



# MM4003

## POTENTIOMETER POSITION INPUT TRANSMITTER

### FEATURES

- Provides DC Output Proportional to a Potentiometer Position Input
- Potentiometer Values from 100 ohms to 100 kilohms
- Unlimited\* Choice of Input / Output Ranges
- Fully Isolated Output Available
- Choice of Power Options
- 10 + 5 Year Warranty

### DESCRIPTION

The MM4003 provides an output voltage or current proportional to the slide position of a potentiometer. It is useful in monitoring valve or actuator position and for creating test signals.

All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical noise and damage by lightning.

Any value potentiometer from 100 ohms to 100 kilohms can be used. The module utilizes a stable 1 V power supply to excite the potentiometer. As the potentiometer is rotated, the slide voltage is proportional to the wiper position.

### TYPICAL APPLICATIONS

Tank level, valve or actuator position control, monitoring and data acquisition, creating test signals.

### SPECIFICATIONS

#### INPUT POTENTIOMETER RESISTANCE

any value from 100 ohms to 100 kilohms

#### SPAN ADJUSTMENT

70% to 100% of pot rotation

#### OFFSET ADJUSTMENT

0 to 25% of pot rotation

#### INPUT IMPEDANCE

>10 megohms

#### EXCITATION

1 V, 10 mA max load

#### OUTPUT RANGE

Voltage  
select any range from -10 V to +15 V, 10 mA max load (min span 0.2 V)

Current  
select any range from 0 to 50 mA max, >24 V compliance (1200 ohms max at 20 mA)

18 V compliance for ISO option if full-scale output >20 mA

**RESPONSE TIME** (Range Dependent)  $\leq 100$  ms

#### ACCURACY

$\pm 0.1\%$  of span

#### LINEARITY

$\pm 0.01\%$  of span

#### COMMON MODE REJECTION

120 dB, DC to 60 Hz

#### ISOLATION (Optional)

Output / Input  
>500 megohms  
Breakdown Voltage  
>1000 VAC rms  
Breakdown, Power / Circuitry  
>1500 VAC rms

#### OUTPUT RIPPLE (Peak-to-Peak)

<0.1% of span

#### LINEARITY

$\pm 0.05\%$  of span

#### OPERATING TEMPERATURE

14°F to 140°F / -10°C to 60°C

#### TEMPERATURE STABILITY

$\pm 0.02\%$  of span/°C max

#### POWER

115 VAC  $\pm 10\%$ , 50 or 60 Hz (2.5 W max)

230 VAC  $\pm 10\%$ , 50 or 60 Hz (2.5 W max)

(DC Power Option)  
24 VDC (limits 21-32 VDC) (2.5 W max)

— Isolation, DC power supply to input common: 10 megohms

\* Within specified range limits.

**MM4003**

**ORDERING INFORMATION**

**POWER**

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

**INPUT**

**Specify Input**

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

**OUTPUT**

**Select Units**

- VDC  mADC

**Enter Output**

Zero Scale

Full Scale

**OPTIONAL**

- Conformal Coating

**TAGS**

**Specify Tag Numbers**

Tag Number is typed on product label at no charge.

**Enter Tag Number(s)**

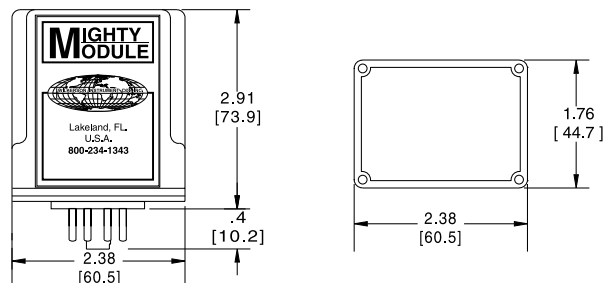
**ACCESSORIES**

**MM4003**

DR1	DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter)	QTY _____
MP008	Plastic Socket, 8-pin for Flat Surface or PVC Track	QTY _____
TRK48	PVC Snap-Track, 4 ft. for MP088, MP011 & DMP8500	QTY _____
DMP008	DIN-Rail Mounting Socket, 8-pin, 35 mm Symmetrical	QTY _____
CLP1	Holddown Assembly for MP008 and MP011	QTY _____
HKB-HK2D-8	Explosion-Proof Housing with MP008 Installed	QTY _____

**DIMENSIONS**

Inches [mm]



**CONNECTIONS**

PIN 1	Power AC L1 or DC
+ PIN 2	No Connection
PIN 3	Power AC L2 or DC -
PIN 4	Input Zero
PIN 5	Input Wiper
PIN 6	Input FS
PIN 7	Output +
PIN 8	Output -