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

ADAM-4150

ADAM-4168

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** T/C, mV, V, mA
- **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
  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**

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 (Typical)** On: 3ms
  Off: 1ms
- **Total Switching Time** 10 ms
- **Supports 100 Hz pulse output**

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

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)