OP442-V01

selec 900CPR-1-BL-U

Operating Instructions

FEATURES

- Under current, Over current protection
- True RMS value measurement
- User selectable Power ON delay, Trip time delay and Recovery time delay
- Adjustable hysteresis
- Two alarm relays with NC or NO operation selectable

SPECIFICATIONS

DISPLAY
3 Digits, LCD with backlight

ELECTRICAL CONNECTION
1Ø – 2 wire

AUXILIARY SUPPLY
85 – 270V AC/DC
50 / 60Hz

POWER CONSUMPTION
4VA max

CT PRIMARY SETTING
1A / 5A–999A

CT SECONDARY SETTING
1A or 5A (Selectable)

TRIP SETTINGS
Under Current : 0 – 999A
(0-100% of CT Primary Setting)
Over Current : 0.5A – 1.19kA
(10-120% of CT Primary Setting)

TIME SETTINGS
Response Time : < 200ms
Trip time delay : 0 – 99.9sec.
Power ON Delay : 0.5 – 99.9sec.
Recovery Time : 0 – 99.9sec

MAXIMUM CURRENT INPUT
120% of CT Primary setting

HYSTERESIS
0.1 - 99.9A

RESOLUTION
0.01, 0.1, 1A, 0.01kA (Depends on CT setting)

ACCURACY
Current : ±1% of Setting, ±2 digits
Time (Trip Time, Recovery Time,
Power ON Delay) : ±5% of setting ± 200ms

OUTPUT SPECIFICATIONS
2 Relays : Relay1 : 1C/O (SPDT)
Relay2 : 1C/O (SPDT)

RELAY RATING
NO (5A, 250V AC)
NC (3A, 250V AC)

LED INDICATION
LED1(Red) : Relay1(Continuously ON after trip)
LED2(Red) : Relay2(Continuously ON after trip)

ENVIRONMENTAL SPECIFICATIONS
- Indoor use
- Altitude of up to 2000 meters
- Pollution degree II

Temperature : Operating : 0°C to 50°C
Storage : -20°C to 70°C
Humidity : Up to 95% RH, non-condensing

MECHANICAL SPECIFICATIONS
No. of Push Buttons : 3
Size : 35mm width
Mounting : 35mm Din Rail Mount
Wire Size (max) : 4 sq.mm
Screw tightening torque : 0.5 N-M

WEIGHT
150 gms.

SAFETY PRECAUTIONS

All safety related codifications, symbols and instructions that appear in this operating manual or on the equipment must be strictly followed to ensure the safety of the operating personnel as well as the instrument.

If the equipment is not used in a manner specified by the manufacturer it might impair the protection provided by the equipment.

If there is physical damage to the unit then do not use it.

Read complete instructions prior to installation and operation of the unit.

WIRING GUIDELINES

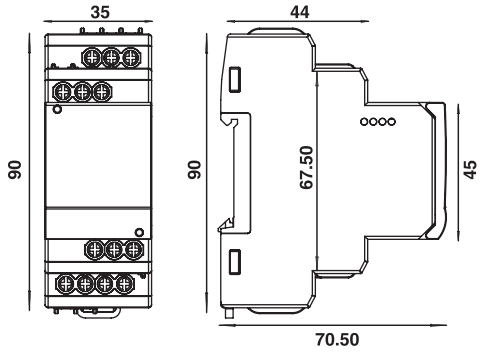
WARNING

1. To prevent the risk of electric shock power supply to the equipment must be kept OFF while doing the wiring arrangement.
2. Wiring shall be done strictly according to the terminal layout with shortest connections. Confirm that all connections are correct.

CAUTION

1. To ensure the safe operation of unit, check the wiring and connections.
2. It is recommended to test the unit periodically to satisfy the regulations.

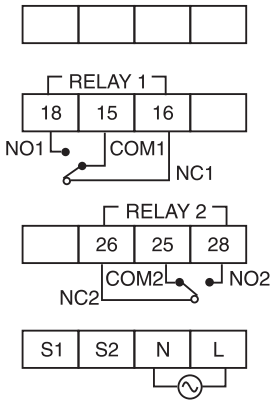
DIMENSIONS (All dimensions in mm)



LED INDICATION CHART

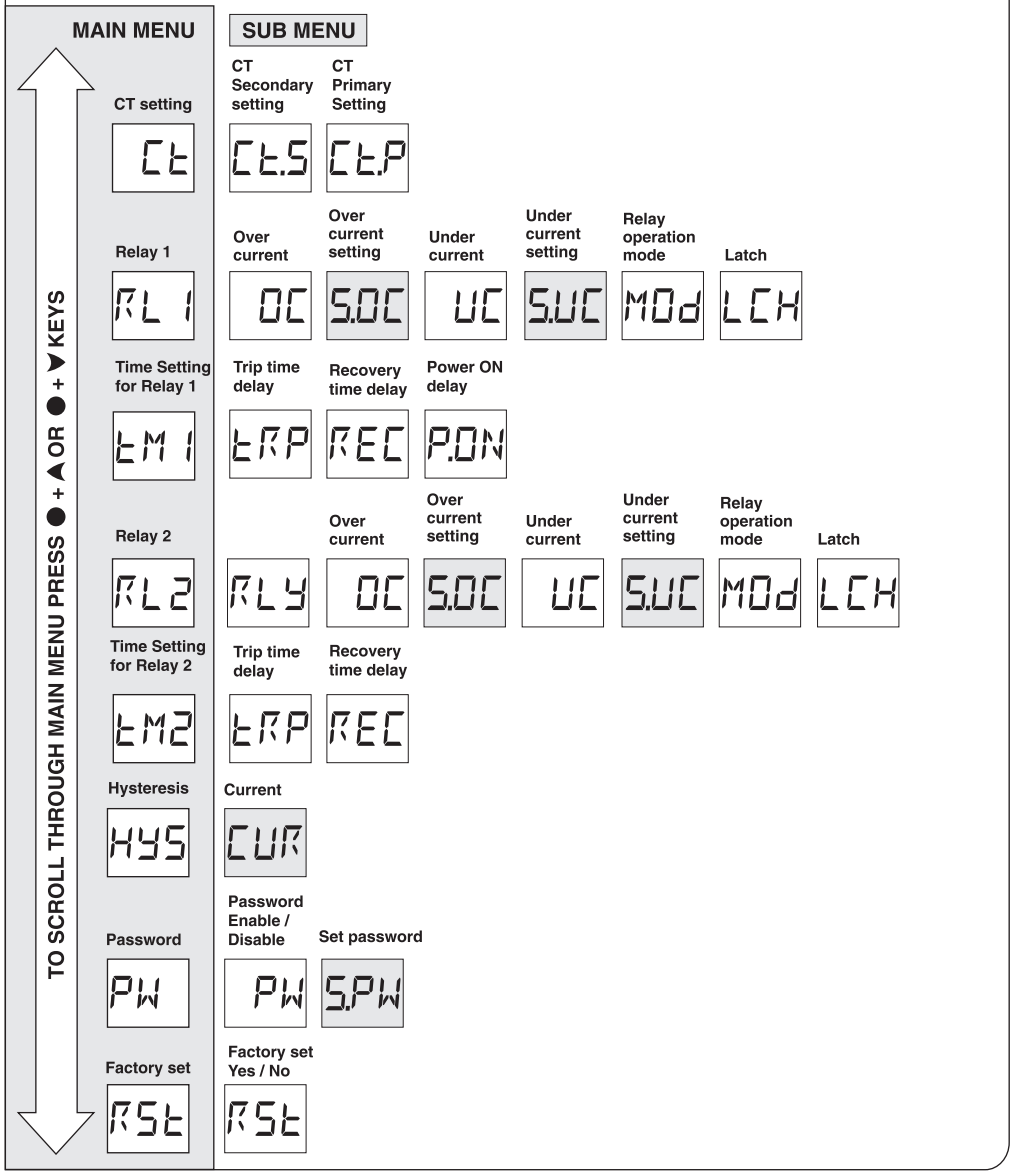
Various Conditions	'R1' LED	'R2' LED
No fault	OFF	OFF
Trip (Relay 1)	ON	OFF
Trip (Relay 2)	OFF	ON
Trip (If programmed for both relays)	ON	ON

TERMINAL CONNECTIONS



CONFIGURATION MENU

Press ▲ + ▼ for 3sec. to enter or exit configuration menu.



Note : Appearance of shaded menus dependant on selection of other parameters

CT setting (CT)

Press ▲ to enter sub menu from main menu

Press ▲ or ▼ to scroll through sub menu

Press ● + ▲ or ● + ▼ to change parameter value

DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
CT.S	CT Secondary setting	5 A	1A / 5A	
CTP	CT Primary setting	100 A	5 - 999A (If CT.S is 5A) 1 - 999A (If CT.S is 1A)	

Relay 1 (RL1)

Press ▲ to enter sub menu from main menu

Press ▲ or ▼ to scroll through sub menu

Press ● + ▲ or ● + ▼ to change parameter value

DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
OC	Over current	> A ON R1	ON / OFF	
S.OC	Over current setting	> A 110 R1	0.5A - 1.19kA 10-120% of CT Primary setting	This option will be prompted only when OC option is made ON in config. menu. OC setting cannot go below the UC setting. e.g. If UC is 50A, OC setting cannot go below 50A
UC	Under current	< A OFF R1	ON / OFF	
S.UC	Under current setting	< A 50.0 R1	0 – 999A 0 – 100% of CT Primary setting	This option will be prompted only when UC option is made ON in config. menu. UC setting cannot go above the OC setting. e.g. If OC is 100A, UC setting will be limited till 100A only.
MOd	Relay operation mode	OFF R1	ON / OFF	ON : NO (During Trip) OFF : NC (During Trip)
LCH	Latch	OFF R1	ON / OFF	If Latch is ON, user has to reset the unit manually when fault is removed

Time Setting for Relay 1 (TM1)

Press ▲ to enter sub menu from main menu

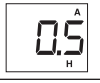
Press ▲ or ▼ to scroll through sub menu

Press ● + ▲ or ● + ▼ to change parameter value

DISPLAY (For 1sec)	DESCRIPTION	DEFAULT VALUE	RANGE	CONDITION
TRP	Trip time delay	3.0 s R1 t	0.0 - 99.9s	
REC	Recovery time delay	0.5 s R1 t off	0.0 - 99.9s	
P.ON	Power ON delay	5.0 s ton	0.5 - 99.9s	

Relay 2 (RL2)		Press ▲ to enter sub menu from main menu		
Press ▲or ▼ to scroll through sub menu		Press ● + ▲ or ● + ▼ to change parameter value		
DISPLAY (For 1sec)	**DESCRIPTION**	**DEFAULT VALUE**	**RANGE**	**CONDITION**
	Relay		RL1 / RL2	If RL1 is selected, all the settings done for RL1 & TM1 will be automatically set for RL2 and no other parameter of RL2 & TM2 will be prompted.
	Over current		ON / OFF	
	Over current setting		0.5A - 1.19kA 10-120% of CT Primary setting	This option will be prompted only when OC option is made ON in config. menu. OC setting cannot go below the UC setting. e.g. If UC is 50A, OC setting cannot go below 50A
	Under current		ON / OFF	
	Under current setting		0 – 999A 0 – 100% of CT Primary setting	This option will be prompted only when UC option is made ON in config. menu. UC setting cannot go above the OC setting. e.g. If OC is 100A, UC setting will be limited till 100A only.
	Relay operation mode		ON / OFF	ON : NO (During Trip) OFF : NC (During Trip)
	Latch		ON / OFF	If Latch is ON, user has to reset the unit manually when fault is removed

Time Setting for Relay 2 (TM2)		Press ▲ to enter sub menu from main menu		
Press ▲or ▼ to scroll through sub menu		Press ● + ▲ or ● + ▼ to change parameter value		
DISPLAY (For 1sec)	**DESCRIPTION**	**DEFAULT VALUE**	**RANGE**	**CONDITION**
	Trip time delay		0.0 - 99.9s	
	Recovery time delay		0.0 - 99.9s	

Hysteresis (HYS)		Press ▲ to enter sub menu from main menu		
Press ▲or ▼ to scroll through sub menu		Press ● + ▲ or ● + ▼ to change parameter value		
DISPLAY (For 1sec)	**DESCRIPTION**	**DEFAULT VALUE**	**RANGE**	**CONDITION**
	Hysteresis for current		0.1 - 99.9A	

Password (PW)		Press ▲ to enter sub menu from main menu		
Press ▲or ▼ to scroll through sub menu		Press ● + ▲ or ● + ▼ to change parameter value		
DISPLAY (For 1sec)	**DESCRIPTION**	**DEFAULT VALUE**	**RANGE**	**CONDITION**
	Password		ENB / DIS	Enable / Disable password protection option
	Set password		0-999	Will be prompted only when Password option is enabled

NOTE : PW option will be asked when the user enter the config. menu if PW option is enabled in the config menu and the user has to enter the password which he has set in the S.PW (set password) option.

Factory set (RST)		Press ▲ to enter sub menu from main menu		
Press ▲or ▼ to scroll through sub menu		Press ● + ▲ or ● + ▼ to change parameter value		
DISPLAY (For 1sec)	**DESCRIPTION**	**DEFAULT VALUE**	**RANGE**	**CONDITION**
	Reset (Factory set)		YES / NO	

TRIP VALUE SETTING (Online) | **Press ▲ key for 3 sec. to enter or exit Trip Value Setting menu :**

Press ▲or ▼ to scroll through main menu		Press ● + ▲ or ● + ▼ to change parameter value		
DISPLAY (For 1sec)	**DESCRIPTION**	**DEFAULT VALUE**	**RANGE**	**CONDITION**
	LOCK		YES / NO	This option will be prompted first when the user enters the trip setting menu. User has to set NO after which he can access the trip setting menu.
	Over current setting (RLY 1)		0.5A - 1.19kA 10-120% of CT Primary setting	This option will be prompted only when OC option is made ON in config. menu. OC setting cannot go below the UC setting. e.g. If UC is 50A, OC setting cannot go below 50A.
	Over current setting (RLY 2)		0.5A - 1.19kA 10-120% of CT Primary setting	This option will be prompted only when OC option is made ON in config. menu. OC setting cannot go below the UC setting. e.g. If UC is 50A, OC setting cannot go below 50A.
	Under current setting (RLY 1)		0 – 999A 0-100% of CT Primary setting	This option will be prompted only when UC option is made ON in config. menu. UC setting cannot go above the OC setting. e.g. If OC is 100A, UC setting will be limited till 100A only.
	Under current setting (RLY 2)		0 – 999A 0-100% of CT Primary setting	This option will be prompted only when UC option is made ON in config. menu. UC setting cannot go above the OC setting. e.g. If OC is 100A, UC setting will be limited till 100A only.
	Trip time delay (RLY 1)		0.0 - 99.9s	
	Trip time delay (RLY 2)		0.0 - 99.9s	
	LOCK		YES / NO, (In this option if YES is selected by the user, then whenever the user enters the Trip Value Setting, initially LOCK option will be prompted. The user will have to set NO after which he can access the trip setting menu. If the user wants to disable LOCK option, he can set NO when LOCK option is prompted after TRP option.)	

ONLINE KEYS	Individual parameters can be viewed with every press of ▼ keys.

PARAMETER	**SYMBOL**
Current	L1 A

TRIP INDICATION	Trip Indication on press of ▲ key : Trip value will be displayed till the key is pressed.
RESET	Press ● key for 3sec. to reset manually (Applicable only if Latch is ON)

Master Password : 753

(Specifications subject to change as development is a continuous process.)

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