

INSTALLATION INSTRUCTION MANUAL OVER CURRENT RELAY (SINGLE PHASE)



OCS D1



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

MOUNTING

OCS D1 can be RAIL mounted or PANEL mounted.

Auto mode operation :-

OCS D1 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.

FUNCTIONING

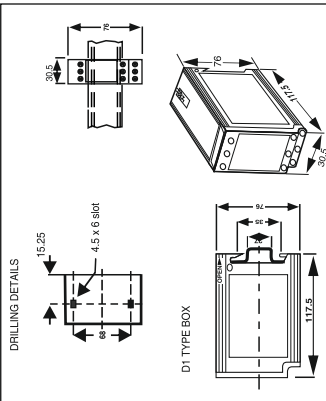
OCS D1 unit is provided with settable OC Trip settings, TRIP Time delay. Rated Current Input of 5 A / (500 mA) or 1 A / (250 mA) can be selected via terminals (1&2) or (1 & 3) respectively. So external CT's should have a secondary current rating of 5A or 1A (500 mA or 250 mA rated current is also available as option to 5A or 1 A).

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 operated in Auto mode only.

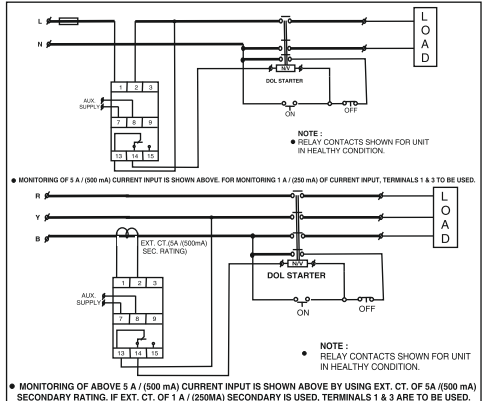
TECHNICAL SPECIFICATIONS OF OCS D1

1	Auxilliary Supply :	110/220/230/240/380/415 VAC, ± 20% 12/24 VDC, ± 10% (Selection via. Terminals)
2	Rated Current Input :	Terminal 1 & 2:Current Input 5 A/ (500 mA) Terminal 1 & 3:Current Input 1A/ (250 mA)
3	Frequency :	50/60 Hz, ± 3%
4	Power Consumption :	30VA.
5	Output Relay Contacts :	1 CO
6	Output Contact Rating :	5 A, 240 VAC (Resistive)
7	Life Expectancy :	0.5 x 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	Reset :	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 & 5 Amp / (500 mA & 250 mA). Use external C.T. For more than rated current.
16	Operating Conditions :	Temperature:- -5° C to 60° 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.

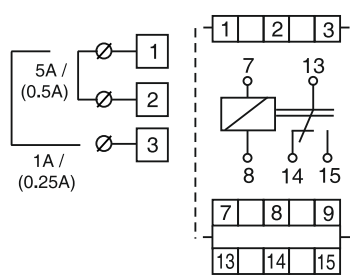
MOUNTING DIMENSIONS



ELECTRICAL CONNECTIONS IN POWER AND CONTROL WIRING



CONNECTION DIAGRAM



INDICATIONS :

- ON : RELAY ON
- OC : OVER CURRENT TRIP

TERMINAL DETAILS :

- 7 - 8 : AUX. SUPPLY
FOR DC SUPPLY CONNECT + VE TO [7]
- VE TO [8]
- 1 - 2 : CURRENT INPUT 5 A / (500 MA)
- 1 - 3 : CURRENT INPUT 1 A / (250 MA)
- 13-14-15 : OUTPUT RELAY CONTACT (C1-NO1-NC1)

NOTE :
● RELAY CONTACTS SHOWN FOR UNIT IN HEALTHY CONDITION.

NOTE : 01 A] POWER ON DELAY IS APPLICABLE WHEN CURRENT IS FLOWING THROUGH LOAD.

CAUTION

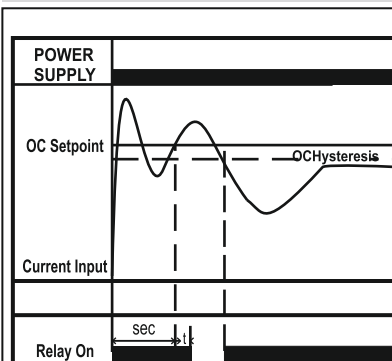
Ensure that OCS D1 is -

- *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.

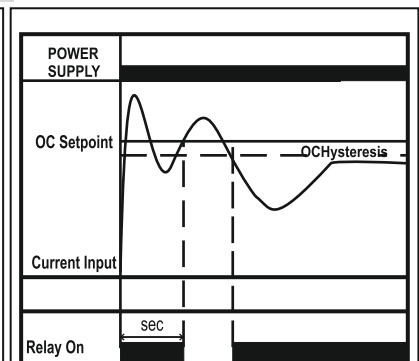
COMPLIANCE TO STANDARDS

TEST	IEC STD.
1. EFT Test of Auxiliary Supply	61000-4-4
2. Surge Test of Auxiliary Supply	61000-4-5
3. Voltage Interruption, Variation & Dip Test	61000-4-11
4. ESD Test (Contact Discharge)	61000-4-2
5. ESD Teast (Air Discharge)	61000-4-2
6. H.V. Test (Dielectric Test)	60255-5
7. Insulation Resistance Test	60255-5
8. Dry Heat Test	60068-2-2
9. Damp Heat test (Steady State)	60068-2-30
10. Damp Heat test (cyclic test)	60068-2-78

OPERATIONAL DIAGRAM



Trip Delay set to time 't'



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

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