ADAM-4118
ADAM-4150
ADAM-4168

Robust 8-ch Thermocouple Input Module with Modbus
Robust 15-ch Digital I/O Module with Modbus
Robust 8-ch Relay Output Module with Modbus

ADAM-4118

ADAM-4150

ADAM-4168

Specifications

General

- **Certification** FCC, CE, UL
- **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	**R**	500 ~ 1,750°C
K	0 ~ 1,370°C	**S**	500 ~ 1,750°C
T	-100 ~ 400°C	**B**	500 ~ 1,800°C
E	0 ~ 1,000°C	**N**	-270 ~ 1300°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 (Typical)
- **Zero Drift** ±6μV/°C
- **Built-in TVS/ESD Protection**
- **Burnout Detection**

Specifications

General

- **Certification** FCC, CE, UL
- **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 ~ 30 V
  (Note: The Digital Input Level 0 and 1 status can be inverted)
- **Supports 3 kHz Counter Input (32-bit + 1-bit overflow)**
- **Supports 3 kHz Frequency Input**
- **Supports Invert DI Status**
- **Over Voltage Protection** 40 V_{DC}

Digital Output

- **Channels** 8, open collector to 40 V (0.8A max. load)
- **Power Dissipation** 1W load max
- **RON Maximum** 150 mΩ
- **Supports 1 kHz Pulse Output**
- **Supports High-to-Low Delay Output**
- **Supports Low-to-High Delay Output**

Specifications

General

- **Certification** FCC, CE, UL
- **Power Consumption** 1.8 W @ 24 V_{DC}

Relay Output

- **Output Channels** 8 Form A
- **Contact Rating (Resistive)** 0.5 A @ 120 V_{AC}
  0.25 A @ 240 V_{AC}
  1 A @ 30 V_{DC}
  0.3 A @ 110 V_{DC}
- **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**
- **Maximum Operating Speed** 50 operations/min (at related load)

Common Specifications

General

- **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** 3,000 V_{DC}
- **Interface (B version)** RS-485, micro USB
- **Supported Protocols** ASCII Command and Modbus/RTU

Environment

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

Ordering Information

- **ADAM-4118** Robust 8-ch Thermocouple Input Module w/ Modbus
- **ADAM-4150** Robust 15-ch Digital I/O Module with Modbus
- **ADAM-4168** Robust 8-ch Relay Output Module with Modbus

Last updated: 13-Aug-2021