

# PROCESS SIGNAL ISOLATORS

## SEM1000 LOOP ISOLATOR

- Loop Powered
- (4 to 20) mA Output
- Galvanic Isolation 500 V DC Flash Tested 1 KV
- High Accuracy 0.05%
- 12.5 mm Wide



### INTRODUCTION

The SEM1000 isolator is designed to be series connected into a new or existing (4 to 20) mA current loop and provide an isolated (4 to 20) mA signal capable of driving into 300 Ω maximum load. The output is powered from the input loop.

This isolator requires no user adjustment during commissioning. 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

<b>INPUT</b>	Type	Current input 2 wire Loop powered
	Range	(4 to 20) mA (30 mA MAX)
	Protection	Reverse connection
	Voltage Drop	5.0 V typical, 5.5 V Maximum (Plus output load) $5.5 + (\text{load} \times 0.02)$
<b>OUTPUT</b>	Max Loop Supply	35 Volts
	Type	(4 to 20) mA source (Powered from input)
	Load	0 to 300 R (Open circuit limits at approximately 15 V)

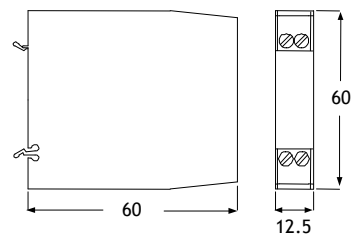
#### GENERAL SPECIFICATION

Isolation	500 V DC (flash tested @ 1 kV) (Isolation method, opto coupler / transformer)
Electrical Safety	BS EN61010-1 POLLUTION DEGREE 2; INSTALLATION CAT II ; CLASS I
Ambient	(0 to 70) °C ; (10 to 95) % RH non condensing
Accuracy	0.05 % full range output
Stability	0.01 % / °C
Response Time	Less than 100 mS to reach 63 % of final value.
EMC Tested to	BS EN 61326
Adjustments	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 12.5) mm (67.5 above rail)
Mounting	Snap on "top hat" rail (DIN EN 50022-35)

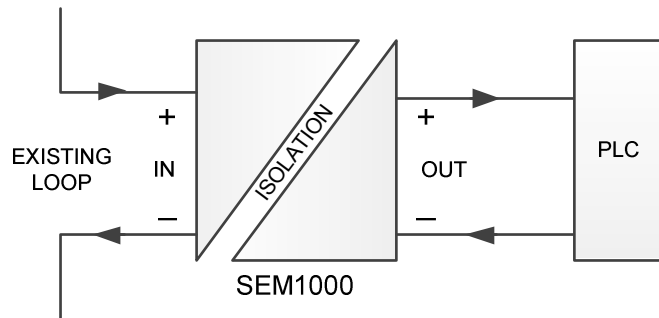
(All dimensions in mm)



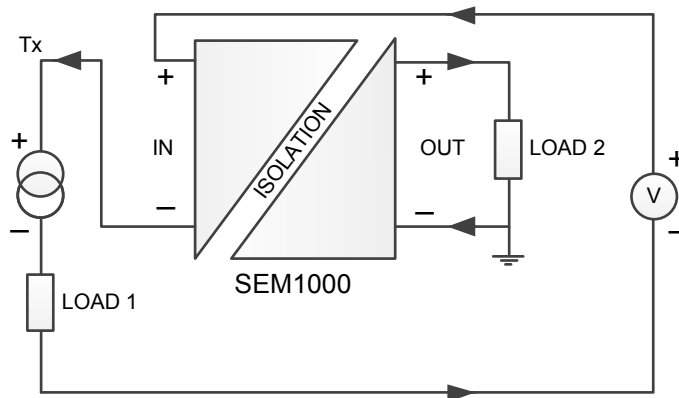
# PROCESS SIGNAL ISOLATORS

## APPLICATIONS

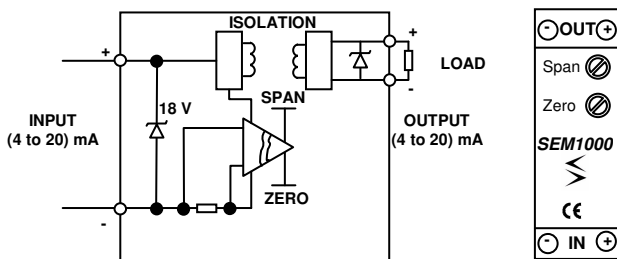
SEM1000



SEM1000



## SCHEMATIC



ORDER CODE: SEM1000