IDMT

Combined Over Current & Earth Fault Relay

DP-34

DELAB

features

- True RMS Measurement with SPARC[1] and DCOI[2] Algorithm
- Auto / Manual Scroll for Real Time Display of Phase Current and Earth Fault in %
- 6 Selectable IDMT Graphs + 1 DTL
- Fault / Io-set & hi-set Trip LED Indication
- Fault Start Event Recording & LED Indication + Output[3]
- Pre-Alarm LED Indication + Output[3]
- Trip Event Memory (non-volatile 7 previous records for 3 phases + earth)
- Fault Start Event Memory (non-volatile 4 previous records with phase info)
- Programmable Relay Output Contacts for K2,K3*
- Last Trip Elapsed Time (up to 99days)
- Software Lock to Prevent Unauthorized Setting
- Complies with IEC-60255-26 Standards
- ANSI Code: 50P, 50G, 51P, 51G
- External Plug-in Module for :-
  A-01s (RS-485 MODBUS RTU) isolated type
  A-02s (RS-485 MODBUS RTU+k3)*isolated type

technical data

Current Input (In)	:	../5A or ../1A
Frequency	:	Software selectable 50 or 60 Hz
Burden	:	<0.3 VA @ In
Output Relay Rating	:	SPDT 5A, 250V AC/DC
Display	:	7-Segment LED (3 + 1digit)
Indication (LEDs)	:	x10, pre-alarm, fault, fault start event, Io / hi trip
Operating Temp.	:	0°C ~ +55°C
Humidity	:	56 days at 93%RH, 40°C non-condensing
IP Rating	:	IP54 (front panel)
Weight	:	275 g

parameter setting

Phase OverCurrent

$I_p>$: Io-set	2% to 200% (step of 1%)
TM $I_p>$: Io-set time Multiplier	0.05 ~ 1.00 (step of 0.01, 5 IDMT + 1 DTL)
$t_p>$: Io-set trip delay time	0.03s ~ 20.0s 0.03s ~ 0.10s (step of 0.01s) 0.10s ~ 1.00s (step of 0.02s) 1.0s ~ 20.0s (step of 0.1s)
$I_p>>$: hi-set	OFF or 20% ~ 2000% 20% ~ 1000% (step of 10%) 1000% ~ 2000% (step of 100%)
$t_p>>$: hi-set trip delay time	0.03s ~ 20.0s (same range as $t_p>$)

Earth Fault

$I_e>$: Io-set	2% to 100% (step of 1%)
TM $I_e>$: Io-set time Multiplier	0.05 ~ 1.00 (step of 0.01, 5 IDMT + 1 DTL)
$t_e>$: Io-set trip delay time	0.03s ~ 20.0s 0.03s ~ 0.10s (step of 0.01s) 0.10s ~ 1.00s (step of 0.02s) 1.0s ~ 20.0s (step of 0.1s)
$I_e>>$: hi-set	OFF or 20% ~ 1000% (step of 10%)
$t_e>>$: hi-set trip delay time	0.03s ~ 0.5s

aux power

DP-34-220a	:	65 ~ 275 Vac (45~65Hz), 90 ~ 300 Vdc
DP-34-024d	:	16 ~ 36 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)
ALr (pre-fault 90% $I_p>$, 50% $I_e>$)
trP (tripping output - Lc or nLc)
Pht (Over Current Trip) Lc or nLC
EFt (Earth Fault Trip) Lc or nLc
AFS (all fault start signal - Lc or nLc)
dUF (device failure - Lc only)

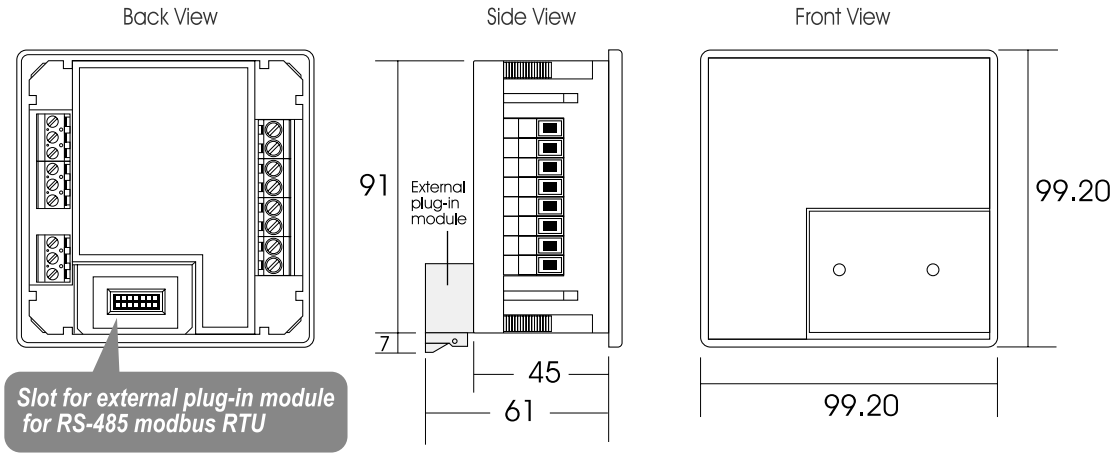
[1]SPARC - sampling progressive algorithm for RMS Computation:
Computation of multiple rms values/cycle (Superior response in short circuit situation)

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

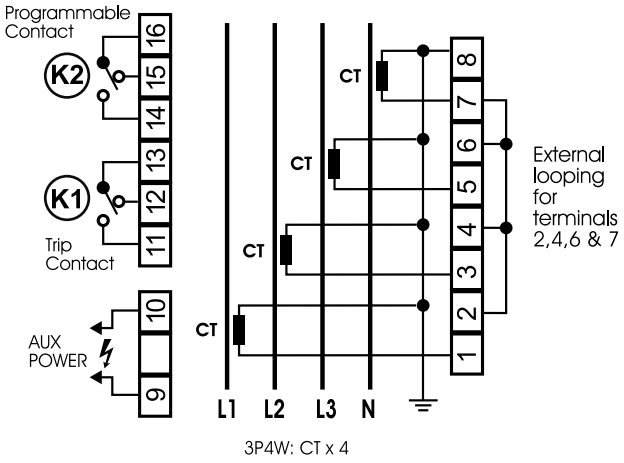
[3]Output on k2 dependent on the programmed options

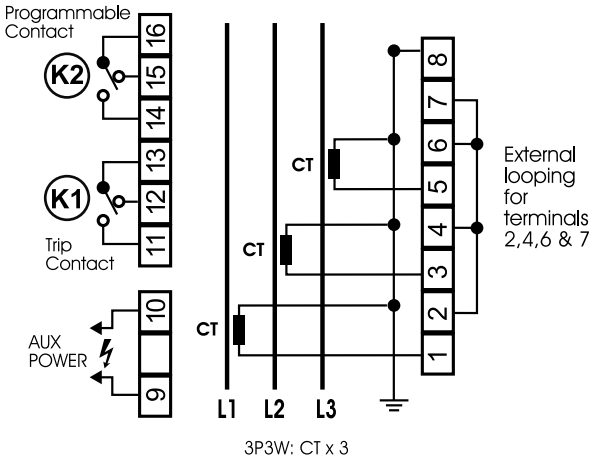
Note: Specification subject to change without prior notification (please visit www.delab.com.my for latest specification)

casing dimension

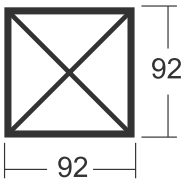


wiring diagram





panel cut-out



Panel Cut-out : 92 x 92

ordering information

► *Refer to page 26 for IDMT graphs*

Model	Description
DP-34-220a-5A	(CT.../5A) 65 ~ 275 Vac (45~65 Hz), 90~300 Vdc
DP-34-220a-1A	(CT.../1A) 65 ~ 275 Vac (45~65 Hz), 90~300 Vdc
DP-34-024d-5A	(CT.../5A) 16~36 Vdc
DP-34-024d-1A	(CT.../1A) 16~36 Vdc

Note: All measurement in mm.