

# ADAM-4012

# ADAM-4013

# ADAM-4015

1-ch Analog Input Module

1-ch RTD Input Module

6-ch RTD Module with Modbus



ADAM-4012



ADAM-4013



ADAM-4015



## Specifications

### General

- Power Consumption 1.2 W @ 24 V<sub>DC</sub>
- Supported Protocols ASCII command
- Connectors 1 x plug-in terminal block (#14 ~ 22 AWG)

### Analog Input

- Channels 1
- Input Impedance Voltage: 20 M $\Omega$   
Current: 125  $\Omega$  (Added by user)
- Input Type mV, V or mA
- Input Range  $\pm 150$  mV,  $\pm 500$  mV,  $\pm 1$  V,  $\pm 5$  V,  $\pm 10$  V and  $\pm 20$  mA
- Accuracy Voltage mode:  $\pm 0.1\%$  or better  
Current mode:  $\pm 0.2\%$  or better
- Span Drift  $\pm 25$  ppm/ $^{\circ}$ C
- Zero Drift  $\pm 6$   $\mu$ V/ $^{\circ}$ C

### Digital Input

- Channels 1  
Logic level 0: 1 V max.  
Logic level 1: 3.5 ~ 30 V  
pull up current: 0.5 mA,  
10 k $\Omega$  resistor to 5 V
- Event Counter Max. input freq.: 50 Hz  
Min. input pulse width: 1 msec.

### Digital Output

- Channels 2, open collector to 30 V,  
30 mA max. load
- Power Dissipation 300 mW

## Common Specifications

### General

- Power Input Unregulated 10 ~ 30 V<sub>DC</sub>
- Connectors 1 x plug-in terminal block (#14 ~ 22 AWG)
- Watchdog Timer System (1.6 second)

### Analog Input

- Resolution 16-bit
- Sampling Rate 10 sample/second (total)

## Specifications

### General

- Power Consumption 0.7 W @ 24 V<sub>DC</sub>
- Supported Protocols ASCII command
- Connectors 1 x plug-in terminal block (#14 ~ 22 AWG)

### Analog Input

- Channels 1
  - Input Connections 2 or 3-wire
  - Input Impedance 2 M $\Omega$
  - Input Type Pt or Ni RTD
  - RTD Types and Temperature Ranges
- | IEC RTD 100 ohms |                   |    |                   |
|------------------|-------------------|----|-------------------|
| Pt               | -100 $^{\circ}$ C | to | +100 $^{\circ}$ C |
| a =              | 0.00385           |    |                   |
| Pt               | 0 $^{\circ}$ C    | to | +100 $^{\circ}$ C |
| a =              | 0.00385           |    |                   |
| Pt               | 0 $^{\circ}$ C    | to | +200 $^{\circ}$ C |
| a =              | 0.00385           |    |                   |
| Pt               | 0 $^{\circ}$ C    | to | +600 $^{\circ}$ C |
| a =              | 0.00385           |    |                   |
| JIS RTD 100 ohms |                   |    |                   |
| Pt               | -100 $^{\circ}$ C | to | +100 $^{\circ}$ C |
| a =              | 0.003916          |    |                   |
| Pt               | 0 $^{\circ}$ C    | to | +100 $^{\circ}$ C |
| a =              | 0.003916          |    |                   |
| Pt               | 0 $^{\circ}$ C    | to | +200 $^{\circ}$ C |
| a =              | 0.003916          |    |                   |
| Pt               | 0 $^{\circ}$ C    | to | +600 $^{\circ}$ C |
| a =              | 0.003916          |    |                   |
| Ni RTD           |                   |    |                   |
| Ni               | -80 $^{\circ}$ C  | to | +100 $^{\circ}$ C |
| Ni               | 0 $^{\circ}$ C    | to | +100 $^{\circ}$ C |
- Accuracy  $\pm 0.1\%$  or better
  - Span Drift  $\pm 25$  ppm/ $^{\circ}$ C
  - Zero Drift  $\pm 3$   $\mu$ V/ $^{\circ}$ C
  - CMR @ 50/60 Hz 150 dB

## Specifications

### General

- Connectors 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- Power Consumption 1.2 W @ 24 V<sub>DC</sub>
- Watchdog Timer System (1.6 s) & Communication
- Supported Protocols ASCII command and Modbus/RTU
- Burn-out Detection Yes

### Analog Input

- Channels 6 differential
  - Input Connections 2, 3-wire
  - Input Impedance 10 M $\Omega$
  - Input Type Pt, Balco and Ni RTD
  - RTD Types and Temperature Ranges
- | Pt 100 RTD:                    |                     |
|--------------------------------|---------------------|
| Pt -50 $^{\circ}$ C            | to 150 $^{\circ}$ C |
| Pt 0 $^{\circ}$ C              | to 100 $^{\circ}$ C |
| Pt 0 $^{\circ}$ C              | to 200 $^{\circ}$ C |
| Pt 0 $^{\circ}$ C              | to 400 $^{\circ}$ C |
| Pt -200 $^{\circ}$ C           | to 200 $^{\circ}$ C |
| IEC RTD 100 ohms (a = 0.00385) |                     |
| JIS RTD 100 ohms (a = 0.00392) |                     |
| Pt 1000 RTD                    |                     |
| Pt -40 $^{\circ}$ C            | to 160 $^{\circ}$ C |
| Balco 500 RTD                  |                     |
| -30 $^{\circ}$ C               | to 120 $^{\circ}$ C |
| Ni 50 RTD                      |                     |
| Ni -80 $^{\circ}$ C            | to 100 $^{\circ}$ C |
| Ni 508 RTD                     |                     |
| Ni 0 $^{\circ}$ C              | to 100 $^{\circ}$ C |
| BA1                            |                     |
| -200 $^{\circ}$ C              | to 600 $^{\circ}$ C |
- Accuracy  $\pm 0.1\%$  (Typical)
  - CMR @ 50/60 Hz 120 dB
  - Span Drift  $\pm 25$  ppm/ $^{\circ}$ C
  - Zero Drift  $\pm 3$   $\mu$ V/ $^{\circ}$ C

## Ordering Information

- ADAM-4012 1-ch Analog Input Module
- ADAM-4013 1-ch RTD Input Module
- ADAM-4015 6-ch RTD Module with Modbus