



MM1220

THERMOCOUPLE INPUT LIMIT ALARM

DUAL

FEATURES

- Provides Relay Contact Closures at Preset Thermocouple Input
- Cold Junction Compensated
- Fail-Safe, Latching, and Adjustable Deadband Available
- Red and Green LED Alarm Status Indicators
- 5 mV Minimum Input Span
- Unlimited* Choice of Input Ranges
- Upscale Burnout Protection (Downscale Available)
- Choice of Power Options
- 10 + 5 Year Warranty

DESCRIPTION

The MM122X monitors any thermocouple input signal and provides two sets of spdt, 5 A alarm relays with two independently adjustable setpoints. Each setpoint has a set of red/green LEDs to indicate alarm status. When the input is between the setpoints, the relays are normally de-energized. When the signal exceeds a particular setpoint, the relay becomes energized. To provide a fail-safe operation (loss of power resulting in alarm state), select Option R. The module can be

supplied as a HI/HI, HI/LO, or LO/LO alarm (HI/LO supplied if not specified).

Standard deadband on both alarms is fixed at 0.5% of span. (Option A provides adjustable deadband of 0.5% to 100% of span.) Option D, latching alarms, has no deadband control. Once the limit has been reached, the alarm latches and power to the module must be momentarily interrupted to reset the alarm.

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 module behaves as though the input goes offscale high. Option B provides downscale burnout protection (module behaves as though the input goes low).

TYPICAL APPLICATIONS

Heater/cooler control, HI/LO temperature alarm.

SPECIFICATIONS

INPUT RANGE

select any type thermocouple
(min span 5 mV)

SETPOINT

each alarm 0 to 100% of span

RELAY CONTACTS (spdt)

Resistive Load
5 A max, 150 W max,
240 VAC max, 30 VDC max
Inductive Load
1/8 HP max at 120/240 VAC

DEADBAND

Standard
fixed 0.5% of span
(Option A)
0.5% to 100% of span
(Option D)
Latching,
Interrupt power to reset

TRANSISTOR OUTPUT (Option V)

relay driver
(12 V coil, ≥ 220 ohms)
or open-collector outputs sink
100 mA, 30 V supply max

ACCURACY

$\pm 0.1\%$ of span

COMMON MODE REJECTION

120 dB, DC to 60 Hz

OPERATING TEMPERATURE

14°F to 140°F / -10°C to 60°C

TEMPERATURE STABILITY

$\pm(0.02\%$ of span + 1.3 μ V)/°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.

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

Select Units

- Deg C Deg F

Enter Input

Zero Scale

Full Scale

Select Sensor

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

Open Sensor Response

- Upscale Downscale

ALARMS

Alarm Selection - Output

- Relay
- Transistor, O.C.

Alarm Type

- High/Low
- High/High
- Low/High

Alarm Logic

- Normal - Energize On Alarm
- Reverse - De-Energize On Alarm

Enter Setpoint Input Level

Setpoint 1

Setpoint 2

Adjustable Deadband (Option A)

- Yes No

OPTIONS

- Conformal Coating

TAGS

Specify Tag Numbers

Tag number is typed on product label at no charge.

Enter Tag Number(s)

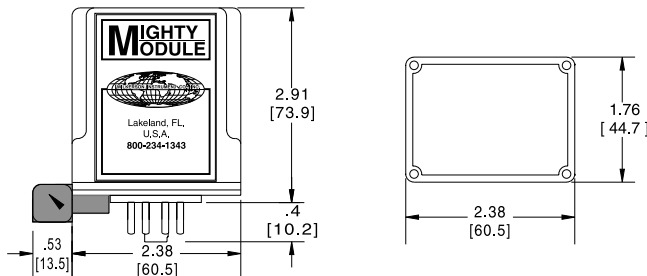
ACCESSORIES

MM1220

| | | |
|-------------|----------------------------------------------------------|-----------|
| DR1 | DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter) | QTY _____ |
| MP011 | Plastic Socket, 11-pin or Flat Surface PVC Track | QTY _____ |
| TRK48 | PVC Snap-Track, 4 ft. for MP008, MP011 & DMP8500 | QTY _____ |
| DMP011 | DIN-Rail Mounting Socket, 11-pin, 35 mm Symmetrical Rail | QTY _____ |
| CLP1 | Holddown Assembly for MP008 and MP011 | QTY _____ |
| HKB-HK2D-11 | Explosion-Proof Housing with MP011 Installed | QTY _____ |

DIMENSIONS

Inches [mm]



CONNECTIONS

| | |
|-------------|---------------------|
| PIN 1 | Power AC L1 or DC + |
| PIN 2 | No Connection |
| PIN 3 | Power AC L2 or DC - |
| T/C Input + | T/C Terminal + |
| T/C Input - | T/C Terminal - |
| PIN 6 | Relay Set 1 NO |
| PIN 7 | Relay Set 1 C |
| PIN 8 | Relay Set 1 NC |
| PIN 9 | Relay Set 2 NO |
| PIN 10 | Relay Set 2 C |
| PIN 11 | Relay Set 2 NC |