



DM4003

POTENTIOMETER POSITION INPUT FIELD RANGEABLE TRANSMITTER

FEATURES

- 100 ohm to 100 kilohm Potentiometer
- Selectable Response Time/Filter
- Provides a Fully Isolated DC Output Proportional to Wiper Position
- User Write-On Label
- User-Settable Input and Output Ranges
- Fully Labeled Jumper Positions for Easy Range Settings
- Plug-In Terminal Blocks
- Standard DIN-Rail Mount with Easy Snap-On Snap-Off
- Connections and Ranging Readily Accessible from the Front
- Choice of Power Options
- Permanent Warranty

DESCRIPTION

The DM4003 provides an isolated voltage or current output proportional to the position of a potentiometer wiper. The output is fully isolated from input, line power and ground. The unit is useful in eliminating ground loops and common mode signals.

Input and output ranges are user-settable. The output response may be normal or reverse-acting. A fully-labeled set of jumpers selects the input and output ranges.

All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical noise and damage by lightning. It utilizes a feedback VCO to develop a pulse train with a duty cycle proportional to the input signal amplitude. This pulse train is coupled through a pulse transformer to the output circuitry, where the duty cycle data is converted to a proportional DC output level.

Connections are made via two 4-pin plug-in terminal blocks. These terminal blocks allow the product to be removed without unwiring the connections.

TYPICAL APPLICATIONS

A useful interface for monitoring valve and actuator position, or for generating test signals.

SPECIFICATIONS

INPUT

Input Potentiometer Value
100 ohm to 100 kilohm

Excitation
1 VDC

Span Selections for Full Scale
Output (% rotation)
25%, 50%, 75% & 100%

Offset
±0% to 100% of span

OUTPUT

Voltage	Current (mA)
0/.25	0/1
0/1	0/4
1/5	4/20
0/5	0/20
0/10	
-5/+5	
-10/+10	

OUTPUT LOGIC

Normal or Reverse Acting

DRIVE CAPABILITY

Voltage
5 mA

Current
>24 V compliance

OUTPUT RIPPLE (Peak-to-Peak)

<0.1% of full scale

ISOLATION

Resistance
>500 megohms

Voltage Rating
>1000 VAC sinewave

RESPONSE TIME (99%)

2, 20, 50, 500 milliseconds

ACCURACY

±0.1% of span

LINEARITY

±0.1% of span

COMMON MODE REJECTION

>100 dB, DC to 60 Hz

OPERATING TEMPERATURE

14 to 140 °F/-10 to 60 °C

TEMPERATURE STABILITY

±0.01% of span/°C

POWER

Standard
115 VAC ± 10%, 50/60 Hz
230 VAC ± 10%, 50/60 Hz

Optional
115/230 VAC Selectable
±10%, 50/60 Hz
24 VAC ± 10%, 50/60 Hz
24 VDC (21 to 32 VDC)
12 VDC (10 to 16 VDC)

Wattage
2.5 W max

ORDERING INFORMATION

POWER

- 115 VAC, 50/60 Hz Power
- 230 VAC, 50/60 Hz Power
- 24 VAC, 50/60 Hz Power
- 24 VDC Power, Transformer Isolated
- 12 VDC Power, Transformer Isolated

Select Output Logic

- Normal Acting
- Reverse Acting

OPTIONS

- Conformal Coating

INPUT

Specify Input

Potentiometer input products are calibrated assuming 0 to 100% rotation. Final calibration should be done using the actual system potentiometer.

TAGS

Specify Tag Numbers

Tag Number is typed on product label at no charge.

OUTPUT

Select Units

- VDC mADC

Enter Output

Zero Scale

Full Scale

Enter Tag Number(s)

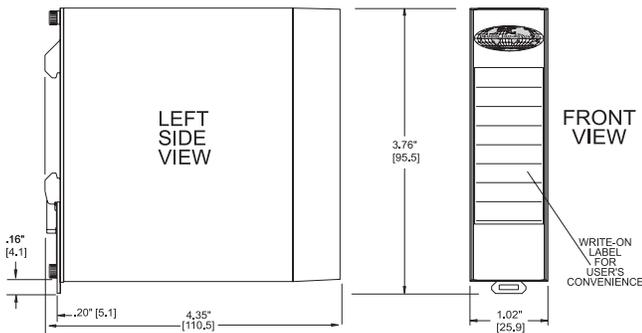
ACCESSORIES

DM4003

DR1 DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter) QTY _____

DIMENSIONS

Inches [mm]



CONNECTIONS

- TERM 1 Input FS
- TERM 2 Input Wiper
- TERM 3 Input Zero
- TERM 4 Input Shield
- Output + Output +
- Output - Output -
- L1 Power AC L1 or DC +
- L2 Power AC L2 or DC -



2915 Parkway Street
Lakeland, FL 33811-1391 · USA
800-234-1343
Tel: 863-647-2000 · Fax: 863-644-5318
www.wici.com · Email: sales@wici.com