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



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 it's 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 ACCURACY ± 0.05 % (± 0.008 mA) of full range output

STABILITY 0.01 % / °C

RESPONSE TIME Less than 100 mS to reach 70 % of final value.

EMC Tested to BS EN 61326

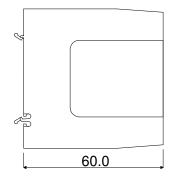
ADJUSTMENT Front Entry Fine Zero and Span Adjustment

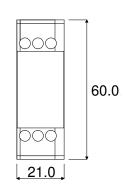
MECHANICAL DETAILS

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)



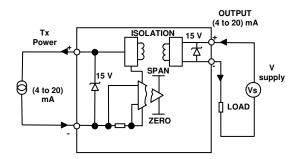




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SCHEMATIC

SEM1010





ORDER CODE: SEM1010

