ℰSignalCon®

ISC 2-Channel Isolated Universal Signal Converter/Conditioner/Isolator

Features

- The unique Math function.

$$f(PV_1, PV_2) = \sqrt{\frac{PV_1 \times A + PV_2 \times B}{C}}$$

  PV1,PV2 is the measuring value of Channel 1 and Channel 2 separately. A,B,C is a constant set by user.
- The unique High/Low comparison output.
  The output 1 can scale to PV1 or PV2 whichever is higher/lower than the other.
- Programmable for various input signals and measuring range.
- Configurable without Power Connected.
- Full 3-way isolation for 1500 Vrms.
- DIN rail mount.
- Dual channel Input.
  Resistance thermometer (Pt100)
  Thermocouple (J,K,T,E,B,R,S,N,C)
  Voltage/Current transmitter (mV/V/mA)
- Dual 0/4 to 20 mA or 0~10V analogue output (ISC-D).
- RS485 communication interface with Modbus RTU protocol (ISC-C).
- Fault signal on sensor break presettable.

Configuration

The ℰ**SignalCon**® DIN Rail converter is user configurable with the ℰ**Signalwin**® software and interface cable URC-1020 or handheld programmer.The ℰ**Signalwin**® is user-friendly software. The latest release version can be download free from website. Interface cable consist of interface converter and USB plug. It can be purchased separately from the ℰ**SignalCon**® supplier. During configuration the converter can work alone without connecting to a power source.

Specification	
Input	Thermocouple (T/C) : industry standard thermocouple types J, K, T, E, B, R, S, N, C (ITS-90). Pt100: Excitation 180uA. 2 or 3 wire connection (ITS-90 α=0.00385). Voltage: -60mVdc to 60mVdc or -10Vdc to 10Vdc. Current: 0-24mAdc
Accuracy	Refer to Table 1 Input Signal
A/D Resolution	16 bits
Input Sampling Rate	<200ms
Power Supply	DC 24V
Output	Current Output:0/4~20mA(Resistive load 600Ω max.) Continuous Voltage Output:0~50mV; 0~10V... (Resistive load 600Ω min.)
Output Resolution	0.6 μA(15 bits)
Output Response Time	<200ms
Common Mode Rejection Ratio(CMRR)	>80dB
Electromagnetic Compatibility (EMC)	En 50081-2, En 50082-2
Galvanic Isolation	3.75 KV. between input and output
Operating Temperature	-10℃ ~ 50℃
Humidity	0 to 90% RH
Dimension	75mm(W)x87mm(H)x18.5mm(D)

Table 1 Input Signal

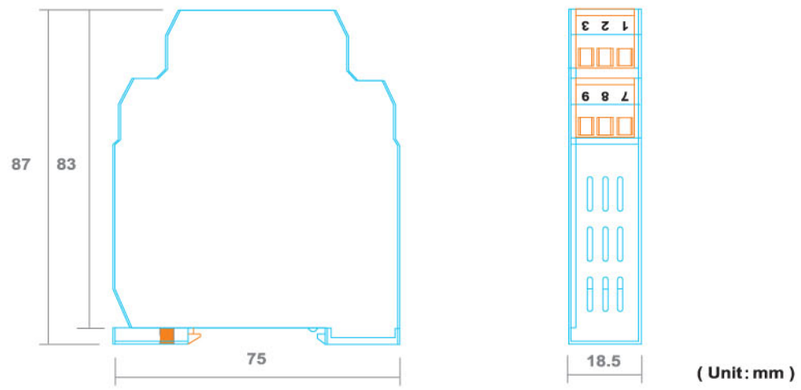
Input signal	Maximum Range	Accuracy
Thermocouple J	-50 to 1000 ˚C (-58 to 1832˚F)	±1˚C
Thermocouple K	-50 to 1370 ˚C (-58 to 2498˚F)	±1˚C
Thermocouple T	-270 to 400 ˚C (-454 to 752˚F)	±1˚C
Thermocouple E	-50 to 700 ˚C (-58 to 1292˚F)	±1˚C
Thermocouple B	0 to 1750 ˚C (32 to 3182˚F)	±2˚C(Note 1)
Thermocouple R	-50 to 1750 ˚C (-58 to 3182˚F)	±2˚C
Thermocouple S	-50 to 1750 ˚C (-58 to 3182˚F)	±2˚C
Thermocouple N	-50 to 1300 ˚C (-58 to 2372˚F)	±2˚C
Thermocouple C	-50 to 1800 ˚C (-58 to 3272˚F)	±2˚C
Pt100	-200 to 600 ˚C (-328 to 1112˚F)	±0.2˚C
mV	-60mVto 60mV	±0.01mV
Voltage (Note 2)	-10 to 10Vdc	±1mV
Current (Note 2)	0 to 24mAdc	±10 μA

Note 1 : Accuracy is not guaranteed between 0 and 400˚C (0 and 752˚F) for type B.

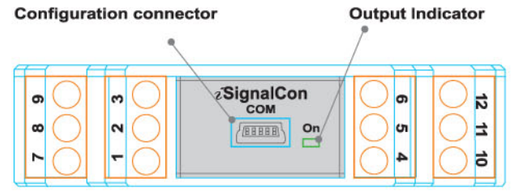
Note 2 : The internal DIP switch should be set.

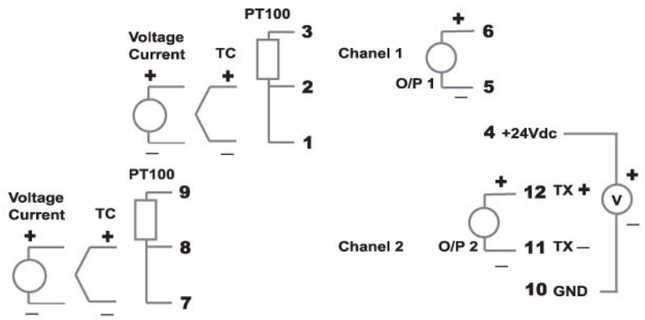
VERTEX

Dimension



Electrical Connection





Ordering Information

ISC —

Output 1	Code
4 ~ 20 mA	M
0 ~ 10 VDC	V

Output 2	Code
4 ~ 20 mA	M
0 ~ 10VDC	V
RS-485	C

The unit will come standard with PT100, -200~600°C, you can change the input Type/Rang using the free software "ℰ**Signalwin**®" with the configuration cable URC-1020, or you can contact us for non-standard Input/Rang setting.