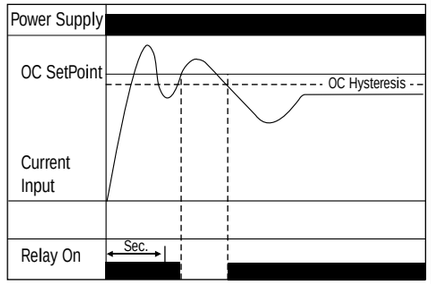
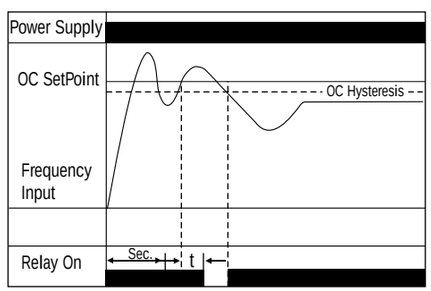
TIMING DIAGRAM

FIG 1 A



Power on Delay 3.5 ± 1.5 Sec. (Fixed)
Trip Delay Set to minimum (i.e. instantaneous)

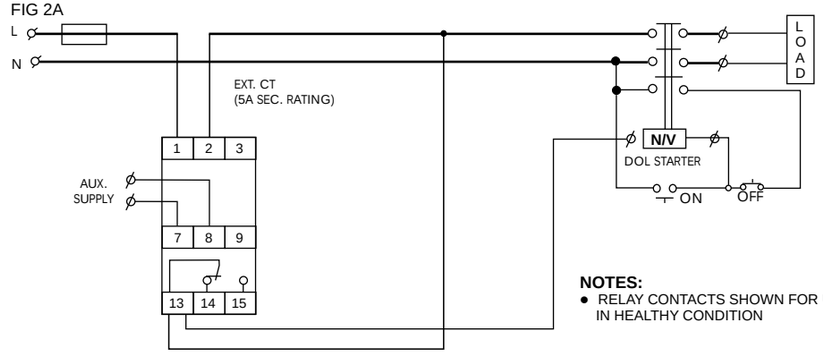
FIG 1 B



Trip Delay Set to time 't'

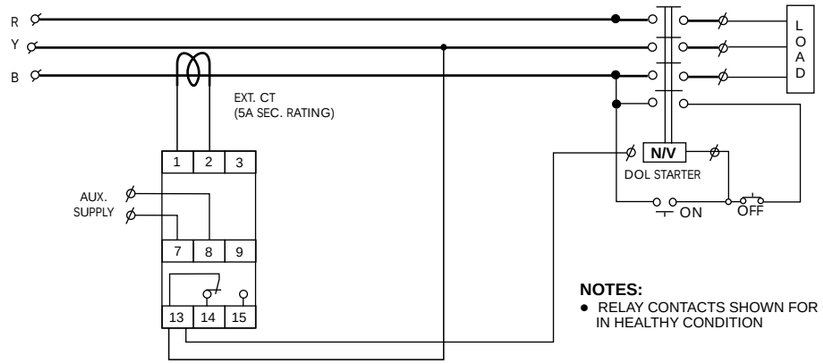
ELECTRICAL CONNECTIONS IN POWER AND CONTROL WIRING

FIG 2A



NOTES:
- RELAY CONTACTS SHOWN FOR UNIT IN HEALTHY CONDITION

- MONITORING OF 5A CURRENT INPUT SHOWN ABOVE. FOR MONITORING OF 1A OF CURREDNT INPUT, TERMINALS 1 & 3 TO BE USED

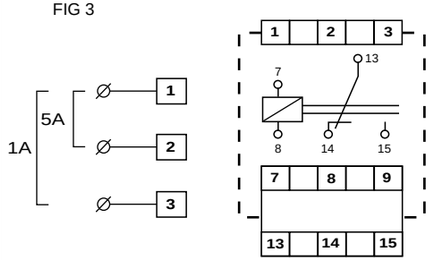


NOTES:
- RELAY CONTACTS SHOWN FOR UNIT IN HEALTHY CONDITION

- MONITORING OF ABOVE 5A CURRENT INPUT SHOWN ABOVE BY USING EXT. CT. OF 5A SECONDARY RATING. IF EXT. CT. OF 1A SECONDARY IS USED, TERMINALS 1 & 3 TO BE USED

CONNECTIONS DIAGRAM

FIG 3



INDICATIONS:

ON : RELAY ON
OC : OVER CURRENT TRIP

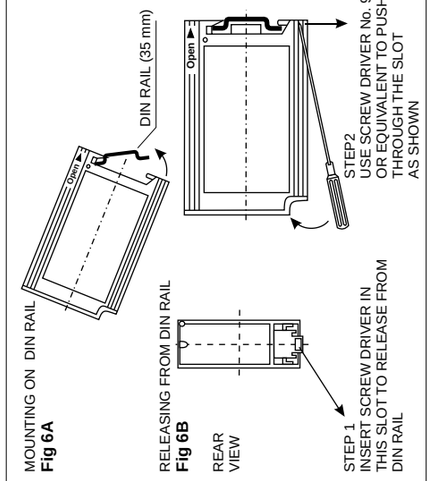
TERMINAL DETAILS

7-8 : SYSTEM SUPPLY
1-2 : CURRENT INPUT (5A)
1-3 : CURRENT INPUT (1A)
13-14-15 : OUT PUT RELAY CONTACT (C1-NO1-NC1)

NOTES:
- RELAY CONTACTS SHOWN FOR UNIT IN HEALTHY CONDITION

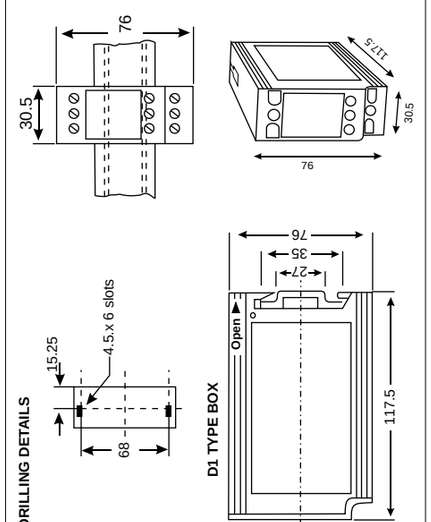
MOUNTING ON AND RELEASING FROM DIN RAIL

FIG 4A



MOUNTING DIMENSIONS

FIG 5



INSTALLATION INSTRUCTION MANUAL FOR OVER CURRENT RELAY (SINGLE PHASE)

OCS D1

WARRANTY

AGAINST
ALL MANUFACTURING DEFECTS
FOR 18 MONTHS
FROM DATE OF SUPPLY
OR 12 MONTHS FROM
INSTALLATION
WHICHEVER IS EARLIER

Manufactured by:

minilec®

S. No. 1073/1-2-3, Pirangoot,
Tal. Mulshi, Dist. Pune - 412 111 (India)

VERSION 01
(15 / 04 / 2001)

INSTALLATION INSTRUCTIONS FOR OCS D1

INTRODUCTION

It's the Company's pleasure to enlist you as one of our esteemed customers. Thank you for selecting & purchasing MINILEC make OVER CURRENT RELAY (Single Phase) OCS D1.

The following installation instructions would guide you in installing your single over current relay OCS D1 & making the best use of it.

OCS D1 operates on current sensing principle and is used in single phase system supply where over current protection or monitoring is required.

MOUNTING

Your OCS D1 can be RAIL mounted or PANEL mounted. (See Fig. 4A for mounting on and Fig. 4B for releasing from DIN RAIL Also see Fig. 5 for PANEL mounting & Drilling Details Dimensions).

CAUTION

Ensure that your OCS D1 is -

- Not installed near any heat sources like burner, sunlight, electric arc etc.
- Not subjected to abnormal vibrations.
- Not subjected to direct rains, stormy wind and dust.
- Installed as near to the starter as possible.

ELECTRICAL CONNECTIONS OF OCS D1

See Fig. 3 for electrical connection details of OCS D1.

See Fig. 2A & 2B for power and control wiring.

Aux. supply must be as marked on front cover plate. The output relay contacts 13 & 14 are to be connected in series with the no - volt coil of the contractor.

FUNCTIONING

The unit is provided with settable OC Trip settings, TRIP Time delay.

Rated Current Input of 5A or 1A can be selected via terminals (1 & 2) or (1 & 3) respectively. So external CT's should have a secondary current rating of 5A or 1A. Select external Ct's to be installed in the system after considering fault current levels expected in the system circuit. When the power is applied to the unit, the relay energises immediately ignoring abnormal load conditions experienced during start up. (For Fixed Power ON Delay)

The unit operates in Auto mode only.

Auto Mode Operation :- The unit is provided with factory set hysteresis (Reset Gap) of 5% ± 1% w. r. t. set current.

When the fault condition occurs, the relay trips. When the current input returns within the set limit of OC, the unit reset automatically and regains its healthy condition. (Refer Fig. 1B)

NOTE : 01

A] POWER DELAY IS APPLICABLE WHEN CURRENT IS FLOWING THROUGH LOAD.

TECHNICAL SPECIFICATIONS OF OCS D1

1. **Auxiliary Suply :**
   110/220/230/240/380/415 VAC, ± 20%
2. **Rated Current Input :** 5A / 1A
   (Selection via. terminals)
   Terminal 1 & 2 : Current Input 5A
   Terminal 1 & 3 : Current Input 1A
3. **Frequency :** 50/60 H, ± 3%
4. **Power Consumption :** 30VA
5. **Output Relay Contact :** 1 CO
6. **Output Contact Rating :**
   5 A, 240 VAC (Resistive)
7. **Life Expectancy :**
   0.5×10^6 operations at 100% rating
8. **OC Trip Setting :**
   50% to 140% of rated Current Input (variable)
9. **Set Accuracy :**
   ± 5% w. r. t. Current Input of 100%
10. **Trip Time Delay :**
    1 Sec. to 10 Sec. (Adjustable)
11. **Power on Delay :**
    3.5 Sec.± 1.5 Sec. (Fixed) REF. NOTE 01
12. **REST :** Auto
13. **RESET GAP :**
    5% ± 1% w.r.t. set current (fixed)
14. **Indications :**
    ON (Green) - Relay ON
    OC (Red) - Over Current TRIP
15. **Current Sensor :** Inbuilt (1 Amp & 5Amp)
    Above 5A, EXT CT of 5Amp or 1 Amp secondary to be used.
16. **Operating Conditions :**
    Temperature :- -5^0 C to 60^0 C
    Humidity :- Upto 95% R. H.
17. **Enclosure :** ABS
18. **Dimensions (mm) :**
    Overall : 76 x 30.5 x 117.5
    Mounting : 68 (Centre to Centre)
19. **Weight (Approx.) :** 350 gms.

TESTING PROCEDURE