



# MM1420

## RTD INPUT DUAL ALARM

### FEATURES

- Provides Relay Contact Closures at Preset RTD Input
- 3-Wire or 2-Wire, 10 ohms to 2000 ohms RTDs
- Fail-Safe, Latching and Adjustable Deadband Available
- Red and Green LED Alarm Status Indicators
- Unlimited\* Choice of Input Ranges
- Upscale Burnout Protection
- Choice of Power Options
- 10 + 5 Year Warranty

### DESCRIPTION

The MM1420 monitors an RTD 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 an 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.

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

### TYPICAL APPLICATIONS

Temperature control, monitoring or warning for HVAC, pumps, motors, etc.

### 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)]

#### EXCITATION CURRENT

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

#### SETPOINT

each alarm 0 to 100% of span

#### DEADBAND

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

#### OPEN SENSOR OUTPUT

≥full scale

#### ACCURACY

±0.1% of span or 0.02 ohms,  
whichever is greater

#### COMMON MODE REJECTION

120 dB, DC to 60 Hz

#### 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

#### TRANSISTOR OUTPUT (Option V)

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

#### 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 or 60 Hz  
(2.5 W max)  
230 VAC ±10%, 50 or 60 Hz  
(2.5 W max)  
(DC Power Option)  
24 VDC (limits 21 VDC to 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**

- 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

**ALARMS**

**Specify Alarm Header Option**

- 11-Pin  20-Pin

**Alarm Selection - Output**

- Relay
- Transistor, O.C.

**Alarm Type**

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

**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)**

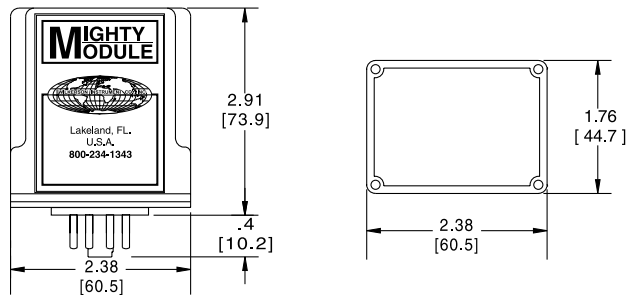
**ACCESSORIES**

**MM1420**

DR1	DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter)	QTY _____
MP011	Plastic Socket, 11-pin or Flat Surface PVC Track	QTY _____
MP020	Plastic Socket, 20-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**

**11 PIN (Option E)**

PIN 1	Power AC L1 or DC +	PIN 6	Relay 1 NO
PIN 2	RTD Compensating Lead	PIN 7	Relay 1 C
PIN 3	Power AC L2 or DC -	PIN 8	Relay 1 NC
PIN 4	RTD	PIN 9	Relay 2 NO
PIN 5	RTD	PIN 10	Relay 2 C
		PIN 11	Relay 2 NC

**20 PIN**

PIN 1	Power AC L1 or DC +	PIN 15	Relay 1 NC
PIN 3	Power AC L2 or DC -	PIN 17	Relay 2 NO
PIN 9	RTD	PIN 18	Relay 2 C
PIN 11	RTD	PIN 19	Relay 2 NC
PIN 13	Relay 1 NO	PIN 20	RTD Compensating Lead
PIN 14	Relay 1 C		