

8-Channel Thermocouple Input USB Data Acquisition Module

USB-4718



Windows software displays data in graphical or tabular format.



USB-4718 shown smaller than actual size.

- ✓ Supports USB 2.0
- ✓ Portable
- ✓ Bus-Powered
- ✓ 8 Differential Analog Input Channels
- ✓ 16-Bit Resolution
- ✓ 8 DI/8 DO
- ✓ Wiring Terminal on Modules
- ✓ Suitable for DIN-Rail Mounting
- ✓ Lockable USB Cable for Rigid Connection

The USB-4700 series consists of true Plug & Play data acquisition devices. No more opening up your computer chassis to install boards—just plug in the module, then get the data. It's easy and efficient.

The USB-4718 offers 8 thermocouple inputs with 16-bit resolution, up to 0.1% input range accuracy, or 4 to 20 mA inputs.

Reliable and rugged enough for industrial applications, yet inexpensive enough for all types of projects, the USB-4718 is the perfect way to add measurement and control capability to any USB capable computer.

The USB-4718 is fully USB plug and play and easy to use. It obtains all required power from the USB port, so no external power connection is ever required.

Data collection is simple. Simply plug the data acquisition module into an available USB port and our easy-to-use Windows software does the rest. The software converts your PC into a real-time strip chart recorder. Data can be printed in graphical or tabular format. It can also be exported to a text or Microsoft Excel file.

Specifications

ANALOG INPUT

Accuracy: $\pm 0.1\%$ for voltage input

Bandwidth: 13.1 Hz @ 50 Hz, 15.72 Hz @ 60 Hz

Channels: Eight differential

Ch. Independent Conf: Yes

CMR @ 50/60 Hz: 92 dB min

Resolution: 16-bits

Input Impedance: 20 M Ω

Input Range: 0 to 15 mV, 0 to 50 mV, 0 to 100 mV, 0 to 500 mV, 0 to 1V, 0 to 2.5V, 0 to 20 mA, 4 to 20 mA

Input Types: Thermocouple, mV, V, mA

Sampling Rate:

10 samples/sec (total)

Span Drift: ± 25 ppm/ $^{\circ}$ C

TVS/ESD Protection: Built-in

Zero Drift: ± 3 μ V/ $^{\circ}$ C

ISOLATED DIGITAL INPUT

Channels: 8

Input Voltage:

Logic 0: 2V max

Logic 1: 5V min (30 V max)

Isolation Protection: 2500 Vdc

Opto-Isolator Response: 25 μ s

ISOLATED DIGITAL OUTPUT

Channels: 8

Output Type: Sink (NPN)

Isolation Protection: 2500 Vdc

Output Voltage: 5 to 30 Vdc,

1.1 A max/total

Sink Current: 200 mA max/channel

Opto-isolator Response: 25 μ s

GENERAL

Bus Type: USB 2.0

Software: Windows 2000/XP

I/O Connector: Onboard screw terminal

Dimensions:

80 H x 132 L x 32 mm D

(3.1 x 5.2 x 1.3")

Power Consumption:

100 mA @ 5V

Power Input: 5V from USB line

Watchdog Timer: 1.6 sec (system)

Operating Temperature:

0 to 60 $^{\circ}$ C (32 to 140 $^{\circ}$ F)

Storing Temperature:

-20 to 70 $^{\circ}$ C (-4 to 158 $^{\circ}$ F)

Storing Humidity: 5 to 95%

RH non-condensing



OMEGACARESM extended warranty program is available for models shown on this page. Ask your sales representative for full details when placing an order. OMEGACARESM covers parts, labor and equivalent loaners.

Thermocouple Ranges and Accuracy			
Thermocouple	Input Range	Typical Accuracy	Maximum Error
J	0 to 760 $^{\circ}$ C (32 to 1400 $^{\circ}$ F)	$\pm 1.0^{\circ}$ C	$\pm 1.5^{\circ}$ C
K	0 to 1370 $^{\circ}$ C (32 to 2498 $^{\circ}$ F)	$\pm 1.0^{\circ}$ C	$\pm 1.5^{\circ}$ C
T	-100 to 400 $^{\circ}$ C (-148 to 752 $^{\circ}$ F)	$\pm 1.0^{\circ}$ C	$\pm 1.5^{\circ}$ C
E	0 to 1000 $^{\circ}$ C (32 to 1832 $^{\circ}$ F)	$\pm 1.0^{\circ}$ C	$\pm 1.5^{\circ}$ C
R	500 to 1750 $^{\circ}$ C (932 to 3182 $^{\circ}$ F)	$\pm 1.2^{\circ}$ C	$\pm 2.5^{\circ}$ C
S	500 to 1750 $^{\circ}$ C (932 to 3182 $^{\circ}$ F)	$\pm 1.2^{\circ}$ C	$\pm 2.5^{\circ}$ C
B	500 to 1800 $^{\circ}$ C (932 to 3272 $^{\circ}$ F)	$\pm 2.0^{\circ}$ C	$\pm 3.0^{\circ}$ C

To Order	
Model No.	Description
USB-4718	8-channel thermocouple input USB module

Comes with Windows Software and complete user manual on CD, a 1.8 m (6') USB 2.0 cable, and DIN rail mounting kit.

Ordering Example: USB-4718, 8-channel thermocouple input USB module, and OCW-1, OMEGACARESM extends standard 1-year warranty to a total of 2 years.