

2018 Innovated nEOCR

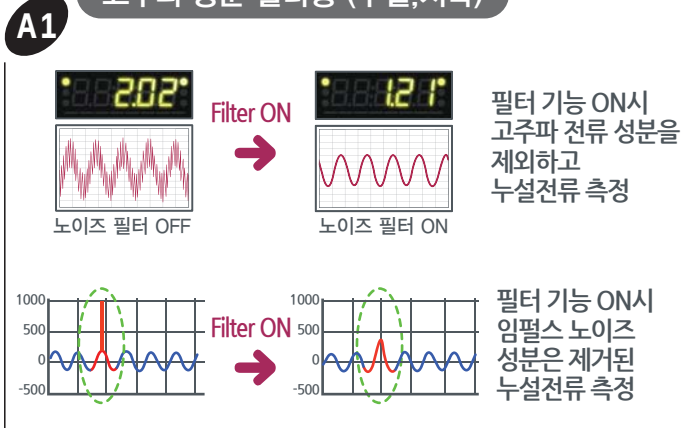
디지털 모터보호 계전기
Digital Electronic Over Current Relay

EOCR

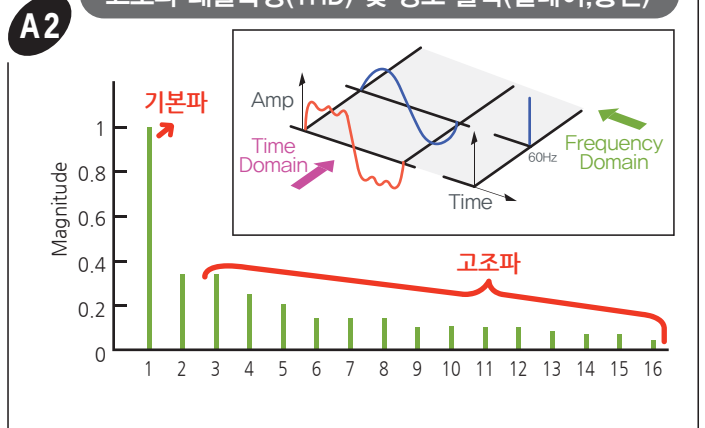


- ✓ 향상된 계측 정밀도 (1% Class)
- ✓ 고주파 성분 필터링 (누설, 지락)
- ✓ 고감도, 순시 동작형 / 누설 전류 보호기능 (30mSec/30mA)
- ✓ 고조파 왜율측정(THD) 및 경보 출력
- ✓ 온/습도 센서 내장
- ✓ 본체의 LED로 운전/정지/Trip 표시
- ✓ Modbus-485 (up to 200 nodes)
- ✓ 과도 전압에 의한 전원부 단락보호 방지 및 경보출력

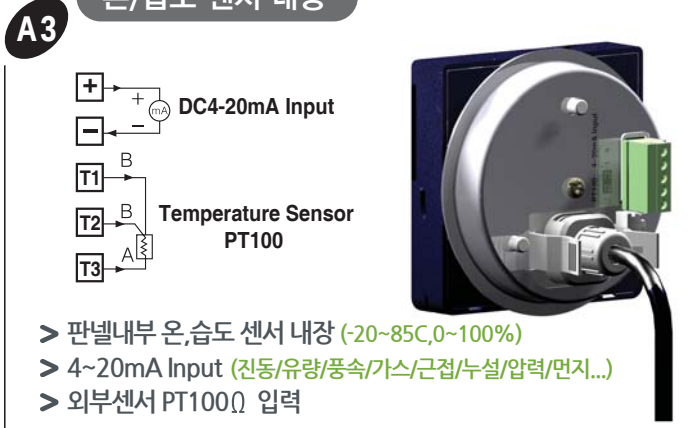
A1 고주파 성분 필터링 (누설,지락)



A2 고조파 왜율측정(THD) 및 경보 출력(릴레이,통신)



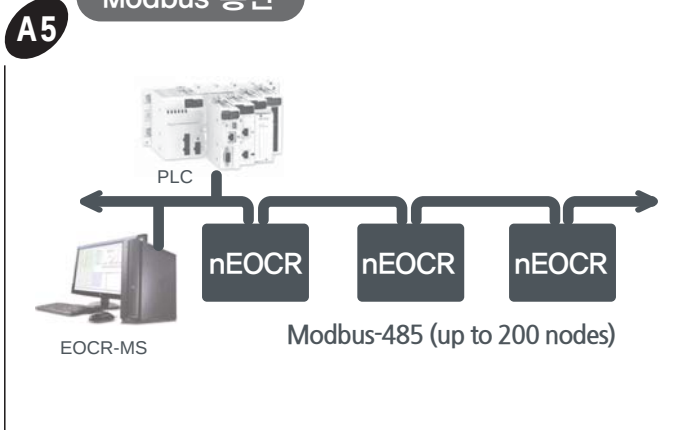
A3 온/습도 센서 내장



A4 본체의 LED로 운전/정지/Trip 표시



A5 Modbus 통신

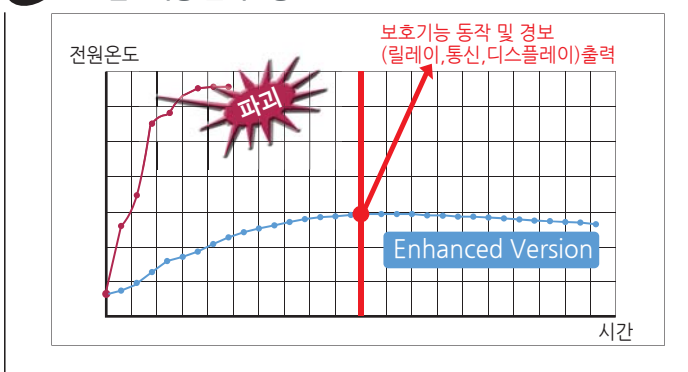


A6 EOCR-MS monitoring software



A7 서지/과도 전압에 의한 전원부 단락보호 및 경보기능

* 별도사양 문의요망



A8 다양한 악세사리

A8

다용도 국제화 케이블

C A B L E - R J 4 5 - 0 0 1

M o d 4 8 5 T J 0 0 1

3 C T - H 1 - 1 0 0

Z C T - 0 3 5

①	Cable	RJ45	
②	Cable 길이	00H	0.5M
		001	1M
		01H	1.5M
		002	2M
		003	3M
	기타	주문사항(150M까지 가능)	

①	모델명	TM	Termination RJ45
		TJ	T Junction RJ45

②	Cable 길이	00H	0.5M
		001	1M
		002	2M
		003	3M
		004	4M
		005	5M

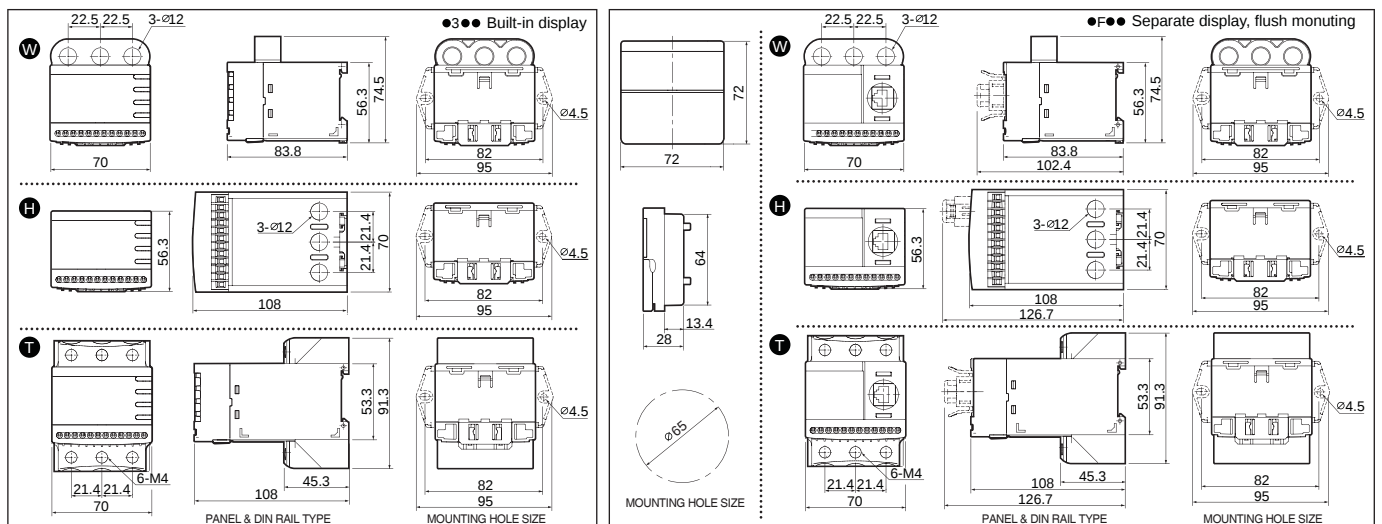
①	External	3CT	
②	CT 변류비	H1	100 : 5A
		HH	150 : 5A
		H2	200 : 5A
		H3	300 : 5A
		H4	400 : 5A

①	관통구경	035	35mm
		080	80mm
		120	120mm

정격사양

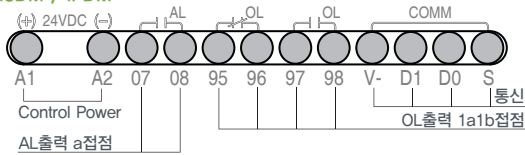
기능 및 특성		정격사항	
과전류	정격전류설정범위(A)	정한시: 0.5~80A, 80A 이상: 외부CT 사용	
		반한시: 0.5~32A, 32A 이상: 외부CT 사용	
저전류	정격전류설정범위(A)	0.5~과전류 설정치 이하 또는 oFF (적용하지 않을때)	
동작 시간특성		정한시(Definite)/반한시(Inverse)/열축적 반한시(Thermal Inverse)	
시간설정	기동지연(dt)시간	0~200초	
	과전류/정한시동작시간(ot)	0.2~30초	
	/반한시특성곡선(cIS)	1~30 Class	
	부족전류/동작시간(ut)	0.5~30초	
	자동복귀 시간	0.5초~20분	
제어전원	전압	100~240VAC/DC(85%~110%, Free Voltage), 24VAC/DC	
	주파수	50/60Hz	
	소비전력	7VA	
출력접점	용량	3A/250VAC 저항부하	
	구성	과전류 : 1a1b, 경보 또는 부족전류 : 1a	
표시기능	7 Segment LED	3상 전류표시, 트립 원인 표시, 설정값 표시 및 설정항목 표시	
	Bar graph	실부하율 표시, 65%~100%	
통신기능		Modbus/RS-485	
취부방식		Panel 부착형 (i3DM), 도어취부형 (iFDM)	
절연저항	회로와 외함	DC 500V 10MΩ 이상	
	회로와 외함	2kV, 50/60Hz, 1 Min	
절연내압	접점상호간	1kV, 50/60Hz, 1 Min	
	회로간	1.5kV, 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 : 1.2×50μs, ±2kV(0℃, 90℃, 180℃, 270℃)	
Emission		CISPR11 Class A(Conducted and Radiated)	
사용환경	온도	저장(Store) -40℃~+85℃	
		운전(Operation) -20℃~+60℃	
	습도	30~85% RH(결로가 없는 상태)	
치수	Window Type	70W×74.5H×83.8D	
	Bottom Hole Type	70W×56.3H×108.1D	
중량		Panel 부착형	도어 취부형
	Window Type	265g	247g
	Bottom Hole Type	295g	280g
	PDM(Cable 3M 기준)	-	125g(120g)

외형도

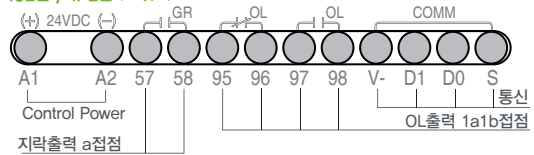


단자 배치도

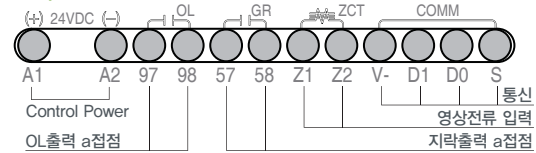
> i3DM / iFDM



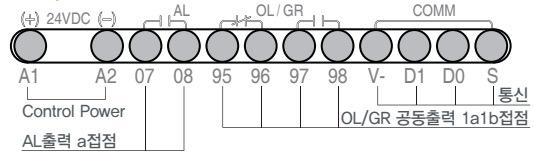
> i3BZ / iFBZ (A type)



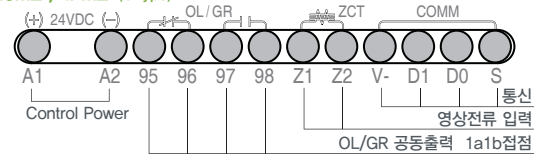
> i3MZ / iFMZ (A type)



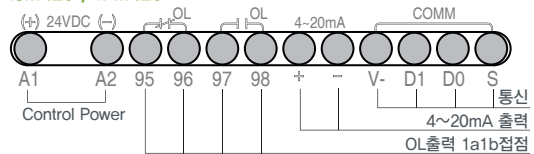
> i3BZ / iFBZ (C type)



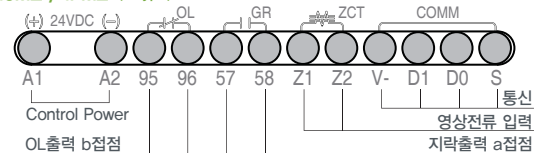
> i3MZ / iFMZ (C type)



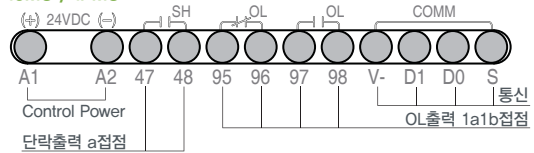
> i3M420 / iFM420



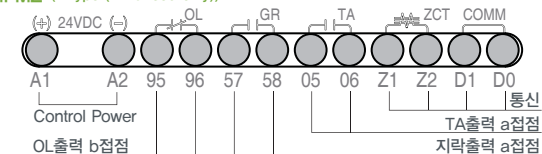
> i3MZ / iFMZ (D type)



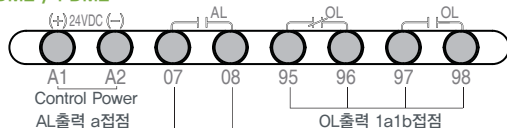
> i3MS / iFMS



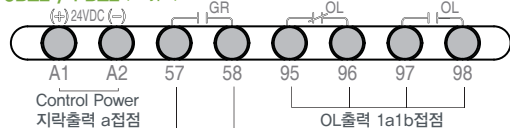
> iFMZ (D type (Enhanced only))



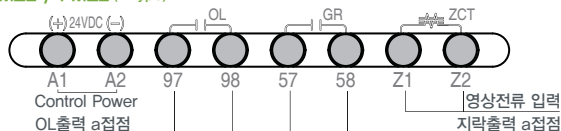
> 3DM2 / FDM2



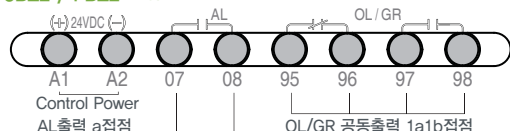
> 3BZ2 / FBZ2 (A type)



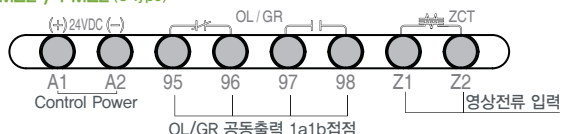
> 3MZ2 / FMZ2 (A type)



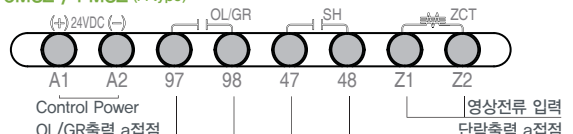
> 3BZ2 / FBZ2 (C type)



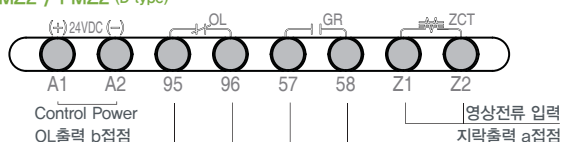
> 3MZ2 / FMZ2 (C type)



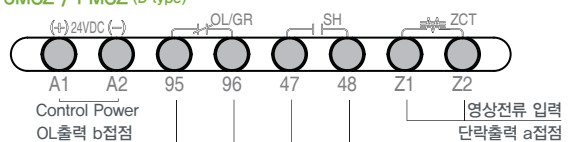
> 3MSZ / FMSZ (A type)



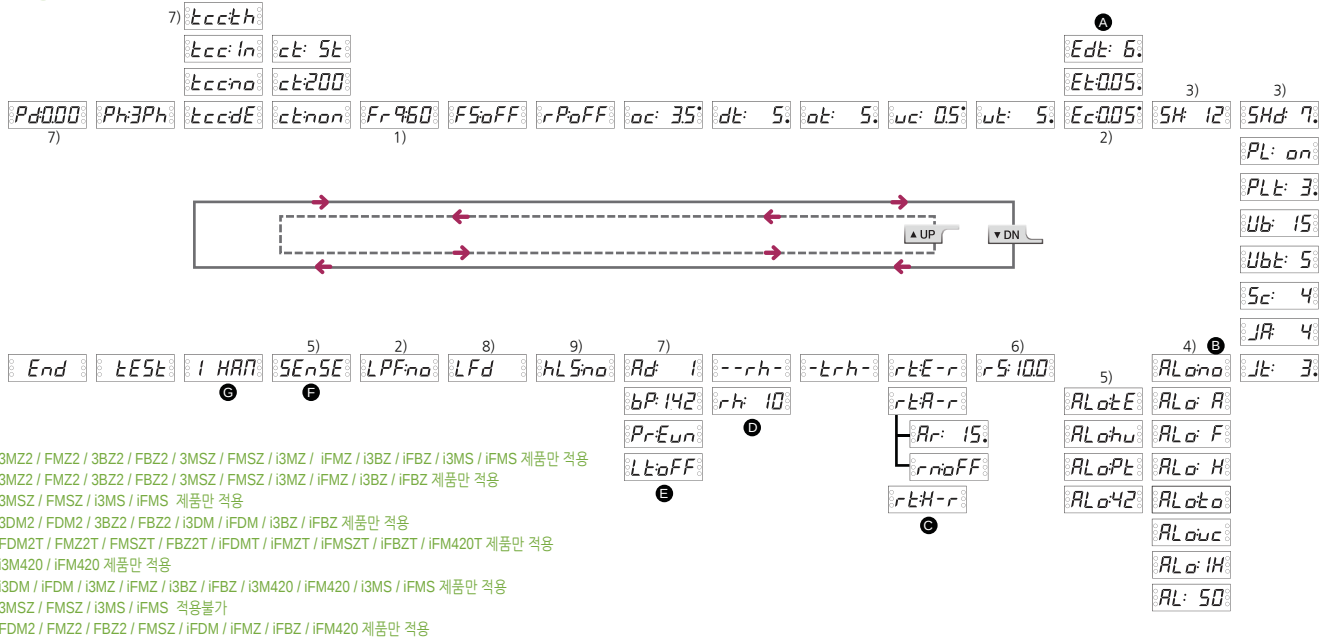
> 3MZ2 / FMZ2 (D type)



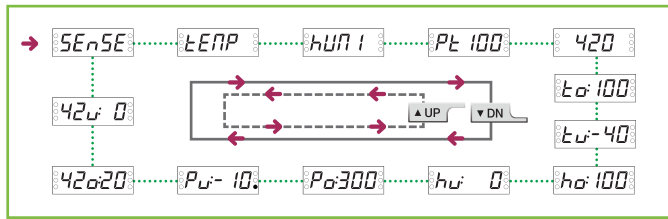
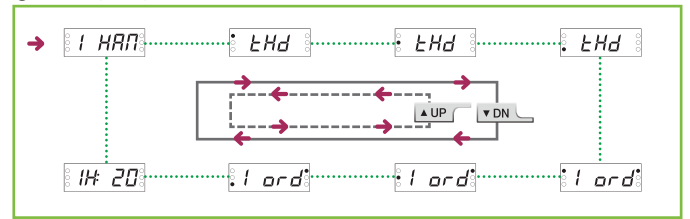
> 3MSZ / FMSZ (D type)



설정순서



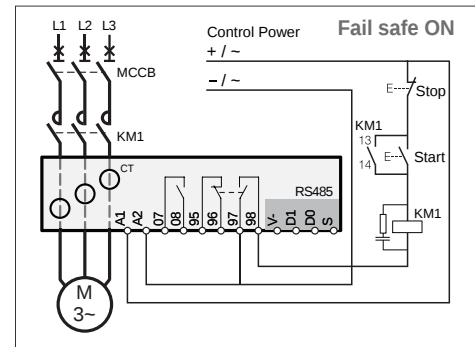
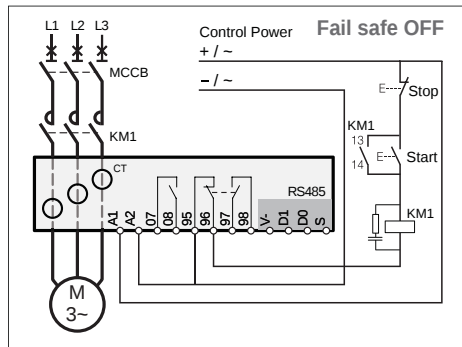
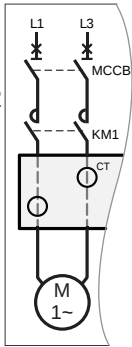
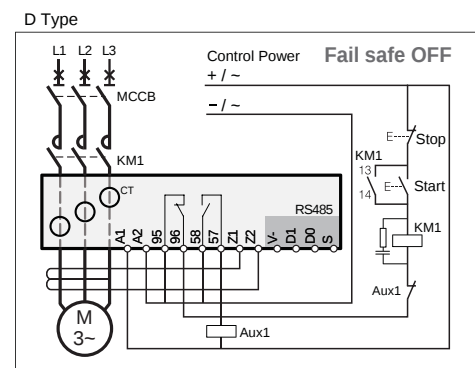
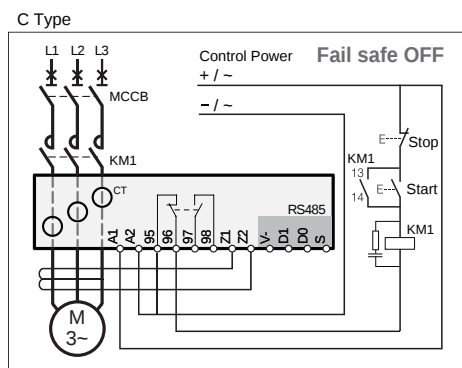
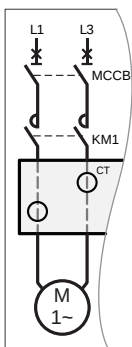
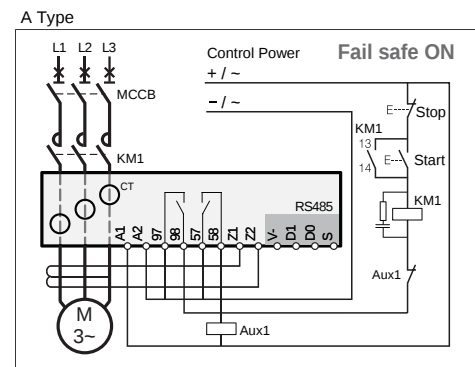
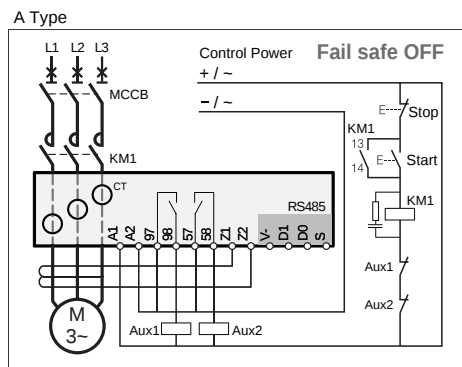
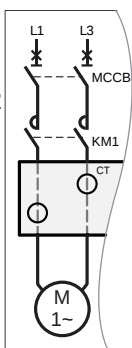
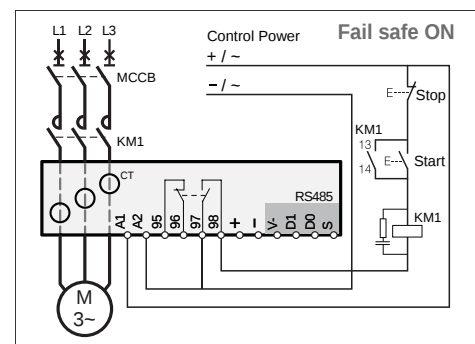
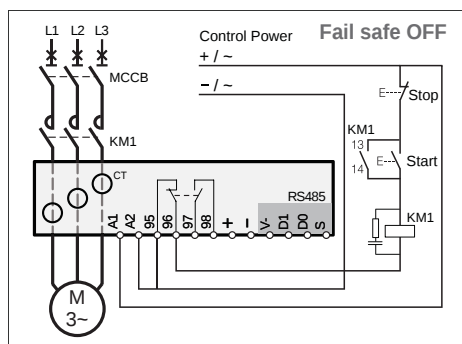
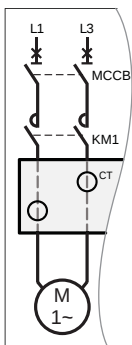
표시	설정항목	초기값	표시	설정항목	설정범위	초기값
F	습도(%) 표시(설정불가)		G	고조파 메뉴 1st~ 8th 5% 9th~ 16th : 10%		
5)	PT100 센서부의 온도 표시(설정불가)		5)	L1상 전류 전고조파 왜곡율 (설정불가)		
	4~20mA Analog input data 표시(설정불가)			L2상 전류 전고조파 왜곡율 (설정불가)		
	알람 온도 상한값	100		L3상 전류 전고조파 왜곡율 (설정불가)		
	알람 온도 하한값	-40		L1상 기본파 전류 (설정불가)		
	알람 습도 상한값	100		L2상 기본파 전류 (설정불가)		
	알람 습도 하한값	0		L3상 기본파 전류 (설정불가)		
	알람 PT100 온도 상한값	300		3상 전류 최대 THD에 대한 알람 레벨 설정	20 - 100	20
	알람 PT100 온도 하한값	-100		순환 표시 설정 모드 / 1을 선택하면 온도, 습도가 함께 표시됨.	1, 2	2
	알람 420 전류 입력 상한값	20		자체 시험 기능 (운전중에는 Test모드 기능 불가)		
	알람 420 전류 입력 하한값	0		자체 시험 완료 → (3sec) → (10sec) Test is Not applicable under normal operation		

F 온습도 센서 설정 메뉴**G 고조파(THD) 설정 메뉴****Hidden Menu**

ESC와 SET버튼을 동시에 3초 이상 누르면 Hidden Menu가 나타나며, 다음과 같은 항목이 표시됨

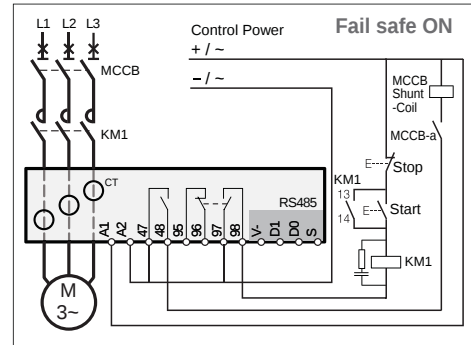
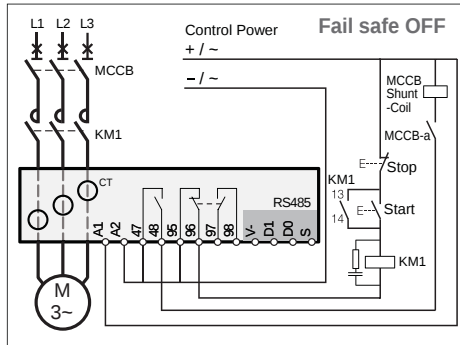
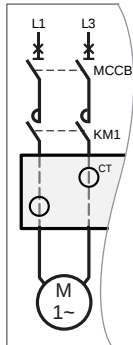
표시	설정항목	설정범위
	펌웨어버전 및 제품코드	펌웨어버전(nEOCR, PDM,) Reference Code를 번갈아가면서 표기
	D-Time 최대 설정값 선택	200, 250, 300, 350, 400, 450, 500, 600
	CT비 최대 설정값 선택	800, 3000
	ot 최대 설정값 선택	30, 50, 80, 120
	ut 최대 설정값 선택	30, 50, 80, 120
	상전류 교정 선택	Ld, t, S, r
	상전류값 교정	사용자 입력값
	4~20mA 출력 교정 메뉴	사용자 입력값
	AL출력(07 - 08)을 b접점으로 변경	yE, no
	전원부 보호회로 동작 시간 설정	2 sec ~ 10sec (Enhanced Version Only)
	감시모드 선택	yE, no
	온도 보정 메뉴	0.1°C
	습도 보정 메뉴	1 %
	PT100 온도 보정 메뉴	0.1°
	420전류 → 4mA 입력 보정 메뉴	0.01mA
	420전류 → 20mA 입력 보정 메뉴	0.1mA
	공장출하값으로 변경	yE, no

결선도

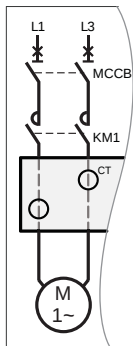
i3DM
iFDM
3DM2
FDM2i3MZ
iFMZ
3MZ2
FMZ2i3M420
iFM420

결선도

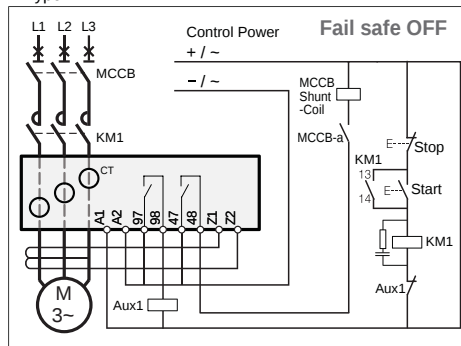
i3MS
iFMS



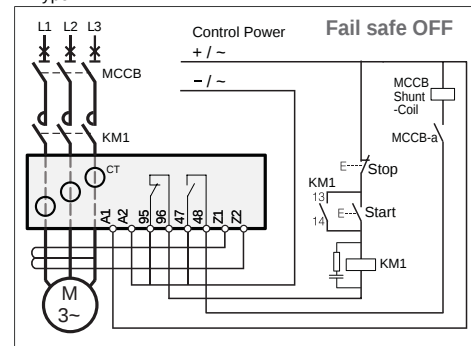
3MSZ
FMSZ



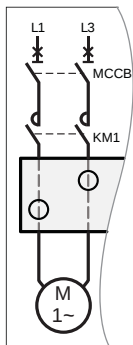
A Type



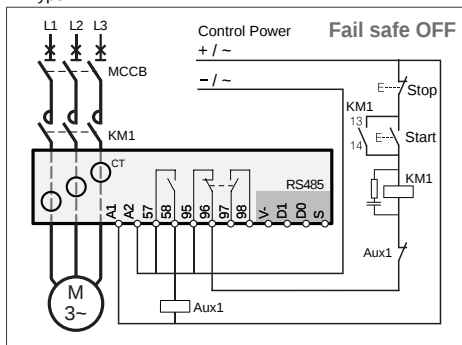
D Type



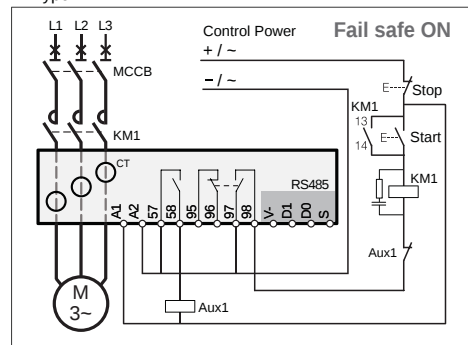
i3BZ
iFBZ
3BZ2
FBZ2



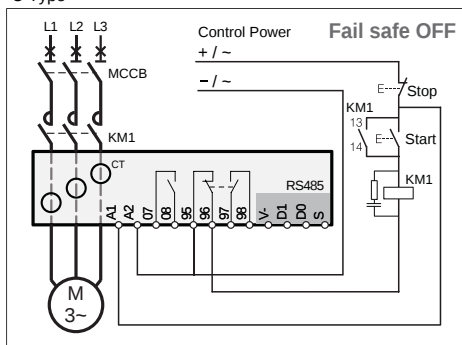
A Type



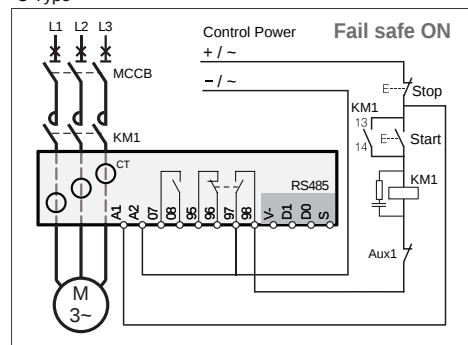
A Type



C Type



C Type



주문방법

EOCR-iFDM(온도센서) 주문할 경우

i	F	D	M	T	-	W	R	D	U	W	Z
1						2	3	4	5	6	

①	제품 Type	i3DM / iFDM	T	온도센서용
		i3MZ / iFMZ		
		i3M420 / iFM420		
		i3MS / iFMS		
		3DM2 / FDM2		
		3MZ2 / FMZ2		
		3MSZ / FMSZ		

②	전류범위	WR	0.5...25A Only i3MS, 3MSZ, iFMS, FMSZ	
		WR	0.5...80A	
③	출력접점형태	D	b (95-96),a (97-98),a (07-08) 3DM2,FDM2,i3DM,iFDM,3BZ2,FBZ2,i3BZ,iFBZ	
		D	b (95-96),a (97-98),a (47-48)	i3MS, iFMS
		A	a (97-98): OL/GR, a (47-48): SH	3MSZ, FMSZ
		A	a (97-98): OL, a (57-58): GR	i3MZ, iFMZ 3MZ2, FMZ2
		C	b (95-96),a (97-98): OL/GR	
		D	b (95-96): OL, a (57-58): GR	
④	조작전원/주파수	B	AC/DC 24V	
		U	AC/DC 100~240V	
⑤	CT 형태	W	Window hole type	
		H	Through bottom-hole type	
		T	Through screw-terminal type	
⑥	Version	Z	New Version (*1)	
		ZE	New Enhanced version (*별도사양,문의요망)	

(*1) Upgraded by 1% Class, THD,Earth-Current Low PassFilter, Temperature/Humidity