



Data Sheet

**Isolated Signal Conditioner  
for Linear Potentiometers  
OMX 39DU**

*Distributed by*

**BRISTOL**  
**III INSTRUMENTS**

[www. BristolInstruments.com](http://www.BristolInstruments.com)

Bristol Instruments  
90 Canal Street, 4th Floor  
Boston, MA 02114

Toll free  
877-866-8500



## OMX 39DU

The OMX 39 model series are low-price and simple analog transmitters with mounting on a 35 mm wide DIN rail.

Type OMX 39DU is a transmitter for galvanic separation of linear potentiometers. The transmitters have galvanic separation with isolation voltage of 600 V and thus they are suitable as primary isolation for majority of industrial applications.

### ISOL. TRANSMITTER FOR LIN. POTENTIOMETERS

- Input: Linear potentiometer
- Output: 0...5 mA, 0...20 mA, 4...20 mA,  $\pm 20$  mA  
0...2 V, 0...5 V, 0...10 V,  $\pm 10$  V
- Galvanic separation: 3,75 kVAC
- Power supply 10...30 V AC/DC; 80...250 V AC/DC

### OMX 39DU

GALVANIC SEPARATION FOR LINEAR POTENTIOMETERS

#### OPERATION

The transmitter is designed for simple measurements without further control.

#### CALIBRATION

By trimmers accessible from the face of the transmitter you may adjust the range of the output signal within the range of  $\pm 10$  %.

## TECHNICAL DATA

### INPUT

Number of inputs	1
DU Range	0...100 kΩ
Pot. power supply	10 VDC/20 mA, Potentiometer resistance > 500 Ω

### INSTRUMENT ACCURACY

TC: 50 ppm/°C  
 Accuracy: ±0.2% of range  
 Rate: continuous measurement  
 Overload capacity: 2x; 10x (t < 30 ms)  
 Calibration: at 25°C and 40% r.h.

### ANALOG OUTPUTS

Type: isolated, fixed setting  
 TC: 50 ppm/°C  
 Rate: response to change of value < 1 ms  
 Voltage: 0...2 V, 0...5 V, 0...10 V, on request ±10 V (minimum load 1 kΩ)  
 Current: 0...20 mA, 4...20 mA, on request ±20 mA  
 (line compensation up to 600 Ω)

### POWER SUPPLY

Range: 10...30 V AC/DC, ±10%, PF ≥ 0.4, I<sub>STP</sub> < 40 A/1 ms, isolated  
 80...250 V AC/DC, ±10%, PF ≥ 0.4, I<sub>STP</sub> < 40 A/1 ms, isolated  
 Consumption: < 2.4 W/2.6 VA  
 Power supply is protected by a fuse inside the instrument.

### MECHANIC PROPERTIES

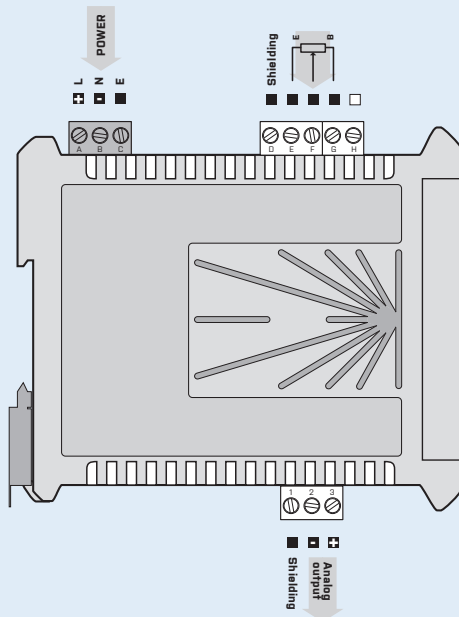
Material: PA 66, incombustible UL 94 V-1, blue  
 Dimensions: 22 x 98 x 113 mm (w x h x d)  
 Installation: on DIN rail, width 35 mm

### OPERATING CONDITIONS

Connection: connector terminal blocks, section < 2.5 mm<sup>2</sup>  
 Stabilization period: within 5 minutes after switch on  
 Working temperature: -20°...60°C  
 Storage temperature: -20°...85°C  
 Protection: IP20  
 El. safety: EN 61010-1, A2  
 Dielectric strength: 4 kVAC per 1 min test between supply and input  
 4 kVAC per 1 min test between supply and analog output  
 3.75 kVAC per 1 min test between input and analog output  
 Insulation resistance: for pollution degree II, measuring cat. III  
 power supply > 600 V (PI), 300 V (DI)  
 input, output, PN > 500 V (PI), 250 V (DI)  
 EMC: EN 61326-1

PI - Primary insulation, DI - Double insulation

## CONNECTION



## ORDER CODE

### OMX 39DU

Power supply	10...30 V AC/DC	<b>0</b>
	80...250 V AC/DC	<b>1</b>
Analog output	0...2 V	<b>1</b>
	0...5 V	<b>2</b>
	0...10 V	<b>3</b>
	0...20 mA	<b>4</b>
	<b>4...20 mA</b>	<b>5</b>
	±10 V	<b>6</b>
	±20 mA	<b>7</b>
	0...5 mA	<b>8</b>

Basic configuration of the instrument is indicated in bold.