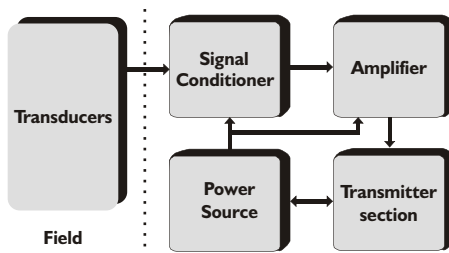


## INTRODUCTION

The ESD make Signal Isolators series are used in applications where one signal is to be fed to two different instruments to avoid ground loops. ESD SIG 40 series is a single input and single or dual output signal isolator. It accepts 4 - 20 mA input and converts it into two isolated 4 -20 mA signals. The unit is Din Rail mounting type. Internal potentiometers for Span and Zero of each output are provide internally. The instrument has high degree of isolation between supply, input and output with respect to one another. Choice for number of outputs is available. Use of highly reliable electronic components ensures long and trouble free service. The instrument is tested for its performance under various climatic conditions.

## PRINCIPLE OF OPERATION



The SIG 40 series is based on the principle of isolating the input signal from the output signal using a high precision analog isolators.

The selection of analog isolators and its circuitry ensures linear signal transmission. Sensor compensation circuit, where automatic cold junction compensation in case of thermocouple & lead resistance compensation in case of Pt - 100 is achieved. Duly compensated signal is fed to a signal conditioning amplifier.

## APPLICATION

The SIG 40 series isolator can be used in any process control system where isolation is required between input and output signal to break the ground loop. Also in application where the input signals from the field are to be given to multiple devices like PLC /VFD etc.

## FEATURES

- ✓ Proven troublefree field performance
- ✓ Highly compact
- ✓ Highly stable output
- ✓ Fast response time
- ✓ DIN rail mounting
- ✓ Maximum MTBF and minimum MTTR
- ✓ Isolation between input and output
- ✓ ABS enclosure
- Designed for 4 to 20 mA / thermocouples inputs
- ✓ Cold junction compensation for Thermocouple input



## SPECIFICATIONS

Model	: SIG 401/ SIG 402
Input type	: Thermocouple / 4 - 20 mA / 0 - 10 VDC
Input resistance	: Less than 100 ohms for 4 - 20 mA input
Output	: 4 - 20 mA / 0 - 20 mA / 0 - 10 VDC
Load resistance	: 400 ohms maximum for 4 - 20 mA output
Number of outputs	: One / Two
Accuracy	: +/- 0.1% for 4 - 20mA / 0 - 10 VDC, +/- 0.5% for thermocouple
Power supply	: 24 VDC, +/- 10 %
Relative humidity	: Less than 90 % non condensing
Ambient temperature	: 0 to 55°C
Accuracy deviation due to	
a) Temperature change	: +/- 0.03 % /°C, ref at 25°C
b) Supply variation	: +/- 0.005 % / V
Isolation	: 1 kV between control supply, input and output with respect to one another

Recalibration (if reqd) : By zero & span potentiometers inside

Dimensions (in mm) : 75 (L) x 22.5 (W) x 110 (H)

Mounting : DIN rail

Enclosure : ABS plastic

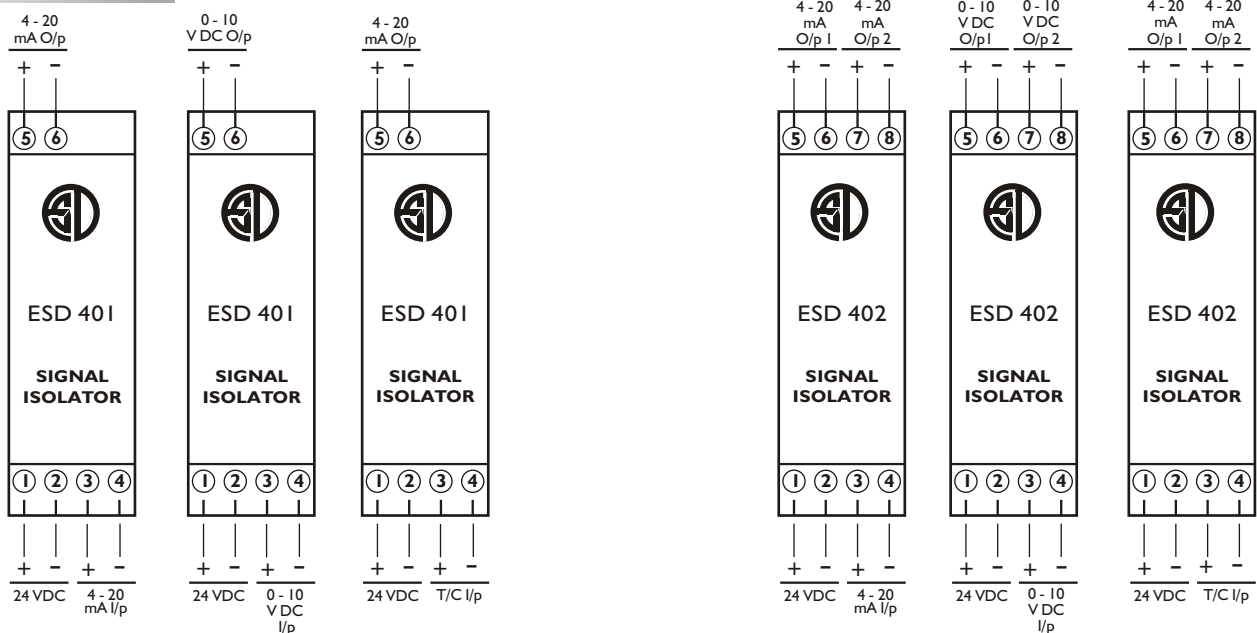
Termination : Screwed type suitable for 2.5mm<sup>2</sup> wire

Weight : 150 grams approximately

Chart :

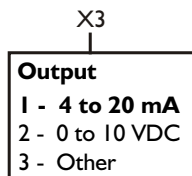
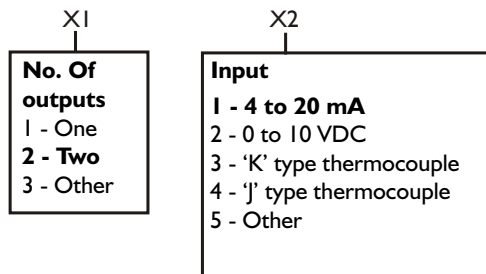
Input	Standard Ranges in °C		
J	0 - 200	0 - 400	0 - 600
K	0 - 200	0 - 400	0 - 600
	0 - 800	0 - 1000	0 - 1200

## INSTALLATION



## ORDERING INFORMATION

ESD SIG 40



<b>Ordering eg. SIG 40 - 211</b>	
No. of O/p's	: Two (2)
Input	: 4 to 20 mA (1)
Output	: 4 to 20 mA (1)



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Process Control Instrumentation

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