EOCR-DS1(T) / EOCR-DS3(T) / EOCR-DG(T) / EOCR-DZ(T) / EOCR-4E

3090-A0100-08

⚠ 위험 / DANGER / 危险

제품설치 및 보수전에 모든 전원을 차단하여 주십시요.
이들 지침을 따르지 않을시
심각한 상해 또는 사망의 원인이 됩니다.

HAZARD OF ELECTRIC SHOCK, EXPLOSION,OR ARC FLASH
Disconnect all power before servicing equipment.
Failure to follow these instructions will result in death or serious injury.

电击、爆炸或电弧危险
在检修设备之前，请断开所有电源.
若违背这些说明，
则可能会导致严重的人身伤害甚至死亡.

이 기기는 업무용 환경에서 사용할 목적으로 적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

Help & Download

기술자료는 **www.schneider-electric.co.kr** 또는 아래 **QR code**로 다운로드 받으실수 있습니다.
For more technical support, please visit **www.schneider-electric.co.kr** or **QR code**
请访问 **www.schneider-electric.co.kr** or **QR code** 下载有关技术资料

Customer Care Center
82-2-1588-2630
Customercare.kr@schneider-electric.com

서울특별시 마포구 성암로 189,중소기업DMC타워 14층
14F Kbiz DMC Tower,189,Seongam-ro,Mapo-gu, Seoul,South Korea.
首尔特别市麻浦区盛岩路189, 中小企业DMC大楼 14楼

■ 모든 전기적인 설치 및 보수는 전기기술자의 의해서 작업되어야 합니다.
Authorized technical engineers only for installation, maintanance or repair.
所有电器的安装和维护必须由获得认证的电气技工操作完成.

■ 모터특성에 맞게 시간과 정격전류 설정해야 하며,
잘못된 설정으로 모터가 소손될수 있습니다.
Adjust the settings according to the electric characteristics of a motor, an inappropriate setting may cause permanent damage on the motor.
以电机特性来设定好跳闸时间和额定电流，若误设定会造成电机烧损害.

■ 고조파 함유율이 IEC규정치 이상인 현장에서는 반드시 적절한 외부 필터를 설치하여야 하며, 미설치시 제품손상으로 인해 고장 및 오작동 될수 있습니다.
External filter should be installed to reduce harmonics in an environment where the AC power contains excessive harmonic than IEC standard.
No installation in the site may result in accuracy problem, abnormal operation and mal-function.
在于高周波含有IEC规定以上的现场上，需配备外部滤波器，
未配备滤波器会因为产品 受到干扰而产生误动作.

■ 인버터 또는 SCR 제어부하는 당사에 문의 하시기 바랍니다.
Please contact Customer Care center when our product is installed for devices containing SCR such as inverters.
若有变频器、SCR来控制负荷，请咨询到本公司.

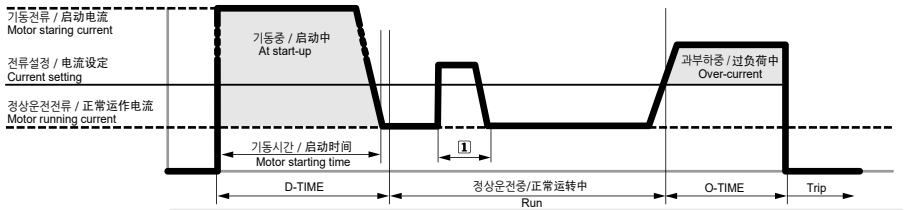
■ 제품의 안정적인 사용을 위해 주기적으로 작동상태를 확인하십시오.
Check periodically whether our product works properly by pressing and holding the test button.
为了保证正常动作，请定时确认产品动作状态.

■ 제품 하자 무상보증기간은 당사의 물류센터 출하 후 18개월입니다.
18 months warranty from the date of shipment.
我公司对于物流中心出库后18个月内出现问题产品进行免费维修.

■ 용어 정의 / Terminology / 用语定义
Control Power / 제어전원 / 控制电源, Trip / 과부하동작 / 超负荷运转
LOAD / 전류설정 / 电流设定, TEST / 시험 / 测试, RESET / 복귀 /复位
D-TIME(Delay Time) / 기동시 부동작 시간설정 / 启动延迟时间设定
O-TIME(Operating Time) / 동작지연시간설정 / 跳闸延迟时间设定

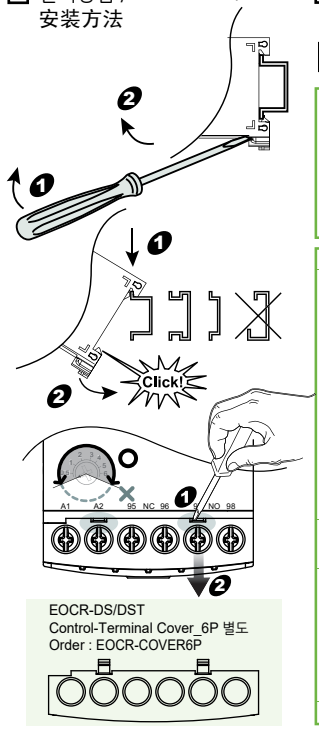
■ 설정 방법 / Setting instruction / 设定方法
D-TIME : 모터 기동시간 확인 후 2~3초 길게 설정.
Set two to three seconds longer than the motor starting time.
确定电机起动时间后，加长2-3秒设定
O-TIME : 과부하 동작시간으로 모터 단속,연속시간 확인하여 설정.
Over-current run time. Set less than the motor's endurance time with over-current.
过负荷动作时间来确定电机长短时间
LOAD : 모터의 정격전류(FLC)>110% 또는 운전전류<105%~120%.
Set over 110% of the motor's rated current or under 120% of its operating current.
电机的额定(FLC)电流>110%或者运转电流<105%~120%

■ TEST 방법 / TEST instruction / 测试方法
TEST 버튼을 누르면 적색 LED가 켜지고 설정된 O-TIME이 경과된 후 출력접점이 동작하면 정상.
Reset Button을 누르거나 Control Power를 차단하면 즉시 복귀함.
With Test button held down, the red LED is on and the product will trip after O-TIME.
The relay will be de-energized when RESET button is pushed or the control power is disconnected.
按TEST按钮, 就亮起红色LED灯, 经过O-TIME后, 输出接点动作, 这属于正常.
按下 Reset Button 或切断 Control Power 则立即复位.



1 과전류가 감지되었으나 설정된 O-Time이내에서 동작하지 않음. The trip is deactivated until the over-current run time is longer than O-time.
虽然感知过电流，如果比设定的 O-Time 时间短 则不会动作.

설치방법 / Installation / 安装方法



EOCR-DS/DST
Control-Terminal Cover_6P 별도
Order : EOCR-COVER6P

주문방법 / How to order / 订购方法

①	②	④	⑤
E O C R D S 1 -	0 5	S	Q

①	EOCRDS1 EOCRDS3 EOCRDS1T EOCRDS3T	전자식 과전류 계전기 / Electronic Over-current Relay	CCC Certification 电子式过载继电器 GB14048.4-2010
	EOCRDG EOCRDGT EOCRDZ EOCRDZT	전자식 과전류(지락) 계전기 / Electronic Over-current(Ground fault) Relay	
	EOCR4E		

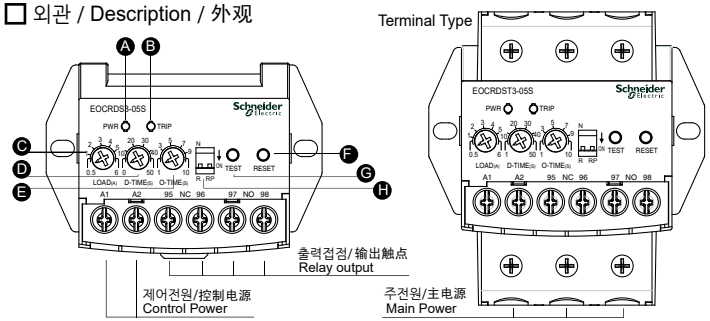
No	Item	Model	Type	전류범위 / Current Range / 电流范围	
②	표준형 Standard 标准型	DS1(T)	05	0.5...6A	60A이상은 05Type과 외부CT 조합사용 Above 60A, use combination type 60A 以上是组合05Type 和外部CT而使用
		DS3(T)	30	3...30A	
			60	5...60A	
		DG(T) DZ(T)	05	0.5...6A	
			10	1...10A (DZ only)	
			30	3...30A (DG only)	
			60	5...60A (DZ only)	
		4E	05	1...6A	
	CT조합형 External CT Type CT组合型	DS1(T) DS3(T) DG(T) DZ(T)	H1	10...100A	100:5 3CT (100:5 CT combination)
			HH	15...150A	150:5 3CT (150:5 CT combination)
			H2	20...200A	200:5 3CT (200:5 CT combination)
			H3	30...300A	300:5 3CT (300:5 CT combination)
			H4	40...400A	400:5 3CT (400:5 CT combination)
③	접점상태 Relay output 触点状态	DG(T) DZ(T) 4E	N	95-98 Closed when powered (Energized) 정상시 여자	
			R	95-96 Closed when powered (De-energized) 정상시 소자	

④ 제어전원 / 控制电源 Control Power	S AC/DC 24~240V	W AC 380~440V	B AC/DC 24V	F7 AC 110V	M7 AC 220V	Y7 AC 90~260V
DS1(T)	○	○				
DS3(T)	○	○				
DG(T)			○	○	○	
DZ(T)			○	○	○	
4E						○

⑤ Q Export

EOCR-DS1(T)/ DS3(T)_电子式过载继电器_GB14048.4-2010

외관 / Description / 外观

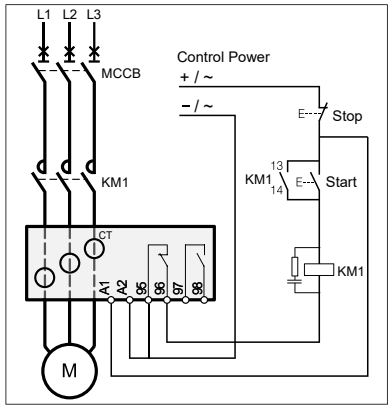


Ⓐ	Ⓑ	Ⓒ	Ⓓ	Ⓔ	Ⓕ	Ⓖ	Ⓗ
LED(PWR)	LED(TRIP)	LOAD	D-TIME	O-TIME	RESET	TEST	DIP SW

LED 동작표시 / LED Indication / 动作显示		EOCR-DS1(T) / DS3(T) PWR(Green)	TRIP(Red)
기동중 / Starting / 启动中		Blink	Blink
정상운전 / Normal operation / 正常运转		On	Off
과부하 / Over-current / 超负荷		On	Blink
이상 동작시(트립) / Trip / 异常动作之时		Off	On
구속 / Stall / 堵转		Off	Blink
결상 / Phase Loss(PL) / 缺相	L1	Off	Blink
	L2	Off	Blink
	L3	Off	Blink
역상 / Reverse Phase(RP) / 逆相			

※구속보호는 설정된 기동지연시간(D-Time)이 지난후에 설정된 전류의 300%이상이 지속되면 즉시 동작함.
STALL protection operates immediately if more than 300% of the set current continues after D-Time expires.
堵转保护是过了设定的启动延迟时间(D-Time)后, 仍然超过300%的设定电流, 立即跳闸.

결선도 / Wiring / 接线图



	95 - 96	97 - 98
R type	Close	Open
N type	Open	Close

※ 제어전원은 절연된 전원 사용.
It is highly recommended to use an isolated control power.
控制电源，请使用结缘

	(mm²) AWG	L (mm)	c (N.m)
	(1...2.5) 18...14	(8)	(1.7)
a		a) size (7)	
d a	(2.5...16) 14...6	a) size (12)	(2.5)

NVR (No Volt Release) / N : Fail safe , R : No Fail safe
설정변경시, EOCR 전원의 ON/OFF 또는 Reset 버튼을 눌러 제품을 초기화 해야함.
To change setting paramaters, turn the control power off and turn it on again, or press Reset button for initialization.
如果变更设定值时，应按EOCR电源的ON/OFF按钮或Reset按钮，进行产品初始化.

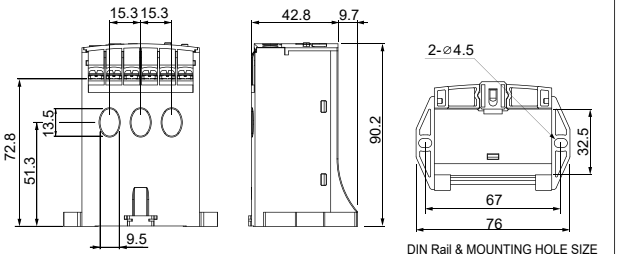
RP : 역상검출 / Reverse phase detction / 逆相保护
RP ON/OFF가 바뀌는 즉시 option적용됨. 逆相 开/关 转换立刻应用此选项.
Reverse phase detection will be activated or deactivated as soon as the switch changes.

※ **PL :** 결상기능의 ON/OFF는 RESET 버튼을 5초이상 누른 상태에서 TEST 버튼을 눌러 설정 변경함.
The phase-loss function can be activated/deactivated by a sequence with the two push buttons.
With the Reset button pressed at least 5 second, both of the two LEDs become blinking or ON.
缺相功能的 On/Off 来设定变更,
以复位按钮按着5秒之后，同时再按下去Test按钮.

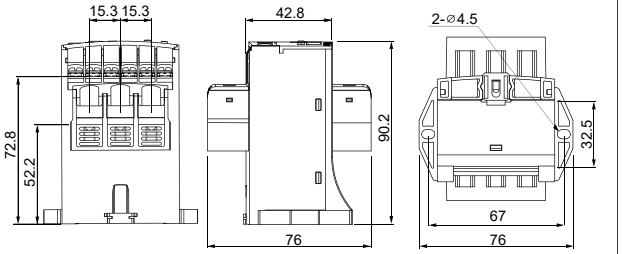
	PWR(Green)	TRIP(Red)
PL ON	On	On
PL Off	Blink	Blink

외형치수 / Dimensions / 外形尺寸

EOCR-DS1 / DS3



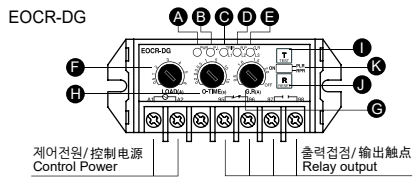
EOCR-DS1T / DS3T



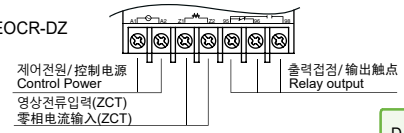
EOCR-DG(T)
EOCR-DZ(T)

☐ 외관 / Description / 外观

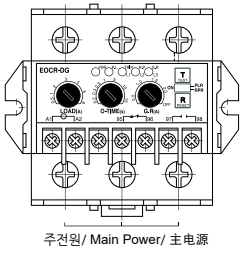
EOCR-DG



EOCR-DZ



Terminal Type



$$\text{D-Time} = 64 - 4\ \frac{I}{Is}\ \text{sec}$$

I : autual curr.
Is : setting curr.

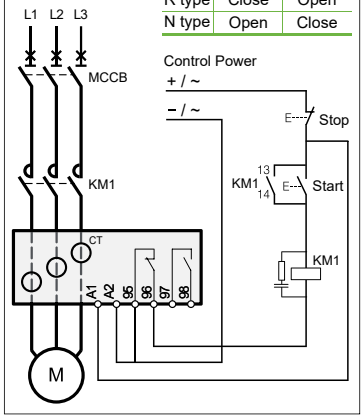
A	B	C	D	E	F	G	H	I	J	K
LED(PWR)	LED(PL)	LED(TRIP)	LED(RP)	LED(GR)	LOAD	G.R	O-TIME	TEST	RESET	RL & PR SW

LED 동작표시 / LED Indication / 动作显示		EOCR-DG(T) /DZ(T)				
		PWR	PL	OL	RP	GR
정상운전 / Normal operation / 正常运转		On	Off	Off	Off	Off
과부하 / Over-current / 超负荷		Off	Off	On	Off	Off
지락 / Ground Fault / 接地电流		Off	Off	On	Off	On
역상 / Reverse Phase(RP) / 逆相		Off	Off	Off	On	Off
결상 / Phase Loss(PL) / 缺相	L1	Off	On	On	Off	Off
	L2	Off	On	Off	On	Off
	L3	Off	On	Off	Off	On
불평형 / Unbalance / 不平衡		Off	Blink	On	Off	Off

☐ 결선도 / Wiring / 接线图

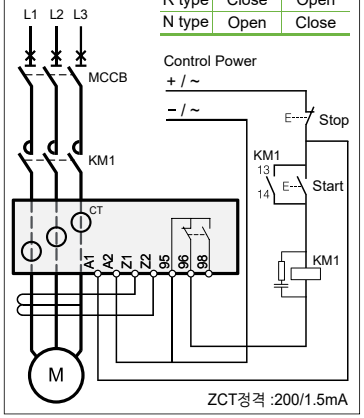
EOCR-DG(T)

	95 - 96	97 - 98
R type	Close	Open
N type	Open	Close



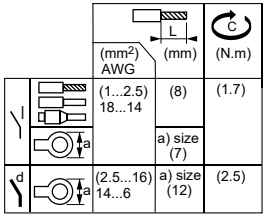
EOCR-DZ(T)

	95 - 96	95 - 98
R type	Close	Open
N type	Open	Close



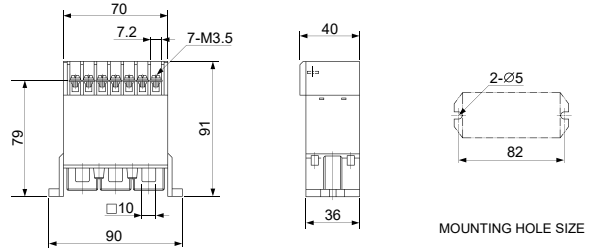
※ 제어전원은 절연된 전원 사용.
It is highly recommended to use an isolated control power.
控制电源，请使用结缘

※ ZCT 2차 출력단자에는 접지금지.(EOCR-DZ(T))
Do NOT connect the ZCT secondary circuit to ground.
请勿接地ZCT的二次输出端子

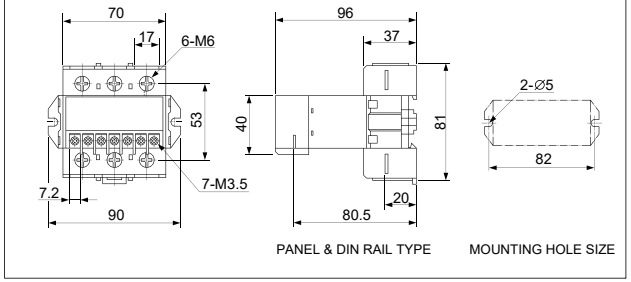


☐ 외형치수 / Dimensions / 外形尺寸

EOCR-DG / DZ

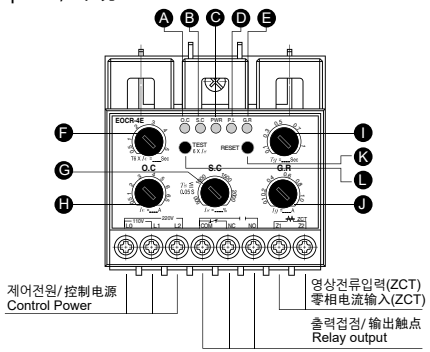


EOCR-DGT / DZT



EOCR-4E

☐ 외관 / Description / 外观



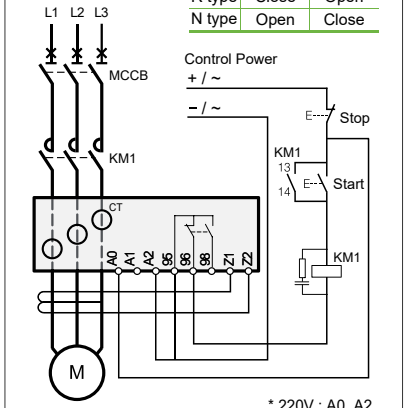
A	B	C	D	E	F	G	H	I	J	K	L
LED(OC)	LED(SC)	LED(PWR)	LED(PL)	LED(GR)	O-TIME	S.C	LOAD	G.R	G.R	RESET	TEST

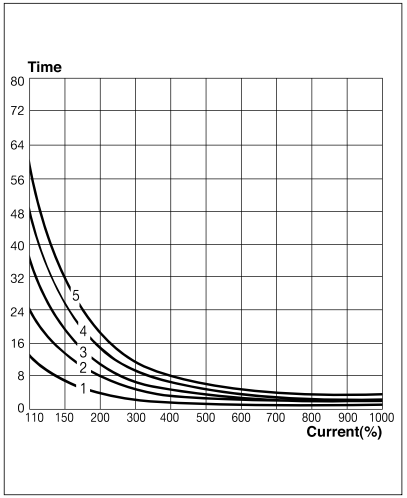
LED 동작표시 / LED Indication / 动作显示	EOCR-4E				
	OC	SC	PWR	PL	GR
정상운전 / Normal operation / 正常运转	Off	Off	On	Off	Off
과부하 / Over-current / 超负荷	On	Off	On	Off	Off
단락 / Short / 短路	On	On	On	Off	Off
지락 / Ground Fault / 接地电流	Off	Off	On	Off	On
결상 / Phase Loss(PL) / 缺相	Off	Off	On	On	Off

☐ 결선도 / Wiring / 接线图

EOCR-4E

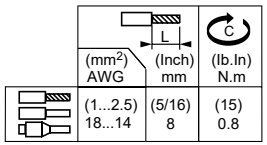
	95 - 96	95 - 98
R type	Close	Open
N type	Open	Close





※ 제어전원은 절연된 전원 사용.
It is highly recommended to use an isolated control power.
控制电源，请使用结缘

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Do NOT connect the ZCT secondary circuit to ground.
请勿接地ZCT的二次输出端子



☐ 외형치수 / Dimensions / 外形尺寸

