



## UK Technical Data 06

### ELR-3C

#### Earth Leakage Relay - Type A



#### Function

ELR-3C 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 -3C unit.

ELR-3Cs 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-3C must be used in conjunction with separately mounted CT -1\*\*\* (see separate data sheet). The selection is based on the diameter of the CT aperture to accommodate the cross sectional area of the current carrying conductors.

#### Features

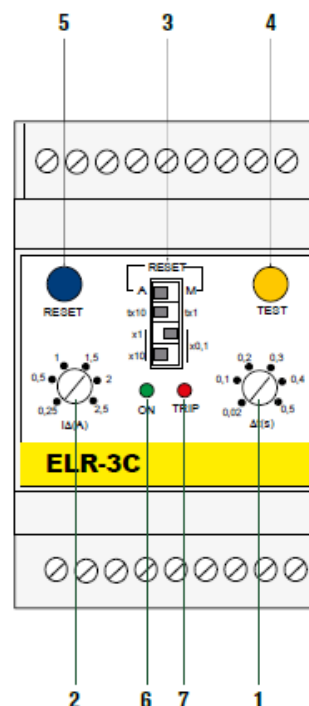
Green LED - power on, Red LED - relay tripped. Manual trip and reset buttons, can be configured for auto reset where it is safe to use this function. Suitable for detecting type A residual currents - range 0.025 to 25A, with adjustable time setting from 0.02 to 5s. Separately mounted CT -1\*\*\*internal diameters available in 35, 60, 80 and 110 mm.

#### Mounting

Relay mounts on a standard 35 mm rail inside the panel. The CT 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

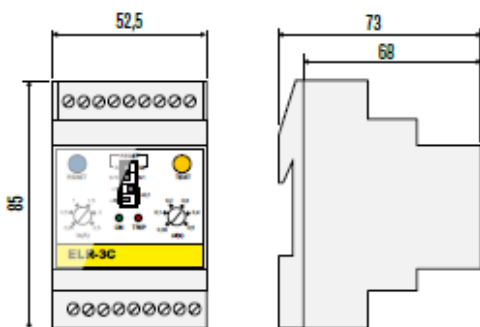
1. Potentiometer - Time delay trip setting  $t$ (sec)
2. Potentiometer - Fault current trip setting  $I\Delta n$ (A)
3. Dip switches -
  - a) - Auto or Manual reset
  - b) -  $t \times 10$  or  $t \times 1$  for time delay setting.
  - c+d) -  $I\Delta n \times 0,1$  -  $I\Delta n \times 1$  -  $I\Delta n \times 10$  for fault current trip setting.
 Position of the dip switches as follows:  
 Both dip switches on the right ( $I\Delta n \times 0,1$ ) = 0.1  
 Dip switch ( $I\Delta n \times 1$ ) left and ( $I\Delta n \times 0,1$ ) right = 1  
 Both dip switches on the left ( $I\Delta n \times 1$  and  $I\Delta n \times 10$ ) = 10
4. Trip test button
5. Manual reset button  
- Remote reset; disconnect the power for > 1 second
6. Power-on LED (green)
7. Trip LED (red)



**Technical Data**

Technical Data	ELRC-3C
<b>Control Circuit</b>	
Toroidal transformer (External)	Order separately CT-1/035 = 35 mm, 060 = 60 mm, 080 = 80 mm, 110 = 110mm
Adjustment tripping time (t)	0.02 s < 5 s
Residual operating current characteristics	Type A
Adjustment tripping current (I $\Delta$ n)	0.025 A < 5 A
Frequency range response residual current Type A	50 Hz ... 60 Hz
Frequency range response residual current Type AC	50 Hz ... 60 Hz
<b>Auxiliary Supply</b>	
Auxiliary voltage (Us)	110 VAC/DC and 240-415 VAC "Other voltages available on request"
Rated frequency	50-60 Hz
Maximum power consumption	3 VA
<b>Output Relays</b>	
Contact arrangement	1 c/o (Trip)
Contact rating (Ith)	5 A (240 VAC)
<b>Indicators</b>	
Auxiliary voltage (On)	Green LED)
Relay tripped (Fault)	Red LED)
<b>Insulation</b>	
Withstand voltage	2.5 kV for 1 minute
<b>Ambient Operating Conditions</b>	
Operating temperature	-10 °C ... 60 °C
Storage temperature	-20 °C ... 80 °C
Relative humidity	< 90 %
Degree of protection	Terminals = IP20 / With clear protective cover in place = IP40
<b>Certification</b>	
Standards	IEC/EN 61010, 61000-6-2, 61000-6-3, IEC/TR 60755
Design requirements (OEM)	IEC/EN 60947-2 Annex M

**Dimensions**



**Wiring example**

