

Option-1. Looping (Protect smaller current by looping option)

Some motor size may require 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 current measured as indicated by the following chart.

Option	Current Setting Range(A)	Time of Passing (#)	No. of Loops (#)
05 Type	0.5 - 6	1	0 --- Fig 1
	0.25 - 3	2	1 --- Fig 2
	0.17 - 2	3	2
Looping Option	0.12 - 1.5	4	3
	0.10 - 1.2	5	4

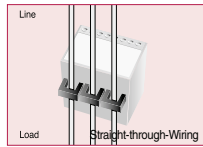


Fig 1

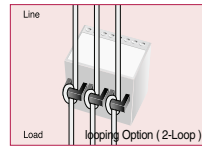
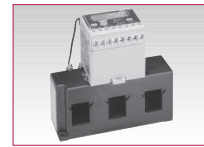


Fig 2

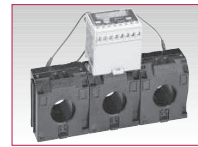
Option-2. External Current Transformer Option (Ext. CT option protect bigger current)

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

Option	Current Setting Range(A)	Current Ratio of Ext. CT
05 Type	0.5 - 6	NIL
	5.0 - 60	NIL
	10 - 120	100 : 5
60 Type	15 - 180	150 : 5
	20 - 240	200 : 5
	30 - 360	300 : 5



External 3CT Option

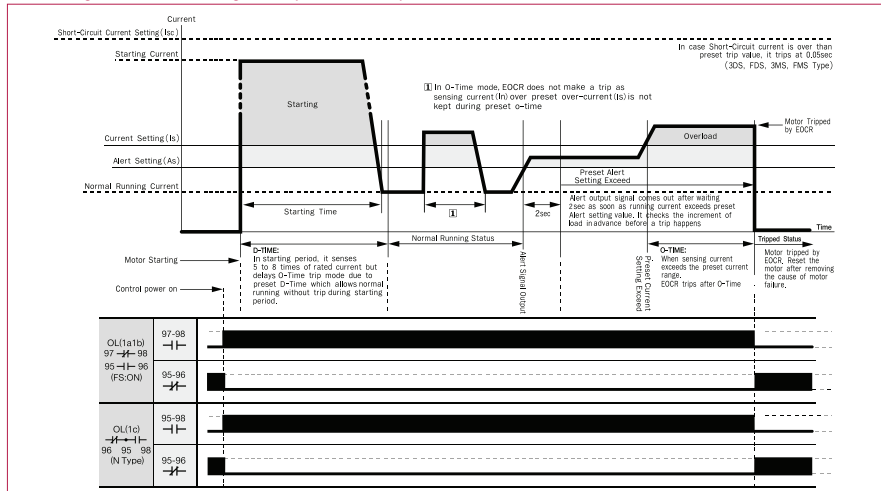


External SR-CT Option

EOCR Type Table for 3phase Motor

Current Setting Range (Adjustable) (A)	Capacity of 3 Phase Motor (kW/HP)			TYPE	Cable Size		Remark			
	AC220(V)		Current (A)		AC380/440(V)					
0.5 - 6	0.75	1	4.8	1.5	2	4.2 / 3.6	05	3.5	28	Built-in CT (Standard type)
5.0 - 60	5.5	7.5	26	22	30	49 / 46	60	5.5-14	67	
10 - 120	22	30	93	37	50	84 / 73	100:05	38	130	Assemble with External CT
20 - 240	37	50	160	75	100	163 / 141	200:05	100	240	
30 - 360	55	75	230	132	175	263 / 227	300:05	250	430	
40 - 480	95	125	360	190	250	376 / 325	400:05	325	495	
50 - 600	110	150	440	220	300	423 / 390	500:05	400	565	
60 - 720	150	200	570	300	400	602 / 520	600:05	500	625	

EOCR Setting Pattem / Motor Running Current (3DD & FD Series)



Overview

D-TIME(Delay Time):

When starting the motor, its current is increasing 5 to 8 times of rated current and its starting time is different according to the load of motors. D-Time knob(Mode) has a function to delay the trip during starting period even if starting current exceeds over preset over-current value.

O-TIME (Operating Delay Time):

When EOCR senses over-current which exceeds over preset over-current range. O-Time knob(Mode) delays trip until EOCR trips after detecting over-current during running period. In case of Definite type, Over-current protection is provided by the relay tripping when motor operating current(I_n) exceeds EOCR current setting(I_s) for a period greater than preset trip time(O-Time), while Inverse type shows that Over-current protection is provided by the relay tripping according to the Time-Current Characteristic Curve.

RESET

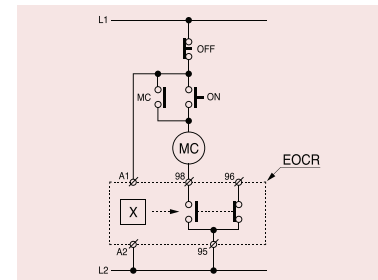
Depressing the RESET button or interrupting power supply resets the relay immediately. Depress the RESET button on the facia for manual reset. Electrical Reset can be achieved by interrupting power supply in remote area. Auto Reset can be achieved automatically according to R-Time setting. Auto reset function is selectable by using mode switch. EOCR with fixed auto reset time or adjustable auto reset time is applicable.

TEST

It has function to check and confirm the status of the motor by depressing the TEST button on the facia. To keep depressing the TEST button makes relay trip after the elapse of D-Time and/or O-Time. Once TEST is done, then reset the relay by depressing RESET button. The test function of Digital EOCR with 7 Segment Display CANNOT be performed during motor running, but possible when motor is stopped.

N Type (Fail-safe Mode / No Volt Release)

NVR(No Volt Release)/On(N Type)
Fail-safe

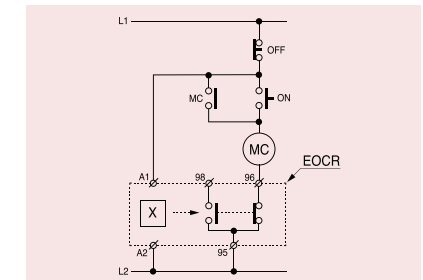


The output of relay is normally energized with control power applied. It is called NVR (No Volt Release) function and recommended to use output mode for safe protection. It is selectable by DIP switch or FS Mode

Caution) NVR function is designed to offer more accurate protection for motor. The motor can not start in case there is no power supply to EOCR or the span of life of motor is gone through. It is able to find the problem in its process in advance.

R type (Non-Fail-Safe Mode)

NVR(No Volt Release)/Off (R Type)
Non-Fail-safe



In all case, the failure of the control voltage may not interrupt the process. It is selectable by DIP switch or FS Mode

Caution) In case of Non-Fail-Safe mode, periodical checking is required in case there is abnormal power supply to EOCR or the span of life of motor is gone through.

Classification		EOCR-3DE Series			EOCR-3M Series			
Model								
Model		3DE	3EZ	3DM	3MS	3MZ	3M4Z	
Wiring	Wire-through	○	○	○	○	○	○	
	Terminal	-	-	-	-	-	-	
Mount	Flush Mounting	-	-	-	-	-	-	
	Panel Mounting	○	○	○	○	○	○	
Protection	Overcurrent	Basic Type	0.5-60A		05: 05-10A, 60: 5-70A	05: 05-10A, 20: 5-20A	05: 05-10A, 60: 5-70A	05: 05-10A, 60: 5-70A
		Use external CT	1-960A(10.5-800.5)		1-960A(10.5-800.5)			
	Undercurrent		0.5-less than preset O.C / OFF		0.5-less than preset O.C / OFF			
		Locked Rotor	Running	0.5, 1-10sec		1-10sec		
		Starting	Within 0.5sec after D-Time		Within 0.5sec after D-Time			
		Phase Loss	Within 3sec		Within 3sec			
		Phase Reversal	0.1-0.3sec		0.1sec			
		Phase Unbalance	Within 8sec		Within 8sec			
		Ground Fault	-	A:0.02-3A, B:0.2-10A	-	-	A:0.03-2.5A, B:0.2-10A	-
		Short Circuit	-	-	-	0.05sec	-	-
Alert Output		A/F/H/U		A/F/H	-	-	-	
Trip Cause Memory		Last 3 Trip Cause			Last 1 Trip Cause			
Trip Cause Display		○	○	○	○	○	○	
Display		4-Digit 7segment			5-Digit 7segment			
Running Time Memory & Setting		-	-	○	○	○	○	
Bar-Graph		-	-	○	○	○	○	
Current Signal Output		-	-	-	-	-	4-20mA	
Setting SW. Type		Button SW.			Rotary SW & Button SW.			
Ground Fault Current Sensing		-	Zero Phase Current	-	-	Zero Phase Current	-	
Contacts	Mode	O.L:2-SPST(1a1b)	O.L:1-SPST(1a)	O.L:2-SPST(1a1b)	O.L:2-SPST(1a1b)	O.L:1-SPST(1a)	O.L:2-SPST(1a1b)	
		AL:1-SPST(1a)	GR:1-SPST(1a)	AL:1-SPST(1a)	S.C:1-SPST(1a)	GR:1-SPST(1a)	-	
Rating	Rating	3A/250VAC, Resistive		3A/250VAC, Resistive			-	
		24VAC/DC, 220VAC ± 15%, 110VAC ± 15%		24VAC/DC, 85-250VAC/DC			-	

Panel Mounting / Flush Mounting makes it easier for use.

- Digital Ammeter is installed at the front cover of panel door in Flush Mounting type. It makes possible to check sensing current and finding the cause of trip with tripped current easily, to set current and O-time by simple button selection without removing unit from panel.
- Panel Mounting type with Digital Ammeter is installed inside the MCC panel and Just Operator is Possible to adjust it.

Following conditions should be considered in case of installing EOCR.

- Overcurrent & Phase Loss must be included as basic protective function in the point of view for its law and regulation.
- Earth leakage current protection must be added against moisture and humidity conditions.
- In case you need to sense the overload increasing, Alert function must be added.
- If you need to confirm the current of many motors in one place , Current signal output transducer function (4-20mA) must be added.
- Short Circuit protection must be added if you protect line damage caused by Short Circuit.
- EOCR with 3CT is recommended to not only 3 φ 3w, but also 3 φ 4w condition.

Window / Terminal makes it easier for installation.

- Wire is passing through CT without cutting, that is much easier for installation. It has also more convenient application to external CTs.
- As for Terminal type, display part is Flush Mounting type but Converter is Panel Mounting type with its application less than 60Amp.

The same diameter of Digital Ammeter to conventional Analogue Ammeter makes it easier for installation.

- Ammeter Selector SW is not necessary as 3 phase current is displayed L1, L2, L3 in order every 5 seconds.
- It is easy to install Ammeter by using cap cover and it saves install time.

Alert Output Mode

- "A" (Ampere Relay) : Energized when sensing current
- "H" (Holding) : ON-OFF output mode

- "F" (Flicker) : Flicker
- "U" (Under Current Mode) : "AL" output is transferred to UC (3DD/FD version "E")

Classification		EOCR-FDE Series		EOCR-FM Series				EOCR-P Series	
Model									
Model		FDE	FEZ	FDM	FMS	FMZ	FM420	PMZ	
Wiring	Wire-through	○	○	○	○	○	○	○	○
	Terminal	○	○	○	○	○	○	○	○
Mount	Flush Mounting	○ (Display)	○ (Display)	○ (Display)	○ (Display)	○ (Display)	○ (Display)	○ (Display)	-
	Panel Mounting	○ (Converter)	○ (Converter)	○ (Converter)	○ (Converter)	○ (Converter)	○ (Converter)	○ (Converter)	○
Protection	Overcurrent	0.5-60A		05: 05-10A, 60: 5-70A	05: 05-10A, 20: 5-20A	05: 05-10A, 60: 5-70A	05: 05-10A, 60: 5-70A	05: 05-10A, 60: 5-70A	05-60A
		1-960A(10.5-800.5)		1-960A(10.5-800.5)					
	Undercurrent	0.5-less than preset O.C / OFF		0.5-less than preset O.C / OFF					
		Locked Rotor	Running	0.5, 1-10sec		1-10sec			
		Starting	Within 0.5sec after D-Time		Within 0.5sec after D-Time				Within 0.5sec after D
		Phase Loss	Within 3sec		Within 3sec				Within 3sec
		Phase Reversal	0.1-0.3sec		0.1sec				0.1-0.3sec
		Phase Unbalance	Within 8sec		Within 8sec				Within 8sec
		Ground Fault	-	A:0.02-3A, B:0.2-10A	-	-	A:0.03-2.5A, B:0.5-10A	-	Definite: 0.03-10A, Invers
		Short Circuit	-	-	-	0.05sec	-	-	0.03-0.05sec
Alert Output		A/F/H/U		A/F/H	-	-	-	-	-
Trip Cause Memory		Last 3 Trip Cause			Last 1 Trip Cause				Last 3 Trip Cause
Trip Cause Display		○	○	○	○	○	○	○	○
Display		4-Digit 7segment			5-Digit				5-Digit
Running Time Memory & Setting		-	-	○	○	○	○	○	○
Bar-Graph		-	-	○	○	○	○	○	○
Current Signal Output		-	-	-	-	-	4-20mA	4-20mA	4-20mA
Setting SW. Type		Button SW.		Rotary SW. & Button SW.				Button SW.	
Ground Fault Current Sensing		-	Zero Phase Current	-	-	Zero Phase Current	-	Zero Phase Current	
Contacts	Mode	O.L:2-SPST(1a1b)	O.L:1-SPST(1a)	O.L:2-SPST(1a1b)	O.L:2-SPST(1a)	O.L:1-SPST(1a)	O.L:2-SPST(1a1b)	O.L:SH : 2-SPST(1a	
		AL:1-SPST(1a)	GR:1-SPST(1a)	AL:1-SPST(1a)	SC:1-SPST(1a)	GR:1-SPST(1a)	-	GR : 1-SPST(1a	
Rating	Rating	3A/250VAC, Resistive		3A/250VAC, Resistive			-	3A/250VAC, Resist	
		24VAC/DC, 220VAC ± 15%, 110VAC ± 15%		24VAC/DC, 85-250VAC/DC			-	24VAC/DC, 85-250V	

EO CR-3DE/FDE

● MC
● Re
● Ov
● Un
● Tir
● -0.5
● UI
● OFF
● Di
● / Tri
● Tri
● Me
● Th
● Fit
● Re

CU Based
al Time Processing / Higher Precision
ercurrent Protection Range: 0.5-60A, Wide Range Protection (Use with external CT from 11 to 960A, Direct application without CT up to 60A)
ndercurrent Protection Range: 0.5-59A / OFF (Use with external CT less than 960A)
me Characteristic for Overcurrent
i-10A : Definite / Inverse Selectable, Over 11A : Definite(Use with external CT in case using Inverse time)
C' output is used as common to "OC" output. When choosing "U" in AL mode, "AL" mode becomes
igital display / 3 Phase Current Display: Digital Ammeter (Every 5 seconds)
pped Cause Digital Display: Easy Troubleshooting
ip Cause Memory: Last 3 trip check function. Possible to check with tripped trip cause and current
annual / Electrical Reset
e tripping relay is normally energized with control power supply. (Selectable)
to a variety of environment as Terminal & Window type.
sistive Strengthened against variable frequency device such as inverter : 20-400Hz.



EOCR-SSD

Series



PFZ	<input type="radio"/>
<input type="radio"/>	
<input type="radio"/> (Display)	
<input type="radio"/> (Converter)	
A	
~3000:5)	
et O.C / OFF	
/Adjustable	
ter D-Time	
sec	
sec	
sec	
verse: 0.03-1A	
5sec	
-	
Cause	<input type="radio"/>
t	<input type="radio"/>
	<input type="radio"/>
A	
W.	
Current	
ST(1a1b)	
ST(1a)	
Resistive	
≥50VAC/DC	

Protection

Protective Item	Trip Time	Description
Over-current	O-Time	$I_s < I_n$
Phase Loss	3sec	$[(MAX - MIN) / MAX] \times 100 > 90$
Locked Rotor	0.5sec after elapse dt	≥ 3 times OC setting value

Specification

Over-current Setting	Current	O5	0.5 ~ 6A
		30	3 ~ 30A
		60	10 ~ 60A
	Starting delay time	D-Time	1 ~ 30sec
		Trip time	O-Time
Reset		Manual / Electrical	
Operating t-c characteristic		Over-current	
Tolerance		Current	$I < 1A : \pm 0.05A, I \geq 1A : \pm 5\%$
		Time	$t \leq 3S : \pm 0.2s, t > 3s : \pm 5\%$
Environment	Temperature	Operation	-20°C ~ -60°C
	Humidity	Store	-30°C ~ -80°C
Control Power		30-85% RH non-condensing	
		• 110 : 110VAC ± 15%, 50/60Hz	
		• 220 : 220VAC ± 15%, 50/60Hz	
		• 440 : 440VAC ± 15%, 50/60Hz	
• 24 : 240VAC/DC			
Contact Rating		2-SPST	3A / 250VAC , Resistive
Insulation		Between casing and circuit	Over 10 MΩ , DC500V
Dielectric Strength		Between casing and circuit	2000VAC 60Hz, 1min
		Between open contacts	1000VAC 60Hz, 1min
		between circuit	2000VAC 60Hz, 1min
Installation		35mm Din Rail or Panel Mounting	

- MCU(Micro Controller Unit) based / 2-CT Type
- Real Time Processing / Higher Precision
- Current Setting Renge - 05Type : 0.5 ~ 6A / 30Type : 3 ~ 30A / 60Type : 10 ~ 60A
- Digital display : trip cause / easy troubleshooting
- Reset : Manual (instantaneous) / Electrical (remote)
- Load selection by DIP switch : Single phase(1P) / Three phase(3P)
- Fail safe(N) / Non-fail safe(R)

EOCR-3DE/FDE Series

Features

- Compact Design
- 3DE/3EZ : Panel Mounting Type
- FDE/FEZ : Panel Flush Mounting Type
- MCU(Microprocessor Control Unit) Based
- 3 Integral Current Transformers
- Multiple Protection Functions
- Digital Ammeter
- Troubleshooting / Trip Cause Memory, Display
- Adjustable Operating Features by Mode switch
- Wide Current Adjustment Range
- Selectable Time-Current Characteristics (Inverse / Definite)
- Manual (Instantaneous) / Electrical (Remote) Reset
- Test Function
- Ambient Insensitive
- Selectable Fail-safe and Non-fail-safe Operation Modes

Comparison Table of Model

EOCR	3DE / FDE	3EZ / FEZ
Protection		
Over - current	●	●
Under - current	●	●
Phase Loss	●	●
Phase Unbalance	●	●
Phase Reverse	●	●
Locked Rotor	●	●
Ground Fault	-	●
Run Monitor & Load Alert Function	●	-
Selectable Alerting Pulse	●	-

Protection Feature

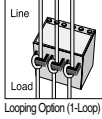
Function	mode	Description
Over-current	tc	dE (Definite T-C) This is provided by the relay tripping when motor operating current(In) exceeds current setting value in "oc" mode for a period greater than the preset trip time(O-Time in "tc" mode)(Curve-2)
	In (Inverse T-C)	This is provided by the relay tripping when motor operating current(In) exceeds current setting value in "oc" mode according to the Time-current Characteristic Curve(Curve-1)
Under-current	Uc	Definite T-C This is provided by the relay tripping when motor operating current(In) is lower than current setting value in "uc" mode for a period greater than the preset trip time(Time in "ut" mode)
Phase Loss	PL	On The relay will be operated within 3 sec. When the phase failure occurs
Phase Unbalance	Ub	5-50% This is provided by the relay tripping in phase unbalance greater than setting % difference in terms of maximum phase current : $[(MAX-MIN)/MAX] \times 100[\%]$
	On	In the event of phase reversal, the relay trips in 0.1sec
Phase Reversal	RP	Off(-) Phase reversal protection function is disabled : this allows the relay to be used for reversing application
Ground Fault	Ec	0.03-3A Ground fault protection is provided by the relay tripping according to zero sequence current sensed by ZCT
Locked Rotor	Lc	2-10 Times OC This is a protection for locked rotor in starting state. The variable setting range is 2-10 times oc setting value, but maximum setting value is limited in case "oc" setting value is greater than 10A. The maximum setting value is calculated by $[100/oc \text{ setting value}]$
Stall	Sc	1.5-5 Times OC This is a protection for locked rotor while motor is working. The variable setting range is 1.5-5 times oc setting value, but the maximum setting value is limited in case "oc" setting value is greater than 20A. The maximum setting value is calculated by $[100/oc \text{ setting value}]$

※ T-C : Time-Current Characteristic

Looping Option

Smaller ampere ranges than particular EOCR current range can be covered by looping the motor wire 2 or 3 times as under described.

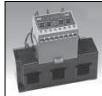
	No of Loops	Current Ratio of Ext. CT	Current Setting Range (A)
0.5 Type	0	1	0.5 - 6
	1	2	0.25 - 3
	2	3	0.17 - 2
	3	4	0.12 - 1.5
Looping Option	4	5	0.1 - 1.2



External CT Option

Higher ampere ranges can be achieved by setting in "CT" mode fitted to an external transformer, and the actual motor current display is possible in any case

Type	Value in "CT" mode	Current Setting Range (A)
wide Range	OFF(-)	0.5 - 60A
10 : 5	10	1 - 12A
15 : 5	15	1.5 - 18A
⋮	⋮	⋮
800 : 5	800	80 - 960A

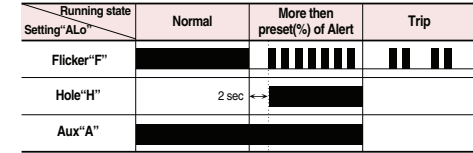


EOCR-3DE+External CT

Alert Function

When motor operating current (In) exceeds the alert setting (As), the alert relay outputs three kind of signal. The output can be used to warn customers/operators of possible overloading and avoid unnecessary motor shutdown.

The type of output signal is decided by the selection in the "ALO" mode
 "A"(Ampere relay): energized whenever CT senses a current
 "F"(Flickering): character "A" and current value flashes frequently
 "H"(Holding): ON-OFF
 "U"(Undercurrent mode): the "AL" output(07-| 08) is transferred into "Uc" output



In = Motor Operating Current / Is = EOCR Over-current Setting / As = Alert Setting

Fail-safe & Non-fail-safe

The tripping relay can be operated in a fail-safe or non-fail-safe mode

Application of the Fail-safe (Electrically Held) Connection
 Fail safe setting in "FS" mode : ON
 The tripping relay is normally energized with control power supply

Application of the Non-fail-safe Connection
 Fail safe setting in "FS" mode: OFF(-)
 In all cases, the failure of the control voltage may not interrupt the process.

	Control power on-	Relay Trip-
FS-ON (Fail safe)	95- 96	97- 98
	97- 98	95- 96
FS-- (OFF) (Non-Fail safe)	95- 96	97- 98
	97- 98	95- 96

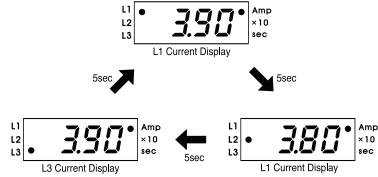
LED Display



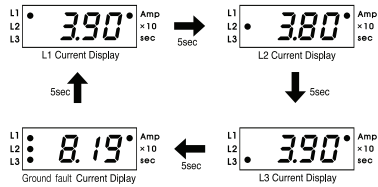
Digital Ammeter

3 phase motor currents (In) / Ground fault current are displayed in sequence on the LED display.

● 3DE/FDE



● 3EZ/FEZ



Rotation display of Phase current

Instead of automatic rotation, manual display rotation is possible as depressing once SET/Store button during an operation. If manual is selected, the information of phase current L1 is displayed firstly and next information is displayed continuously like a manner of L1→L2→L3→(GR)→L1...whenever depress SET/Store button every once

Digital Trip Cause Indication / Easy Troubleshooting

- Enter into "trip" mode by depressing once Set/store button, then last trip cause is showed
- Each phase current is displayed in order whenever depress UP/DN button in every once under trip mode
- The 2nd trip cause is showed after displaying 3phase current of last trip
- The 3rd trip can be checked by same manner

Test

This is the self-test of this product. If the relay enters into this mode, it begins to count down preset value of O-time after waiting 3sec and becomes trip state as showing "END" message that means this relay is ready to work.

- "END" message of this test is also stored in "Fault" mode as last trip.
- Not permitted to test this function during the operation to prevent unnecessary trip

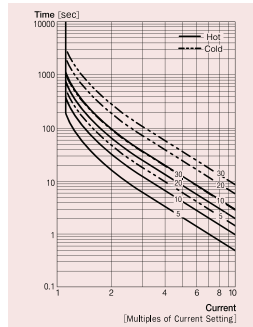
Reset

Depressing the RESET button or interrupting control power resets the relay immediately. Electrical remote reset is also available through the panel mounted reset switch.

Examples of Trip Cause Indication

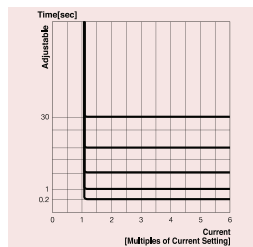
<p>Over-current Trip Relay displays a trip, caused by over-current, which has been detected from phase L1(R/T1).</p>	
<p>Under-current Trip Relay displays a trip, caused by under-current, which has been detected from phase L2(S/T2).</p>	
<p>Phase Loss Trip Relay displays a trip, caused by phase loss (Phase Failure) on Phase L2(S/T2)</p>	
<p>Phase Reversal Trip Relay displays a trip, caused by phase reversal.</p>	
<p>Phase Unbalance Trip Relay displays a trip, caused by phase unbalance, in phase L1(R/T1).</p>	
<p>Ground fault Trip : EOCR-3DZ/FDZ Only Relay displays a trip, caused by ground fault current</p>	
<p>Locked Rotor Trip Relay displays a trip, caused by locked rotor, during starting state</p>	
<p>Locked Rotor Trip Relay displays a trip, caused by locked rotor, while motor is working</p>	

Time-Current Characteristic Curve



O-T Setting (Curve)	IEC 947-4 (Trip Class)
1-5	10A
6-10	10
11-20	20
21-30	30

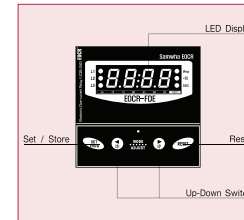
Curve-1 Inverse (SW3-INV/On position)



Curve-2 Definite (SW3-DEF/Off position)



EOCR-FDE / FEZ



- MCU Based
- 3 Integral Current Transformers
- Over-current, Under-Current, Phase Loss, Phase Unbalance, Phase Reversal, Locked Rotor Protection
- Digital Ammeter & Trip cause indication
- Selectable Trip Time Characteristics
- Independently Adjustable Starting Trip Delay and Trip Time
- + Load Alerting Function → EOCR-FDE
- + Ground Fault Protection → EOCR-FEZ

Protection

EOCR-FDE		EOCR-FEZ	
Protective Item	Trip Time	Protective Item	Trip Time
Over-current	O-TIME	Over-current	O-TIME
Under-current	0.5-30 sec	Under-current	0.5-30
Phase Loss	3 sec	Phase Loss	3 sec
Phase Unbalance	8 sec	Phase Unbalance	8 sec
Phase Reverse	0.1-0.3 sec	Phase Reverse	0.1-0.3 sec
Locked Rotor	D-TIME	Locked Rotor	D-TIME
-	-	Ground Fault	0.05-10 sec

Specification

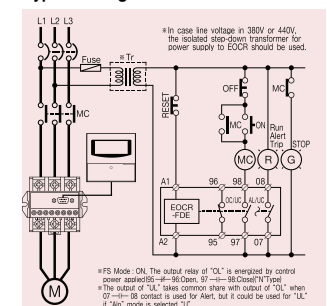
Model	EOCR-FDE	EOCR-FEZ
Over Current Setting	Refer Table #1	
Ground Fault Current Setting	-	A: 0.02 - 3A / B: 0.2-10A
Alert Setting	50 - 100% / OFF	
Start Time Setting (D-TIME)	1 - 200 sec	
Trip Time Setting (O-TIME)	INV DEF	1 - 30 0.2 - 30 sec
Control Voltage	24VAC/DC, 110VAC ± 15%, 220VAC ± 15%	
Contact Rating	OL AL/GR	2-SPST AL Relay Ground Fault Relay
Rating	3A/250VAC Resistive	
Time Characteristic	In/TC mode dE/TC mode	Inverse (See Curve-1) Definite (See Curve-2)
Troubleshooting / Trip Indication	LED Display (SSD+LED)	
Current Sensing	3-CT	
Mounting	35mm Din-rail	

Caution The external CT should be used in case Inverse curve(In setting) is applied over 10Amps.

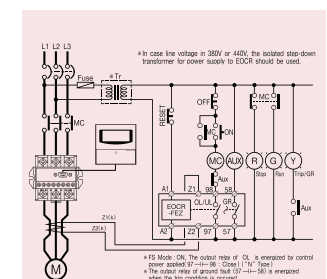
How to set

Mode	Buttons	Action
Search a mode to be adjusted	DN / UP	Search a mode to be adjusted by depressing UP/DN mode switch.
Set	SET / store	Selected mode and setting value start flickering which means to be ready to accept setting as pressing once Set/store button
Adjust	DN / UP	Select a required setting value and/or characters by pressing continuously UP/DN mode switch until reaching what want to do.
Store	SET / store	Store a selected value and/or characters by pressing once Set/store button Instantaneously the flickering is stopped.
Reset	RESET	After completing above procedure, make a reset to be ready to operate. If not made reset, it will be reset automatically after an elapse of 30sec.

Typical Wiring



EOCR-FDE



EOCR-FEZ