**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**

RoHS

**COMPLIANT**

2002/95/EC

 **ADAM-4150**

RoHS

**COMPLIANT**

2002/95/EC

 **ADAM-4168**

RoHS

**COMPLIANT**

2002/95/EC

**Specifications**

# General

* **Power Consumption** 0.5W @ 24 VDC

# Analog Input

* **Channels** 8 differential and independent configuration channels
* **Input Impedance** Voltage: 20 M

Current: 120 

* **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 ±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 VDC
* **High Common Mode** 200 VDC
* **Span Drift** ±25 ppm/°C (Typical)
* **Zero Drift** ±6μV/°C

## Built-in TVS/ESD Protection

* **Burnout Detection**

**Specifications**

**General**

* **Power Consumption** 0.7 W @ 24 VDC

# 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 VDC

**Digital Output**

* **Channels** 8, open collector to 40 V (0.8A max. load)
* **Power Dissipation** 1W load max
* **RON Maximum** 150 m

## 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 VDC

# Relay Output

* **Output Channels** 8 Form A
* **Contact Rating** 0.5 A @ 120 VAC

**(Resistive)** 0.25 A @ 240 VAC

1 A @ 30 VDC

0.3 A @ 110 VDC

* **Breakdown Voltage** 750 VAC (50/60 Hz)
* **Initial Insulation** 1 G  min. @ 500 VDC

## Resistance

* **Relay Response** On: 3ms

**Time (Typical)** Off: 1ms

## Total Switching Time 10 ms

* **Supports 100 Hz pulse output**
* **Maximum Operating** 50 operations/min

**Speed** (at related load)

 **Storage Temperature** -40 ~ 85°C

(-40 ~ 185°F)

(-40 ~ 185°F)

* **Isolation Voltage**
* **Interface (B version)**

 **Operating Temperature** -40 ~ 85°C

5 ~ 95% RH

 **Operating Humidity**

**Environment**

ASCII Command and Modbus/RTU

Unregulated 10 ~ 48 VDC System (1.6 second) & Communication

2 x plug-in terminal blocks (#14 ~ 22 AWG)

3,000 VDC

RS-485, micro USB

* **Power Input**
* **Watchdog Timer**
* **Connector**

 **Supported Protocols**

**Common Specifications**

**General**

**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

 **RS-485 I/O Modules: ADAM-4000**

All product specifications are subject to change without notice. Last updated: 27-Jun-2018