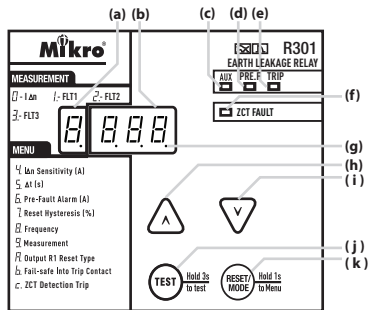
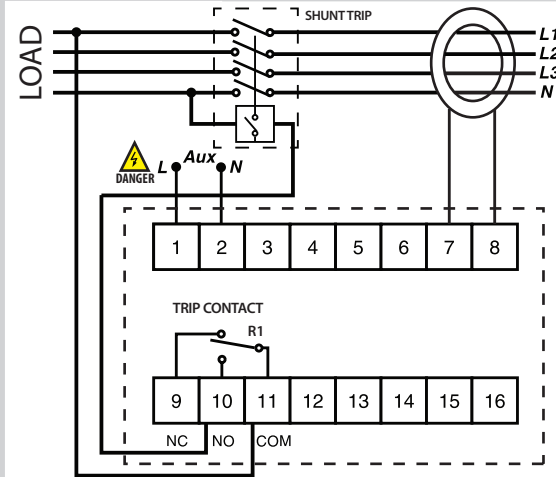


R301 Earth Leakage Relay User Guide



- (a) Function indication
- (b) Data indication
- (c) Auxiliary power supply indicator
- (d) Pre-fault indicator
- (e) Trip status indicator
- (f) ZCT fault indicator
- (g) mA indicator
- (h) Up button
- (i) Down button
- (j) Test button
- (k) Reset/Mode button

Typical Application Diagram



Technical Data

Auxiliary Supply

Supply Voltage..... 198 ~ 265VAC
Supply Frequency..... 50 or 60Hz
VA Rating..... 3VA max

Accuracy

Protection Thresholds..... -15% to 0%
Time Delay..... $\pm 3\%$ with a minimum 40ms

Setting Ranges

(i) Earth-leakage Setting
In Sensitivity..... 20mA - 30.0A
Time Δt INST - 10.0s
Pre-fault..... 10mA - 24.0A
Reset Hysteresis..... 2% - 10%

Output Contacts

Rated Voltage..... 250VAC
Continuous Carry..... 5A (Cos ϕ = 1.0)
Expected Electrical Life..... 10⁵ operations
Expected Mechanical Life..... 5 x 10⁶ operations

Environmental Conditions

Temperature..... -10°C to 55°C
Humidity..... 5% to 95% non-condensing

Mechanical

Mounting..... Panel mounting
Dimension (mm) 96(w) x 96(h) x 90(d)
Enclosure Protection..... IP54 at the panel
IP20 at the body
Approximate Weight..... 0.5kg

Earth Leakage Protection Class

Type A

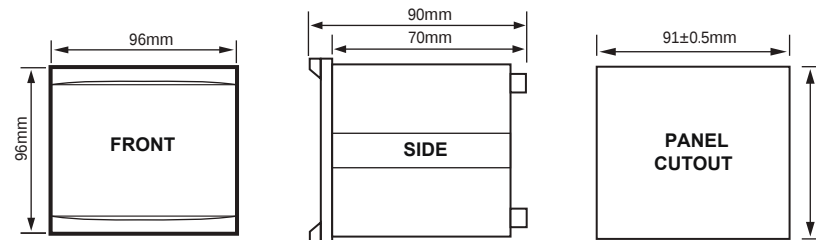
Zero-Phase Current Transformer

To operate with Mikro's ZCT series of current transformer

Features

- Selectable 50 or 60 Hz frequency
- Selectable fundamental or true RMS measurement
- Detection of no connection to ZCT
- Protected against nuisance tripping
- Incorporated fail-safe feature into trip contact

Case Dimensions



System Operation

Functions Setting	
4	In Sensitivity [DEF=0.30]
5	Time Δt [DEF=0.50]
6	Pre-fault [DEF=0.15]
7	Reset Hysteresis [DEF=5]
8	Frequency [50Hz/60Hz] [DEF=50]
9	Detection Method [Fn=Fundamental, rns=RMS][DEF=rns]
A	Output R1 reset type [n-A=Manual, Aut=Auto][DEF=Aut]
b	Fail-safe into trip contact [Yes/No] [DEF=No]
c	ZCT Detection Trip [Yes/No] [DEF=Yes]

[DEF=Default setting]

Push Button Operation

Trip Test	Press and hold "TEST" button for 3.5 seconds
Trip Reset	Press "RESET" button
Scroll Display	Press "MODE" button
Enter Menu Mode	Press and hold "MODE" button for 1second
Set/Save Setting	Press "UP" and "DOWN" buttons simultaneously
Adjust Setting	Press "UP" or "DOWN" button
Display Off Mode	Press "RESET" button for 10 seconds to toggle the display off mode. The display will switch off after 6 minutes if no key is pressed.

LED Indicator

LED Indicator				Status
AUX	PRE.F	TRIP	ZCT	
0	0	0	0	No Auxiliary power supply
1	0	0	0	Normal condition, no tripping
1	X	1	X	Leakage pickup
1	X	B	X	Leakage tripped
1	X	X	B	ZCT connection fault alarm
1	B	X	X	Pre-fault alarm

1 = ON 0 = OFF B = Blinking X = don't care