

# MM4380A

## DC INPUT, FIELD RANGEABLE ISOLATED TRANSMITTER

### FEATURES

- Allows Inputs to  $\pm 256$  V or  $\pm 100$  mA
- 15 mV or 0.8 mA Minimum Input Span
- Size, Pinouts and Performance Identical to MM4300 & MM4300A
- User-Settable Input and Output Ranges
- Fully Labeled Jumper Positions for Easy Range Settings
- Provides a Fully Isolated DC Output Proportional to DC Input
- Choice of Power Options
- Permanent Warranty

### DESCRIPTION

The MM4380A provides a DC output proportional to a DC input. The output is fully isolated from input, line power and ground. The unit is useful in eliminating ground loops and common mode signals.

Input and output ranges are user-settable. Each may be voltage or current, with or without offset. The output response may be normal or reverse-acting. A fully-labeled set of jumpers selects the input and output ranges. The MM4380A is identical in size and fully interchangeable

with fixed-range modules such as the MM4300 and MM4300A.

All Wilkerson products are designed with RFI filters and lightning protection to reduce susceptibility to electrical noise and damage by lightning. It utilizes a feedback VCO to develop a pulse train with a duty cycle proportional to the input signal amplitude. This pulse train is coupled through a pulse transformer to the output circuitry, where the duty cycle data is converted to a proportional DC output level.

### TYPICAL APPLICATIONS

Eliminates ground loops and common mode signals. Use for voltage/current scaling and conversion with isolation for buffering and noise reduction. Single-unit replacement module provides field rangeability for all normal input and output ranges.

### SPECIFICATIONS

#### INPUT RANGE

##### Limits

- any voltage between  $-256$  and  $+256$  VDC
- any current between  $-100$  and  $+100$  mAdc

##### Span

- any voltage span from 15 mV to 256 V
- any current span from 0.8 mA to 100 mAdc

##### Offset

- can cancel any input offset between  $-110\%$  and  $+110\%$  of span

#### INPUT IMPEDANCE

- Voltage 1 megohm
- Current 20 ohms

#### OUTPUT RANGE

Voltage	Current
0/.25 V	0/1 mA
0/1 V	0/4 mA
0/5 V	0/20 mA
1/5 V	4/20 mA
0/10 V	
-5/+5 V	
-10/+10 V	

#### OUTPUT LOAD

- Voltage 10 mA max. (1 kilohm at 10 V)
- Current  $>24$  V compliance (1200 ohms max. at 20 mA)

#### OUTPUT RESPONSE

- (User Settable)
- normal or reverse acting (example 10 to 0 VDC)

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

- $< 0.1\%$  of span

#### ISOLATION

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

#### RESPONSE TIME

- $< 100$  ms

#### ACCURACY

- $\pm 0.1\%$  of span

#### LINEARITY

- $\pm 0.05\%$  of span

#### COMMON MODE REJECTION

- 120 dB, DC to 60 Hz

#### OPERATING TEMPERATURE

- $14^{\circ}\text{F}$  to  $140^{\circ}\text{F}$  /  $-10^{\circ}\text{C}$  to  $60^{\circ}\text{C}$

#### TEMPERATURE STABILITY

- $\pm(0.02\%$  of span +  $2 \mu\text{V})/^{\circ}\text{C}$  max

#### POWER

- 115 VAC  $\pm 10\%$ , 50/60 Hz (2.5w max)
- 230 VAC  $\pm 10\%$ , 50/60 Hz (2.5W max)
- 24 VAC \*\*  $\pm 10\%$ , 50/60 Hz (2.5W max)
- (DC Power Option)
- 24 VDC \*\* (limits 21-32 VDC) (2.5W max)
- 12 VDC \*\* (limits 10-16 VDC) (2.5W max)

\*\* Not UL Recognized

**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**

- VDC
- mADC

**Enter Input**

Zero Scale

Full Scale

**OUTPUT**

**Select Units**

- VDC
- mADC

**Enter Output**

Zero Scale

Full Scale

**Select Output Logic**

- Normal Acting
- Reverse Acting

**OPTIONS**

- Conformal Coating

**TAGS**

**Specify Tag Numbers**

Tag number is typed on product label at no charge.

**Enter Tag Number(s)**

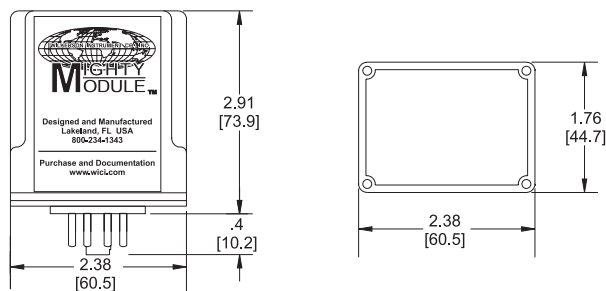
**ACCESSORIES**

**MM4380A**

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	No Connection
PIN 5	Input +
PIN 6	Input -
PIN 7	Output +
PIN 8	Output -