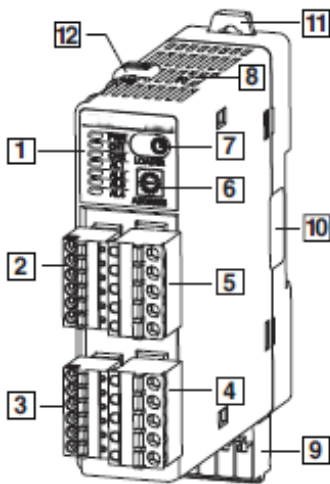


# 多通道模組溫度控制器 CM SERIES

M A N U A L



## ※產品組成說明(CM2 規格)



1 Indicating LED

Status Indi- cating LED	Initial power on (※1)	Control output	Alarm output				Auto tuning (※2)
			N.O		N.C		
			Alarm occurred OFF(OPEN)	Alarm occurred ON(CLOSE)	Alarm occurred OFF(CLOSE)	Alarm occurred ON(OPEN)	
PWR LED (※3)	Green	Green	—	—	—	—	Green
CH1 LED	2400bps - Flickering	ON-RED	—	—	—	—	Flickering
CH2 LED	4800bps - Flickering	ON-RED	—	—	—	—	Flickering
AL1 LED	9600bps - Flickering	ON-Yellow(※4)	Light OFF	Light ON	Light OFF	Light ON	Light OFF
AL2 LED	19200bps - Flickering	ON-Yellow(※5)	Light OFF	Light ON	Light OFF	Light ON	Light OFF
AL3 LED	38400bps - Flickering	—	Light OFF	Light ON	Light OFF	Light ON	Light OFF
AL4 LED	—	—	Light OFF	Light ON	Light OFF	Light ON	Light OFF

※1: In case of initial power on, default communication speed will be flickering for 5 sec(1 sec cycle).

※2: Each CH□ LED will be flickering during auto tuning (1 sec cycle).

※3: Power LED will be flickering while communicating with external units(1 sec cycle).

※4: Light ON when control type for CH1 is heating & cooling type and cooling output is provided. (Alarm setting not available on AL1)

※5: Light ON when control type for CH2 is heating & cooling type and cooling output is provided. (Alarm setting not available on AL2)

2 CT(Current Transformer) input terminal, DI(Digital input) terminal 3 CH1, CH2 Sensor input terminal

4 OUT2(Control output), AL3 and AL4(Alarm output) terminal 5 OUT1(Control output), AL1 and AL2(Alarm output) terminal

6 Communication address setting switch : Set a communication address

7 PC loader port(Port A) : In case of PC parameter setting, use a dedicated loader(SCM-US, sold separately)

8 Communication address group change switch : Set Communication address group

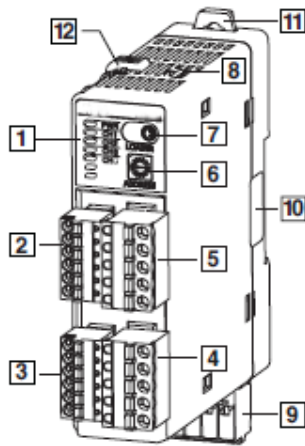
9 Power supply/communications connector(Port B) : Only Basic module

10 END Cover : Remove it when connecting each module.

11 Rail Lock : Used for fixing units to DIN Rail or to the wall

12 Lock switch : Used for fixing each module when connecting module units.(up/down side)

## ※產品組成說明(CM4 規格)



① Indicating LED

Status Indicating LED	Initial power on (*1)	Control output	Auto tuning (*2)
PWR (*3)	Green	Green	Green
CH1	2,400bps – Flickering	ON – RED	Flickering
CH2	4,800bps – Flickering	ON – RED	Flickering
CH3	9,600bps – Flickering	ON – RED	Flickering
CH4	19,200bps – Flickering	ON – RED	Flickering
	38,400bps – Flickering	—	—
	—	—	—

\*1: In case of initial power on, default communication speed will be flickering for 5 sec (1 sec cycle).

\*2: Each CH□ LED will be flickering during auto tuning (1 sec cycle).

\*3: Power LED will be flickering while communicating with external units (1 sec cycle).

② CH1, CH2 Sensor input terminal

④ OUT3, OUT4(Control output)

⑥ Communication address setting switch : Set a communication address

⑦ PC loader port(Port A): In case of PC parameter setting, use a dedicated loader(SCM-US, sold separately)

⑧ Communication address group change switch: Set communication address group.

⑨ Power supply / communications connector(PortB): Only Basic module

⑩ END Cover: Remove it when connecting each module.

⑪ Rail Lock: Used for fixing units to DIN Rail or to the wall

⑫ Lock switch : Used for fixing each module when connecting module units. (up/down side)

③ CH3, CH4 Sensor input terminal

⑤ OUT1, OUT2(Control output)

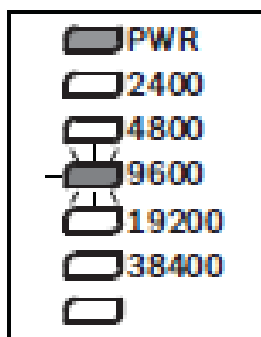
## ※輸入感測器型式及溫度範圍(CM2 & CM4 規格)

Input type		NO	Dot	Display	Input range(°C)	Input range(°F)	
ThermoCouple	K(CA)	0	1	K(CA).H	-200~1350	-328~2462	
		1	0.1	K(CA).L	-200.0~1350.0	-328.0~2462.0	
	J(IC)	2	0	J(IC).H	-200~800	-328~1472	
		3	0.1	J(IC).L	-200.0~800.0	-328.0~1472.0	
	E(CR)	4	1	E(CR).H	-200~800	-328~1472	
		5	0.1	E(CR).L	-200.0~800.0	-328.0~1472.0	
	T(CC)	6	1	T(CC).H	-200~400	-328~752	
		7	0.1	T(CC).L	-200.0~400.0	-328.0~752.0	
	B(PR)	8	1	B(PR)	0~1800	32~3272	
	R(PR)	9	1	R(PR)	0~1750	32~3182	
	S(PR)	10	1	S(PR)	0~1750	32~3182	
	N(NN)	11	1	N(NN)	-200~1300	-328~2372	
	C(TT)	12	1	C(TT)	0~2300	32~4172	
	G(TT)	13	1	G(TT)	0~2300	32~4172	
	L(IC)	14	1	L(IC).H	-200~900	-328~1652	
		15	0.1	L(IC).L	-200.0~900.0	-328.0~1652.0	
U(CC)	16	1	U(CC).H	-200~400	-328~752		
	17	0.1	U(CC).L	-200.0~400.0	-328.0~752.0		
Platinel II		18	1	PLII	0~1400	32~2552	
RTD	JIS	JPT 100Ω	19	1	JPT100.H	-200~600	-328~1112
		JPT 100Ω	20	0.1	JPT100.L	-200.0~600.0	-328.0~1112.0
	DIN	DPT 100Ω	21	1	DPT100.H	-200~600	-328~1112
		DPT 100Ω	22	0.1	DPT100.L	-200.0~600.0	-328.0~1112.0

※通訊設定相關資料(CM2 & CM4 系列)

Application Standard	Compliance with EIA RS485
Max. connection	31 units(address setting:01~31)
Communication type	Two wire, Half Duplex
Synchronization method	Asynchronous
Communication distance	Max. 800m
Communication speed(bps)	2400, 4800, 9600(default), 19200, 38400
Communication response time	5~99 ms
Start Bit	1 bit(fixed)
Stop Bit	1 bit, 2 bit(default)
Partity Bit	None(default), Odd, Even
Data Bit	8 bit(fixed)
Protocol	Modbus RTU

※通訊速度顯示 & 通訊位址設定



SW1 \ SW2																	
		0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
+0	+16	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15
	+0	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

\* Default: SW1 : 1, SW2 : +0

※錯誤訊息(CM2 規格)

	Input Sensor Open Error	Over Temperature Range
PWR LED		RED ON
CH1 LED		RED Flickering (for 0.5 sec)
CH2 LED		RED Flickering (for 0.5 sec)
Communication Output (decimal)	'31000' output	'30000 (upper limit)' output, '-30000 (lower limit)' output
Dedicated program	'OPEN' indication	'HHHH (upper limit)' indication, 'LLLL (lower limit)' indication

※錯誤訊息(CM4 規格)

	Input Sensor Open Error	Over Temperature Range
PWR LED		RED ON
CH1 LED		RED Flickering (for 0.5 sec)
CH2 LED		RED Flickering (for 0.5 sec)
CH3 LED		RED Flickering (for 0.5 sec)
CH4 LED		RED Flickering (for 0.5 sec)
Communication Output (decimal)	'31000' output	'30000 (upper limit)' output, '-30000 (lower limit)' output
Dedicated program	'OPEN' indication	'HHHH (upper limit)' indication, 'LLLL (lower limit)' indication