INSTALLATION INSTRUCTION
CURRENT MONITORING RELAY

minilec®

S2 CMR5

S2 CMR5 offers protections against -

* Under current.
* Over current.

S2 CMR5 relay is anauxiliary relay and it should be used along with the starter only. The effective working of the unit will depend on efficient working of the starter. Before installing unit check whether the starter is operating perfectly by starting with the “ON” push button and switching off by “OFF” push button. If the operation of START and STOP are imperfect the starter needs to be serviced. Do not install your unit with faulty starter.

CAUTION

1 . Ensure that S2 CMR5 relay is -

* Not installed near any heat sources like Burner, Sunlight, Electric arc etc.
* Not subjected to abnormal vibrations.
* Installed as near to starter as possible.
* Not subjected to Direct heat, Sunlight, Rain, Stormy wind and Dust.

2. Working of the product is affected by frequency variations and Harmonic distortion in applications. like Genset Supply or UPS Supply. Care should be taken to ensure that net resultant unbalance Supply is not beyond the unbalance trip limits of unit.

3. Programm the relay to suit your application. Refer table 1 for programming the relay.
4. If the product is not installed as per guideline given by Minilec. Company will not be responsible for any wrong connection, damage, Injury, accident, Etc.

ELECTRICAL CONNECTION

(See Fig. 1 & 2) for installation of the unit in the power and control wiring.

PROGRAMMING / SETTING

With the help of push button provided on front, you can Program the relay for suitable operation. Please see Table 1.

MOUNTING -

All models are suitable for DIN RAIL mounting.

Table 1 - PROGRAMMING MODE SETTING

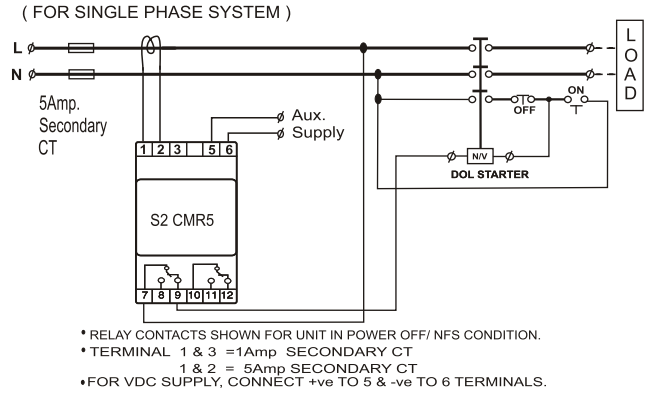
PRESS TEST/ RESET PUSH BUTTON FOR	S2 CMR LED STATUS ON LED	UC LED	OC* LED	Mode
	●	●	○	Run Mode
≥ 8 SEC	☆	☆	☆	Program Mode
≤ 4 SEC	●	●	●	Test Facility.
WAIT 3 SEC	○	○	○	Exit Test Mode.
≥ 4 SEC	☆	○	○	Auto / manual Reset selection
≤ 4 SEC	● / ○	○	○	● Auto Reset / ○ Manual Reset
≥ 4 SEC	○	☆	○	Fail Safe/ Non Fail Safe selection
≤ 4 SEC	○	● / ○	○	● Fail Safe / ○ Non Fail Safe
≥ 4 SEC	○	○	☆	Common or Separate relay selection
≤ 4 SEC	○	○	● / ○	● Relay-1,Relay-2 For UC & OC ○ Relay-1For UC, Relay-2 For OC
≥ 4 SEC	○	○	☆	Zero Current Trip / Healthy selection
≤ 4 SEC	○	● / ○	● / ○	● Zero Current Trip ○ Zero Current Healthy
IF P. B. IS NOT PRESSED FOR>10 SEC	☆	☆	☆	AUTO EXIT program mode after flashing for 3 sec.

● LED ON ○ LED OFF ☆ LED FLASHING

NOTE:- 1. BY PRESSING P. B. CONTINUOUSLY ENTER IN DESIRED MODE, SKIPPING IN BETWEEN MODES.
2. BY DEFAULT UNIT IN-AUTO,NFS,2CO,ZCT MODE.

Sr. No.	PARAMETERS	S2 CMR5
1	System supply voltage	100 / 110 / 120 VAC± 20 % 220 / 230 / 240 VAC± 20 % 380 / 415 / 440 VAC± 20 %
2	Aux. Supply	100 - 120, 220 - 240, 415 VAC± 20% 24VDC ± 20%
3	Frequency	50 / 60 Hz.
4	Output relay contacts	2CO
5	Output contact rating	5 Amp, 240VAC [resistive]
6	Rated input current	5Amp/ 1Amp (selection on terminal) Terminal 1 & 2 current input 5A (# 0.5A) Terminal 1 & 3 current input 1A (# 0.25A) (# - 0.5/0.25A MODEL OPTIONAL)
7	Under current trip setting	* 10 % TO 100% of rated current input (variable) ± 5 % w.r.t full scale.
8	Current Trip setting (O/L, OC, EF, EL)	50 % TO 140% of rated current input variable ± 5 % w.r.t full scale
9	Current unbalance trip setting	N.A
10	Trip time delay	1 -10 sec ± 1 sec (Adj)
11	Power on delay	1 -10 sec ± 1 sec (Adj).
12	Resetting	Auto / Manual
13	Reset gap	10% ± 1% w.r.t. Set current (Fixed)
14	Current sensor	External CT having 5Amp or 1Amp secondary.
15	Indications	Power on (Green) - ON Under current (Red) - UC Over current (Red) - OC [For UC & OC fault respective Red LED Steady ON]
16	Enclosure	S2 series - ABS / PC ABS
17	Dimensions (mm)	Overall (L X W X D) = 90 x 35 x 60 Mounting = Rail Mounting
18	Weight (gms.)	140
19	Operating conditions	Temperature = - 5° c to + 60° c Humidity = upto 95 % rh.
20	Programming mode for [BY FRONT PUSH BUTTON]	Test facility, Auto / manual Reset, NFS / FS facility, common or separate relay selection, ZCT or ZCH facility

Fig.1 S2 CMR5



* RELAY CONTACTS SHOWN FOR UNIT IN POWER OFF/ NFS CONDITION.
* TERMINAL 1 & 3 =1Amp SECONDARY CT
1 & 2 = 5Amp SECONDARY CT
* FOR VDC SUPPLY, CONNECT +ve TO 5 & -ve TO 6 TERMINALS.

Fig.2 S2 CMR5

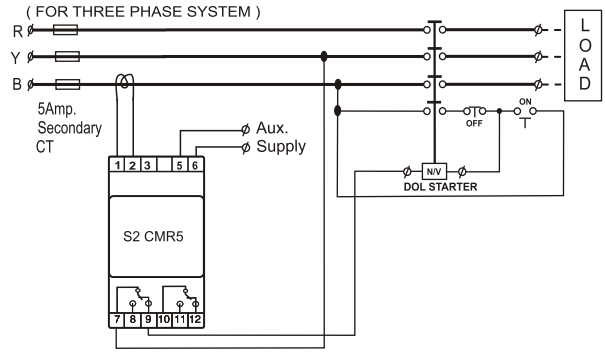


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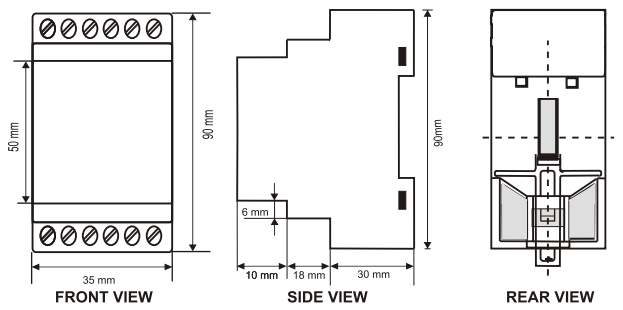
Fig - 3 ENCLOSURE DIMENSIONS



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.	Surge Test of System Supply	61000-4-5
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