



# MM4001

## RTD INPUT TRANSMITTER

### FEATURES

- Provides DC Output Proportional to an RTD Input
- 3-Wire or 2-Wire, 10 ohms to 2000 ohms RTDs
- Unlimited\* Choice of Input / Output Ranges
- Linearized for Platinum RTDs
- Fully Isolated Output Available
- Choice of Power Options
- 10 Year Warranty

### DESCRIPTION

The MM4001 provides an output voltage or current proportional to an RTD input signal. It is useful in measuring temperatures with a variety of RTDs.

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

The module utilizes a single constant current source to excite the RTD. An accurate and stable lead wire compensation circuit uses the third lead of the 3-wire RTD to compensate for the RTD lead resistance.

### TYPICAL APPLICATIONS

Temperature control, monitoring, and data acquisition.

### SPECIFICATIONS

#### RTD INPUT

3-Wire or 2-Wire,  
10 ohms to 2000 ohms

#### INPUT RANGE

select any range within RTD limit  
[min span 25°F/14°C (100°F/55°C  
with 10 ohms RTD)]

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

#### EXCITATION CURRENT

10 ohms	10 mA
100 ohms	5 mA
1000 ohms	0.5 mA
2000 ohms	0.2 mA

#### ISOLATION (Optional)

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

#### OPEN SENSOR OUTPUT

≥ full scale

#### ACCURACY

±0.1% of span

#### LINEARITY

±0.05% of span  
(Pt RTD, output vs temp)  
±0.05% of span, (temp ≥32°F/0°C)  
±0.15% of span, (temp <32°F/0°C)  
(others, output vs res)  
±0.01% of span

#### COMMON MODE REJECTION

120 dB, DC to 60 Hz

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

<0.1% of span

#### OPERATING TEMPERATURE

14°F to 140°F/-10°C to 60°C

#### TEMPERATURE STABILITY

±0.02% of span or 0.025°C/°C,  
whichever is greater

#### POWER

115 VAC ±10%, 50/60 Hz  
(2.5 W max)

230 VAC ±10%, 50/60 Hz  
(2.5 W max)

(DC Power Option)

24 VDC (limits 21-32 VDC)

12 VDC (limits 10-16 VDC)

Isolation, DC power supply to  
input common: 10 megohms

\* Within specified range limits.

**ORDERING INFORMATION**

**POWER**

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

**INPUT**

**Select Units**

- Deg C  Deg F

**Enter Input**

Zero Scale

Full Scale

**Select Sensor**

- 100 ohm Pt., .00385 Alpha
- 100 ohm Pt., .00392 Alpha
- 100 ohm Pt., .00375 Alpha
- 1000 ohm Pt., .00385 Alpha
- 1000 ohm Pt., .00392 Alpha
- 10 ohm Cu.
- Other - Specify in Notes

**Open Sensor Response**

- Upscale  Downscale

**OUTPUT**

**Select Units**

- VDC  mADC

**Enter Output**

Zero Scale

Full Scale

**OPTIONS**

- Conformal Coating

**TAGS**

**Specify Tag Numbers**

Tag number is typed on product label at no charge.

**Enter Tag Number(s)**

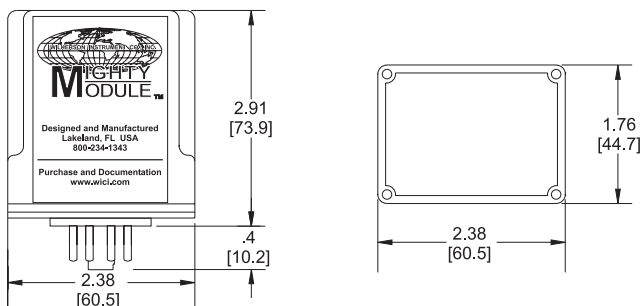
**ACCESSORIES**

**MM4001**

DR1	DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter)	QTY _____
MP008	Plastic Socket, 8-pin Panel Mount or PVC Snap Track	QTY _____
TRK48	PVC Snap-Track, 4 ft. for MP008, MP011 & DMP8500	QTY _____
DMP008	DIN-Rail Mounting Socket, 8-pin, 35 mm Symmetrical Rail	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 RTD Lead Compensation
- PIN 5 RTD -
- PIN 6 RTD +
- PIN 7 Output +
- PIN 8 Output -



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