



PRODUCT OVERVIEW

Microprocessor based digital earth leakage relays measuring low-level leakage or unbalanced currents due to insulation loss in conductors or equipment to be protected. A zero phase current transformer (toroid) is used to sense the leakage current with all protected conductors passing through the toroid.

Pre-fault alarm contact and a positive safe contact to read fail safe trip contact provide better fault prevention control of the system or equipment. The pre-fault alarm contact is energised whenever the leakage current exceeds 50% of the sensitivity setting ($I_{\Delta n}$).

The positive safe contact to read fail safe trip contact will become energised when the relay is powered up and healthy.

FEATURES

- Fascia mount
- Digital earth leakage relay
- Programmable current sensitivity and time delay
- Detection of missing ME-T
- Relay trip indicator
- Relay alarm indicator
- Real-time leakage current display
- 50% pre-fault indicator
- Leakage fault current recording
- Standard DIN 96x96mm panel mounting
- Protected against nuisance tripping
- Positive safety output contact
- Pre-fault alarm contact
- Remote reset function

ORDERING INFORMATION

PART NUMBER	DESCRIPTION
ME-ELR-DF-24D	For 50Hz system, auxiliary voltage 21~28V DC
ME-ELR-DF-110A	For 50Hz system, auxiliary voltage 94~127V AC

*See Price List or Catalogue for Toroid to suit

TECHNICAL DATA

AUXILIARY SUPPLY

Model ME-ELR-DF-24D	: 21~28V DC
Model ME-ELR-DF-110A	: 94~127V AC
Rated frequency	: 50Hz
VA Rating	: 3 VA typical

SETTING

Sensitivity setting	: 30mA, 50mA, 0.1A to 1.0A (step=50mA), 1.0A to 5.0A (step=1.0A)
Time delay setting	: 0.05s to 0.50s (step=0.05s)

PERFORMANCE

Current accuracy	: -15% to +0%
Timing accuracy	: $\pm 5\%$

RECORD

Fault record	: 3 latest tripped fault currents or "tSt" for manual test trip
Storage	: Non-volatile memory

INPUT

Remote Test / Reset Inputs	: N.O. dry contact
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OUTPUTS

Trip contact	: Activated during leakage trip, manual test trip or ME-T connection error
Positive safety contact	: Activated when powered on and relay healthy
Alarm contact	: Activated when measured leakage current exceeds 50% of $I_{\Delta n}$.

OUTPUT CONTACTS

Rated voltage	: 250 V AC
Contact rating	: 5 A (NO), 3 A (NC)
Expected electrical life	: 100,000 operations at rated current
Expected mechanical life	: 5×10^6 operations

INDICATORS

Pre-fault alarm	: Red indicator (Normal blink)
Time delay	: Red indicator (Fast blink)
Leakage trip	: 7-segment display and red indicator
ME-T connection error	: 7-segment display and red indicator
Real-time leakage current	: 7-segment display

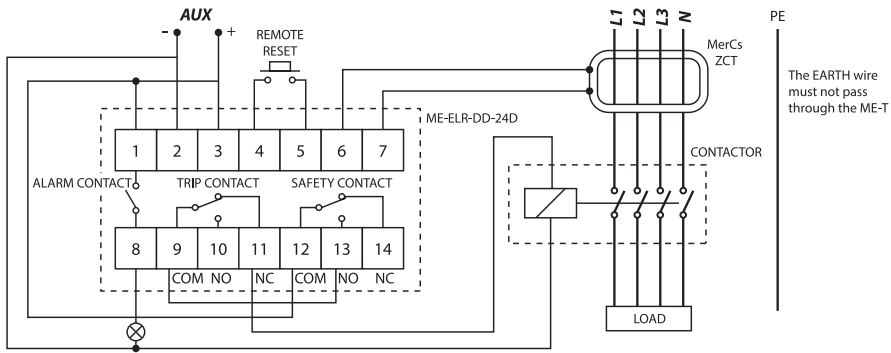
ZERO - PHASE CURRENT TRANSFORMER

To operate with MerCs' ME-T series of current transformers

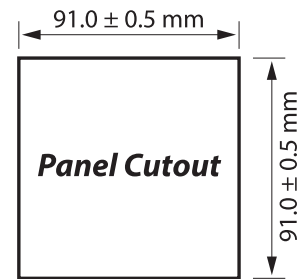
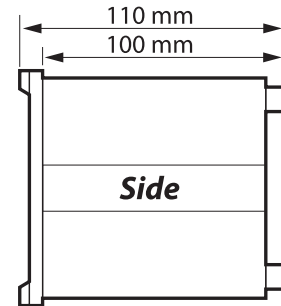
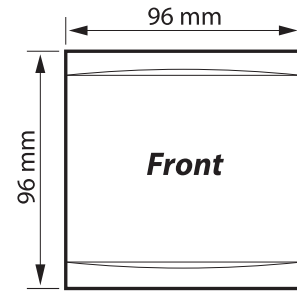
MECHANICAL

Mounting	: Panel mounting
Dimension (mm)	: 96(w) x 96(h) x 110(d)
Enclosure protection	: IP54 at the panel
Approximate weight	: 0.4 kg (excluding ME-T)

TYPICAL APPLICATIONS DIAGRAM FOR ME-ELR-DF-24D



CASE DIMENSIONS



TYPICAL APPLICATIONS DIAGRAM FOR ME-ELR-DF-110A

