

EOCR-DM2 Series

Basic model : EOCR-3DM2 (Z) / FDM2 (Z)

EOCR-3DM2 Window type



EOCR-3DM2 Bottom hole type



EOCR-FDM2 Window type



EOCR-FDM2 Bottom hole type



EOCR-3DM2 Terminal type



EOCR-FDM2 Terminal type



General features

- Micro-controller unit based
- Real time processing / High precision
- Protections : Over current, Under current, Phase loss, Phase reversal, Stall, Jam, Current Imbalance, Earth fault (**3MZ2/FMZ2**)
- Inverse available up to 32Amps without external CTs.
- Ancillary functions : Fail safe, Pre-alarm (**3DM2/FDM2**), Accumulated running hour, 3 faults records & limitation of auto-restart.
- Reinforced monitoring function : Monitoring distance up to 400M, 3 phase current display, Pre-alarm (**3DM2/FDM2**) & Trip cause indication
- Bar graph indication of a load current to the current setting.
- Available application on single and 3 phase motor
- RoHS Compliance
- For **FDM2/FMZ2**, normal protections are guaranteed even if PDM is disconnected.

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Protection functions

Protection item	Condition & Setting range	Operation time
Over current (oc)	Condition : Load current (In) exceeds setting current (Is) Setting range : 0,5~60A (Def), 0,5~32A (Inv)	Definite (Def) : 0,2~30s adjust. Inverse (Inv) : 1~30 class
Under current (uc)	Condition : Load current (In) less than setting current uc should be less than oc setting	oFF, 1~10s adjustable
Phase loss (PL)	Condition : max imbalance is more than 85% among 3 phase current, Enable or disable : Selectable	oFF, 0,5~5s adjustable
Reverse phase (RP)	Condition : Reversed phase sequence input on EOCR, Enable or disable : Selectable	Within 0,15s
Stall (Sc)	Condition : $I_n \geq$ Stall current setting (Sc). Active only in motor starting 0,5~30A : 2~8 times of oc setting ~40A : 2~6 times, ~60A : 2~4 times.	Right after D-time elapsed
Jam (JA)	Condition : $I_n \geq$ Jam current setting (JA). Active only in motor running 0,5~50A : 1,5~5 times of oc setting ~60A : 1,5~4 times of oc setting	0,3~5s adjustable
Imbalance (IM)	Condition : Current imbalance \geq Setting imbalance % Setting range : 10~50% of imbalance	1~10s adjustable
Earth fault (EF)	Condition : EF current (Ie) exceeds setting current (Ies) OFF, 0,03~10A	0,05~5s adjustable -- 3MZ2/FMZ2 only --

Ancillary functions

Password selection	For secured setting parameters.
Phase selection	For single phase / three phase motor selection
TCC selection	Available three time-current-characteristics (Definite, Inverse, Thermal inverse)
CT ratio	For the current setting more than 60A (20A : i3MS/FMS) and less than 0,5A
Fail safe selection	Fail safe operation for OL trip output.
Pre alarm selection	Pre alarm signaling by the 07-08 output contact
Total running hour	Total accumulated running hour from the installation which cannot be modified and reset.
Running hour	Display or provide a time-out signal to the 07-08 output contact. (i3DM/iFDM)
Reset mode	Manual / Auto / Electrical ; Selectable
Trip cause memory	Store the latest 3 trip causes
Restart limitation	The maximum auto-restart number within 30 minutes in auto-reset mode.

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Specifications





Model			3DM2 / FDM2, 3MZ2 / FMZ2
Over current	Rated setting range (A)		Definite TCC : 0,5-60A : use external CT higher than 60A
			Inverse TCC : 0,5-60A : use external CT higher than 32A
Under current	Rated setting range (A)		0,5A ~ less than oc setting
Operating time characteristics			Definite(Def) / Inverse(Inv)
Time setting	Def	D-time	0-200s
		O-time	0,2-30s
	Inv (cLS)		1-30 classes
	GF delay time (Edt)		0-30s (3MZ2/FMZ2)
	GF O-time (Et)		0,05-10s (3MZ2/FMZ2)
	Auto-reset		0,5s-20min.
	Reset mode		Manual reset (H-r) / Electric reset (E-r) / Auto-reset (A-r)
Control power	Voltage		100-240VAC/DC (85% ~110%, Free voltage), 24VAC/DC (±5%) .
	Frequency		50/60Hz
	Power consumption		Lower than 7VA
Output	Capacity		3A/250VAC resistive.
	Composition		1a1b : OC or GR 1a : AL
Display	7 segment LED		3 phase amps, Cause of trip, Setting parameters indication.
	Bar-graph		Load factor.
Mounting			Panel mounting (3DM2/3MZ2)
			Flush mounting (FDM2/FMZ2)
Insulation	Between case & circuit		Over DC500V 10MΩ
Dielectric strength	Between case & circuit		2kV, 50/60Hz, 1 Min.
	Between contacts		1kV, 50/60Hz, 1 Min.
	Between circuit		2kV, 50/60Hz, 1 Min
Electrostatic discharge (ESD)	IEC61000-4-2		Level 3 : Air discharge : ±8kV, Contact discharge : ±6kV
Radiated disturbance	IEC61000-4-3		Level 3 : 10V/m, 80 ~ 1000MHz
Conducted disturbance	IEC61000-4-6		Level 3 : 10V,0.15 ~ 80MHz
EFT/Burst	IEC61000-4-4		Level 3 : ±2kV, 1 Min.
Surge	IEC61000-4-5		Level 3 : 1.2 x 50µs, ±4kV (0°, 90°, 180°, 270°)
Emission	CISPR11		Class A (Conducted and radiated)
Environment	Temperature	Store	-40°C ~ +85°C
		Operation	-20°C ~ +60°C
	Humidity		30-85% RH (Non-condensate)
Dimension	Window type		70W × 74,5H × 83,8D
	Bottom hole type		70W × 56,3H × 108,1D
Weight			3DM2 / 3MZ2
			FDM2 / FMZ2
	Window type		265g
	Bottom hole type		295g
	Terminal type		295 + 120 = 415g
	Display (W/3M cable)		390 + 120 = 510g
Power consumption			125g
			Less than 7VA.

EOCR-DM2 Series

Basic model : EOCR-i3DM(Z, S, 420) / iFDM (Z, S, 420)

Ordering






EOCR-3XX2		3DM2 - WR D U W Q					
		①	②	③	④	⑤	⑥
 Window CT  Bottom CT  Terminal  External CT combination type	①	Model name	3DM2	Basic model			
			3MZ2	GF model			
	②	Current range	WR	0.5~60A			
			H1	100:5 3CT combination type			
			HH	150:5 3CT combination type			
			H2	200:5 3CT combination type			
H3			300:5 3CT combination type				
③	Output contact type	3MZ2	A	a(97-98) : OC, a(57-58) : GR			
			C	b(95-96), a(97-98) : OC,GR common			
		3DM2	D	b(95-96) : OC, a(57-58) : GR			
			D	b(95-96), a(97-98)			
④	Control voltage	B	24VAC/DC				
		U	100~240VAC/DC				
⑤	CT type	W	Window type				
		H	Bottom hole type				
		T	Terminal type				
⑥	Export code	Q					

EOCR-FXX2		FDM2 - WR D U W Q					
		①	②	③	④	⑤	⑥
 Window CT  Bottom CT  Terminal  External CT combination type	①	Model name	iFDM	Basic model			
			iFMZ	GF model			
	②	Current range	WR	0.5~60A			
			H1	100:5 3CT combination type			
			HH	150:5 3CT combination type			
			H2	200:5 3CT combination type			
H3			300:5 3CT combination type				
③	Output contact type	FMZ2	A	a(97-98) : OC, a(57-58) : GR			
			C	b(95-96), a(97-98) : OC,GR common			
		FDM2	D	b(95-96) : OC, a(57-58) : GR			
			D	b(95-96), a(97-98)			
④	Control voltage	B	24VAC/DC				
		U	100~240VAC/DC				
⑤	CT type	W	Window type				
		H	Bottom Hole type				
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Basic model : EOCR-i3DM(Z, S, 420) / iFDM (Z, S, 420)

Ordering

<p>Display</p> 	<p>EOCR-PDMQ</p>																		
<p>Cable connector</p> 	<p>CABLE - RJ45 - 001</p> <p style="text-align: center;">① ②</p> <table border="1"> <thead> <tr> <th>①</th> <th>Connector type</th> <th colspan="2">RJ45</th> </tr> </thead> <tbody> <tr> <td rowspan="6">②</td> <td rowspan="6">Cable length</td> <td>00H</td> <td>0.5 m</td> </tr> <tr> <td>001</td> <td>1 m</td> </tr> <tr> <td>01H</td> <td>1.5 m</td> </tr> <tr> <td>002</td> <td>2 m</td> </tr> <tr> <td>003</td> <td>3 m</td> </tr> <tr> <td>Others</td> <td>Custom made</td> </tr> </tbody> </table>	①	Connector type	RJ45		②	Cable length	00H	0.5 m	001	1 m	01H	1.5 m	002	2 m	003	3 m	Others	Custom made
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