INSTALLATION INSTRUCTIONS FOR S2 ELR2

INTRODUCTION

Thank you for selecting and purchasing **MINILEC** make Earth Leakage Relay.

The following installation instruction would guide you in installing your S2 ELR2 making the best use of it.

This unit offers protection against-

* Earth Leakage Protection.

This is an auxiliary relay and it should be used along with starter only. The effective working of the unit will depend on efficient working of the starter. Before installing your 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 the above 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 the frequency variation and harmonic distortion in applications like Genset Supply or UPS Supply. Care should be taken to ensure that the net resultant unbalance Supply is not beyond the unbalance trip limits of your unit.

3. Ensure that S2 ELR2 unit is installed along with calibrated Minilec make ELR CBCT only for effective Earth Leakage Protection. Without Minilec make ELR CBCT, functioning of the product will be affected.

4.The serial no. of S2 ELR2 and ELR CBCT should match for better performance.

5. If the product is not installed as per guideline given by Minilec, Our company will not be responsible for any wrong connection, damage, Injury, accident etc.

ELECTRICAL CONNECTION

See Fig. 1 for installation of the unit in the power and control wiring.

MOUNTING

This model is suitable for Din Rail mounting.

SR. NO.	PARAMETERS	S2 ELR2
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% 24 VDC ± 20%
3.	FREQUENCY	50 Hz / 60 Hz.
4.	OUTPUT RELAY CONTACTS	2CO.
5.	OUTPUT CONTACT RATING	5 Amp, 240VAC [RESISTIVE]
6.	RATED INPUT CURRENT	30 TO 300 mA PRIMARY CURRENT INPUT THRO' MINILEC - ELR CBCT
7.	EL CURRENT TRIP SETTING	30, 60, 90, 120, 150, 180, 210, 240, 270, 300mA
8.	TRIP TIME DELAY	0.1, 0.2, 0.3, 0.4, 0.5, 0.6, 0.7, 0.8, 0.9, 1S
9.	POWER ON DELAY	0.5 S ± 0.1 S
10.	RESETTING	MANUAL RESET
11.	RESET GAP	N.A.
12.	CURRENT SENSOR	MINILEC MAKE - ELR CBCT
13.	TEST MODE	TEST FACILITY BY TEST PUSH BUTTON
14.	INDICATIONS	POWER ON (GREEN) - ON (STEADY) EARTH LEAKAGE (RED) - EL (STEADY)
15.	ENCLOSURE DIMENSIONS (mm) • OVERALL (L X W X D)	S2 SERIES - ABS / PC - ABS 90 x 35 x 60
16.	MOUNTING	DIN RAIL MOUNTING
17.	WEIGHT (APPROX.)	140 gms.
18.	OPERATING CONDITIONS	TEMPERATURE = -5 °C TO +60 °C HUMIDITY = UPTO 95% Rh.

WARRANTY

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

MANUFACTURED BY:

minilec®

www.minilecgroup.com

S. NO. 1073/ 1-2-3, AT POST : PIRANGUT, TAL: MULSHI, DIST: PUNE (INDIA) PIN : 412 111

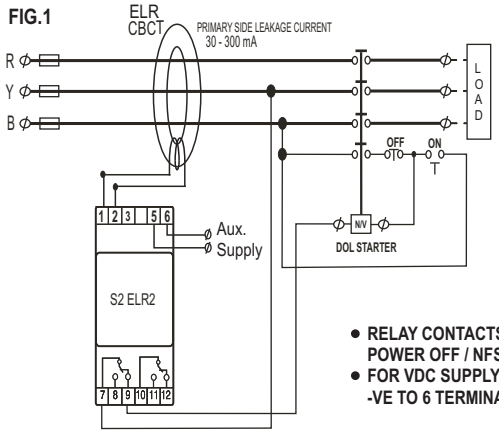
VERSION 01 (21/ 12/ 19)

INSTALLATION INSTRUCTION MANUAL FOR EARTH LEAKAGE RELAY

S2 ELR2

ELECTRICAL CONNECTION IN POWER & CONTROL WIRING FOR S2 ELR2

FIG.1



- **RELAY CONTACTS SHOWN FOR UNIT IN POWER OFF / NFS CONDITION.**
- **FOR VDC SUPPLY, CONNECT +VE TO 5 AND -VE TO 6 TERMINAL.**

SETTING FOR EARTH LEAKAGE RELAY S2 ELR2

Typical Earth Fault Relay setting for electrical low voltage system of 415 VAC, 3 phase, 50Hz maximum demand of 150KW at lagging power factor of 0.85 are shown below.

Power = $\sqrt{3} \times V \times I \times \cos\phi$

Load Current = $\frac{150 \times 1000}{1.732 \times 415 \times 0.85}$

Load Current = 245.50 Amps.

Current transformer selected = 300 / 5A, 15VA, Class 5P10.

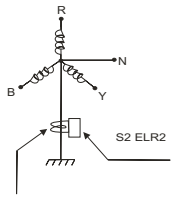
Minilec make S2 ELR2 is provided with Earth Leakage current setting between 10% to 100%.

Hence EL at 10% setting = 10% x 300mA
= 30 mA.

Similarly EL at 30% setting = 30% x 300mA
= 90 mA.

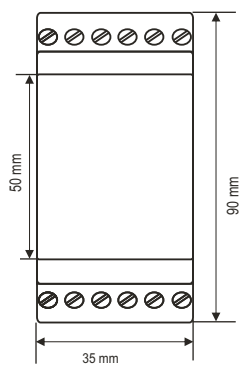
These are typical EF and EL current calculations and setting given as an Example.
Individual user can make the EF/EL settings as per their requirements.

For Generator and transformer application, with 3P- 4 Wire system, connection of CT can be made as follows

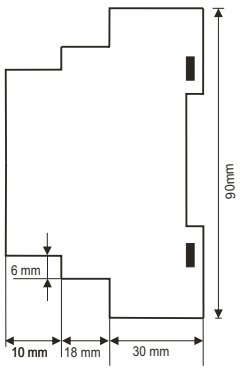


External CT - Minilec make ELR CBCT for S2 ELR2.

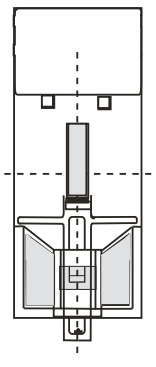
ENCLOSURE DIMENSIONS



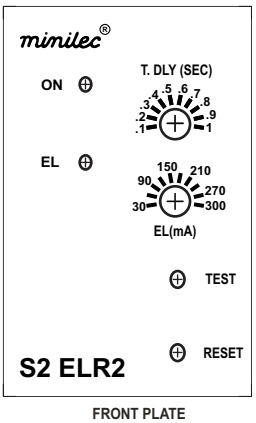
FRONT VIEW



SIDE VIEW



REAR VIEW



FRONT PLATE