

# 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<sub>DC</sub>

### 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<sub>DC</sub>
- High Common Mode 200 V<sub>DC</sub>
- 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<sub>DC</sub>

### 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<sub>DC</sub>

### 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<sub>AC</sub> (50/60 Hz)
- Initial Insulation Resistance 1 G Ω min. @ 500 V<sub>DC</sub>
- Relay Response Time (Typical) On: 3ms  
Off: 1ms
- Total Switching Time 10 ms
- Supports 100 Hz pulse output

## Common Specifications

- Power Input Unregulated 10 ~ 48 V<sub>DC</sub>
- Watchdog Timer System (1.6 second) & Communication
- Connector 2 x Plug-in terminal blocks (#14 ~ 22 AWG)
- Isolation Voltage 3000 V<sub>DC</sub>
- 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)