

Earth Leakage Relay DP-10



features



- True RMS Measurement with SPARC¹ and DCOI² Algorithm
- Fundamental Signal Detection³
- Real Time Display of IΔn in mA/A
- Fault / lo-set & hi-set Trip LED Indication
- Fault Start Event Recording & LED Indication + Output⁴
- Pre-Alarm LED Indication + Output⁴
- Trip Event Memory (non-volatile 7 previous records)
- Fault Start Event Memory (non-volatile 4 previous records)
- Programmable Relay Output contact for K2
- Last Trip Elapsed Time (up to 99days)
- Software Lock to Prevent Unauthorized Setting
- Complies with : IEC-60255-26 / BS EN 50121-5 Standards
- External Plug-in Module for :- A-01s (RS-485 MODBUS RTU) isolated type

technical data

Current Input (IΔn)	: ZCT (multiple sizes from ID of 25~200mm)
Measurement Range	: 0.005 ~ 30.0 A
Output Relay Rating	: SPDT 5A, 250V AC/DC
Display	: 7-Segment LED (3 + 1 digit)
Indication (LEDs)	: mA, pre-alarm, fault, fault start event, lo / hi trip
Operating Temp.	: 0°C ~ +55°C
Humidity	: 56 days at 93%RH, 40°C non-condensing
IP Rating	: IP54 (front panel)
Weight	: 230 g

parameter setting

IΔn >: lo-set	30 mA ~ 30.0 A 0.03 ~ 1.00 A (step of 0.01 A) 1.00 ~ 3.00 A (step of 0.05 A) 3.00 ~ 10.0 A (step of 0.1 A) 10.0 ~ 30.0 A (step of 0.5 A)
t>: lo-set trip delay time	0.03 s ~ 20.0 s 0.03 s ~ 0.10 s (step of 0.01s) 0.10 s ~ 1.00 s (step of 0.02s) 1.0 s ~ 20.0 s (step of 0.1s)
IΔn >>: hi-set	OFF or 0.1A ~ 30.0 A 0.1 ~ 10.0 A (step of 0.1A) 10.0 ~ 30.0 A (step of 0.5 A)
t>>: hi-set trip delay time	fixed @ 30ms

aux power

DP-10-220a	: 65 ~ 275 Vac (45~65Hz), 90 ~ 300 Vdc
DP-10-024d	: 18 ~ 72 Vdc
Consumption	: < 3VA

fundamental frequency

50 or 60Hz Selectable

K1 output contact options

Latching (Lc) or non-latching (nLc) trip

K2 output contact options

CbF (circuit breaker Failure - nLc only)
A50 (pre-fault 50% of IΔn > - Lc or nLc)
A90 (pre-fault 90% of IΔn > - Lc or nLc)
trP (tripping output - Lc or nLc)
LFS (lo fault start signal - Lc or nLc)
HFS (hi fault start signal - Lc or nLc)
AFS (all fault start signal - Lc or nLc)
dUF (device failure - Lc only)

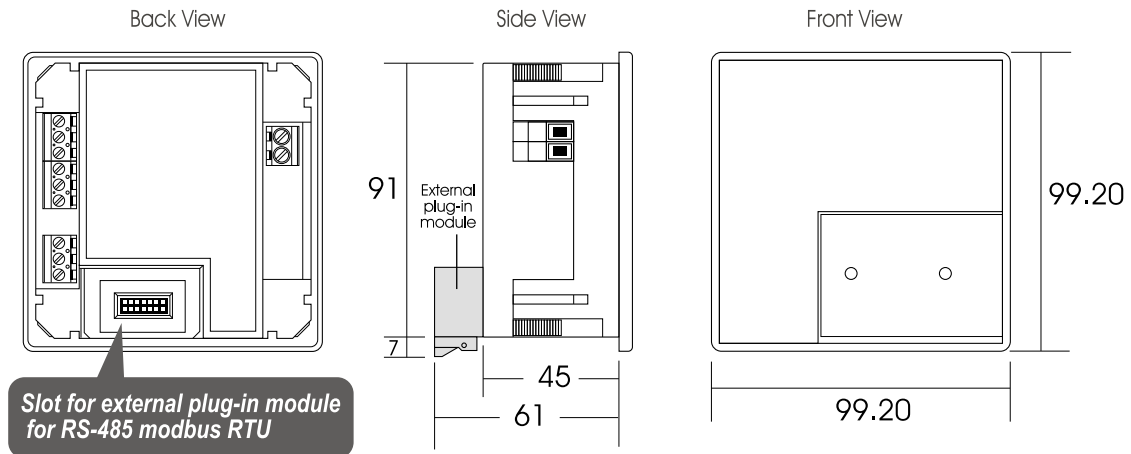
¹SPARC - sampling progressive algorithm for RMS Computation:
Computation of multiple rms values/cycle (Superior response in short circuit situation)

²DCOI - dc offset independent algorithm:
Cancels out dc signal caused by EMI and aging circuitry (Better Immunity against EMI)

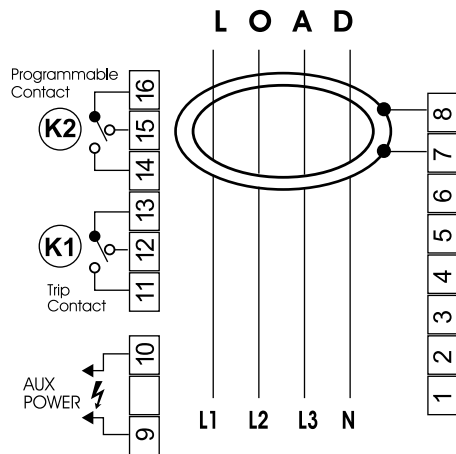
³Fundamental Signal Detection:
To discriminate between signal and noise and eliminate nuisance tripping

⁴Output on K2 dependent on the programmed options

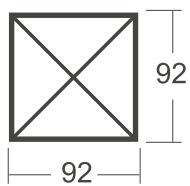
casing dimension



wiring diagram



panel cut-out



Panel Cut-out : 92 x 92

ordering information

Model	Description
DP-10-220a	65 ~ 275 Vac (45~65Hz), 90 ~ 300 Vdc
DP-10-024d	18 ~ 72 Vdc

Note: All measurement in mm.