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.

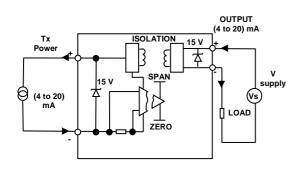
SPECIFICATIONS @ 20 °C **MECHANICAL DETAILS** INPUT Two wire (4 to 20) mA TYPE Powers & monitors two wire CONNECTION Captive clamp screws Transmitter from the loop output CABLE SIZE Maximum 4 mm sq solid / 2.5 mm sq stranded RANGE (4 to 20) mA (25Max) CASE MATERIAL Grey Polyamide PROTECTION Current limited FLAMMABILITY To ÚL94-VO VDE 0304 Part 3, Level IIIA Tx SUPPLY (5 to 15) V Max DIMENSIONS (60 x 60 x 21) mm (67.5 above rail) MAX LOOP VOLTS 35 Volts MOUNTING Snap on "top hat" rail (DIN EN 50022-35) OUTPUT TYPE (4 to 20) mA Current Sink Reverse protected LOOP DROP 5 V @ 20 mA (with a 10 V Tx drop) (All dimensions in mm) 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; $) \cap ($ INSTALLATION CAT II; CLASS I AMBIENT (0 to 70) $^{\circ}\text{C}$; (10 to 95) % RH non-condensing ACCURACY $\pm 0.05~\%$ (±0.008 mA) of full range output STABILITY 0.01 % / °C 60.0 RESPONSE TIME Less than 100 mS to reach 70 % of final value. EMC Tested to BS EN 61326 Front Entry Fine Zero and Span Adjustment ADJUSTMENT d d DOC 60.0 21.0



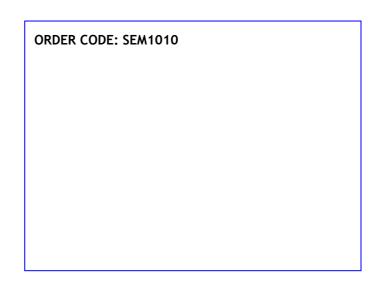
PROCESS SIGNAL ISOLATORS

SCHEMATIC

SEM1010







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