

New digital !!! Electronic Over Current Relay (EOCR)



Digital Electronic Over Current Relays

Model : iEOCR-MME

มาพร้อมสวิตช์ Start/Stop มอเตอร์ + Digital EOCR + Communication RS485 และอื่นๆ อีกมาก

Motor Protection

- Over/Under Current
- Thermal Overload
- Phase Reversal/Phase Loss/Phase Unbalance
- Locked Rotor (Stall & Jam)
- EF Current

Control Function

- Operating Mode; DOL, Y-D Starting, Inverter Starting
- Control Mode; LOP, MCC, AUTO(PLC, DCS), Network

Network Communication Protocol

- MODBUS-RTU



- ❖ On/off function for local and remote
- ❖ *Operating Mode: DOL, star-delta, inverter*
- ❖ Built-in MODBUS RS-485 communication Control Mode: LOP, MCC, AUTO, COMM
- ❖ Suitable for inverter environment: Available for low frequency (5~200Hz)
- ❖ Enhanced monitoring function: Real-time monitoring at far distance (150m)
- ❖ Perfect protection by selecting inverse thermal time / definite time / inverse time
- ❖ Bar graph function: operating current to set current
- ❖ Record 3 latest fault: fault type fault time fault current of R.S.T phase
- ❖ Date & Time setting: YYYY/MM/DD/HH/MM/SS
- ❖ Limit restarting, operating hour saving functions
- ❖ 3-phase current and leakage current display (alternatively)
- ❖ 3-phase / single phase setting
- ❖ Security set-up: password function
- ❖ Setting and monitoring with PC: free PCON software
- ❖ Selectable by General/Ground Current with External ZCT Ground Current with built-in ZCT
- ❖ Real Time Processing / Higher Precision

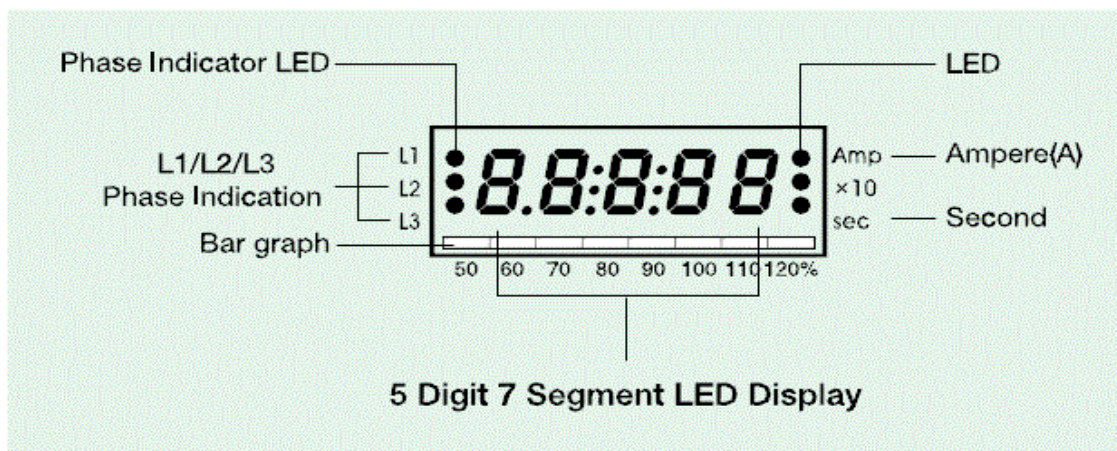
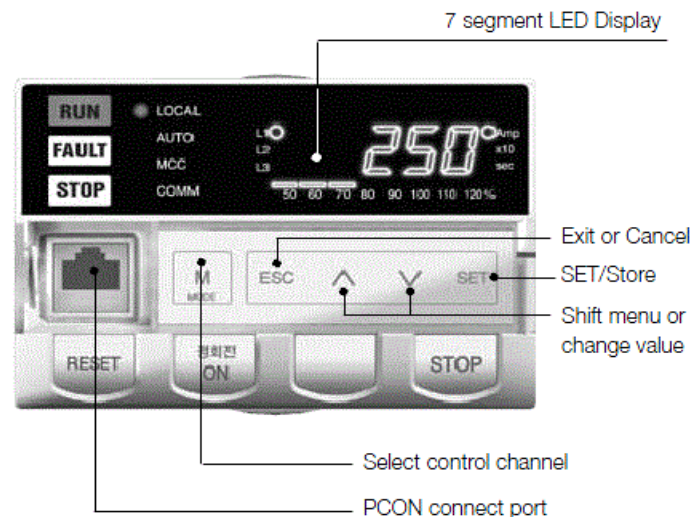
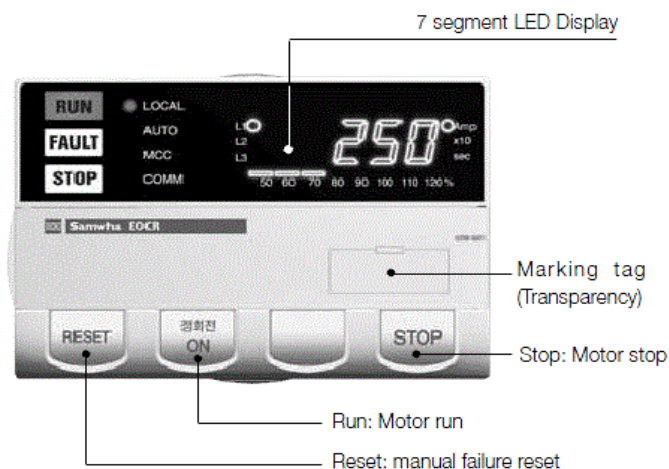
Protection functions : ป้องกันอะไรได้บ้าง?

Protection item	Condition & Setting range	Operation time
Item	Operating Condition / Set-up Range	Operating Time
Over Current (oc)	Load current(In) exceeds threshold(Is) Setting Range : 0.5~100A(Def), 0.5~32A(Inv & th) 100	Definite(Def) : 0.2~120s Adjustable Inverse(Inv) & Thermal(th) : 1~30 Class
Under Current (uc)	Load current(In) less than threshold(uc) In <= uc uc should be less than oc Setting	oFF, 1~120s Adjustable
Phase Loss (PL)	max imbalance is more than 85% among 3 phase current, Enable or disable : Selectable	oFF, 0.5~5s Adjustable
Reverse Phase(rP)	Reversed phase sequence input on EOCR. Enable or disable : Selectable	Within 0.15s
Stall (Sc)	Active only in motor starting, In * Stall threshold (Sc×OC). Setting Range : Adjustable 2~8 times of oc setting if Sc×OC doesn't exceed 250A	Immediately after D-Time elapsed
Jam	Active only in motor running, In * Jam threshold (JA×OC). Setting Range : 1.5~8 times of oc setting if JA×OC doesn't exceed 250A	0.2~10s Adjustable
Unbalance (ub)	Current unbalance * threshold 1~10s Adjustable. Setting Range : 10~50% Unbalance[%] = 100 × (Max phase current - Min phase current)/ Max phase current	1~10s Adjustable
Earth Fault (EF)*1)	EF current(Ie) exceeds threshold(Ies) Setting	0.05~10s Adjustable (0.1~10s for MMED model)

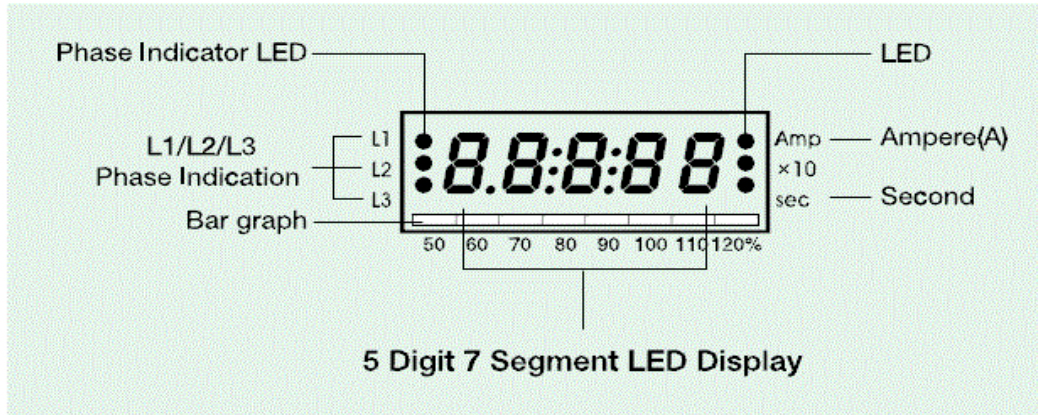
Auxiliary functions : ช่วยเสริมสนับสนุนการป้องกัน

Password	Password Secure configuration
3-phase / single phase setting	The selection enables application to 3-phase or single phase motor without ureter setting
Communication	Communication Serial network communication for monitoring of metering, status, and fault history
Phase selection	Phase selection Select a Single-phase motor or 3-Phase motor
Total Running-Hour	Total Running-Hour Record of total running from installation which cannot be modified or cleared
Running-Hour	Running-Hour Running-Hour Accumulated running hour from preset point which can be cleared to zero, when motor stops
Fault History	Fault History Records for recent 3 faults each phase current which stored in a non-volatile memory
Limitation of autoreset attempt	Limitation of autoreset attempt Block auto-reset if the reset count exceeds the preset count within 30 minutes
Date/Time Information Setting	Seve date/time of failure to provide exacit time of moter failure

New digital !!! Electronic Over Current Relay (EOCR)



3 phase load currents (I_n) and a leakage current are displayed every 2 seconds in sequence



Bar graph

- it shows the load factor to OC setting value by %
- % value = (running current/setting current) × 100%
- Min scale is 50%
- if the setting value is the rated motor current, it shows the load factor of the motor.

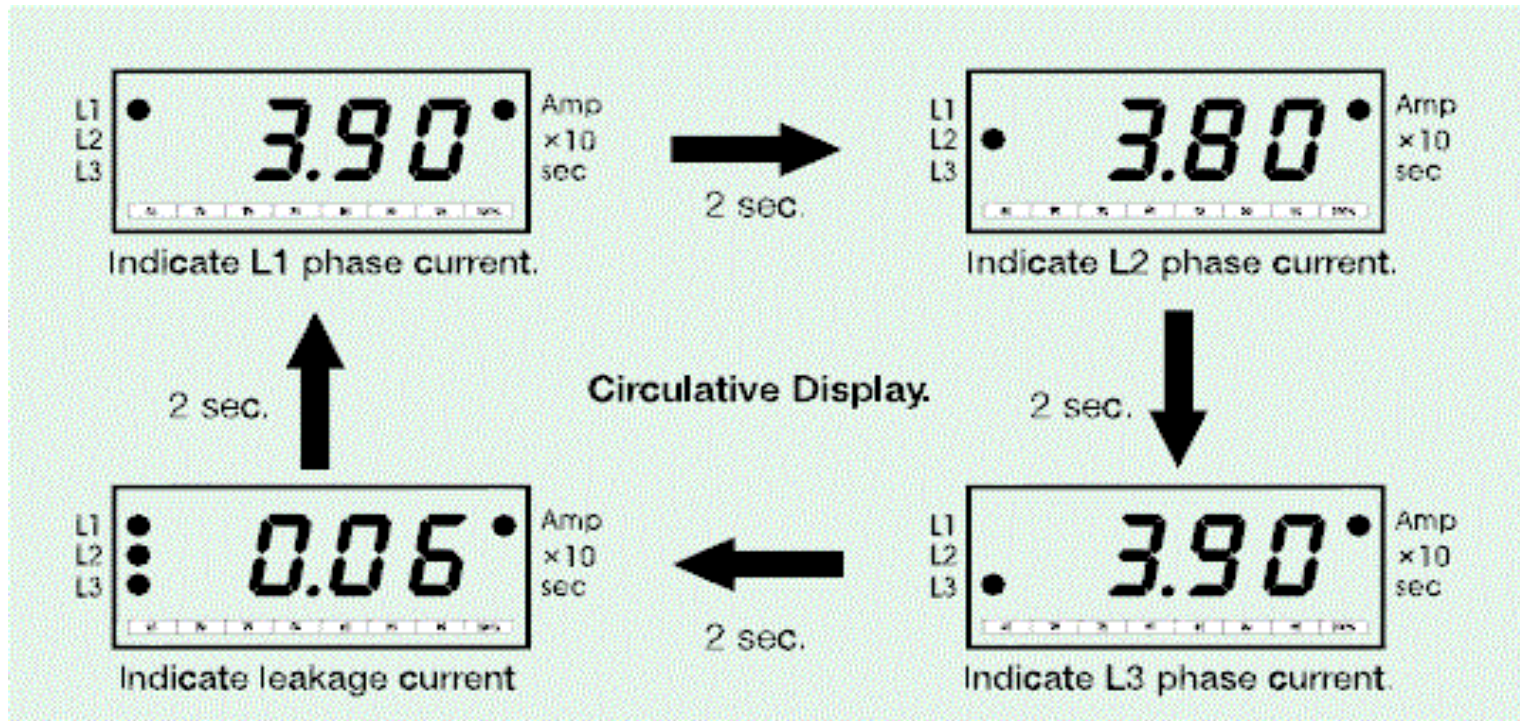
Current display

- ◆ Shows the highest current among three phases for oc, Stall, Jam trips.
- ◆ Shows the lowest current among three phases for uc, Ub trips.
- ◆ Shows the lost phase for PL.
- ◆ Shows the phase and the current during running.

Amp: Ampere. LED is on when a current display.

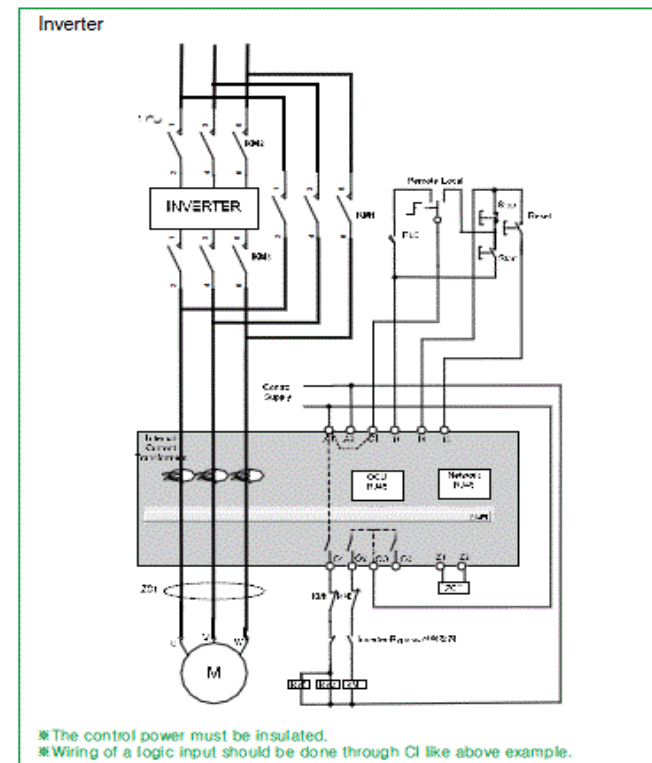
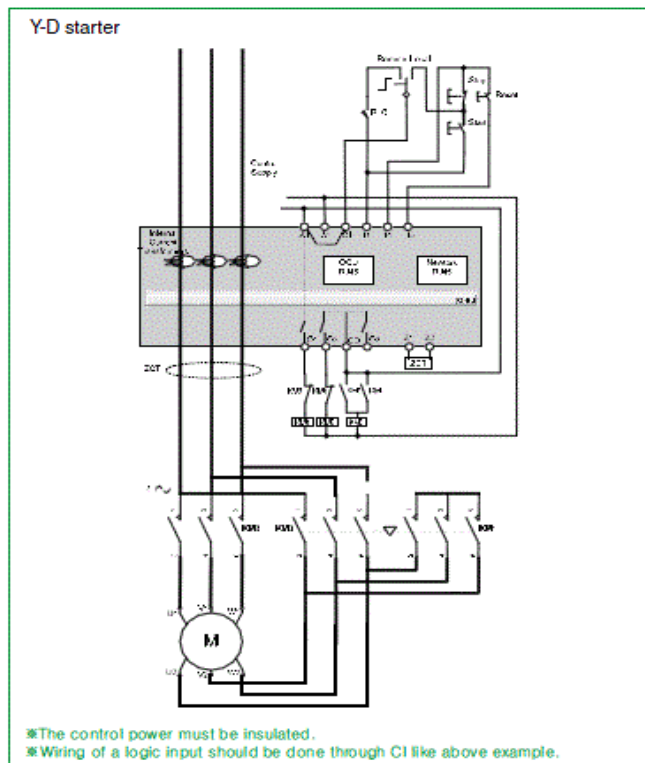
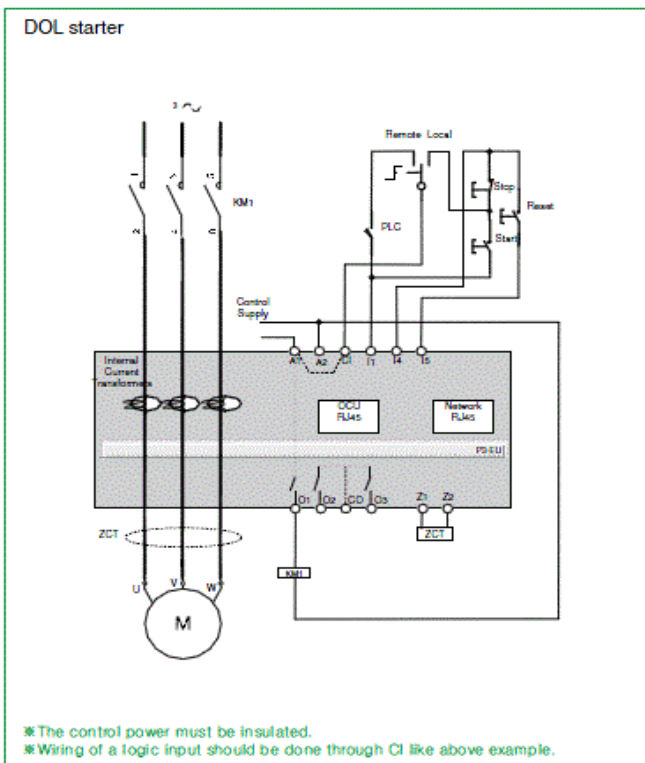
X10: Shows the unit changed to 10 times.

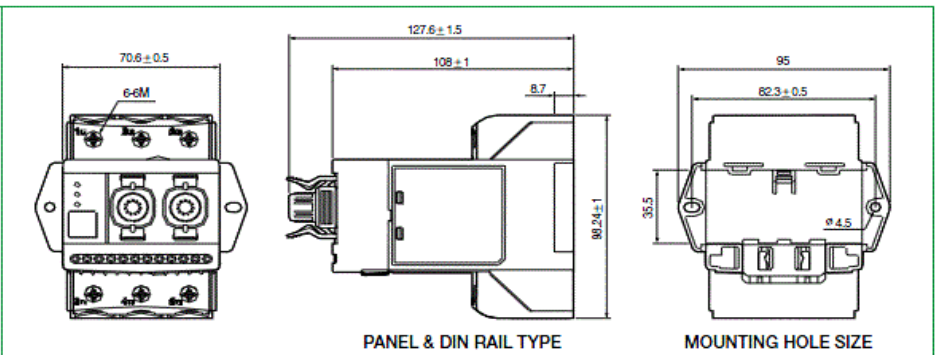
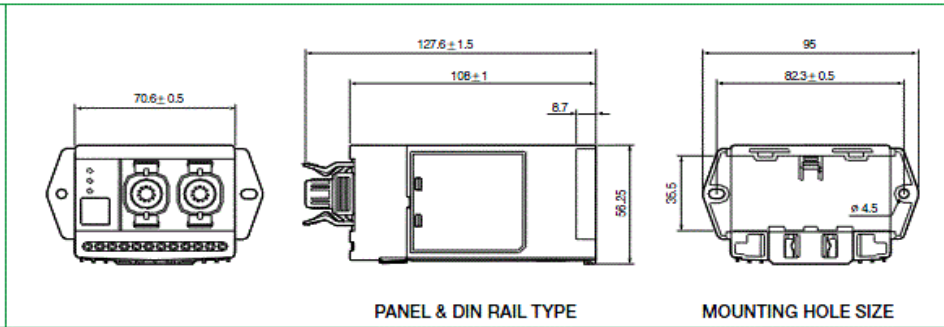
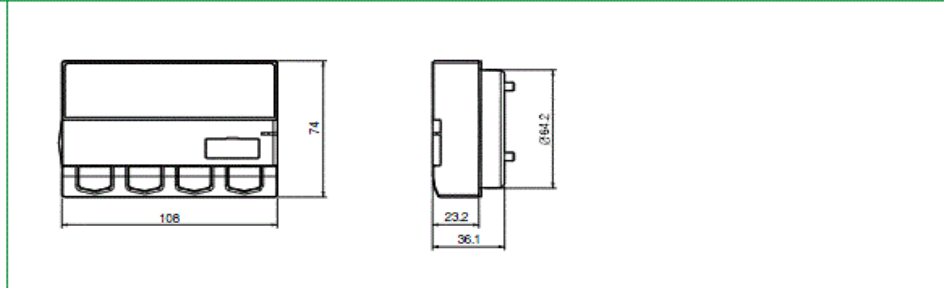
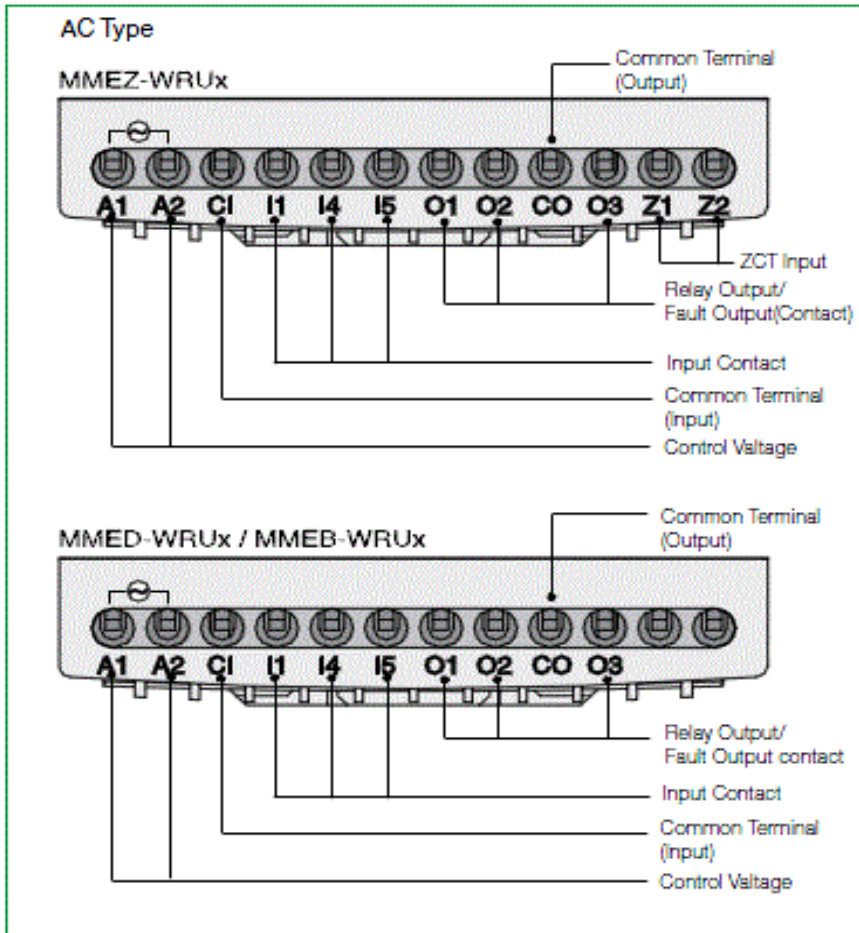
Sec: Second. LED is on when a time display.



หน้าจอ LED จะแสดงค่ากระแสเมื่อมีกระแสไหลผ่าน โดยจะบอกค่ากระแสมอเตอร์ทั้ง 3 เฟสสลับหมุนวนไปทุกๆ 2 วินาที

Typical wiring : วงจรการต่อสายเบื้องต้น





รหัสอักษรแต่ละตัวหมายถึงอะไร?

For ordering iEOCR-MMED;

M M E D - W R U H

①
②
③
④

①	Product Type	ED	General type
		EB	External ZCT
		EZ	ZCT excluded
②	Current Range	WR	0.5 ~ 100A
③	Operating Power / Frequency	B	DC 24V
		U	AC 100~240V(50/60Hz)
		G	DC 110 ~125V
④	CT type	H	Bottom-Holl type
		T	Terminal type

For ordering cable;

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

①
②

①	Cable conection	RJ45
②	Cable length	00H 0.5M
		001 1M
		01H 1.5M
		002 2M
		003 3M
		Others Order specification (max. 150m)

Order code :

EOCR-MMED-WRUH + Cable RJ45-00

EOCR-MMED → Basic model

WR → Current range 0.5-100A

U → Control voltage 100-240 VAC/DC

H → CT Type Bottom hole type

Cable RJ45-00 → Cable 0.5 m.

รหัสการสั่งซื้อ :

EOCR-MMED-WRUH + Cable RJ45-00

EOCR-MMED → ชนิดทั่วไป

WR → ย่านพิกัดการใช้งานกระแส 0.5..100 A

U → แรงดันไฟเลี้ยง 100-240 VAC/DC

H → CT เป็นชนิดมีรูร้อยสายอยู่ด้านใต้

Cable RJ45-00 → สาย RJ45 ยาว 0.5 เมตร

