

CMP-48P/96P系列溫度程序控制器

CMP-XXP

特性

Power

- ◆ 90 ~ 250 VAC, 47 63 Hz, 12VA, 5W maximum
- ◆ 11 ~ 26 VAC / VDC, 12VA, 5W maximum

Input

- ◆ Resolution : 18 bits
- ◆ Sampling Rate : 5 times / second
- ◆ Maximum Rating : -2 VDC minimum, 12 VDC maximum
(1 minute for mA input)
- ◆ Temperature Effect : A1.5uV/ °C for all inputs except mA input
A3.0uV/ °C for mA input
- ◆ Sensor Lead Resistance Effect :
T/C: 0.2uV/ohm
3-wire RTD: 2.6 °C/ohm of resistance difference
of two leads
2-wire RTD: 2.6 °C/ohm of resistance sum of two leads
- ◆ Burn-out Current: 200 nA
- ◆ Common Mode Rejection Ratio (CMRR): 120dB
- ◆ Normal Mode Rejection Ratio (NMRR): 55dB



- ◆ Sensor Break Detection :
- ◆ Sensor open for TC, RTD and mV inputs,
- ◆ Sensor short for RTD input
- ◆ below 1 mA for 4-20 mA input,
- ◆ below 0.25V for 1 - 5 V input,
- ◆ unavailable for other inputs.
- ◆ Sensor Break Responding Time :
- ◆ Within 4 seconds for TC, RTD and mV inputs,
- ◆ 0.1 second for 4-20 mA and 1 - 5 V inputs.

H

規格

Type	Range	Accuracy @ 25°C	Input Impedance
J	-120°C~1000°C (-184°F~1832°F)	±2°C	2.2 MΩ
K	-200°C~1370°C (-328°F~2498°F)	±2°C	2.2 MΩ
T	-250°C~ 400°C (-418°F~752°F)	±2°C	2.2 MΩ
E	-100°C~ 900°C (-148°F~1652°F)	±2°C	2.2 MΩ
B	0°C~ 1800°C (32°F~3272°F)	±2°C (200°C~1800°C)	2.2 MΩ
R	0°C~ 1767.8°C (32°F~3214°F)	±2°C	2.2 MΩ
S	0°C~ 1767.8°C (32°F~3214°F)	±2°C	2.2 MΩ
N	-250°C~ 1300°C (-418°F~2372°F)	±2°C	2.2 MΩ
L	-200°C~ 900°C (-328°F~ 1652°F)	±2°C	2.2 MΩ
C	0°C~ 2315°C (32°F~ 4199°F)	±2°C	2.2 MΩ
P	0°C~ 1395°C (32°F~ 2543°F)	±2°C	2.2 MΩ
PT100 (DIN)	-210°C~ 700°C (-346°F~ 1292°F)	±0.4°C	1.3 MΩ
PT100 (JIS)	-200°C~ 600°C (-328°F~ 1112°F)	±0.4°C	1.3 MΩ
mV	-8mV~70mV	±0.05 %	2.2 MΩ
mA	-3mA~27mA	±0.05 %	70.5 MΩ
V	-1.3V~11.5V	±0.05 %	650 KΩ

Output 1 / Output 2

Relay Rating : 2A/240 VAC, life cycles 200,000 for resistive load
Pulsed Voltage : Source Voltage 5V, current limiting resistance 66Ω
Linear Output Characteristics:

Type	Zero Tolerance	Span Tolerance	Span Tolerance
4~20 mA	3.6~4 mA	20~21 mA	500Ω max.
0~20 mA	0 mA	20~21 mA	500Ω max.
0~5 V	0 V	5~5.25 V	10 KΩ min.
1~5 V	0.9~1 V	5~5.25 V	10 KΩ min.
0~10 V	0 V	10~10.5 V	10 KΩ min.

Alarm

Alarm Relay : Form C Rating
2A/240VAC, life cycles 200,000 for resistive load.
Alarm Functions : Dwell timer, Deviation High / Low Alarm,
Deviation Band High / Low Alarm,
PV High / Low Alarm,
Alarm Mode : Normal, Latching, Hold, Latching / Hold.
Dwell Timer : 0.1-4553.6 minutes

Data Communication

Interface : RS-232 (1 unit), RS-485 (up to 247 units)
Protocol : Modbus Protocol RTU mode
Address : 1-247
Baud Rate : 2.4~38.4 Kbits/sec
Parity Bit : None, Even or Odd
Stop Bit : 1 or 2 bits
Communication Buffer : 64 bytes

Analog Retransmission

Output Signal : 4-20 mA, 0-20 mA, 0-5V, 1-5V, 0-10V
Resolution : 15 bits
Accuracy : ±0.05 % of span ±0.0025 %/°C
Load Resistance : 0 - 500 ohms (for current output)
10 K ohms minimum (for voltage output)
Output Regulation : 0.01 % for full load change
Output Settling Time : 0.1 sec. (stable to 99.9 %)
Isolation Breakdown Voltage : 1000 VAC min.
Integral Linearity Error : ±0.005 % of span
Temperature Effect : ±0.0025 % of span/°C
Saturation Low : 0 mA (or 0V)
Saturation High : 22.2 mA (or 5.55V, 11.1V min.)
Linear Output Range : 0-22.2mA(0-20mA or 4-20mA)
0-5.55V (0-5V, 1-5V)
0 - 11.1 V (0-10V)

Control mode

Output 1 : Reverse (heating) or direct (cooling) action
Output 2 : PID cooling control, cooling P band 50~300%
of PB, dead band -36.0 ~ 36.0 % of PB
ON-OFF : 0.1 - 90.0 (°F) hysteresis control (P band = 0)
P or PD : 0-100.0 % offset adjustment
PID : Fuzzy logic modified
Proportional band 0.1~900.0 °F. Integral time 0-1000 seconds
Derivative time 0-360.0 seconds
Cycle Time : 0.1-90.0 seconds
Manual Control : Heat (MV1) and Cool (MV2)
Auto-tuning : Cold start and warm start
Failure Mode : Auto-transfer to manual mode while
sensor break or A-D converter damage
Ramping Control : 0-900.0 °F/minute or 0-900.0 °F/hour ramp rate

◆ **User Interface**

Dual 4-digit LED Displays
Keypad : 4 keys
Programming Port : For automatic setup, calibration and testing
Communication Port : RS-232 and RS-485

◆ **Digital Filter**

Function : First order
Time Constant : 0, 0.2, 0.5, 1, 2, 5, 10, 20, 30, 60 seconds programmable

◆ **Profiler**

Number of profiles : 9
Number of Segment per profile
Profile 1, 2, 3, 4 : 16
Profile 5, 6, 7 : 32
Profile 8, 9 : 64
Event Outputs : 3

◆ **Protective Class :**

IP65 for panel with additional option
IP50 for panel without additional option
IP20 for terminals and housing with protective cover.
All indoor use.

◆ **EMC:** EN61326

◆ **Environmental & Physical**

Operating Temperature : -10°C to 50°C
Storage Temperature : -40°C to 60°C
Humidity : 0 to 90 % RH (non-condensing)
Altitude : 2000m maximum
Pollution : Degree 2
Insulation Resistance : 20 Mohms min. (at 500 VDC)
Dielectric Strength : 2000 VAC, 50/60 Hz for 1 minute
Vibration Resistance : 10 - 55 Hz, 10 m/s² for 2 hours
Shock Resistance : 200 m/s² (20 g)
Moldings : Flame retardant polycarbonate
Dimensions : 96P - 96mm(W) X 96mm(H) X 65mm(D),
53 mm depth behind panel
48P - 48mm(W) X 48mm(H) X 116mm(D),
05 mm depth behind panel
Weight : 96P- 250 grams
48P- 150 grams
Approval Standards
Safety : UL61010C-1
CSA C22.2 No.24-93
EN61010-1 (IEC1010-1)

■ **型號選用**



