

### iELR

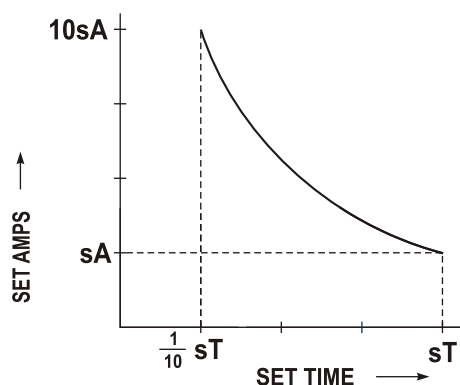
Intelligent Earth Leakage Relay is a innovative product from ElMeasure for the control application. Conventional ELRs work on preset trip settings that work through potentiometers/DIP switches and hence problems arise in accuracy, reliability, and range. ElMeasure's iELR is unique and enables the user to set the leakage current and trip time through front panel keys using password. iELR is built on high speed micro-controller with 4 digits 7 segment RED bright digital display and a host of many unique features listed below.

### UNIQUE FEATURES

- True RMS measurement
- Clearance and Creepage distance meets UL 508 Safety Standard
- **Inverse curve** - Trip time is inversely proportional to leakage current. This ELR is Intelligent, when the Leakage current is 10 times higher than the set current, it trips 10 times faster
- Field Programmable trip current and trip time through front panel keys with password protection
- **Continuous leakage current display** (Programmable) Leakage current continuously displayed to enhance the user to understand the quality of Electrical network / Machine online. This can be disabled through setup if required
- **Continuous Display of Trip Leakage current** (Programmable) - In case of tripping, iELR captures and displays the tripped Current with 4 digit resolution, which helps the user to analyze and correct the problem. This can be disabled through setup if required
- Continuous scrolling display for set current and set Time
- Wide input range 300mA to 12A and the trip time programmable from 300ms to 30 seconds
- Manual Test and Reset Keys
- RS485 Communication Option



### Tripping Characteristics



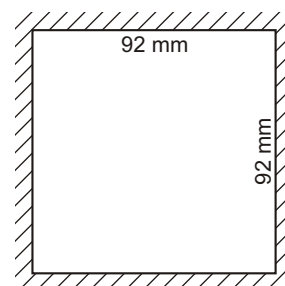
### Mechanical Specification

#### Dimension Bezel :

96 x 96 mm (Depth 50mm behind Bezel)

#### Panel Cutout :

$92^{+0}_{-2} \times 92^{+0}_{-2}$  mm



## APPLICATIONS:

1. Protects control panels and switch boards from flame leakage
2. Protects motors / transformers / feeders / generators etc., from earth leakage
3. Hazardous and sensitive industries like oil refineries / pulp industries / electrical distribution etc., can be protected
4. Complete protection for control engineering and mining industry

UNIQUE FEATURES	BENEFITS
Microcontroller based design	Higher Technological Advantage
Peak Detection and Value Display	Helps Analysis and Corrective Action
Password Protection	Security against Mishandling
Current Sensitivity Range 300 mA - 12A	No Limitations on Set Current
Programmable Trip Time 300ms - 30 seconds	Wider Choice to Suit Different Industry
Selection thru Soft keys (No DIP Switches)	Better IP Protection and Longer Life
Continuous Earth Leakage Value Display (Optional)	Helps Online Loss Analysis
Intelligent Tripping based on $T \propto 1/A$	Faster and Reliable Protection
Auto Scrolling of Trip Info. & Peak Load Current	Better Analysis
SMT Reflow Manufacturing Process	Higher Reliability

## CORE BALANCE CURRENT TRANSFORMER - CBCT



### CBCT Specification

Input Range : 300mA to 12A

CBCT: Tape Wound

**Round Diameter:** Inner Dia 40mm, 60mm, 100mm, 150mm, 200mm, 250mm, 300mm

**Rectangular:** 150×50mm, 250×100mm, 300×100mm, 350×100mm, 400×125mm, 400×200mm, 500×225, 500×200mm.

Any other sizes subject to availability.

### TECHNICAL SPECIFICATIONS

SPEC	SERIES	IELR
Accuracy		Class 2FS
Input voltage		80 - 300 V AC/DC
Input current		300mA - 12A
Programmable		
Tripping Time		0.3 sec to 30 sec
Programmable		
Core Balance CT type		Tape wound
CBCT		Round - tape wound (Epoxy dipped option) Rectangular - tape wound
Relay contacts		One pair of potential free NO & NC contacts
Contact Rating		2Amps / 240V AC / 24V DC
Mounting Type		Flush
Dimensions in mm		96 × 96 × 50
Communication		RS485 serial channel connection industry standard Modbus RTU protocol.
Bard rate		1200 bps to 19200 bps. (Preferred 9600bps)
Isolation		2000 volts AC isolation for 1 minute between communication and other circuits

**ECO Friendly Lead Free**

**18 Months Warranty**

### Safety and Environment Specifications

**Safety** Designed to meet protection class III, pollution degree 2. Protection against shock by double insulation. Clearance and creepage meets as per UL 508 safety standard. Finger touch proof terminals to voltage and current connections.

**Environment**

Operating temperature -10°C to +55°C (14°F to 131°F)  
Storage temperature -25°C to +70°C (-13°F to 158°F)  
Humidity 5% to 95% non condensing.

Protection index IP 51 (IP 54 front option)  
Recommended wire gauge 12 to 14 SWG



ElMeasure strives for continuous product innovation. Product specifications are therefore subject to change without notice.

**Range of Products:** EMS, Demand Controller, Multi-Function Meters, Load Manager, Electronic Energy Meters, Dual Energy Meter, Digital Panel Meters, Intelligent Earth Leakage Relay, Power Factor Controller, Motor Protection Systems, Power Distribution Unit, Portable Analyser, Power & Energy Transducers, RS485 to RS232/Ethernet/Optic Fiber Converter, RF Modem and GSM Modem.



ELECON MEASUREMENTS PVT LTD

A Group of **ELMEASURE INDIA PVT. LTD**

**HO & Unit-I** # 764, 4th Phase, 707, Yelahanka New Town, Bangalore - 560 106. INDIA  
T : +91 80 2846 1777 / 744. F : +91 80 41272461  
Customer Support: +91 80 3290 4489 E : contactblr@elmeasure.com

**Unit-II** Goutham Garden, No. 4, Veerapandi, Coimbatore - 641019 INDIA  
T : 0422 2697200. TF : 0422 2695200  
E : contactcbe@elmeasure.com

**Unit-III** Plot No.: 323/19, Camp Road, Selaqi, Dehradun, UTTARANCHAL  
C : 097600 02492, 12492 E : contactddn@elmeasure.com

**USA Contact:** 4601, Main Street, Lisle, IL 60532, USA

**Malaysia:** Seremban 70300, N.Sembilan, W.Malaysia  
T : 06 6331699 / 06 6331775 F : 06 6331698

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