

# TCIC Series

## High Speed 8-Channel Thermocouple Interface Card

**\$630**  
Basic Unit



- ✓ 8 Thermocouple Channels
- ✓ Accepts Thermocouple Types J, K, T, E, R, S, or  $\pm 500$  mV Input
- ✓ High-Speed USB Interface
- ✓ Optional RS-232/RS-485 Communications

The TCIC Series comprises low-cost, high-speed thermocouple temperature measurement data acquisition cards with USB interface. TCIC cards use an 8-channel, high-resolution A/D converter with on-board noise filters. On-board cold junction compensation and temperature conversion enable standalone operation. The card also has 8 opto-isolated outputs that can be activated based on individually programmable high/low limit setpoints for each thermocouple channel.

Each TCIC card is supplied with Windows software that displays temperature data in digital meter, analog meter, or strip chart format. Data for all 8 channels can be logged to an Excel-compatible file. A LabVIEW demonstration and complete programming examples in .NET are also included.

### Specifications

**Inputs:** 8

**Input Types:** Each of the 8 inputs can be configured to measure  $\pm 500$  mV or type J, K, T, E, R, or S thermocouple

**Millivolt Accuracy:**

$\pm 0.05\%$  uncalibrated; gain drift 5 ppm/ $^{\circ}\text{C}$  typical, 10 ppm/ $^{\circ}\text{C}$  max

**Outputs:** 8 opto-isolated MOSFET outputs controlled based on individual channel high/low temperature setpoints; outputs can be programmed to operate in automatic, latching or manual modes. External 10 to 30 Vdc power supply required, 0.25 A max per output. Each output has an indicating LED.



TCIC-FULL-ENC, \$710, shown smaller than actual size

### Communications Interface:

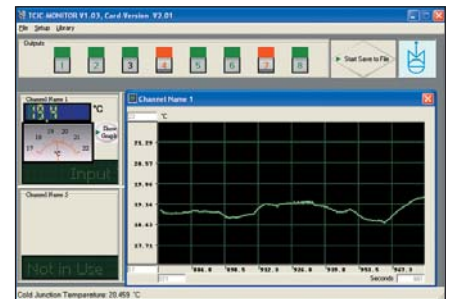
USB standard, RS-232/RS-485 (optional)

**Sampling Rate:** 400 Hz total throughput (50 Hz/channel)

**Power:** USB (from computer); RS-232/RS-485 (from included AC adaptor)

**Enclosure Material:** ABS plastic

**Dimensions:**  
100 W x 160 mm L  
(3.94 x 6.30")



Windows software displays data in graphical or tabular format

### Thermocouple Input Types and Ranges Table

Type	Range	Accuracy* ( $^{\circ}\text{C}$ )	Resolution ( $^{\circ}\text{C}$ )
J	-200 to 1200 $^{\circ}\text{C}$ (-328 to 2192 $^{\circ}\text{F}$ )	$\pm 1.5$	0.019
K	-200 to 1372 $^{\circ}\text{C}$ (-328 to 2501 $^{\circ}\text{F}$ )	$\pm 1.5$	0.024
T	-200 to 400 $^{\circ}\text{C}$ (-328 to 752 $^{\circ}\text{F}$ )	$\pm 1.5$	0.022
E	-200 to 1000 $^{\circ}\text{C}$ (-328 to 1832 $^{\circ}\text{F}$ )	$\pm 1.5$	0.015
R	-50 to 1768 $^{\circ}\text{C}$ (-58 to 3214 $^{\circ}\text{F}$ )	$\pm 2.0$	0.125
S	-50 to 1768 $^{\circ}\text{C}$ (-58 to 3214 $^{\circ}\text{F}$ )	$\pm 2.0$	0.143

\*Total accuracy, including CJC error.

**MOST POPULAR MODELS HIGHLIGHTED!**

To Order (Specify Model Number)		
Model No.	Price	Description
TCIC-USB-ENC	\$630	Thermocouple interface card with USB interface (with enclosure)
TCIC-FULL-ENC	710	Thermocouple interface card with USB and RS-232/RS-485 interfaces (with enclosure)

Each TCIC card is supplied with complete operator's manual, Windows and utility software on CD ROM. TCIC-FULL models include AC adaptor.

**Ordering Example:** TCIC-USB-ENC thermocouple interface card with enclosure and USB interface and OMEGACARE<sup>SM</sup> 1-year extended warranty (adds 1 year to standard 1-year warranty) for TCIC-USB-ENC, \$630 + 63 = \$693.



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