



MM4100 AND MM4100L THERMOCOUPLE TRANSMITTERS

FEATURES

- Provides a DC Output Proportional to any Thermocouple Input
- Analog Linearization Option Available
- Cold Junction Compensated
- NOT Isolated (for Isolated I/O, use MM4130 or MM4130L)
- 5 mV Minimum Input Span
- Unlimited* Choice of Input / Output Ranges
- Upscale Burnout Protection (Downscale Available)
- Choice of Power Options
- 10 Year Warranty

DESCRIPTION

The MM4100 and MM4100L provide a DC output voltage or current, proportional to a thermocouple input signal. It is useful in measuring temperatures with any type of thermocouple. Cold junction compensation is provided by a solid state temperature sensor embedded in the thermocouple terminal strip. All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical noise and damage by lightning.

Upscale burnout protection is provided as standard. In the event the thermocouple opens, the transmitter output will go offscale high. Option B provides downscale burnout protection (transmitter output grows low). Model MM4100L provides an output linear with temperature.

TYPICAL APPLICATIONS

Temperature monitoring, control and data acquisition.

SPECIFICATIONS

INPUT RANGE

select any type thermocouple (min span 5 mV)

OUTPUT RANGE

Voltage

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

Current

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

ACCURACY

±0.1% of span at endpoints

LINEARITY

Output / Input

±0.01% of span (nonlinearized)

COMMON MODE REJECTION

120 dB, DC to 60 Hz

OPERATING TEMPERATURE

4°F to 140°F/-10°C to 60°C

TEMPERATURE STABILITY

±(0.02% of span + 1.3 uV)/°C max

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.

| MM4100L LINEARIZATION ACCURACY, BASE-METAL THERMOCOUPLES | | | |
|--|--|-----------------------|---|
| T/C TYPE | ZERO BASED RANGES | | LOW TEMP RANGES (HIGH END = 0°C) |
| | LIMIT FOR ±1% OF SPAN | LIMIT FOR ±2% OF SPAN | LIMIT FOR ±5% OF SPAN |
| E | 0/500°C 32/392°F | 0/1000°C 32/1832°F | -100/0°C -148/32°F |
| J | 0/1000°C 32/1832°F | 0/1200°C 32/2192°F | -100/0°C -148/32°F |
| K | 0/800°C 32/1472°F Cannot linearize Type K Above 800°C (1472°F) | | -100/0°C -148/32°F |
| N | 0/500°C 32/392°F | 0/1200°C 32/2192°F | -100/0°C -148/32°F |
| T | 0/400°C 0/752°F | 0/400°C 0/752°F | -100/0°C -148/32°F |
| MM4100L LINEARIZATION ACCURACY, PLATINUM THERMOCOUPLES | | | |
| T/C TYPE | ZERO BASED RANGES | | ELEVATED-ZERO RANGES |
| B | - N.A. - | | ±3% of span for 500/1820°C (932/3308°F) ±1.5% of span for 800/1820°C (1472/3308°F) |
| R & S | ±2.5% of span or better, any zero-based range | | ±1.5% of span or better, any range starting above 200°C (392°F) |

Table 1. MM4100L LINEARIZATION ACCURACY

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

INPUT

Select Units

- Deg C Deg F

Enter Output

Zero Scale

Full Scale

Select Sensor

- J TC
- K TC
- R TC
- S TC
- T TC
- E TC
- N TC
- B TC
- Other - Specify in Notes

Open Sensor Response

- Upscale Downscale

OUTPUT

Select Units

- VDC mADC

Enter Input

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)

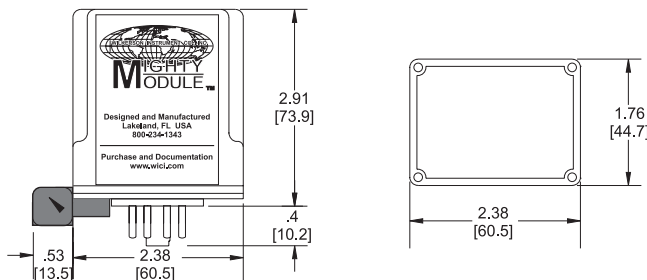
ACCESSORIES

MM4100 AND MM4100L

| | | |
|------------|---|-----------|
| 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 Input AC or +
- PIN 2 No Connection
- PIN 3 Power Input AC or -
- T/C TERM + Thermocouple +
- T/C TERM - Thermocouple -
- PIN 6 No Connection
- PIN 7 Output +
- PIN 8 Output -



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