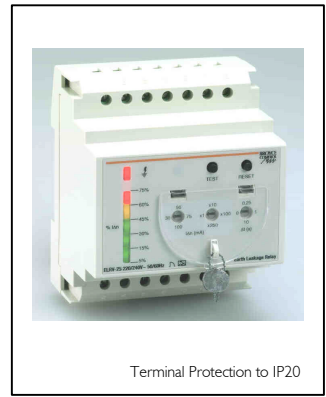


Type: ELRV-10

Earth Leakage Relay (Variable) - Type A

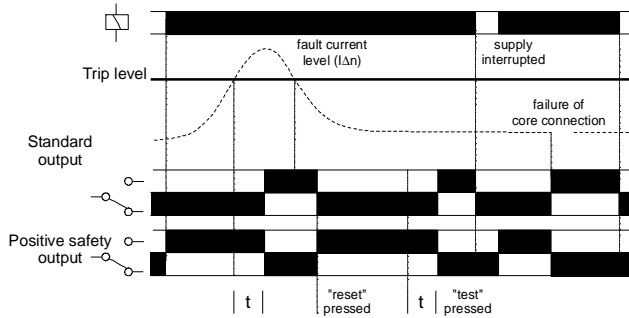
- ❑ Designed to monitor and detect earth fault currents using separate toroid
- ❑ Selectable sensitivity (up to 10A) and time delay (up to 0.5S) with tamper proof cover
- ❑ "Test" button for simulation of a fault condition
- ❑ "Reset" button for clearing of fault condition
- ❑ Remote operation of "Test" and "Reset" buttons
- ❑ 2 x SPDT relay output - Standard output and positive safety output
- ❑ LED scale display of fault level prior to tripping



Dims:
W. 70mm

Terminal Protection to IP20

FUNCTION DIAGRAM



INSTALLATION AND SETTING



Installation work must be carried out by qualified personnel.

- BEFORE INSTALLATION, ISOLATE THE SUPPLY.
 - Connect the unit as shown in the diagram below (N.B. certain features may not be required and therefore do not need to be connected).
 - Apply power and the "positive safety output" relay will energise. The relay will de-energise if:
 - the fault current level exceeds the set trip level ($I_{\Delta n}$)*
 - there is a failure of the connection between the relay and the toroid*
 - the supply to the relay is removed
 - the relay fails internally
- *causes the "standard output" relay to energise in response to the fault condition.
- Prior to a fault occurring, the LED level display will indicate the % of $I_{\Delta n}$ being detected (the display is scaled between 5, 15, 30, 45, 60 and 75% of the set trip level). After all 5 LED's have illuminated and the unit trips due to an excessive fault current, the red \neq LED will illuminate.
 - For remote indication of a fault occurring (when $I_{\Delta n}$ is @ 50%) a lamp or similar indicating device can be connected between terminals "1" and "2". **This is not available on DC supply versions.**

Fault Simulation

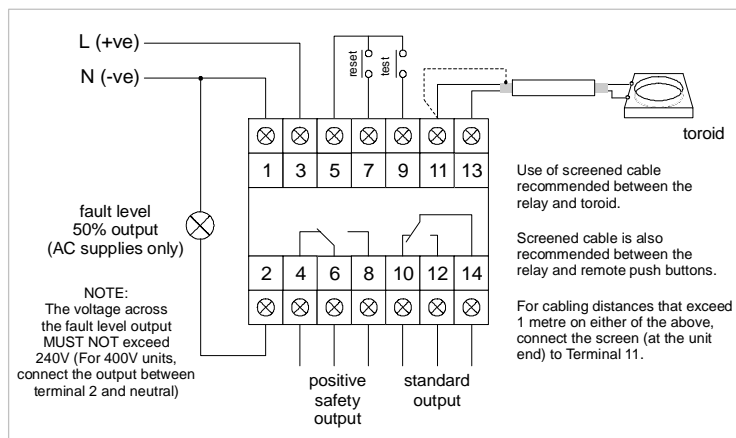
- Pressing the "test" button allows a fault to be simulated. The output relays operate accordingly.
- Pressing the "reset" button after a fault has occurred restores the unit back to its normal operation. (Note that the unit can also be reset by removing then re-applying the supply)

Note:

The operating function of this unit is classed as a Type A for which tripping is ensured for residual sinusoidal alternating currents and residual pulsating direct currents, whether applied suddenly or slowly rising. Additionally, this unit is protected against nuisance tripping $I_{\Delta n}$.

This unit should be installed in conjunction with the latest wiring regulations and practices (IEE, etc)

CONNECTION DIAGRAM



TECHNICAL SPECIFICATION

Supply voltage U_n :	24V DC 110/115V, 220/240V AC 50/60Hz Note: There is no galvanic isolation on 24V DC.
Supply variation:	90 - 110% of U_n (DC: 85 - 115% of U_n)
Isolation:	Over voltage cat. III
Power consumption:	AC: \approx 5 VA, DC: \approx 2W
Sensitivity $I_{\Delta n}$ (mA):	30*, 50, 75, 100 (selectable)
Range:	$\times 1$ *, $\times 10$, $\times 100$ (selectable)
Time delay (t):	instantaneous*, 50, 250, 500mS (selectable)
Memory:	storage of the leakage fault and reset with "reset" button
Toroid withstand capacity:	50kA for 200mS
Distance between toroid and relay:	50 metres (max.)
Ambient temp:	-5 to +60°C -5 to +40°C (in accordance with IEC 60755)
Relative humidity:	+95%
Output:	2 x SPDT relays
Output rating:	AC 1 250V AC 8A (2000VA) AC 15 250V AC 2.5A DC 1 25V DC 8A (200W)
Electrical life:	\geq 150,000 ops at rated load
Fault level output (AC only):	10W max (resistive) up to 240V max. (50% of $I_{\Delta n}$)
Housing:	Grey flame retardant Lexan UL94 VO
Weight:	\approx 200g (\approx 120g for 24v dc version)
Mounting option:	On to 35mm symmetric DIN rail to BS5584:1978 (EN50 002, DIN 46277-3)
Terminal conductor size:	\leq 2.5mm ² stranded \leq 4mm ² solid
Approvals:	Conforms to IEC 60755, 50081-1, 50081-2 50082-1 & 50082-2. CE and Compliant

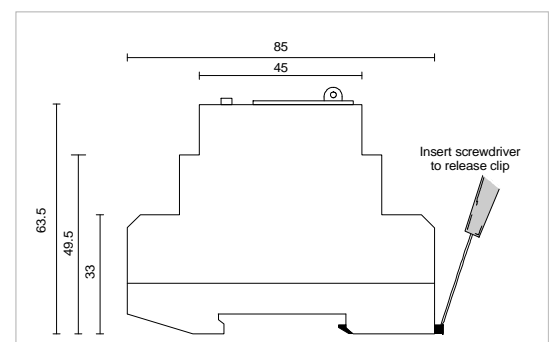
* Note: The unit is factory set to 30mA trip and instantaneous delay. Adjustment of these settings is prevented by the tamperproof cover, which is sealed at the factory. Access to the adjustments can only be made once the factory seal is broken. A spare seal is supplied with the unit and should be fitted if any adjustments are made.

ACCESSORIES

Toroids:	BZCT035 - 35mm BZCT070 - 70mm BZCT120 - 120mm BZCT210 - 210mm
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When using the 120 and 210mm size toroids, the unit should be set to \geq 300mA.

MOUNTING DETAILS



Broyce Control Ltd., Pool Street, Wolverhampton, West Midlands WV2 4HN, England

ELRV10-2-A

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