

2-ch USB Temperature Data Logger



SCM-USU2I Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

Features

- Display method: No mark
- Number of input channels: 2-ch
- Input specifications:
 - Thermo couple: K(CA), J(IC), E(CR), T(CC), B(PR), R(PR), S(PR), N(NN), C(TT), G(TT), L(IC), U(CC), Platinel II
 - RTD: DPt100Ω, DPt50Ω, JPt100Ω, Cu100Ω, Cu50Ω, Nickel120Ω
 - analog: -60-60 mV, 0-200 mV, 0-1 V, 1-5 V, 0-5 V, 0-10 V, 0-20 mA, 4-20 mA
- Sampling period: 50 ms (2-ch synchronous sampling)
- Power supply: 5 VDC≐ USB bus power
- Protection structure: IP20

Software

Download the installation file and the manuals from the Autonics website.

■ DAQMaster

DAQMaster is comprehensive device management program. It is available for parameter setting, monitoring.

Specifications

Model	SCM-USU2I
Power supply	USB BUS POWER (5 VDC≐)
Allowable voltage range	90 to 110 % of rated voltage
Communication method	USB
Protocol	Modbus RTU
Display method	Check via PC software (DAQMaster)
Input specifications	Refer to 'Input Specifications'
Sampling period	50 ms (2-ch simultaneous sampling)
Unit weight (Packaged)	≈ 140 g (≈ 195 g)

Dielectric strength	500 VAC~ 50/60 Hz for 1 min (between input terminal and power terminal)
Vibration	0.75 mm amplitude at frequency of 5 to 55Hz (for 1 min) in each X, Y, Z direction for 2 hours
Shock	500 m/s ² (≈ 50 G) in each X, Y, Z direction for 3 times
Insulation resistance	≥ 100 MΩ (500 VDC≐ megger)
Memory protection	≈ 10 years (when using non-volatile semiconductor memory)
Ambient temp.	-10 to 50 °C, Storage: -20 to 60 °C (rated at no freezing or condensation)
Ambient humi.	35 to 85 %RH, Storage: 35 to 85 %RH (rated at no freezing or condensation)
Protection structure	IP20 (IEC standard)
Insulation type	Double insulation or reinforced insulation
Installation	DIN rail or panel mounting
Accessory	USB 2.0 AB type Cable: 1 (length: 1 m)
Approval	CE

Input Specifications

■ Input type and range

Input type		Decimal	Display	Input range (°C)	Input range (°F)
Thermo-couple	K (CA)	1	K (CA) .H	-200 to 1,350	-328 to 2,462
		0.1	K (CA) .L	-200.0 to 1,350.0	-328.0 to 2462.0
	J (IC)	1	J (IC) .H	-200 to 800	-328 to 1,472
		0.1	J (IC) .L	-200.0 to 800.0	-328.0 to 1472.0
	E (CR)	1	E (CR) .H	-200 to 800	-328 to 1,472
		0.1	E (CR) .L	-200.0 to 800.0	-328.0 to 1,472.0
	T (CC)	1	T (CC) .H	-200 to 400	-328 to 752
		0.1	T (CC) .L	-200.0 to 400.0	-328.0 to 752.0
	B (PR)	1	B (PR)	0 to 1,800	32 to 3,272
	R (PR)	1	R (PR)	0 to 1,750	32 to 3,182
	S (PR)	1	S (PR)	0 to 1,750	32 to 3,182
	N (NN)	1	N (NN)	-200 to 1,300	-328 to 2,372
	C (TT) ⁽⁰¹⁾	1	C (TT)	0 to 2,300	32 to 4,172
	G (TT) ⁽⁰²⁾	1	G (TT)	0 to 2,300	32 to 4,172
	L (IC)	1	L (IC) .H	-200 to 900	-328 to 1,652
		0.1	L (IC) .L	-200.0 to 900.0	-328.0 to 1,652.0
RTD	U (CC)	1	U (CC) .H	-200 to 400	-328 to 752
		0.1	U (CC) .L	-200.0 to 400.0	-328.0 to 752.0
	Platinel II	1	PLII	0 to 1,390	32 to 2,534
	Cu50 Ω	0.1	CU 50	-200.0 to 200.0	-200.0 to 392.0
	Cu100 Ω	0.1	CU 100	-200.0 to 200.0	-200.0 to 392.0
	JPt100 Ω	1	JPt100.H	-200 to 600	-328 to 1,112
		0.1	JPt100.L	-200.0 to 600.0	-328.0 to 1,112.0
	DPt50 Ω	0.1	DPt50.L	-200.0 to 600.0	-328.0 to 1,112.0
		DPt100 Ω	1	DPt100.H	-200 to 600
	0.1		DPt100.L	-200.0 to 600.0	-328.0 to 1,112.0
Analog	Voltage	1	AV1	-9999 to 9999 (Input range varies depending on decimal position)	
		0 to 10 V	AV2		
		0 to 5 V	AV3		
		0 to 1 V	AV4		
	Current	1	AMV1		
		0 to 200 mV	AMV2		
		-60 to 60 mA	AMA1		
		0 to 20 mA	AMA2		

01) C(TT): same as existing W5(TT) type sensor

02) G(TT): same as existing W(TT) type sensor

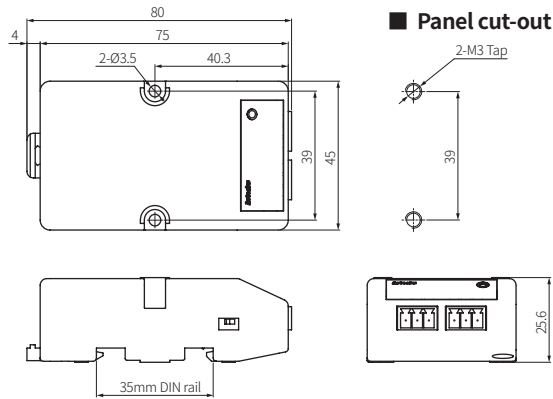
■ Measurement accuracy

Input type	Temperature range	Measurement accuracy
Thermo-couple RTD	At room temperature range ($23 \pm 5^{\circ}\text{C}$)	(PV $\pm 0.3\%$ or $\pm 1^{\circ}\text{C}$ select the higher) ± 1 -digit • Below -100°C of thermocouple K, J, T, N, E and L, U, PLII, RTD Cu50 Ω , DPt50 Ω : (PV $\pm 0.3\%$ or $\pm 2^{\circ}\text{C}$ select the higher) ± 1 -digit • Below 200°C of thermocouple C, G and R, S: (PV $\pm 0.3\%$ or $\pm 3^{\circ}\text{C}$ select the higher) ± 1 -digit • Below 400°C of thermocouple B: no accuracy standard
	Out of room temperature range	(PV $\pm 0.5\%$ or $\pm 2^{\circ}\text{C}$ select the higher) ± 1 -digit • RTD Cu50 Ω , DPt50 Ω : (PV $\pm 0.5\%$ or $\pm 3^{\circ}\text{C}$ select the higher) ± 1 -digit • Thermocouple R, S, B, C, G, L, U: (PV $\pm 0.5\%$ or $\pm 5^{\circ}\text{C}$ select the higher) ± 1 -digit • Other sensors: $\leq \pm 5^{\circ}\text{C}$ ($\leq -100^{\circ}\text{C}$)
Analog	At room temperature range ($23 \pm 5^{\circ}\text{C}$)	$\pm 0.3\%$ F.S. ± 1 -digit
	Out of room temperature range	$\pm 0.5\%$ F.S. ± 1 -digit

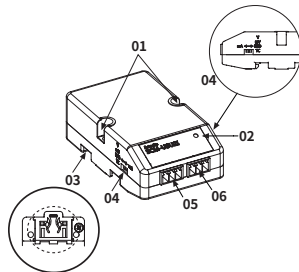
• Connecting 1 or more expansion module can vary measurement accuracy about $\pm 1^{\circ}\text{C}$, regardless of the number of connected expansion module.

Dimensions

• Unit: mm, For the detailed drawings, follow the Autonics website.



Unit Descriptions



01. Mounting hole

Used when the unit mounts to the panel.

02. Power Indicator (Red)

Turns ON when supplying power.

03. Rail Lock

Used when the unit mounts on DIN rail.

04. Input type selector

Selects the input type for each CH. the left selector is for CH1 and the right selector is for CH2.

V, mV, RTD, TC $\leftrightarrow$ mA
(Factory default)

05. CH1 connector

06. CH2 connector