in installations under the control of electrically qualified staff. Any changes to the relay settings should be in accordance with the design requirements of the Installation Regulations (BS 7671 - Fault protection) and verified by suitable testing to check the disconnection time. The transparent cover must be resealed after adjustment.

ELR-3B must be used in conjunction with separately mounted Type B CTB-1/** residual current transformer (see separate data sheet). The selection is based on the diameter of the CTB aperture to accommodate the cross sectional area of the current carrying conductors.

Features

LED displays: Green; current < set thresholds. Yellow; current > ALARM threshold < lower than TRIP threshold. Red; current > Alarm & Trip threshold or open circuit connection to CTB-1 or Test Button operated. For additional features refer to the setting instructions.

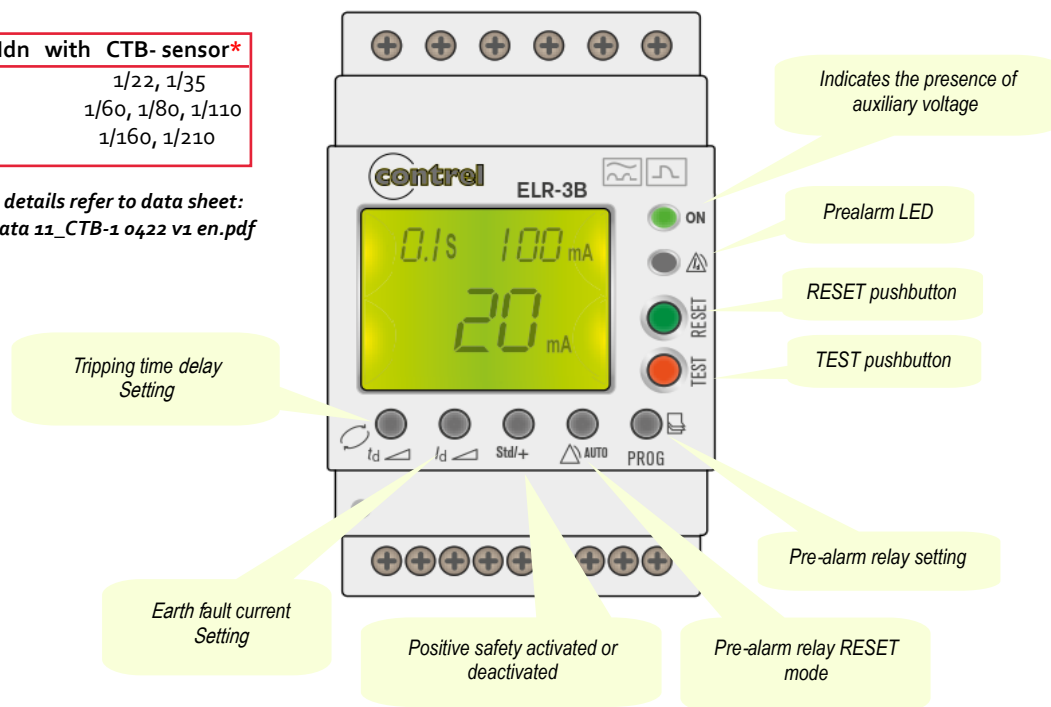
Mounting

Relay mounts on a standard 35 mm rail inside the panel. The CTB must be screwed to a secure back plate using the inbuilt fixing locators. To maintain detection accuracy the monitored cables must be positioned centrally within the CT aperture.

Settings

Minimum I _{dn} with CTB- sensor*	
30 mA	1/22, 1/35
>= 300 mA	1/60, 1/80, 1/110
>= 500 mA	1/160, 1/210

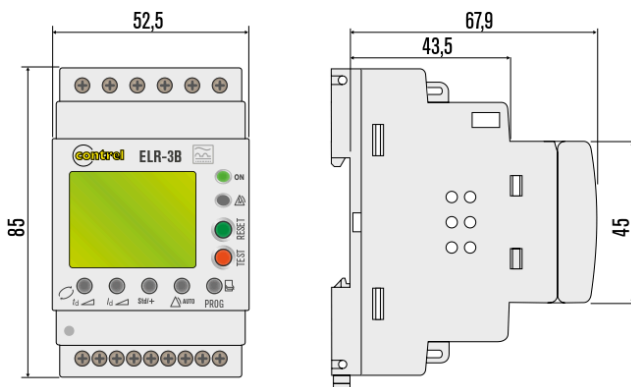
* For CTB-1 details refer to data sheet:
Technical Data 11_CTB-1 0422 v1 en.pdf



Technical Data

Technical Data	ELRC-3B & 3B10
Control Circuit	
Toroidal transformer (External)	Order separately CTB-1/22 = 22 mm, 35 = 35 mm, 60 = 60 mm, 80 = 80 mm, 110 = 110mm, 160 = 160mm
Adjustment tripping time (t)	0.15 < 10 s
Residual operating current characteristics	Type B
Adjustment tripping current (I Δ n)	ELR-3B = 0,03-0,1-0,3-0,5-1-3 A. ELR-3B10 = 0,3-0,5-1-3-5-10 A.
Frequency range response residual current Type AC & A	50-60 Hz: Full Sine Wave; 0.8 - 1 x I Δ n. 1/2 Sine Wave; 0.8 - 1.4 x I Δ n. 1/2(90-135°); 0.8 - 1.4 x I Δ n
Frequency range response residual current Type B	Smooth DC: 0.8 - 1.7 x I Δ n. AC: 150 Hz; 0.8 - 1 x I Δ n. 400 Hz; 0.8 - 1 x I Δ n. 1000 Hz; 1 - 1.3 x I Δ n
Auxiliary Supply	
Auxiliary voltage (Us)	Standard version 230V +/- 20% "Other voltages available on request"
Rated frequency	50-60 Hz
Maximum power consumption	6 VA
Output Relays	
Contact arrangement	2 c/o (1 alarm, 1 Trip)
Contact rating (I Δ th)	6A (240 VAC)
Indicators	
Green & Yellow LEDs	Green; current < set thresholds. Yellow; current > ALARM threshold < lower than TRIP threshold
Red LED)	Current > Alarm & Trip threshold or open circuit connection to CTB-1 or Test Button operated
Insulation	
Withstand voltage CTB-1	2.5 kV for 1 minute
Ambient Operating Conditions	
Operating temperature	-10 °C ... 50 °C
Storage temperature	-20 °C ... 80 °C
Relative humidity	< 95 %
Degree of protection	Terminals = IP20 / Front = IP41
Certification	
Reference Standards	EN 62020, EN 60755, EN60947-2 annex M
Design requirements (OEM)	EN 60947-2 annex M

Dimensions



Wiring example

With shunt-trip coil

