



DM4130

THERMOCOUPLE INPUT FIELD RANGEABLE ISOLATED TRANSMITTER

FEATURES

- Spans from 6.25% to 100% of T/C Range
- Linearized for J, K, R, S, T, E, and N Thermocouples
- Provides a Fully Isolated DC Output Proportional to T/C Input
- Plug-In Output Terminal Block
- Standard DIN-Rail Mount with Easy Snap-On Snap-Off
- Connections and Ranging Readily Accessible from the Front
- User-Settable Input and Output Ranges
- Fully Labeled Jumper Positions for Easy Range Settings
- Choice of Power Options
- User Write-On Label
- Permanent Warranty

DESCRIPTION

The DM4130 provides an isolated voltage or current output proportional to temperature as measured with a thermocouple. Any thermocouple may be used, and types J, K, R, S, T, E, and N can be linearized.

A microprocessor controls span and offset settings, performs cold junction compensation calculations, and performs a table look-up for linearization.

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 terminal blocks. The lower terminal blocks allow the product to be removed without unwiring the connections.

TYPICAL APPLICATIONS

Useful for temperature monitoring, control and data acquisition.

SPECIFICATIONS

INPUT

Span Adjustment
Minimum
(5 mV input minimum)
Maximum
100% of T/C range
Offset Adjustment
0% to 90% of T/C range

COLD JUNCTION COMPENSATION

± 0.25°C accuracy

IMPEDANCE

1 megohm

UPDATE PERIOD

4/sec

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 sine wave

ACCURACY

±0.1% of span

LINEARIZATION

+ 0.25°C of NIST tables
full range of J, K, R, S, T, E, N

COMMON MODE REJECTION

>120 dB, DC to 60 Hz

OPERATING TEMPERATURE

14 to 140 °F (-10 to 60 °C)

TEMPERATURE STABILITY

±(0.01% of span)/°C

POWER

Wattage
2.5 W maximum
(Standard)
115 VAC ±10%, 50/60 Hz
230 VAC ±10%, 50/60 Hz
(Optional)
24 VAC ±10%, 50/60 Hz
24 VDC (21 to 32 VDC)

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

- 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

Enter Tag Number(s)

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.

ACCESSORIES

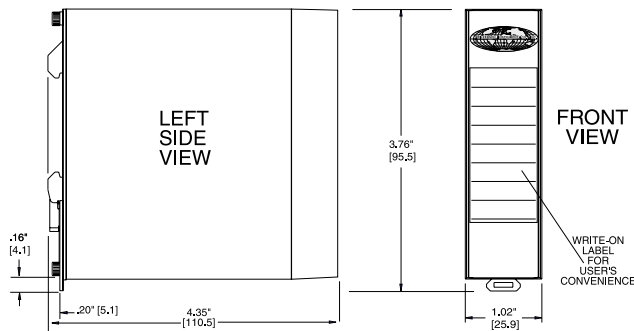
DM4130

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

QTY _____

DIMENSIONS

Inches [mm]



CONNECTIONS

- TERM 1 Shield
- TERM 2 T/C Input +
- TERM 3 No Connection
- TERM 4 T/C Input -
- TERM 5 Output +
- TERM 6 Output -
- TERM 7 Power AC L1 or DC +
- TERM 8 Power AC L2 or DC -