Type: ELR-IF-0030, 0100 & 0300

Earth Leakage Relay with Integral Toroid (Fixed) - Type A

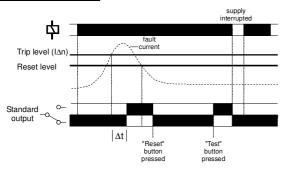
- **DIN Rail or Surface mount enclosure**
- Integral toroid - 25mm Ø
- Designed to monitor and detect true RMS earth fault currents
- Protected against nuisance tripping
- Microprocessor controlled
- Three versions available - 30mA (instantaneous), 100mA (100mS) or 300mA (100mS)*
- Separate "Test" and "Reset" push buttons
- SPDT relay output 5A
- Green LED indicates presence of power supply
- Red LED indicates fault current is >50% of I∆n if flashing, or relay has tripped if permanently illuminated

Dims: W. 70mm H. II0mm D. 37mm



Please state Supply voltage

FUNCTION DIAGRAM



INSTALLATION



Installation work must be carried out by qualified personnel.

- Connect the unit as shown in the diagram below
- DO NOT install the unit in close proximity to equipment generating high magnetic fields.
- Ensure the conductors that pass through the aperture are straight, and as central as possible. Ensure the conductors do not cause any undue stress on the unit itself.

- Ensure the voltage to be applied to terminals "a" and "b" corresponds with the voltage marked on the unit itself.
- Apply power, the green "supply on" LED will illuminate. The output relay will remain de-energised and red "tripped" LED extinguished. If the fault current is > 50% of $|\Delta n|$, then the red LED will flash to provide early indication that a fault current is present. When the fault current exceeds the fixed trip level ($I\Delta n$), the output relay will energise and red LED illuminate after the fixed delay (Δt)
- The relay will now remain in a latched condition until reset.

Fault simulation (Test mode)

- The unit can be placed into a fault condition by pressing the "Test" button on the unit. The output relay will energise.
- Press the "Reset" button on the front of the unit to reset the unit. The output relay will de-energise
- The unit can also be reset by interrupting the power supply.
- To satisfy regulations, it is recommended that the device be tested periodically to ensure correct operation.

Troubleshooting

If the unit fails to operate correctly check that all wiring and connections are good.

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 \mathcal{N} . This unit will also satisfy the requirements for Type AC devices which only need to detect residual alternating currents

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

TECHNICAL SPECIFICATION

120, 240V AC (85 - 115% of Un) Supply voltage Un (a, b)*: (see connection diagram)
Frequency range:

Isolation: Over voltage cat. III 2.5kV (120V AC supply) (1.2 / 50µS) IEC 60664 4kV (240V AC supply) Power consumption (max.)

2W

2-wire: 167A (35mm²) 3-wire: 136A (25mm²) / 4-wire: 100A (16mm²)

Applicable wire sizes: (using 600V AC tri-rated wiring 2-wire: 35mm² 3-wire: 25mm² / 4-wire: 16mm²

conforming to BS 6231)

Monitored leakage curren

30mA (0 / instantaneous**), 100mA (100mS) or Sensitivity I Δ n (Time delay Δ t)*: 300mA (100mS) (*to be specified w ***Actual delay for "0" or "Instantaneous" is <25mS when fault current @ 5 x l⊿n.

Trip level: 75% of I∆n (nominal) 8% of l∆n Hysteresis Accuracy: +10%

≈ 2S (from supply interruption)

LED indication Power supply present: Tripped: Green

Memory

Red (see "INSTALLATION" to the left)

-5 to +40°C (in accordance with IEC 60755) SPDT relay (21, 22, 24) Output

250V 5A (1250VA) 250V 2.5A ACI ACI5 DCI 25V 5A (125W). ≥ 150,000 ops at rated load 2kV AC (rms) IEC 60947-1 Electrical life: Dielectric voltage Rated impulse withstand voltage 4kV (1.2 / 50µS) IEC 60664

Housing: Grey flame retardant Lexan UL94 VO

Weight: Mounting option:

 Using the two fixing holes for mounting directly to a back plate On to 35mm symmetric DIN rail to BS5584: 1978

(EN50 002, DIN 46277-3)

storage of the leakage fault and reset with the "Reset" push button

Terminal conductor size: ≤ 2.5mm² stranded, ≤ 4mm²

Approvals: Conforms to IEC60755, IEC 61543 (EMC)

Cand Compliant.

to terminal identification on the housing () Numbers in brackets shown above re-

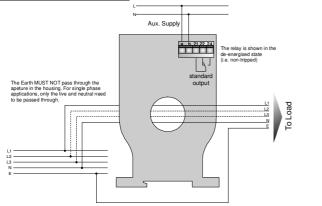
Options

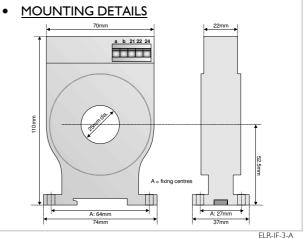
For other supply voltages, alternative trip levels or time delays, please consult the sales office.

Please state full part number and voltage when ordering. The suffix, which should follow ELR-IF, is 0030~(30mA),~0100~(100mA) or 0300~(300mA), then the voltage.

Example: ELR-IF-0100 240V AC

CONNECTION DIAGRAM







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