SIGNAL TRANSDUCER

Cat No. **2SC3D11CC3**

CE RoHS

Features:

- The Signal Transducer converts analog voltage and current signals into the analog voltage and current signals.
- It provides a 3-port galvanic isolation of 3.75kV.
- Inputs and Outputs can be selected via DIP switch setting.
- Total 16 combinations of analog inputs and outputs are available.
- It is supplied in a standardized industrial housing, 22.5mm wide, for mounting on 35mm symmetrical DIN-rail.
- All ranges are factory pre-calibrated also CUSTOM FIELD calibration is available for all given ranges with the help of user accessible potentiometer on front side of the product.
- The auxiliary voltage is indicated by Power-ON green LED.
- Accuracy Class 1(As per IEC60688)
- Output Response Time <100ms

Operation:

Process control and monitoring systems often utilize a large number of standard process signals; Voltage levels, current loops, temperature and pulsed signals to name but a few. When designing a system from scratch it may be possible to exactly match each type of sensor to a controller, but even then it is not always cost effective to do so. signal transducer which is used to converts the standard selected analog signals in voltage or current form to standard signal in voltage or current form in user selectable mode.

The modes of input signal are (0–10)VDC, (2–10)VDC, (0–20)mA, (4–20)mA and modes of output signals are (0–10)VDC, (2–10)VDC, (0–20)mA, (4–20)mA. DIP switches are accessible from Front side of the Base which is used for selection of input - output configuration.

The selection has to done before making the Device power ON.

Function:

- Linear process signal converter with galvanic isolation between input, output and supply.
- Offset/Gain zero adjustable on front panel.+/- 5% for Offset & +/- 10% for Gain.

Precautions:

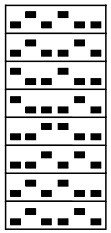
1.Selection of DIP switch is important as per the output mode to get the proper output with said accuracy.

2.On DIP switch, SW No. 6 is NC and it should be always at OFF position.

Applications:

Sometimes the available signals from sensors or other devices cannot be processed by the controller or the actuator. In this case, signal transducers are required to convert the input signal (or different input signals) to the desired output signal. Also it is useful to use the product as a signal isolator which provides 3.75kV galvanic isolations between input signal and output signal.

Dip Switch Mode Selection:

Mode		Input Voltage / Current (DC)		Output Signal
	–	(0-10)V	(0-20)mA	(0-10)V
	–	(0-10)V	(0-20)mA	(0-20)mA
	–	(0-10)V	(0-20)mA	(2-10)V
	–	(0-10)V	(0-20)mA	(4-20)mA
	–	(2-10)V	(4-20)mA	(0-10)V
	–	(2-10)V	(4-20)mA	(0-20)mA
	–	(2-10)V	(4-20)mA	(2-10)mA
	–	(2-10)V	(4-20)mA	(4-20)mA

1 2 3 4 5 6

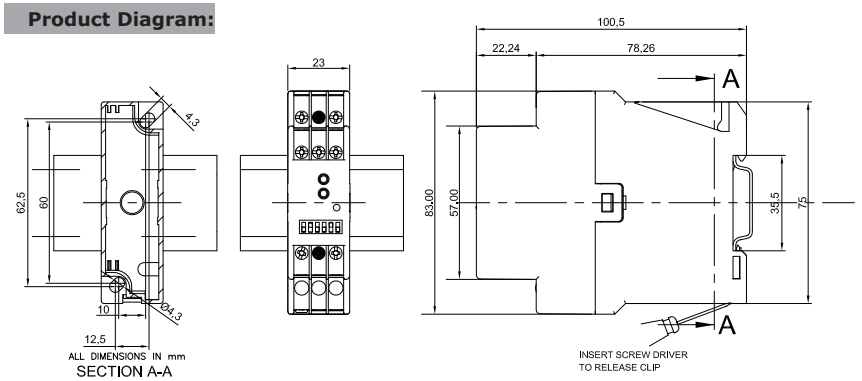
Product Specifications:

Catalogue No.	2SC3D11CC3
Supply Characteristics:	
Supply Voltage	24VDC, +/-15%
Power Consumption	2 W
Device Characteristics :	
Input signal	0-10VDC, 2-10VDC, 0-20mA DC, 4-20mA DC
Input Impedance	V-Approx. 100 kOhm, I-100 Ohm approx.
Output Signal	0-10VDC,2-10VDC (min. 1 kOhm load) 0-20mA DC,4-20mA DC (max. 500 Ohm load)
Accuracy	1% of full Scale
Offset	+/- 5% of full scale Adjustable
Gain	+/- 10% of full scale Adjustable
Linearity	<0.02% of full scale
Protections:	
Input supply reverse polarity	Yes
Input signal reverse polarity	Yes
Output short circuit current	<25mA(Output Voltage mode)
Output open circuit voltage	(12-14)VDC (Output Current mode)
LED Indication	GREEN LED: Power ON
Operating Temperature	-10°C to +55°C
Storage Temperature	-15°C to +60°C
Relative Humidity	95 % RH (non condensing)
Mounting Type	Din Rail Mounting
EMI/EMC Compliance :	
ESD	IEC 61000-4-2 Ed. 2 (2008-12) Level II
Radiated Susceptibility	IEC 61000-4-3 Ed. 3.2 (2010-04)10v/m Level III
Electrical Fast Transient on supply	IEC 61000-4-4 Ed.3.0 (2012-04) Level III
Electrical Fast Transient on I/O signal	IEC 61000-4-4 Ed.3.0 (2012-04) Level II
Surge on supply	IEC 61000-4-5 Ed.3.0 (2014-05) Level III
Surge on I/O signal	IEC 61000-4-5 Ed.3.0 (2014-05) Level II
Conducted Susceptibility	IEC 61000-4-6 Ed.4.0 (2013-10) 10V Level III
Voltage Dips & Interruptions (DC)	IEC 61000-4-29 Ed.1.0.(2000-08)
Conducted Emission	CISPR 14-1 Ed. 5.2 (2011-11) Class B
Radiated Emission	CISPR 14-1 Ed. 5.2 (2011-11) Class B
Safety Compliance:	
Test Voltage between I/P & O/P	IEC 60947-5-1 Ed.3.1 (2009-07) 3.75 kV AC
Impulse Voltage between I/P & O/P	IEC 60947-5-1 Ed.3.1 (2009-07) Level IV
Single Fault Test	IEC 61010-1 Ed.3.0 (2010-06)
Insulation resistance	UL 508 Ed. 17 (1999-01) <2000M
Leakage Current	UL 508 Ed. 17 (1999-01) <3.5mA
Degree of Protection	IP 20 for Terminal; IP-40 for Housing
Pollution Degree	II
Type of Insulation	Reinforced
Environmental Compliance:	
Cold Heat	IEC 60068-2-1 Ed.6.0 (2007-03)
Dry Heat	IEC 60068-2-2 Ed.5.0 (2007-07)
Vibration	IEC 60068-2-6 Ed.7.0(2007-12) 5g
Repetitive Shock	IEC 60068-2-27 Ed.4.0 (2008-02) 40g, 6ms
Non-Repetitive Shock	IEC 60068-2-27 Ed.4.0 (2008-02) 30g, 15ms

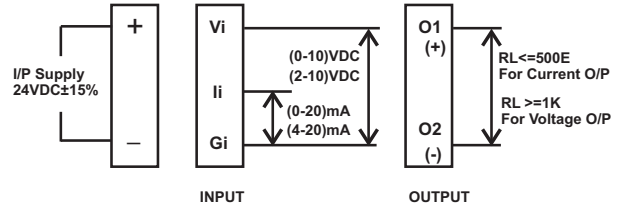
Note:

1. The technical information provided in this document is correct at the time of going to press.
2. Product innovation being a continuous process, we reserve the right to alter specifications without any prior notice.
3. Only qualified persons are authorized to install the device.

Product Diagram:

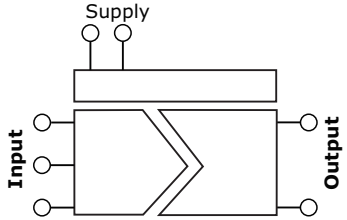


Connection Diagram:

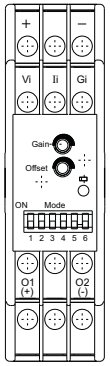


3 Port Isolation Diagram:

3,75kV AC (input, supply and output)



Front facia:



Terminal Details:

Ø3.5....4.0mm	0.6 N.m (6 Lb.in) Terminal screw - M3
	1 x 0.5...4 mm² Stranded Wire
AWG	1 x 22 to 10