iSignalCon®

ISC Dual Channel Isolated Signal Conditioner/Converter

Features

- Programmable for various input signals, measuring range
- Configurable without external Loop Power Connected
- Input:
  Resistance thermometer (Pt100)
  Thermocouple (J,K,T,E,B,R,S,N,C)
  Voltage/Current (mV/V/mA)
- Output device:
  1. ISC-S : Single Analog Output(OUT 1): 4 ~20 mA、0~10VDC ⋯ OUTPUT1=PV1
  2. ISC-D: Dual Analog Outputs: 4 ~20 mA、0~10VDC ⋯ OUTPUT1=PV1 ; OUTPUT2=PV2
  3. ISC-C: One Analog Output(OUT1) 4 ~20 mA、0~10VDC ⋯with RS485 com port:MODBUS-RTU (OUT2); OUTPUT1=PV1
- High accuracy in total ambient temperature range.
- Fault signal on sensor break presettable.

Configuration

The iSignalCon® DIN Rail converter is user configurable with the iSignalwin® software and interface cable URC-1020 or handheld programmer.The iSignalwin® 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 iSignalCon® 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: 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	4 KV. between input and output
Operating Temperature	-40 to 85° C
Humidity	0 to 90% RH
Dimension	75mm(W)x87mm(H)x18.5mm(D)

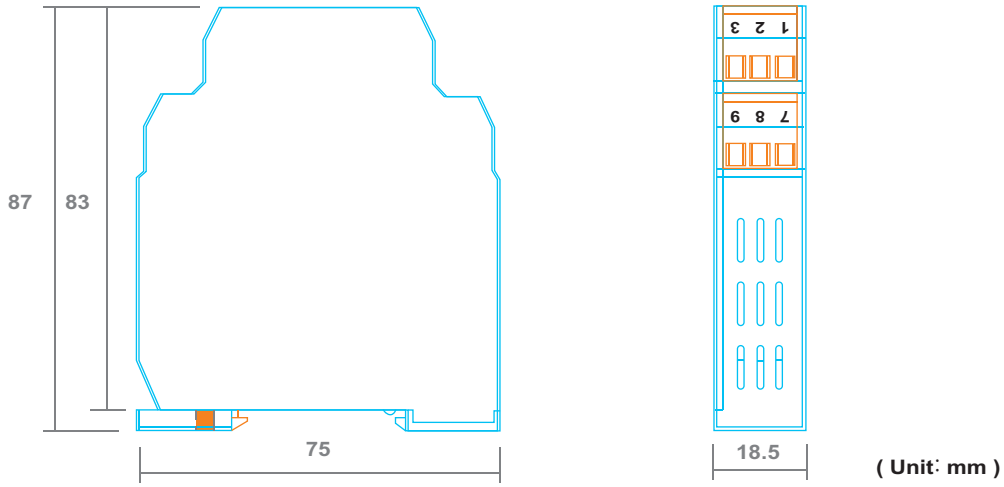
Table 1 Input Signal

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 960 °C (-58 to 1760 °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

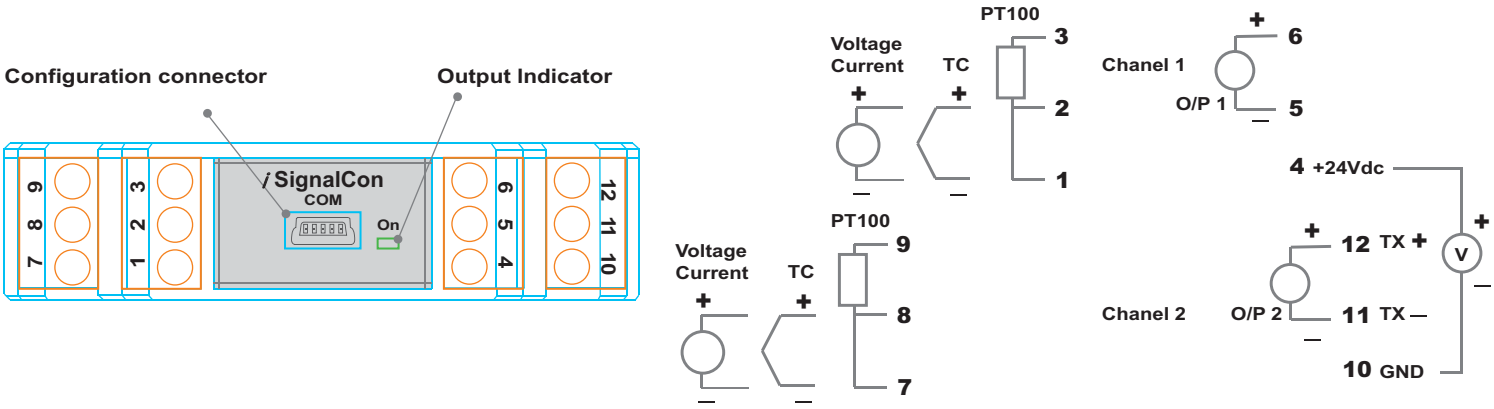
Note 1 : Accuracy is not guaranteed between 0 and 400 °C (0 and 752 °F) for type B.

Note 2 : The internal DIP switch should be set.

Dimension



Electrical Connection



Ordering Information

ISC – S ____ ____ N ____
ISC – D ____ ____ ____
ISC – C ____ ____ C ____

Output Device	Code
Single analog output	S
Dual analog outputs	D
One analog output with RS485 com port	C

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

Output 2	Code
None	N
4 ~ 20 mA	M
0 ~ 10DVC	V
Other	O
RS-485	C

Expolsion Proof	Code
Yes	Y
No	N

Please specify the following parameters if factory setting is requested.

NN ____ – RANGE

Input Signal	Code	Maximum Range
Thermocouple J	J	-50 to 1000˚C (-58 to 1832˚F)
Thermocouple K	K	-50 to 1370˚C (-58 to 2498˚F)
Thermocouple T	T	-270 to 400˚C (-454 to 752˚F)
Thermocouple E	E	-50 to 960 ˚C (-58 to 1760˚F)
Thermocouple B	B	0 to 1750˚C (32 to 3182˚F)
Thermocouple R	R	-50 to 1750˚C (-58 to 3182˚F)
Thermocouple S	S	-50 to 1750˚C (-58 to 3182˚F)
Thermocouple N	N	-50 to 1300˚C (-58 to 2372˚F)
Thermocouple C	C	-50 to 1800˚C (-58 to 3272˚F)
Pt100	D	-200 to 600˚C (-328 to 1112˚F)
mV	L	-60mVto 60mV
Voltage	V	-10 to 10Vdc
Current	M	0 to 24mAdc