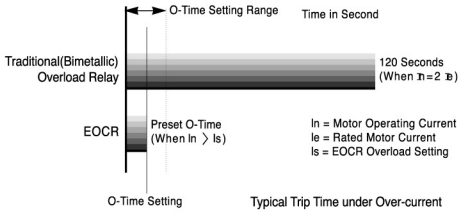
Electronic Overload Relays

Features

- Compact Design
- Multiple Protection Functions
- Wide Current Adjustment Range (10:1)
- Ammeter Function
- Trip Indication LED
- High Accuracy
- Manual Instantaneous Reset
- Electrical Remote Reset
- Test Function
- Ambient Insensitive
- Low Energy Consumption
- Fail-safe Operation (No Volt Release)

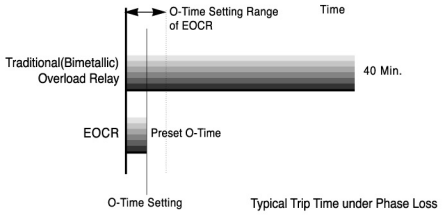
Over-current Protection

Over-current protection is provided by tripping the relay when motor operating current (In) exceeds over-current setting (Is) of EOCR for a period greater than the preset operating time (O-Time).



Phase Loss Protection

During a phase loss, the motor winding current may increase by 150% or more.
As the motor winding current increases, the winding temperature may also increase and possibly damage the winding insulation.
The quick trip time on EOCR helps to prevent over-current damage to the windings.



Ammeter Function & Trip Indication

Indication LED on the dial plate provides trip indication and ammeter functions.
The LED starts to flash at the point where motor current is equal to current setting level (Is), so user can verify motor current by reading the LOAD adjustment scale on the dial plate.
This also provides an accurate current setting.
The LED is illuminated when motor current exceeds current setting (Overload Status).
After tripping has occurred, the LED stays on until the relay is reset.
The trip indication is also an important feature of a multiple relay & contactor (starter) installation.

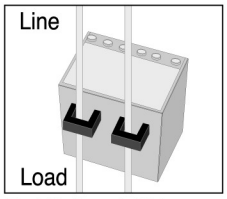
Wide Adjustment Range

EOCR has a wide current adjustment range of over 10:1. It enables three type models to cover a wide range from 0.1A up to 600A thus reducing the number and type of relays that must be inventoried for spare purposes.

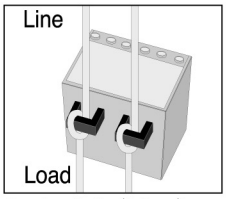
Looping Option

Some motor size may require only one-third or one-fourth of particular EOCR current range. These installations can be accommodated by looping the motor wire 2 or 3 times through the integral current transformers of the EOCR. This reduces the number and type of relays inventoried for spare purposes. Each additional loop will increase the current3measured as indicated by the following chart.

	No. of Loops	Time of Passing	Current Set. Range(A)
05Type	0	1	0.50 - 6.0A
Looping Option	1	2	0.25 - 3.0A
	2	3	0.17 - 2.0A
	3	4	0.12 - 1.5A
	4	5	0.10 - 1.2A



Straight-through-Wiring

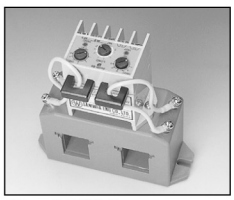


Looping Option(1-Loop)

External Current Transformer Option

Ordering option - 05 type of each model fitted to an external current transformer can achieve higher ampere ranges. (Ext. CT Option)

	Type	Current Ratio of Ext. CT	Current Setting Range
	05	-	0.5 - 6A
Ext. CT Option	100	100:5	10 - 120A
	200	200:5	20 - 240A
	300	300:5	30 - 360A
	400	400:5	40 - 480A
	500	500:5	50 - 600A
	600	600:5	60 - 720A


External CT Option

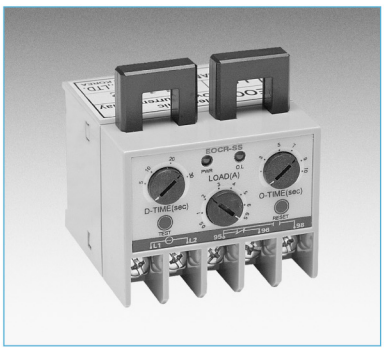
Manual Instantaneous Reset

Pushing RESET button on the dial plate or interrupting power supply provides a manual instantaneous reset.
Electrical remote reset is also provided by the panel-mounted RESET button.

Low Energy Consumption

EOCR-SS uses only 250mA of power, much less than thermal bimetallic overload relays. The result is significant cost savings over the life of relays (over 20 times cost saving).

EOCR-SS



- 2 Integral Current Transformers
- Electronic Shear-pin Function
- Independently Adjustable Starting Trip Delay (D-Time) & Trip Time (O-TIME)

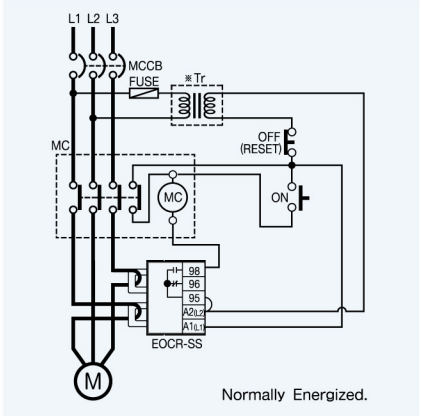
Protection

Protective Item	Operating (Trip) Time
Over-current	O-TIME
Phase Loss	O-TIME
Locked Rotor	O-TIME + D-TIME

Specification

Current Setting	Type		Range
	05		0.5 - 6A
	30		3 - 30A
	60		5 - 60A
	100~ (over 60A)		Ext. CT Option
Time	Start	D-TIME	0.2 - 30 sec
Setting	Trip	O-TIME	0.2 - 10 sec
Control Voltage	220		AC90 - 250V
(50/60Hz)	440		AC320 - 480V
Output Relay	Mode		1-SPDT(1C)
	Rating		AC250V/3A Resistive
	Status		Normally Energized
Time-Current Characteristic			Definite
Operating (Trip) Indication			2-LED
Mount			35mm Din-rail / Panel

Typical Wiring



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