

ETHERNET DATA ACQUISITION

Thermocouple Virtual Chart Recorder

iTCX



- ✔ Virtual Chart Recorder
- ✔ 2 Thermocouple Channels
- ✔ Web Server
- ✔ 10 Popular Thermocouple Types
- ✔ Accurate
- ✔ Email Alarms
- ✔ Data Logging
- ✔ No Special Software Required

View Temperature from One or Two Thermocouples with a Web Browser

The OMEGA® iTCX transmitter lets the user monitor temperature from two independent thermocouple channels over an Ethernet network or the Internet with no special software except a Web browser.

This virtual chart recorder serves active Web pages to display real-time readings and temperature charts. It logs data in standard formats for use in a spreadsheet or data acquisition program such as Excel or Visual Basic.

The virtual chart viewed on the Web page is a JAVA™ Applet that plots a chart over the LAN or Internet in real time. With the OMEGA iTCX, there is no need to invest time and money learning a proprietary software program to log or chart the data.

The OMEGA® iTCX is available in an industrial DIN rail package (iTCX-D) that is powered by 10 to 32 Vdc, and in a benchtop or wall-mount package (iTCX-W) with a universal (100 to 240 Vac) power adaptor included.

Adjustable Charts

Chart scales are fully adjustable on the fly. For example, the chart can display one minute, one hour, one day, one week, one month, or one year. Temperature can be charted across the full span or within any narrow range such as 20 to 30°C.

You can chart temperature from one thermocouple, two thermocouples, and/or the differential between the two.

The iTCX transmitters can take thermocouple Types J, K, T, E, R, S, B, C, N, and L, measuring temperatures up to 1820°C (3308°F). They can display and chart absolute measurements in two locations and a differential measurement between the two locations.

Award-Winning Technology

The OMEGA® iTCX is simple to install and use, and features OMEGA's award-winning iServer technology that requires no special software except a Web browser.



The iTCX connects to an Ethernet network with a standard RJ45 connector and sends data in standard TCP/IP packets. It is easily configured with a simple menu and can be password protected.

From within an Ethernet LAN or over the Internet, the user simply types an IP address or an easy to remember name in any Web browser, and the iTCX serves a Web page with the current readings.

Email Alarms

The iTCX can send an email or text messages over the Internet, reporting the status or an alarm condition to any individual or distribution list.



Adjustable Chart Web Page.

iServer MicroServer™

Specifications

Thermocouple Input Temperature Range: Refer to thermocouple chart

Temperature Accuracy: Refer to thermocouple chart

Resolution: 1°/0.1°

Temperature Stability: 0.08°C/°C

Thermocouple Cold End Tracking: 0.05°C/°C

Thermocouple Lead Resistance: 100Ω max

Thermocouple Type (ITS 90):

J, K, T, E, R, S, B, C, N, L

iSERVER SPECIFICATIONS

Interfaces:

Ethernet: 10Base-T (RJ45)

Supported Protocols:

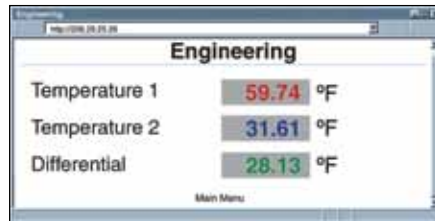
TCP/IP, UDP/IP, ARP, ICMP, DHCP, DNS, HTTP and Telnet

Indicators (LEDs): Network activity, network link, transmit and receive/diagnostics

Memory: 512 KB flash, 16 KB SRAM

Management: Device configuration and monitoring through embedded Web server

Software: Firmware upgradable. Includes an Excel program for automatic data logging within definable time intervals, compatible with all Windows operating systems.



Embedded Web Server:

Serves Web pages containing real-time data and live updated charts within definable time intervals

ENVIRONMENTAL

Operating Temperature: 0 to 70°C (32 to 158°F)

Storage Temperature: -40 to 125°C (-40 to 257°F)

Power Input:

iTCX-W: 9 to 12 Vdc

iTCX-D: 10 to 32 Vdc

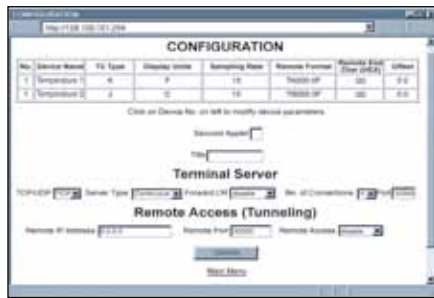
Safety Qualified AC Power Adaptor—Nominal Output:

9 Vdc at 0.5 A (included for iTCX-W)

Input: 100 to 240 Vac, 50/60 Hz; switching power supply (sold separately for iTCX-D)

Consumption: 2.5 W max

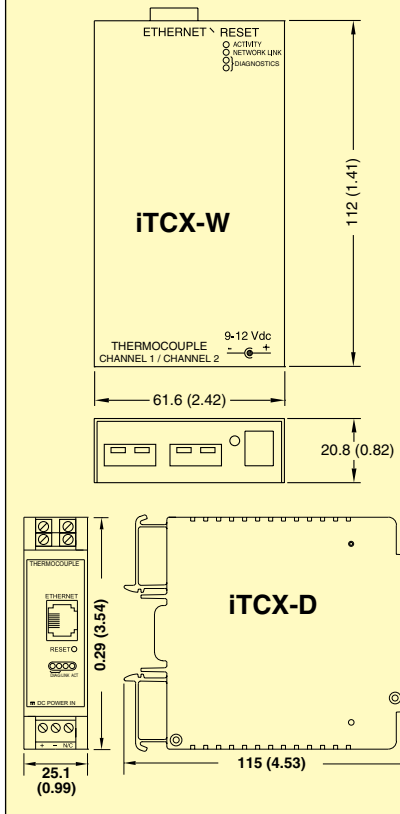
Packaging Material: Metal case with flange mount for iTCX-W; polycarbonate case with DIN rail mount for iTCX-D



	Input Type	Range	Accuracy
J	Iron - Constantan	-210 to 760°C / -346 to 1400°F	0.4°C / 0.7°F
K	CHROMEGA®- ALOMEGA®	-270 to -160°C / -160 to 1372°C -454 to -256°F / -256 to 2502°F	1.0°C / 0.4°C 1.8°F / 0.7°F
T	Copper - Constantan	-270 to -190°C / -190 to 400°C -454 to -310°F / -310 to 752°F	1.0°C / 0.4°C 1.8°F / 0.7°F
E	CHROMEGA®- Constantan	-270 to -220°C / -220 to 1000°C -454 to -364°F / -364 to 1832°F	1.0°C / 0.4°C 1.8°F / 0.7°F
R	Pt / 13% Rh-Pt	-50 to 40°C / 40 to 1768°C -58 to 104°F / 104 to 3214°F	1.0°C / 0.5°C 1.8°F / 0.9°F
S	Pt / 10% Rh-Pt	-50 to 100°C / 100 to 1768°C -58 to 212°F / 212 to 3214°F	1.0°C / 0.5°C 1.8°F / 0.9°F
B	30% Rh-Pt / 6% Rh-Pt	100 to 640°C / 640 to 1820°C 212 to 1184°F / 1184 to 3308°F	1.0°C / 0.5°C 1.8°F / 0.9°F
C	5% Re-W / 26% Re-W	0 to 2320°C / 32 to 4208°F	0.4°C / 0.7°F
N	Nicrosil - Nisil	-250 to -100°C / -100 to 1300°C -418 to -148°F / -148 to 2372°F	1.0°C / 0.4°C 1.8°F / 0.7°F
L	J DIN	-200 to 900°C / -328 to 1652°F	0.4°C / 0.7°F

Mechanical Specifications

Dimensions: mm (inch)
Ø = Diameter



To Order

Model No.	Description
iTCX-W	iServer MicroServer™ for dual thermocouple input, includes 2 Type K thermocouples with 1 m (36") of 24 AWG PTFE insulated wire and a molded mini-connector with snap-on strain relief and universal (100 to 240 Vac) power adaptor
iTCX-D	DIN rail iServer industrial MicroServer™ for dual thermocouple input
iDRN-PS-1000	DIN rail power supply (switching), 95 to 240 Vac input, 24 Vdc out @ 850 mA (power up to 7 units)
CAL-3*	NIST traceable calibration certificate. Three temperature points for each input (for new units).

For* insert: J, K, T, E, R, S, C, N (add C for celsius).

Comes complete with operator's manual.

Ordering Example: iTCX-W, iServer MicroServer for dual thermocouple input and iDRN-PS-1000 DIN rail power supply.