

KOS1010

ISOLATOR 4-20mA

Y2K
YEAR 2000
COMPLIANT



kos1010manualB.doc

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Sep.99

WARRANTY



The instruments are warranted against defective materials and workmanship for a period of three years from date of delivery.

If a product appears to have a defect or fails during the normal use within the warranty period, please contact the distributor from which you purchased the product.

This warranty does not apply to defects resulting from action of the buyer such as mishandling or improper interfacing.

The liability under this warranty shall extend only to the repair of the instrument. No responsibility is assumed by the manufacturer for any damage which may result from its use.

KOSMOS SERIES

1.0 SPECIFICACIONES

1.1 DESCRIPTION

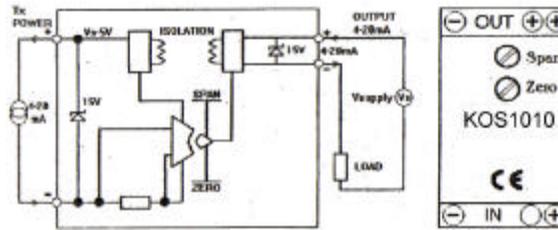
The **KOS1010** is designed to provide an isolation barrier between a field mounted 4-20mA transmitter and the process monitoring system. The isolator output is a two wire 4-20mA current sink. The **KOS1010** derives it's power from the output loop.

INPUT

Type Two wire 4-20mA.
Powers & monitors two wire.
Transmitter from the loop output.
Range 4-20mA (25mA MAX.)
Protection Current limited.
Tx supply 5-15V DC Max.
MAX. Loop Volts 35V.

OUTPUT

Type 4-20mA Current sink reverse protected.
Loop Drop 5V DC @ 20mA (with a 10V Tx drop)
6.5V DC max @ 20mA DC
10V max @ 4mA DC



1.2 GENERAL SPECIFICATION @ 20°C

Isolation 500V AC (flash test @ 1kV).
(Isolation method, opto coupler / transformer)

Environment BS EN61010-1 POLLUTION DEGREE 2;
INSTALACIÓN CAT II; CLASS I

Ambient 0-70°C; 10-95% RH non condensing.

Linearity 0.05%.

Stability 100ppm/°C.

Response Time Less than 100mS to reach 70% of final value.

EMC tested to IEC 801-2 Susceptibilidad a E. S. D.
IEC 801-3 Suscept. a interferencias radiadas
IEC 801-4 Suscept. a interferencias conducidas
EN 55022 Emisiones radiadas

Connection Captive clamp screws.

Cable size MAX. 4mm² solid / 2.5mm² stranded.

Case material Grey Polyamida.

Flammability UL94-V0 VDE 0304 part 3, Level IIIA.

Dimensions 60x60x21mm (67.5 above rail).

Mounting Rail DIN EN 50022-35

Adjustment Front entry fine Zero and Span adjustment.

2.0 INSTALLATION

2.1 Mechanical

This unit must be housed within a suitable enclosure that will provide protection from the external environment, ensuring that the stated temperature and humidity operating ranges are not exceeded. It is good practice to mount the unit away from sources of electrical noise, such as switchgear and transformers. The unit enclosure is designed to snap fit onto a standard "TOP HAT" DIN rail. To remove from rail, apply pressure at the bottom face at the back upwards the rail to release the spring clip and tip away from the top. The unit may be mounted in any orientation and stacked side by side along the rail.

2.2 Electrical

Connections to the isolator are made via screw terminals. Wire protector plates are provided inside each terminal. To maintain CE compliance twisted pair (screened) cables are recommended. It is also good practice to ensure that all 4-20mA loops are grounded at a single point in the loop. Before installation, care must be taken to ensure enough voltage is available in the loop to drive the total loop load. Refer to the specifications listed for the voltage drop.

Refer to the KOS1000 series data sheet for further information on applications of this series of isolators. Please note the isolation provided by this device is only suitable for providing isolation between two process signals and therefore must not be used to provide isolation from hazardous voltages, such as mains supplies.

Additional + terminal is provided on output side to allow wiring to be chain connected to a number of units.

3.0 OPERATION

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. If the isolator fails to operate, check loop for bad connections. Ensure enough voltage is available in the loop to power the isolator. In the unlikely event of the isolator not working, it should be returned to the supplier for repair or replacement.

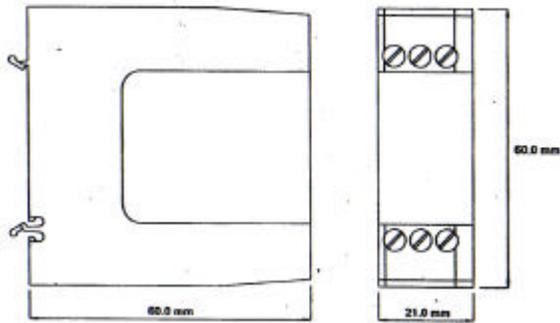
4.0 CALIBRATION

- 4.1 Connect a precision current calibrator to the input and a precision current meter to the output of the device to be calibrated. (*¹) Power the output with a 24V supply.
- 4.2 Inject 4.000mA ±0.001mA into the input and adjust zero potentiometer for 4.000mA ±0.001mA output. (*²)
- 4.3 Inject 20.000mA ±0.001mA into the input and adjust span potentiometer for 20.000mA ±0.001mA output. (*²)
- 4.4 Repeat steps 4.2 and 4.3 until both points are in calibration.

Notes.*

- 1 Current calibrator must be capable of driving the expected loop drop.
- 2 Please note that the above reading accuracies quoted in 4.2 and 4.3 are absolute values and do not include test equipment tolerances.

5.0 MECHANICAL DETAILS



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