



DM4001

RTD INPUT, ISOLATED FIELD RANGEABLE TRANSMITTER

FEATURES

- Spans from 8°C to 1024°C
- Linearized for Platinum RTDs
- Provides a Fully Isolated DC Output Proportional to RTD Input
- Plug-In Terminal Blocks
- 2, 3, or 4 Wire Connections
- User-Settable Input and Output Ranges
- Fully Labeled Jumper Positions for Easy Range Settings
- Standard DIN-Rail Mount with Easy Snap-On Snap-Off
- Connections and Ranging Readily Accessible from the Front
- Choice of Power Options
- User Write-On Label
- Permanent Warranty

DESCRIPTION

The DM4001 provides an isolated voltage or current output proportional to temperature as measured with an RTD. The product can measure 2, 3, or 4 wire resistance elements. The 3 wire configuration provides compensation for lead wire resistance. The 4 wire configuration provides true measurement of the resistance element without lead wire error.

Linearization is provided for .00385 and

.00393 alpha platinum resistance elements.

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.

Connections are made via two 4-pin plug-in terminal blocks. These terminal blocks allow the product to be removed without unwiring the connections.

TYPICAL APPLICATIONS

Useful for temperature monitoring, control and data acquisition.

SPECIFICATIONS

RTD INPUT

100 & 1000 ohm Pt., 10 ohm Cu.
.00385 or .00393 alpha
2, 3, or 4 wire

INPUT

Span Ranges (°C)
8, 16, 32, 64,
128, 256, 512, 1024

Linearization Error
< ± .2%

Open RTD Protection
Upscale or Downscale

EXCITATION

10 ohm 10 mA
100 ohm 1 mA
1000 ohm .1 mA

INPUT OFFSET

± 0%, 20%, 40%, 60% of span

SPAN ADJUSTMENT

+5% to -55% of selected range

ZERO ADJUSTMENT

± 30% of selected offset

OUTPUT

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

OUTPUT LOGIC

Normal or Reverse Acting

DRIVE CAPABILITY

Voltage
5 mA
Current
>24 V Compliance

OUTPUT RIPPLE (Peak-to-Peak)

<0.1% of full scale

ISOLATION

Resistance
>500 megohms
Voltage Rating
>1000 VAC rms sinewave

ACCURACY

±0.1% of span

COMMON MODE REJECTION

>100 dB, DC to 60 Hz

OPERATING TEMPERATURE

14 to 140 °F/-10 to +60 °C

TEMPERATURE STABILITY

±(0.01% of span) /°C

POWER

Standard
115 VAC ± 10%, 50/60 Hz
230 VAC ± 10%, 50/60 Hz

Optional
115/230 VAC Selectable
±10%, 50/60 Hz
24 VAC ± 10%, 50/60 Hz
24 VDC (21 to 32 VDC)
12 VDC (10 to 16 VDC)

Wattage
2.5 W max

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 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

Open Sensor Response

- Upscale Downscale

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)

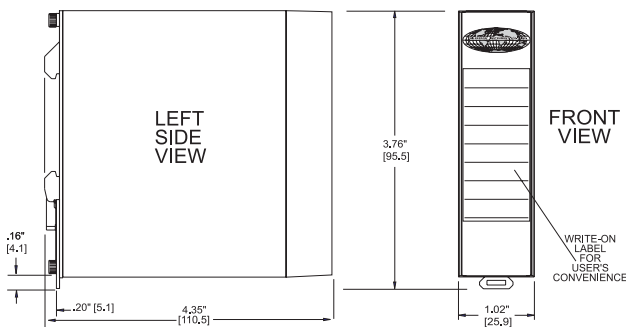
ACCESSORIES

DM4001

DR1 DIN-Rail, 35 mm Symmetrical, 39 inches (1 meter) QTY _____

DIMENSIONS

Inches [mm]



CONNECTIONS

- TERM L1 Power AC L1 or DC +
- TERM L2 Power AC L1 or DC -
- TERM 1 Current Supply +
- TERM 2 Input +
- TERM 3 Input -
- TERM 4 Current Supply -
- Output + Output +
- Output - Output -



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