



# 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

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**

- J TC
- K TC
- R TC
- S TC
- T TC
- E TC
- N TC
- B TC
- Other - Specify 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**

**DM4130**

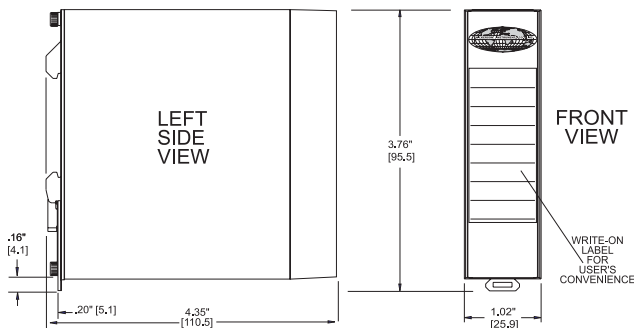
DR1

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 -



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