

USB-4718

8-ch Thermocouple Input USB Module with 8-ch Isolated Digital Input



CE FCC RoHS

Features

- Supports USB 2.0
- Supports voltage, current, and thermocouple inputs
- Bus-powered
- 8 thermocouple input channels
- 2,500 V_{DC} isolation
- Supports 4 ~ 20 mA current input
- Detachable screw terminal on modules
- 8-ch isolated DI and 8-ch isolated DO
- Suitable for DIN-rail mounting
- One lockable USB cable for secure connection included

Introduction

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. USB-4718 offers 8 thermocouple inputs with 16-bit resolution, up to 0.1% input range accuracy. Portable design makes the USB-4718 suitable for the field research. Also the input channels can be set separately make it possible handling multiple types of sensor with only one USB-4718 module.

Reliable and rugged enough for industrial applications, yet inexpensive enough for home projects, the USB-4718 is the perfect way to add measurement and control capability to any USB capable computer. The USB-4700 series is fully plug and play and easy to use. It obtains all required power from the USB port, so no external power connection is ever required.

Specifications

Analog Input

- **Accuracy** $\pm 0.1\%$ for voltage input
- **Bandwidth** 13.1 Hz @ 50 Hz,
15.72 Hz @ 60 Hz
- **Channels** 8 differential
- **Ch. Independent Conf.** Yes
- **CMR @ 50/60 Hz** 92 dB min.
- **Resolution** 16 bits
- **Input Impedance** 1.8 M Ω
- **Input Range** 0 ~ 15 mV, 0 ~ 50 mV, 0 ~ 100 mV, 0 ~ 500 mV,
0 ~ 1 V, 0 ~ 2.5 V, 0 ~ 20 mA, 4 ~ 20 mA
- **Input Types** Thermocouple, mV, V, mA
- **Sampling Rate** 10 S/s (total)
- **Span Drift** ± 25 ppm/ $^{\circ}$ C
- **T/C Type and Temperature Ranges**

J	0 ~ 760 $^{\circ}$ C	R	500 ~ 1750 $^{\circ}$ C
K	0 ~ 1370 $^{\circ}$ C	S	500 ~ 1750 $^{\circ}$ C
T	-100 ~ 400 $^{\circ}$ C	B	500 ~ 1800 $^{\circ}$ C
E	0 ~ 1000 $^{\circ}$ C		

- **TVS/ESD Protection** Built-in
- **Zero Drift** ± 0.3 μ V/ $^{\circ}$ C

Isolated Digital Input

- **Channels** 8
- **Input Voltage** Logic 0: 2 V max.
Logic 1: 5 V min. (30 V max.)
- **Isolation Protection** 2,500 V_{DC}
- **Opto-isolator Response** 25 μ s

Isolated Digital Output

- **Channels** 8
- **Output Type** Sink (NPN)
- **Isolation Protection** 2,500 V_{DC}
- **Output Voltage** 5 ~ 30 V_{DC}, 1.1 A max./total
- **Sink Current** 200 mA max./channel
- **Opto-isolator Response** 25 μ s

General

- **Bus Type** USB 2.0
- **I/O Connector** Onboard screw terminal
- **Dimensions (L x W x H)** 132 x 80 x 32 mm
- **Power Consumption** 100 mA @ 5 V
- **Watchdog Timer** 1.6 sec. (system)
- **Operating Temperature** 0 ~ 60 $^{\circ}$ C (32 ~ 140 $^{\circ}$ F) (refer to IEC 68-2-1, 2)
- **Storage Temperature** -20 ~ 70 $^{\circ}$ C (-4 ~ 158 $^{\circ}$ F)
- **Storage Humidity** 5 ~ 95% RH non-condensing (refer to IEC 68-2-3)

Ordering Information

- **USB-4718** 8-ch Thermocouple Input USB Module
- **1960004544** Wallmount Bracket
- **1960005788** VESA Mount Bracket