



CM3-SP04ERO-A



CM3-SP04ETO-A

■ **Functional**

CIMON Part Number	CM3-SP04ERO-A	CM3-SP04ETO-A
<b>Type</b>	RTD	Thermocouple
<b>Sensor</b>	PT100, JPT100, PT1000, Ni1000 (DIN 43760), Ni1000 (TCR 5000)	K, J, E, T, B, R, S, N type
<b>Temperature Input Range</b>	PT100: -200.0–600°C (18.52–313.71 Ω) JPT100: -200.0–600°C (17.14–317.31 Ω) PT1000: -200.0– 600°C (185.2–3137.1 Ω) Ni1000 (DIN 43760): -50.0–160°C (742.6–2065.9 Ω) Ni1000 (TCR 5000): -50.0–160°C (790.9–1863.6 Ω)	K: -200.0 - 1200.0°C (-5891–48838 uV) J: -200.0 - 800.0°C (-7890–48494 uV) E: -200.0 - 600.0°C (-8825–45093 uV) T: -200.0 - 400.0°C (-5603–20872 uV) B: 400.0 - 1800.0°C (787–13591 uV) R: 0.0 - 1750.0°C (0–20877 uV) S: 0.0 - 1750.0°C (0–18503 uV) N: -200.0 - 1250.0°C (-3990–45694 uV)
<b>Digital Conversion</b>	Digital converted value: (14-bit): -192–16191 (-8192–8191, 0–16000, -8000–8000)  Digital converted value: (16-bit): 0–65000 (-32768–32767, 0–64000, -32000–32000)  Detected Temp. value: -2000–6000 (First decimal place value * 10) or -500–1600 (First decimal place value * 10)	Digitally converted value: 0–16000 (-8000–8000)/ -192–16191 (-8192–8191) Converted temperature value: Range of measured temperature (one digit after the decimal point * 10)
<b>Wire Disconnection Detection</b>	3 wires per channel	Each channel
<b>Accuracy</b>	±0.1% (full scale)	±[(Full Scale) x 0.3% + 1°C (RJC Error)]
<b>Max Conversion Rate</b>	40 ms/4 Channels	50 ms/4 Channels
<b>Number of Input Channels</b>	4	
<b>Insulation Type</b>	Photocoupler between input terminal and PLC power	
<b>Terminal Block</b>	12 points Terminal Block	9 points Terminal Block
<b>Current Consumption</b>	40 mA (+3.3V)	
	10 mA (+24V)	

■ **Features**

- Compatible expansion with any PLC-S CPU.
- RTD module converts PT100, JPT100, PT1000, Ni1000 into 14/16-bit digital value.
- TC module converts thermocouples (K, J, E, T, B, R, S, N) into 14-bit digital value.

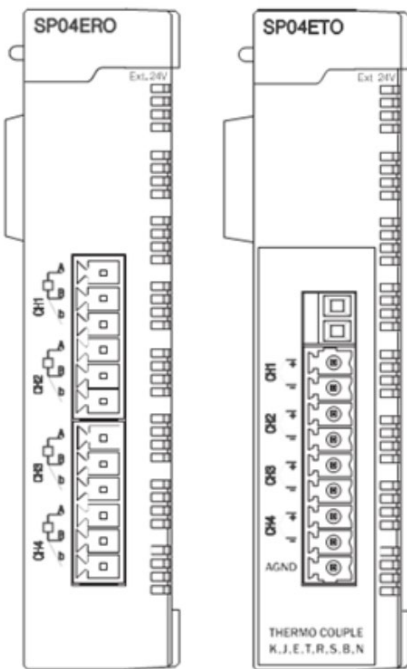
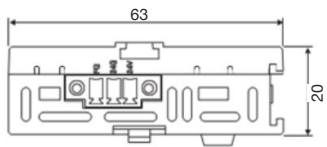
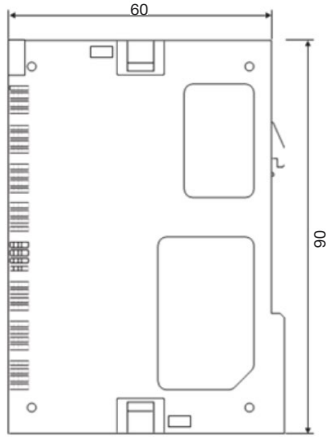
■ **Benefits**

- Diagnostic LEDs.
- Auto detection for wire disconnection.
- Auto detection for out-of-range of measurement.





\*SP04ERO-A and SP04ETO-A have the same dimensions. (Unit: mm)



### Physical

CIMON Part Number	CM3-SP04ERO-A	CM3-SP04ETO-A
Product Dimensions (H x W x D)	90 x 20 x 60 mm (3.5 x 0.8 x 2.4 in)	
Product Weight	153 g (0.34 lb)	87.5g (0.19 lb)

### Environmental

Item	Specification	Standards
Operating Temperature	-10 – +65 °C (+14 – +149 °F)	-
Storage Temperature	-25 – +80 °C (-13 – +176 °F)	-
Operating/Storage Relative Humidity	5 – 95% Non-condensing	-
Shock	15G	IEC 61131-2
Vibration	0.5G - Continuous 1G - Discontinuous	IEC 61131-2
Square Wave Impulse Noise	±2 kV	CIMON Standard
ESD Immunity	±4 kV - Contact Discharges ±8 kV - Air Discharges	IEC 61131-2 IEC 61000-4-2
Radiated Electromagnetic Immunity	80–1000 MHz, 10 V/m	IEC 61131-2 IEC 61000-4-3
Surge Transient Immunity	2 kV - CPU, Power 2 kV - Discrete I/O (VAC) 1 kV - Discrete I/O (VDC) 1 kV - Communication	IEC 61131-2 IEC 61000-4-4