

# PROCESS SIGNAL ISOLATORS

## SEM1010 ISOLATING SIGNAL REPEATER

- Provides Isolation between two devices using the same power supply
- (4 to 20) mA Output
- Galvanic Isolation 500 V DC Flash Tested 1 KV
- High Accuracy 0.05%
- 21 mm Wide
- 10 YEAR WARRANTY



### INTRODUCTION

The SEM1010 is designed to provide an isolation barrier between a field mounted (4 to 20) mA transmitter and the process monitoring system. The isolator output is a two wire (4 to 20) mA current sink. The SEM1010 derives its power from the output loop.

This isolator requires no user adjustments during commissioning, apart from an initial test, to ensure it operates correctly over its full working range. Minor adjustments can be made to the calibration of the device, by means of the two front panel accessible calibration potentiometers. Incorrect connection in the loop will not damage the device as long as the specified maximum currents/voltages are not exceeded.

### SPECIFICATIONS @ 20 °C

INPUT	TYPE	Two wire (4 to 20) mA Powers & monitors two wire Transmitter from the loop output
	RANGE	(4 to 20) mA (25Max)
	PROTECTION	Current limited
	Tx SUPPLY	(5 to 15) V Max
	MAX LOOP VOLTS	35 Volts
OUTPUT	TYPE	(4 to 20) mA Current Sink Reverse protected
	LOOP DROP	5 V @ 20 mA ( with a 10 V Tx drop)
		6.5 V max @ 20 mA 10 V max @ 4 mA

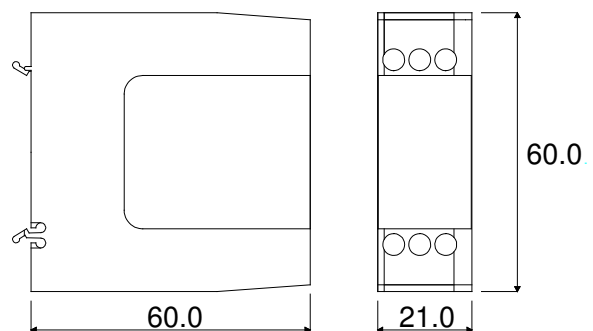
#### GENERAL SPECIFICATION

ISOLATION	500 V DC (flash tested @ 1 kV) (Isolation method, opto coupler / transformer)
ENVIRONMENT	BS EN61010-1 POLLUTION DEGREE 2; INSTALLATION CAT II; CLASS I
AMBIENT	(0 to 70) °C ; (10 to 95) % RH non-condensing
LINEARITY	0.05 %
STABILITY	0.01 % / °C
RESPONSE TIME	Less than 100 mS to reach 70 % of final value.
EMC Tested to	BS EN 61326
ADJUSTMENT	Front Entry Fine Zero and Span Adjustment

### MECHANICAL DETAILS

CONNECTION	Captive clamp screws
CABLE SIZE	Maximum 4 mm sq solid / 2.5 mm sq stranded
CASE MATERIAL	Grey Polyamide
FLAMMABILITY	To UL94-VO VDE 0304 Part 3, Level IIIA
DIMENSIONS	(60 x 60 x 21) mm (67.5 above rail)
MOUNTING	Snap on "top hat" rail (DIN EN 50022-35)

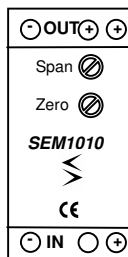
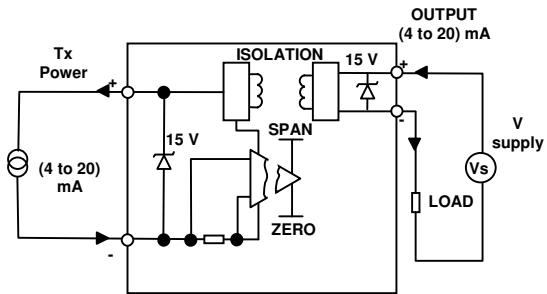
(All dimensions in mm)



# PROCESS SIGNAL ISOLATORS

## SCHEMATIC

SEM1010



ORDER CODE: SEM1010