

ADAM-4118 ADAM-4150 ADAM-4168

Robust 8-ch Thermocouple Input Module with Modbus®

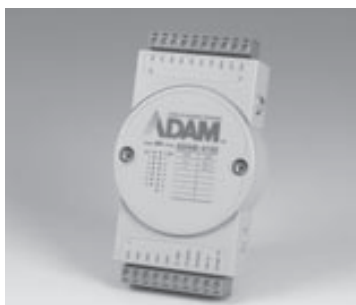
Robust Digital I/O Module with Modbus

Robust Relay Output Module with Modbus



ADAM-4118

CE FCC



ADAM-4150

CE FCC



ADAM-4168

CE FCC

Specifications

General

- Power Consumption 0.5W @ 24 V_{DC}

Analog Input

- Channels 8 differential and independent configuration channels
- Input Impedance Voltage: 20 MΩ
Current: 120 Ω
- Input Type Thermocouple
- Input Range
 - 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
- Voltage mode ±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1 V, ±2.5 V
- Current mode ±20 mA, 4 – 20 mA
- Accuracy Voltage mode: ±0.1% or better
Current mode: ±0.2% or better
- Resolution 16-bit
- Sampling Rate 10/100 samples/sec (selected by Utility)
- CMR @ 50/60 Hz 92 dB
- NMR @ 50/60 Hz 60 dB
- Overvoltage Protection ±60 V_{DC}
- High Common Mode 200 V_{DC}
- Span Drift ±25 ppm/°C
- Zero Drift ±6µV/°C
- Built-in TVS/ESD Protection

Ordering Information

- ADAM-4118 Robust 8-ch Thermocouple Input Module with Modbus®
- ADAM-4150 Robust Digital I/O Module with Modbus
- ADAM-4168 Robust Relay Output Module with Modbus

Specifications

General

- Power Consumption 0.7 W @ 24 V_{DC}

Digital Input

- Channels 7
- Input Level
 - Dry contact: Logic level 0: Close to GND
Logic level 1: Open
 - Wet contact: Logic level 0: +3 V max
Logic level 1: +10 V to +30 V
- (Note: The Digital Input Level 0 and 1 status can be inverted)
- Support 3 kHz Counter Input (32-bit + 1-bit overflow)
- Support 3 kHz Frequency Input
- Support Invert DI Status

Digital Output

- Channels 8, open collector to 40 V (1 A max. load)
- Power Dissipation 1W load max
- Ron Maximum 150 mΩ
- Support 1 kHz Pulse Output
- Support High-to-Low Delay Output
- Support Low-to-High Delay Output

Specifications

General

- Power Consumption 1.8 W @ 24 V_{DC}

Relay Output

- Output Channels 8 Form A
- Contact Rating (Resistive)
 - AC: 0.5 A @ 120 V
0.25 A @ 240 V
 - DC: 1 A @ 30 V
0.3 A @ 110 V
- Breakdown Voltage 750 V_{AC} (50/60 Hz)
- Initial Insulation Resistance 1 G Ω min. @ 500 V_{DC}
- Relay Response Time On: 3ms
Off: 1ms
- Total Switching Time 10 ms
- Supports 100 Hz pulse output

Common Specifications

- Power Input Unregulated 10 – 48 V_{DC}
- Watchdog Timer System (1.6 second) & Communication
- Connector 2 x Plug-in terminal blocks (#14 – 22 AWG)
- Isolation Voltage 3000 V_{DC}
- Support Protocol ASCII Command and Modbus/RTU

Environment

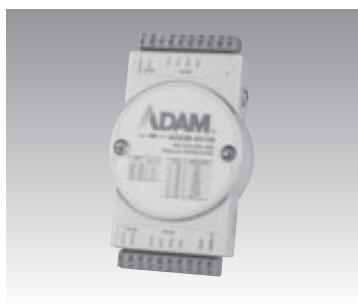
- Humidity 5 – 95% RH
- Operating Temperature -40 – 85 °C (-40 – 185 °F)
- Storage Temperature -40 – 85 °C (-40 – 185 °F)

ADAM-4510I ADAM-4520I ADAM-4117

Robust RS-422/485 Repeater

Robust RS-232 to RS-422/485 Converter

Robust 8-ch Analog Input Module with Modbus®



ADAM-4510I



ADAM-4520I



ADAM-4117



Specifications

General

- **Connectors** 2 x Plug-in terminal blocks (#14 – 22 AWG)
- **Power Consumption** 1.4 W @ 24 V_{DC}

Communications

- **Input** RS-485 (2-wire) or RS-422 (4-wire)
- **Output** RS-485 (2-wire) or RS-422 (4-wire).
- **Speed Modes (bps)** 1200,2400, 4800, 9600, 19.2 k, 38.4 k, 57.6 k, 115.2 k, RTS control and RS-422. (switchable)
- **Support Auto Baud-Rate**
- **Provide RS-485 to RS-422 Convert Ability**

Specifications

General

- **Connectors** 1 x Plug-in terminal block (#14 – 22 AWG) (RS-422/485)
1 x DB9-F (RS-232)
- **Power Consumption** 1.2 W @ 24 V_{DC}

Communications

- **Input** RS-232 (4-wire)
- **Output** RS-485 (2-wire) or RS-422 (4-wire).
- **Speed Modes (bps)** 1200,2400, 4800, 9600, 19.2 k, 38.4 k, 57.6 k, 115.2 k, RTS control and RS-422. (switchable)
- **Support Auto Baud-Rate**

Specifications

General

- **Connectors** 2 x Plug-in terminal block (#14 – 22 AWG) System (1.6 second) & Communication
- **Watchdog Timer** ASCII Command and Modbus/RTU
- **Support Protocol** 1.2 W @ 24 V_{DC}
- **Power Consumption** 1.2 W @ 24 V_{DC}

Analog Input

- **Channels** 8 differential and independent configuration channels
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, 0 ~ 20 mA, 4 ~ 20mA
- **Input Range**
- **Accuracy**
Voltage mode : ±0.1% or better
Current mode : ±0.2% or better
- **Resolution** 16 bits
- **Sampling Rate** 10/100 samples/sec (selected by Utility)
- **CMR @ 50/60 Hz** 92 dB
- **NMR @ 50/60 Hz** 60 dB
- **Over Voltage Protection** ±60 V_{DC}
- **High Common Mode** 200 V_{DC}
- **Span Drift** ±25 ppm/° C
- **Zero Drift** ±6µV/° C
- **Built-in TVS/ESD Protection**

Common Specifications

General

- **Power Input** Unregulated 10 – 48 V_{DC} w/power reversal protection
- **Isolation Voltage** 3000 V_{DC}

Environment

- **Humidity** 5 ~ 95% RH
- **Operating Temperature** - 40 ~ 85° C (-40 ~ 185° F)
- **Storage Temperature** - 40 ~ 85° C (-40 ~ 185° F)

Ordering Information

- **ADAM-4510I** Robust RS-422/485 Repeater
- **ADAM-4520I** Robust RS-232 to RS-422/485 Converter
- **ADAM-4117** Robust 8-ch Analog Input Module with Modbus®