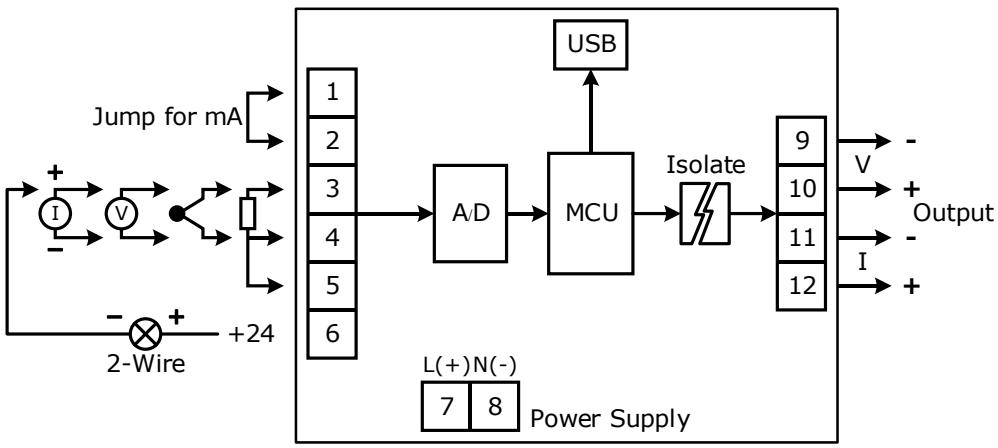
Universal Signal Conditioner

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.



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Specifications

USB Interface

Compliance: USB 1.1/2.0
Connector: USB Type Mini-A (Female)
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 KΩ, 0 to 4 KΩ
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
Loop Powered: 24 VDC (Source 2-Wire)
ADC Resolution: 16 Bits
Input Impedance: Refer to ***Table 1***

Analog Output

Number of Channel: 1 Channel
Output Type: Current, Voltage (Programmable Output)
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 (85 to 230 VAC Optional)

Power Consumption

Standby: 155 mA @ 12 VDC

Environmental Limits

Operating Temperature: 0 to 55 °C
Operating Humidity: 5 to 95% RH
Storage Temperature: 0 to 70 °C

Physical Characteristics

Dimension: W20 x H100 x D118 mm.
Mounting: DIN Rail

Warranty

Warranty Period: 5 Year

Ordering Information: Specify Power Supply
Example SC20/12to24VDC

Package Checklist
1. SC20 2. USB Cable

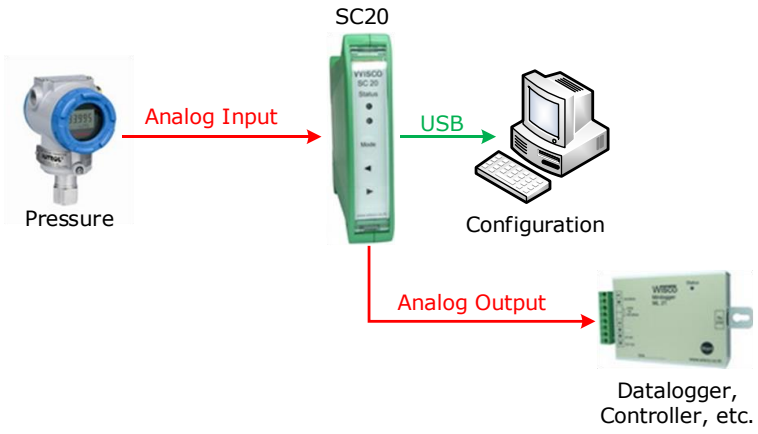

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Table 1. Shown Accuracy and Resolution Each Input Type

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