

ADAM-4080/4080D

ADAM-4117

ADAM-4118

Counter/Frequency Module

8-channel Analog Input Module

8-channel Thermocouple Input Module



ADAM-4080/4080D



Specifications

General

- **LED Indicators** 5-digit readout, CH 0 or CH 1 (programmable) (ADAM-4080D only)
- **Power Consumption** 2.0 W @ 24 V_{DC}
- **Power Input** Unregulated 10–30 V_{DC}

Counter Input

- **Alarm** Alarm comparator on each counter
- **Channels** Two independent 32-bit counters
- **Input Frequency** 50 kHz max. (non-isolation)
- **Input Pulse Width** >10 μs.
- **Input Mode** Isolated or non-isolated
- **Isolation Input Level** Logic level 0: +1 V max. Logic level 1: 3.5–30 V
- **Isolation Voltage** 2500 V_{RMS}
- **Non-isolated Input Level** Programmable threshold: Logic level 0: 0 to +5 V (default = 0.8 V) Logic level 1: 0 to +5 V (default = 2.4 V)
- **Maximum Count** 4,294,967,295 (32 bits)
- **Preset Type** Absolute or relative
- **Programmable Digital Noise Filter** 2 ~ 65 μs

Frequency Measurement

- **Range** 5 Hz ~ 50 kHz
- **Programmable Built-in Gate Time** 1.0/0.1 sec.

Digital Output

- **Channels** 2
- **Open Collector** 30 V, 30 mA max. load
- **Power Dissipation** 300 mW for each channel



ADAM-4117

Specifications

General

- **Power Consumption** 1.2 W @ 24 V_{DC}
- **Power Input** Unregulated 10–48 V_{DC}

Analog Input

- **Accuracy** Voltage mode: ±0.1% or better Current mode: ±0.2% or better
- **ASCII commands and Modbus protocol**
- **Built-in TVS/ESD Protection**
- **Channels** 8 x differential and independent configuration channels 92 dB min.
- **CMR @ 50/60 Hz**
- **Fault and Overvoltage** With stands overvoltage protection up to ±60 V 200 V_{DC}
- **High Common Mode** Voltage: 20 MΩ Current: 120 Ω
- **Input Impedance** mV, V (supports uni-polar and bipolar), mA
- **Input Type** 0–150mV, 0–500mV, 0–1V, 0–5V, 0–10V, 0–15V, ±150 mV, ±500 mV, ±1V, ±5 V, ±10 V, ±15V, ±20 mA, 4–20mA
- **Input Range** 0–150mV, 0–500mV, 0–1V, 0–5V, 0–10V, 0–15V, ±150 mV, ±500 mV, ±1V, ±5 V, ±10 V, ±15V, ±20 mA, 4–20mA
- **Isolation Protection** 3000 V_{DC}
- **Resolution** 16 bits
- **Sampling Rate** 10/100 samples/sec (selected by Utility) ±25 ppm/°C
- **Span Drift** 2
- **Watchdog Timers** ±6μV/°C
- **Zero Drift** ±6μV/°C

Common Specifications

General

- **Dimensions** 70 x 122 x 30 mm
- **Connector** 2 x Plug-in terminal blocks (#14 ~ 22 AWG) ABS+PC
- **Enclosure** DIN 35 rail, stack, wall
- **Mounting** 1.6 sec. (system)
- **Watchdog Timer**

Environment

- **Humidity** 5 ~ 95% RH
- **Operating Temperature** 4080/4080D: -10–70°C (-14–158° F) 4117/4118: -40–85°C (-40–185° F)
- **Storage Temperature** 4080/4080D: -25–85°C (-13–185° F) 4117/4118: -40–85°C (-40–185° F)



ADAM-4118

Specifications

Analog Input

- **Analog Input Channel** 8 differential & independent thermocouple configurations Voltage: 20 MΩ Current: 120 Ω
- **Input Impedance**
- **Input Range** Thermocouple J 0 ~ 760 °C K 0 ~ 1370 °C T -100 ~ 400 °C E 0 ~ 1000 °C R 500 ~ 1750 °C S 500 ~ 1750 °C B 500 ~ 1800 °C
- **Sampling Rate** Voltage mode ±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1 V, ±2.5 V Current mode ±20 mA, +4–20 mA 10/100 samples/sec (selected by Utility) 3,000 V_{DC}
- **Isolation Protection**
- **Power** 0.5 W @ 24 V_{DC}
- **Power Consumption**
- **Communication**
- **Network** RS-485 (2-wire)
- **Speed** 1.2 ~ 115.2 kbps
- **Distance** 1.2 km (4000 ft)
- **Data Format** Advantech protocol: 1 start bit, 8 data bits, 1 stop bit, none parity 1 start bit, 8 data bits, 1 or 2 stop bit, parity check (none, even, odd)
- **Modbus Protocol**
- **Modbus/RTU Protocol Support** Yes
- **Watchdog Timers** System, Communication

Ordering Information

- **ADAM-4080** Counter/Frequency module
- **ADAM-4080D** Counter/Frequency module with LED Display
- **ADAM-4117** 8-channel Analog Input Module
- **ADAM-4118** 8-channel Thermocouple Input Module

- 1 Software
- 2 IPCC
- 3 TPC
- 4 FPM
- 5 ATM & AWS
- 6 DA&C
- 7 cPCI
- 8 ADAM-3000
- 9 Motion Control
- 10 ICOM
- 11 Industrial Networking
- 12 UNO
- 13 ADAM-4000
- 14 ADAM-5000
- 15 ADAM-6000
- 16 ADAM-8000
- 17 BAS

ADAM 4000/4100 Series

Common Specifications

Communication

- RS-485 (2-wire) to host
- Speeds: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps (ADAM-4080, ADAM-4080D only support up to 38400 bps)
- Max. communication distance: 4000 feet (1.2 km)
- Power and communication LED indicator
- ASCII command/response protocol
- Communication error checking with checksum
- Asynchronous data format:
 Advantech protocol: 1 start bit, 8 data bits, 1 stop bit, no parity
 Modbus protocol: 1 start bit, 8 data bits, 1 or 2 stop bit, parity check (none, odd, even) (ADAM-4100 series only)
- Up to 256 multidrop modules per serial port
- Online module insertion and removal
- Transient suppression on RS-485 communication lines

Dimensions

