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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-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