

ELR-1F-0030, 0100, & 0300

Earth Leakage Relay with Integral Toroid (Fixed) Type A

- + DIN Rail or Surface mount enclosure
- + Integral toroid - 25mm
- + 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 if flashing, or relay has tripped if permanently illuminated.



INSTALLATION

BEFORE INSTALLATION, ISOLATE THE SUPPLY



Installation by qualified personnel only.

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 and the conductors do not cause any undue stress on the unit itself.

Applying power: 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 IDn, 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 (IDn), the output relay will energise and red LED illuminate after the fixed delay (Dt).
 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.
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 and 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)

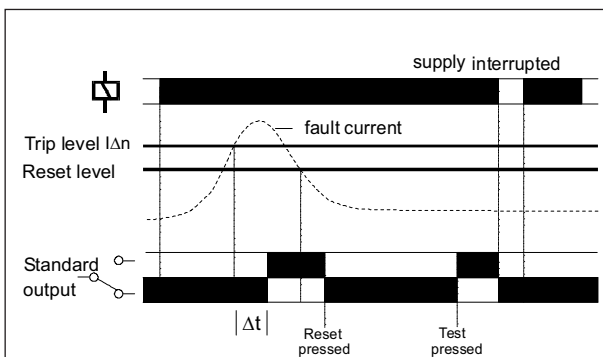
TECHNICAL SPECIFICATIONS

- Supply voltage Un (a, b)*: order 120 or 240V AC (85 - 115% of Un)
 Frequency range: 48 - 63Hz
 Isolation: Over voltage cat. III
 Rated impulse withstand voltage: 2.5kV (120V AC supply) (1.2 / 50µS)
 IEC 60664 4kV (240V AC supply)
- Power consumption (max.): 2W
 Rated current: 2-wire: 167A (35mm²); 3-wire: 136A (25mm²)
 4-wire: 100A (16mm²)
 Wire sizes: 2-wire: 35mm² (using 600V AC tri-rated wiring 3-wire: 25mm²
 4-wire: 16mm² conforming to BS 6231)
- Monitored leakage current: 0 to 1A (15 - 400Hz)
 Sensitivity IDn: (Time delay Dt)*:30mA (instantaneous**), 100mA (100mS) or 300mA (100mS) (*specify when ordering) Actual delay for instantaneous is <25mS when fault current is 5 x IDn.
- Trip level: 75% of IDn (nominal)
 Hysteresis: 8% of IDn
 Accuracy: ±10%
 Reset time: 2S (from supply interruption)
 LED indication: Power supply present: Green / Tripped: Red
 Memory: storage of leakage fault and reset with Reset button
 Ambient temp: -20 to +55°C -5 to +40°C (per IEC 60755)
 Relative humidity: +95%
 Output: SPDT relay (21, 22, 24)
 Output rating: AC1 250V 5A (1250VA) AC15 250V 2.5A
 DC1 25V 5A (125W)
- Electrical life: 150,000 ops at rated load
 Dielectric voltage: 2kV AC (rms) IEC 60947-1
 Rated impulse withstand voltage: 4kV (1.2 / 50µS) IEC 60664
 Housing: Grey flame retardant Lexan UL94 VO
 Weight: 190g
 Mounting: Using the two fixing holes to mount directly to a backplate or onto 35mm symmetric DIN rail
- Terminal conductor size: 2.5mm² stranded, 4mm² solid
 Approvals: Conforms to IEC60755, IEC 61543 (EMC) CE.
 Options: For other supply voltages, alternative trip levels or time delays, please consult the sales office
- Terminal Protection:IP20

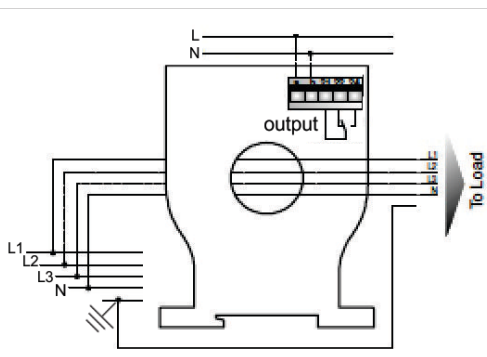
ORDERING:

Please state full part number and voltage when ordering.
 The suffix which should follow ELR-1F, is
 0030 (30mA),
 0100 (100mA) or
 0300 (300mA), then followed by the voltage
 eg. ELR-1F-0100-120

FUNCTION DIAGRAM



WIRING DIAGRAM



DIMENSIONS

