



FR1020

DC INPUT, FIELD RANGEABLE DUAL ALARM LATCHING OR NON-LATCHING

FEATURES

- Allows Inputs to ± 256 V or ± 100 mA
- 16 mV or 0.8 mA Minimum Input Span
- Red and Green LED Alarm Status Indicators
- Adjustable Deadband
- Provides Relay Contact Closures at Preset DC Input
- Configure Alarms as HI/HI; HI/LO; LO/LO
- Alarms Normal or Reverse Acting
- Configure as Latching Alarm
- Fully Labeled Jumper Positions for Easy Range and Configuration Settings
- Choice of Power Options
- Size, Pinouts and Performance Identical to MM1020
- Permanent Warranty

DESCRIPTION

The FR1020 monitors a DC 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. The configuration of each alarm relay is user-settable as follows:

High or Low - High selects alarm on an increasing signal. Low selects alarm on a decreasing signal.

Normal or Reverse - Normal position selects fail-safe operation (loss of power

will result in alarm condition). The relays are energized in the non-alarm condition. When the setpoints are exceeded, the relays de-energize. Selecting the reverse position reverses this logic.

Deadband or Latching - Deadband selects two independently adjustable deadband controls. Deadband for each alarm is adjustable from 0.1% to 100% of the input span. The deadband is symmetrical about the setpoint. With latching selected the alarms will latch

when a setpoint is exceeded, and can not be reset unless the input no longer exceeds a setpoint. Reset may be accomplished by remote contact closure or by momentary power interruption. (Several reset inputs may be tied to one reset contact, but note that all negative inputs will be tied together.) All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical noise and damage by lightning.

SPECIFICATIONS

INPUT

Limits

select any voltage between
-256 and +256 VDC

select any current between
-100 and +100 mA

Span (Selectable Ranges)

Voltage	Current
16-32 mV	.8-1.6 mA
32-64 mV	1.6-3.2 mA
64-128 mV	3.2-6.4 mA
128-256 mV	6.4-12.8 mA
256-512 mV	12.8-25 mA
.5-1 V	25-50 mA
1-2 V	50-100 mA
2-4 V	
4-8 V	
8-16 V	
16-32 V	
32-64 V	
64-128 V	
128-256 V	

INPUT OFFSET

$\pm 0, 25, 50, 75, 100\%$ of F.S.

INPUT IMPEDANCE

Voltage
1 megohm

Current
20 ohms

SETPOINT

0 to 100% of span

DEADBAND

0.1% to 100% of span

LATCHING ALARM

Reset by remote contact closure
or by momentary power
interruption

RELAY CONTACTS

Two spdt
Resistive Load
5 A max, 150 W max,
240 VAC max, 30 VDC max
Inductive Load
 $\frac{1}{8}$ HP max at 120/240 VAC

RESPONSE TIME

20 ms typical

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 +30 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)
24 VAC $\pm 10\%$, 50 or 60 Hz
(2.5 W max)

115/230 VAC selectable
(DC Power Option)

24 VDC (limits 21 VDC to
32 VDC)
(2.5 W max)

Isolation, DC power supply to
input common: 100 megohm

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

INPUT**Select Units**

- VDC mADC

Enter Input

Zero Scale

Full Scale

ALARMS**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

Latching Mode

- Latching Non-Latching

OPTIONS

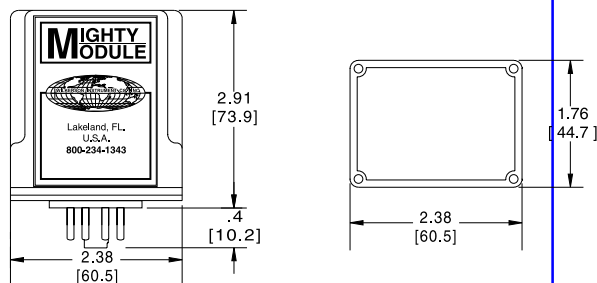
- Conformal Coating

TAGS**Specify Tag Numbers**

Tag number is typed on product label at no charge.

Enter Tag Number(s)**ACCESSORIES****DIMENSIONS**

Inches [mm]

**CONNECTIONS**

- PIN 1 Power AC L1 or DC +
 PIN 2 Latch Reset
 PIN 3 Power AC L2 or DC -
 PIN 4 Input +
 PIN 5 Input -
 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