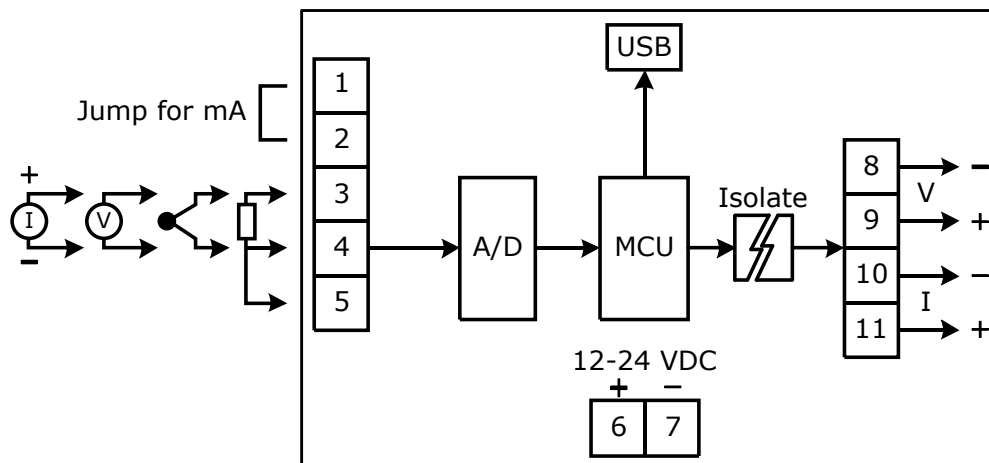


Universal Signal Conditioner SC20



- Programmable Input
- Isolated Input, Output and Power Supply
- Universal Conversions
- 4 - 20 mA, 0 - 10 VDC, 0 - 5 VDC Transmitter Output
- High Accuracy (16 Bits)
- Low Cost
- Easy to Install

Universal Signal Conditioner SC20 A signal conditioner is a device that converts one type of electronic signal into a another type of signal. Its primary use is to convert a signal that may be difficult to read by conventional instrumentation into a more easily read format.



Specifications

USB Interface

Compliance: USB 1.1/2.0

Connector: USB Type B

Speed: 12 Mbps (Full-Speed USB)

Class: CDC

Analog Input

Number of Channel: 1 Channel

Input Type: Programmable Input

Input Range:

Thermocouple: R, S, K, E, J, T, B

RTD: Cu10, PT100, PT1000

Resistance: 0 to 600 Ω , 0 to 1.2 K Ω ,
0 to 4 K Ω

Voltage (mVDC): 0 to 80, 0 to 150

Voltage (VDC): 0 to 1, 0 to 5, 0 to 10,
0 to 15, 0 to 30

Current: 4 to 20 mA, 0 to 20 mA,
0 to 40 mA

ADC Resolution: 16 Bits

Input Impedance: Refer to **Table 1**

Analog Output

Number of Channel: 1 Channel

Output Type: Current, Voltage
(Programmable Output)

Ordering Information:

Example SC20

Package Checklist

1. SC20
2. USB Cable
3. Manual
4. CD Software

Output Range:

Current: 4 to 20 mA

Voltage: 0 to 5, 1 to 5, 0 to 10 VDC

Output Load Resistance:

Current: Max. 1000 Ω Load

Voltage: Min. 600 Ω Load (10 VDC)

Isolation Voltage: 500 VAC, Between
Input Output and Power Supply

Power Requirements

Power Supply: 12 to 24 VDC

Power Consumption

Standby: 155 mA @ 12 VDC

Environmental Limits

Operating Temperature: 0 to 55 $^{\circ}\text{C}$

Operating Humidity: 5 to 95% RH

Storage Temperature: 0 to 70 $^{\circ}\text{C}$

Physical Characteristics

Dimension: W20 x H100 x D118 mm.

Mounting: DIN Rail

Warranty

Warranty Period: 5 year

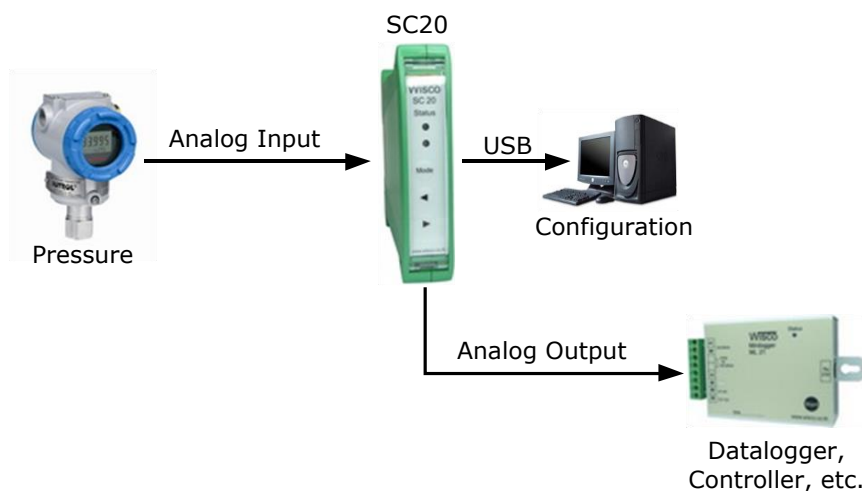


Table 1. Shown Accuracy and Resolution Each Input Type

Code	Input Type		Measuring Range	Resolution	Accuracy (%FS) (Temp. 25 °C)	Input Impedance
0	Not Use		-	-	-	-
1	Thermocouple	R	0.0 - 1700.0 °C	1.5 °C	±0.2%(3.4°C)	280 KΩ
2		S	0.0 - 1700.0 °C	1.5 °C	±0.2%(3.4°C)	280 KΩ
3		K	(-)250.0 - 1300.0 °C	0.2 °C	±0.2%(2.6°C)	280 KΩ
4		E	0.0 - 1000.0 °C	0.1 °C	±0.2%(2.0°C)	280 KΩ
5		J	(-)200 - 700.0 °C	0.15 °C	±0.2%(1.4°C)	280 KΩ
6		T	(-)250 - 400.0 °C	0.2 °C	±0.2%(0.8°C)	280 KΩ
7		B	600.0 - 1800.0 °C	1 °C	±0.2%(3.6°C)	280 KΩ
8	RTD	Cu10	0.0 - 150 °C	1 °C	±0.1%(1.5°C)	-
9		Pt100	(-)200.0 - 800.0 °C	0.15 °C	±0.1%(0.8°C)	-
10		Pt1000	(-)200.0 - 800.0 °C	0.1 °C	±0.1%(0.8°C)	-
11	Resistor (ohm)	600	0.0 - 600.0 Ω	0.06 Ω	±0.01%(0.06 Ω)	-
12		1200	0.0 - 1200.0 Ω	0.06 Ω	±0.02%(0.24 Ω)	-
13		4000	0.0 - 4000.0 Ω	0.1 Ω	±0.02%(0.8 Ω)	-
14	Voltage (mV)	80	0.0 - 80.0 mV	8 μV	±0.1%(5 μV)	280 KΩ
15		150	0.0 - 150.0 mV	8 μV	±0.02%(30 μV)	280 KΩ
16	Voltage (V)	0-1	0.0 - 1.0 V	30 μV	±0.05%(500 μV)	1 MΩ
17		0-5	0.0 - 5.0 V	2 mV	±0.04%(2 mV)	1 MΩ
18		0-10	0.0 - 10.0 V	2 mV	±0.04%(2 mV)	1 MΩ
19		0-15	0.0 - 15.0 V	2 mV	±0.02%(3 mV)	1 MΩ
20		0-30	0.0 - 30.0 V	2 mV	±0.033%(10 mV)	1 MΩ
21	Current (mA)	4-20	4.0 - 20.0 mA	3 μA	±0.01%(5 μA)	100 Ω
22		0-20	0.0 - 20.0 mA	3 μA	±0.01%(5 μA)	100 Ω
23		0-40	0.0 - 40.0 mA	12 μA	±0.05%(0.0 A)	100 Ω