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With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# 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

- Power Consumption 0.5W @ 24 V<sub>DC</sub>

### Analog Input

- Channels 8 differential and independent configuration channels
- Input Impedance Voltage: 20 M $\Omega$   
Current: 120  $\Omega$
- 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		

- Voltage mode  $\pm 15$  mV,  $\pm 50$  mV,  $\pm 100$  mV,  $\pm 500$  mV,  $\pm 1$  V,  $\pm 2.5$  V
- Current mode  $\pm 20$  mA, 4 ~ 20 mA
- Accuracy Voltage mode:  $\pm 0.1\%$  or better  
Current mode:  $\pm 0.2\%$  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
- Overshoot Protection  $\pm 60$  V<sub>DC</sub>
- High Common Mode 200 V<sub>DC</sub>
- Span Drift  $\pm 25$  ppm/ $^{\circ}$ C (Typical)
- Zero Drift  $\pm 6\mu$ V/ $^{\circ}$ C
- Built-in TVS/ESD Protection
- Burn-out Detection

## 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 ~ 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<sub>DC</sub>

### Digital Output

- Channels 8, open collector to 40 V (0.8A max. load)
- Power Dissipation 1W load max
- RON Maximum 150 m $\Omega$
- Supports 1 kHz Pulse Output
- Supports High-to-Low Delay Output
- Supports 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) 0.5 A @ 120 V<sub>AC</sub>  
0.25 A @ 240 V<sub>AC</sub>  
1 A @ 30 V<sub>DC</sub>  
0.3 A @ 110 V<sub>DC</sub>
- Breakdown Voltage 750 V<sub>AC</sub> (50/60 Hz)
- Initial Insulation Resistance 1 G  $\Omega$  min. @ 500 V<sub>DC</sub>
- 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<sub>DC</sub>
- Watchdog Timer System (1.6 second) & Communication
- Connector 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- Isolation Voltage 3,000 V<sub>DC</sub>
- Supported Protocols ASCII Command and Modbus/RTU
- Operating Humidity 5 ~ 95% RH
- Operating Temperature -40 ~ 85 $^{\circ}$ C (-40 ~ 185 $^{\circ}$ F)
- Storage Temperature -40 ~ 85 $^{\circ}$ C (-40 ~ 185 $^{\circ}$ 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