



### **FEATURES**

- LDisplays –50 to +200°C range
- Interfaces with type J or K type thermocouples
- Typical accuracies as low as ±1.5°C
- Use with: DMS-30PC-1-RL DMS-30LCD-1-5

# DMS-EB-TCJ/TCK

Thermocouple input Application boards for DIVIS-SUP G/LGD Wieters

# **OBSOLETE PRODUCT**

**Contact Factory for Replacement Model** 

### PRODUCT OVERVIEW

**Description:** The DMS-EB-TCJ and DMS-EB-TCK Application Boards interface type J or K thermocouples to DATEL's low-power,  $\pm 2V$  input, DMS-30PC-1-RL or DMS-30LCD-1-5 digital voltmeters. These low-cost add-on boards provide a quick easy method of displaying temperature (in degrees Celsius only) within a -50 to +200°C range.

 $\label{lock} \textbf{Installation:} \ A \ screw-type \ terminal \ block \ (TB1) \ accepts \ direct \ thermocouple \ inputs \ and \ provides \ quick \ connection \ for \ the \ +5V \ power \ supply. \ All \ necessary \ I/O \ connections \ for \ the \ meter \ — \ including \ activation \ activation \ for \ the \ meter \ — \ including \ activation \ for \ the \ meter \ — \ including \ activation \ for \ the \ meter \ — \ including \ activation \ for \ the \ meter \ — \ including \ activation \ for \ the \ meter \ — \ including \ activation \ for \ the \ meter \ — \ including \ activation \ for \ the \ meter \ — \ including \ activation \ for \ the \ meter \ — \ including \ activation \ for \ the \ meter \ — \ including \ activation \ for \ the \ meter \ — \ including \ activation \ for \ f$ 

vation of the correct decimal point — are built-in. Simply solder the board to the meter, connect the appropriate thermocouple, and the installation is complete. Using low-power meters, with either LCD or LED displays, will maintain uniform temperatures across the board and keep temperature-gradient induced errors to a minimum.

**Accuracy:** As the accuracy specifications indicate, the DMS-EB-TCJ and TCK boards are for general-

purpose temperature monitoring over the range of -50 to  $+200^{\circ}$ C. However, fairly high accuracy can be obtained with K thermocouples from 0 to  $+200^{\circ}$ C. For higher accuracy temperature readings, see the DMS-EB-HTB.

# SIMPLIFIED SCHEMATIC (-) NPUT LO 12 (-) NPUT LO 13 (-) NPUT





Figure 1. DMS-EB-TCJ/TCK Schematic Diagram





# DMS-EB-TCJ/TCK

Thermocouple Input Application Boards for DMS-30PC/LCD Meters

### **Performance/Functional Specifications**

 $(TA = +25^{\circ}C, VCC = +5V)$ 

Sensors	Type J and K thermocouples
Temperature Measurement Range	−50 to +200°C
Accuracy: DMS-EB-TCJ	
-50 to 0°C	±6°C typ., ±10°C max.
0 to +200°C	±4°C typ., ±8°C max.
Accuracy: DMS-EB-TCK	
-50 to 0°C	±6°C typ., ±10°C max.
0 to +200°C	±1.5°C typ., ±3°C max.
Primary Operating Power	+5V (±5%)
Input Current (Board only)	+0.6mA typ., +1mA max.
Operating Temperature Range	0 to +60°C
Storage Temperature Range	−20 to +75°C
Humidity	0 to 95%, non-condensing
Dimensions	2.02" (51.31mm)L x 0.83" (21.08mm)W

### **Ordering Information**

Model

**DMS-EB-TCJ** Type J thermocouple input board **DMS-EB-TCK** Type K thermocouple input board

**DMS-BZL1 Bezel assembly** 

**DMS-BZL2** Bezel assembly with sealing gasket



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