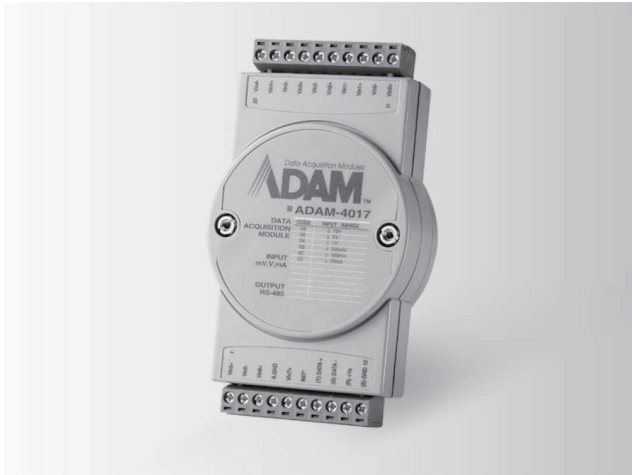


ADAM-4017

8-ch Analog Input Module



CE FCC RoHS

Features

- 8-ch Analog Input (voltage or current)
- Protocols: ASCII
- Watchdog timer to recover the system

Specifications

General

- **Power Consumption** 1.2 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command
- **Power Input** Unregulated 10 ~ 30 V_{DC}
- **Connectors** 2 x plug-in terminal block (#14 ~ 22 AWG)

Analog Input

- **Channels** 8 differential
- **Input Type** mV, V, mA
- **Input Range** ±150 mV, ±500 mV, ±1 V, ±5 V, ±10 V, ±20 mA

Analog Input

- **Accuracy** Voltage mode: ±0.1% or better
Current mode: ±0.2% or better
- **Resolution** 16-bit
- **Sampling Rate** 10 sample/second (total)
- **Isolation Voltage** 3,000 V_{DC}
- **CMR @ 50/60 Hz** 120 dB
- **NMR @ 50/60 Hz** 100 dB
- **Span Drift** ±25 ppm/°C
- **Zero Drift** ±6 µV/°C

Environment

- **Humidity** 5 ~ 95% RH
- **Operating Temp.** -10 ~ 70°C (14 ~ 158°F)
- **Storage Temp.** -25 ~ 85°C (-13 ~ 185°F)

Ordering Information

- **ADAM-4017-E** 8-ch Analog Input Module

ADAM-4115

ADAM-4015

Robust 6-Ch RTD Input Module

6-ch RTD Module with Modbus



ADAM-4115



ADAM-4015



Specifications

General

- **Certification** CE, FCC, UL
- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** 1.2 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 s) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU
- **Interface** RS-485, Micro USB
- **Burnout Detection** Yes

RTD Input

- **Channels** 6 differential
 - **Input Connections** 2, 3-wire
 - **Sampling Rate** 10/100 Hz total channels (selected by utility)
 - **Input Impedance** 10 M Ω
 - **Input Type** Pt, Balco and Ni RTD
 - **RTD Types and Temperature Ranges**
 - Pt100 -50~150°C
 - 0~100°C
 - 0~200°C
 - 0~400°C
 - 200~200°C
- Supports both IEC 60751 ITS90 (0.0385 W/W/°C) and JIS C 1604 (0.0392 W/W/°C)
- Pt1000 -40~160°C
 - Balco (500) -30~120°C
 - Ni (518) -80~100°C
 - 0~100°C
- **Accuracy** $\pm 0.1\%$ (Typical)
 - **CMR @ 50/60 Hz** 120 dB
 - **Span Drift** ± 25 ppm/°C
 - **Zero Drift** ± 6 μ V/°C

Common Specifications

General

- **Power Input** 10 ~ 30 V_{DC}
ADAM-4115: 10 ~ 48 V_{DC}

Environment

- **Operating Humidity** 5 ~ 95% RH

- **Operating Temperature** -10 ~ 70°C (14 ~ 158°F)
ADAM-4115: -40 ~ 85°C (-40 ~ 185°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)
ADAM-4115: -40 ~ 85°C (-40 ~ 185°F)

General

- **Certification** CE, FCC
- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** Typical: 0.5 W @ 24 V_{DC}
Max.: 0.9 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 s) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU
- **Burnout Detection** Yes

Analog Input

- **Channels** 6 differential
 - **Input Connections** 2, 3-wire
 - **Sampling Rate** 10 Hz total channels
 - **Input Impedance** 10 M Ω
 - **Input Type** Pt, Balco, Ni and BA1 RTD
 - **RTD Types and Temperature Ranges**
 - Pt100 -50~150°C
 - 0~100°C
 - 0~200°C
 - 0~400°C
 - 200~200°C
- Supports both IEC 60751 ITS90 (0.0385 W/W/°C) and JIS C 1604 (0.0392 W/W/°C)
- Pt1000 -40~160°C
 - Balco (500) -30~120°C
 - Ni (518) -80~100°C
 - 0~100°C
- Ni (508) 0~100°C
 - 50~200°C
 - 200~600°C
- **Accuracy** $\pm 0.1\%$ (Typical)
 - **CMR @ 50/60 Hz** 120 dB
 - **Span Drift** ± 25 ppm/°C
 - **Zero Drift** ± 6 μ V/°C

Ordering Information

- **ADAM-4115** Robust 6-Ch RTD Input Module
- **ADAM-4015** 6-ch RTD Module with Modbus

ADAM-4021

ADAM-4024

1-ch Analog Output Module with Modbus

4-ch Analog Output Module with Modbus



ADAM-4021



Specifications

General

- **Connectors** 1 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Power Consumption** 1.4 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command and Modbus/RTU

Analog Output

- **Channels** 1
- **Output Impedance** 0.5 Ω
- **Output Range** 0 ~ 20 mA, 4 ~ 20 mA, 0 ~ 10 V
- **Output Type** mA, V
- **Accuracy** $\pm 0.2\%$ of FSR for current output
 $\pm 0.1\%$ of FSR for voltage output
- **Current Load Resistor** 0 to 500 Ω (source)
- **Resolution** 12-bit
- **Isolation Voltage** 3,000 V_{DC}
- **Programmable Output Slope** 0.125 ~ 128 mA/sec.
0.0625 ~ 64.0 V/sec.
- **Readback Accuracy** $\pm 1\%$ of FSR
- **Span Temperature Coefficient** ± 25 ppm/ $^{\circ}\text{C}$
- **Zero Drift**
Voltage output: ± 30 $\mu\text{V}/^{\circ}\text{C}$
Current output: ± 0.2 $\mu\text{A}/^{\circ}\text{C}$

Common Specifications

General

- **Power Input** Unregulated 10 ~ 30 V_{DC}

Environment

- **Operating Humidity** 5 ~ 95% RH
- **Operating Temperature** -10 ~ 70 $^{\circ}\text{C}$
(14 ~ 185 $^{\circ}\text{F}$)
- **Storage Temperature** -25 ~ 85 $^{\circ}\text{C}$
(-13 ~ 185 $^{\circ}\text{F}$)



ADAM-4024



Specifications

General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** 3 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 second) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU

Analog Output

- **Channels** 4
- **Output Impedance** 0.5 Ω
- **Output Range** 0 ~ 20 mA, 4 ~ 20 mA, ± 10 V
- **Output Type** mA, V (Differential)
- **Accuracy** $\pm 0.1\%$ of FSR for current output
 $\pm 0.1\%$ of FSR for voltage output
- **Current Load Resistor** Max. 500 Ω (source)
- **Voltage Load Resistor** Min. 1K Ω
- **Resolution** 12-bit
- **Isolation Voltage** 3,000 V_{DC}
- **Programmable Output Slope** 0.125 ~ 128 mA/sec.
0.0625 ~ 64.0 V/sec.
- **Span Temperature Coefficient** ± 25 ppm/ $^{\circ}\text{C}$
- **Zero Drift**
Voltage output: ± 30 $\mu\text{V}/^{\circ}\text{C}$
Current output: ± 0.2 $\mu\text{A}/^{\circ}\text{C}$

Digital Input

- **Channels** 4
- **Input Level** Logic level 0: 1 V max.
Logic level 1: 10 ~ 30 V_{DC}
- **Isolation Voltage** 3,000 V_{DC}

Ordering Information

- **ADAM-4021-F** 1-ch Analog Output Module with Modbus
- **ADAM-4024-B1E** 4-ch Analog Output Module with Modbus

ADAM-4017+ ADAM-4018+ ADAM-4019+

8-ch Analog Input Module with Modbus
8-ch Thermocouple Input Module with Modbus
8-ch Universal Analog Input Module with Modbus



ADAM-4017+



ADAM-4018+



ADAM-4019+



Specifications

General

- **Power Consumption** 1.2 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 second) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU

Analog Input

- **Channels** 8 differential
- **Channel Independent Configuration** Yes
- **Input Impedance** Voltage: 20 M Ω
Current: 120 Ω
- **Input Type** mV, V, mA
- **Input Range** 0 ~ 150 mV, 0 ~ 500 mV, 0 ~ 1 V, 0 ~ 5 V, 0 ~ 10 V, ± 150 mV, ± 500 mV, ± 1 V, ± 5 V, ± 10 V, ± 20 mA, 0 ~ 20 mA, 4 ~ 20 mA

General

- **Power Consumption** 0.8 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 second) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU

Analog Input

- **Channels** 8 differential
- **Channel Independent Configuration** Yes
- **Input Impedance** Voltage: 20 M Ω
Current: 120 Ω
- **Input Type** Thermocouple, mA
- **Input Range** ± 20 mA, 4 ~ 20 mA
- **T/C Types and Temperature Ranges**

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		

- **Burnout Detection** All T/C

Specifications

General

- **Power Consumption** 1.0 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 second) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU

Analog Input

- **Channels** 8 differential channels for individual input type
- **Channel Independent Configuration** Yes
- **Input Impedance** Voltage: 20 M Ω
Current: 120 Ω
- **Input Type** T/C, mV, V, mA
- **Input Range** 0 ~ 100 mV, 0 ~ 500 mV, 0 ~ 1 V, 0 ~ 2.5 V, 0 ~ 5 V, 0 ~ 10 V, ± 100 mV, ± 500 mV, ± 1 V, ± 2.5 V, ± 5 V, ± 10 V, ± 20 mA, 0 ~ 20 mA, 4 ~ 20 mA,

- **T/C Types and Temperature Ranges**

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	N	-200 ~ 1,300°C

- **Burnout Detection** 4 ~ 20 mA & all T/C

Common Specifications

General

- **Power Input** Unregulated 10 ~ 30 V_{DC}
- **Connectors** 2 x plug-in terminal block (#14 ~ 22 AWG)

Analog Input

- **Accuracy** Voltage mode: $\pm 0.1\%$ or better
Current mode: $\pm 0.2\%$ or better
- **Resolution** 16-bit
- **Sampling Rate** 10 sample/second (total)

- **Isolation Voltage** 3,000 V_{DC}
- **Overvoltage Protection** ± 35 V_{DC}
- **CMR @ 50/60 Hz** 120 dB
- **NMR @ 50/60 Hz** 100 dB
- **Span Drift** ± 25 ppm/ $^{\circ}$ C (Typical)
- **Zero Drift** ± 6 μ V/ $^{\circ}$ C
- **Built-in TVS/ESD Protection**

Environment

- **Operating Humidity** 5 ~ 95% RH
- **Operating Temperature** -10 ~ 70°C (14 ~ 158°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

Ordering Information

- **ADAM-4017+-F** 8-ch Analog Input Module with Modbus
- **ADAM-4018+-F** 8-ch Thermocouple Input Module w/Modbus
- **ADAM-4019+-F** 8-ch Universal Analog Input Module w/Modbus