

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

| | | |
|---------------|-----------------|---|
| INPUT | 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) $5.5 + (\text{load} * 0.02)$ |
| OUTPUT | 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) |

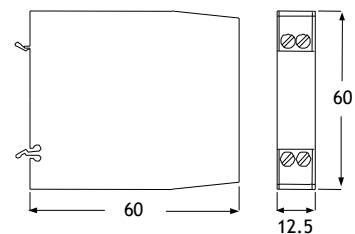
GENERAL SPECIFICATION

| | |
|-------------------|--|
| 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) |

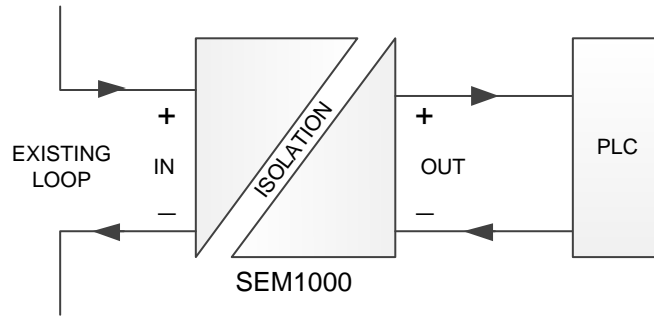
(All dimensions in mm)



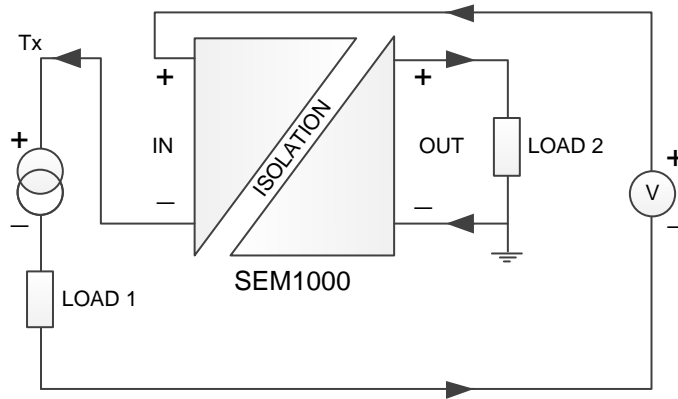
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APPLICATIONS

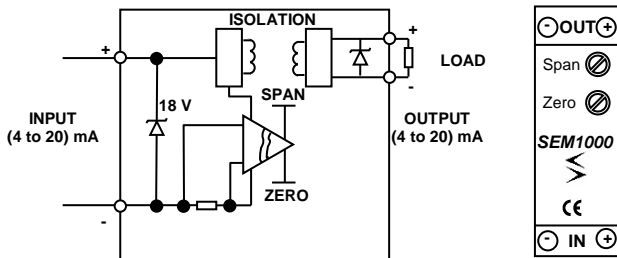
SEM1000



SEM1000



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ORDER CODE: SEM1000