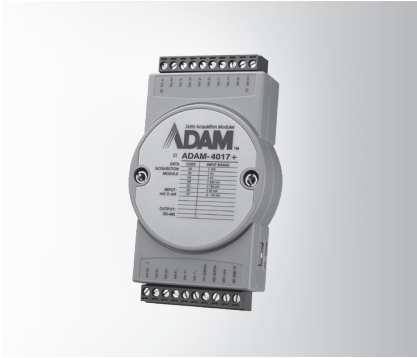


ADAM-4017+ ADAM-4018+ ADAM-4019+

8路Modbus模拟量采集模块
8路Modbus热电偶采集模块
8路Modbus通用型模拟量采集模块



ADAM-4017+



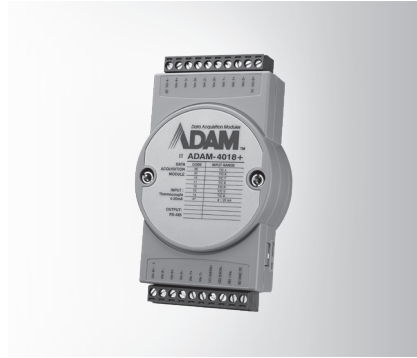
规格

常规

- 功耗 1.2 W @ 24 V_{DC}
- 看门狗 系统 (1.6秒) & 通信
- 通讯协议 ASCII command and Modbus/RTU

模拟量输入

- 通道数 8 路差分
- 通道独立配置 支持
- 输入电阻 Voltage: 20 MΩ
Current: 120Ω
- 输入类型 mV, V, mA
- 输入范围 0 ~ 150 mV, 0 ~ 500 mV, ± 1 V, 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



ADAM-4018+



规格

常规

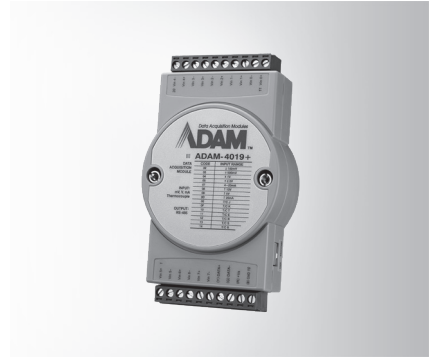
- 功耗 0.8 W @ 24 V_{DC}
- 看门狗 系统 (1.6秒) & 通信
- 通讯协议 ASCII command and Modbus/RTU

模拟量输入

- 通道数 8 路差分
- 通道独立配置 支持
- 输入电阻 Voltage: 20 MΩ
Current: 120Ω
- 输入类型 热电偶, mA
- 输入范围 ± 20 mA, 4 ~ 20 mA
- T/C 类型和量测范围

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		

- 断线检测 All T/C



ADAM-4019+



规格

常规

- 功耗 1.0 W @ 24 V_{DC}
- 看门狗 系统 (1.6秒) & 通信
- 通讯协议 ASCII command and Modbus/RTU

模拟量输入

- 通道数 8 路差分支持独立输入
- 通道独立配置 支持
- 输入电阻 Voltage: 20 MΩ
Current: 120Ω
- 输入类型 T/C, mV, V, mA
- 输入范围 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 类型和量测范围

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

- 断线检测 4 ~ 20 mA & all T/C

通用规格

常规

- 电源 10 ~ 30 V_{DC} 未校准
- 接口 2 x plug-in 接线端子 (#14 ~ 22 AWG)

模拟量输入

- 精度 电压模式: ±0.1% or better
电流模式: ±0.2% or better
- 分辨率 16-bit
- 采样率 10 sample/second (total)

- 隔离电压 3,000 V_{DC}
- 过载保护 ±35 V_{DC}
- CMR @ 50/60 Hz 120 dB
- NMR @ 50/60 Hz 100 dB
- Span Drift ±25 ppm/°C (Typical)
- Zero Drift ±6 µV/°C
- 内置 TVS/ESD 防护

环境

- 工作湿度 5 ~ 95% RH
- 工作温度 -10 ~ 70°C (14 ~ 158°F)
- 存储温度 -25 ~ 85°C (-13 ~ 185°F)

订购信息

- ADAM-4017+-F 8路Modbus模拟量采集模块
- ADAM-4018+-F 8路Modbus热电偶采集模块
- ADAM-4019+-F 8路Modbus通用型模拟量采集模块

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** ±0.2% of FSR for current output
±0.1% of FSR for voltage output
- **Current Load Resistor** 0 to 500 Ω (source)
- **Resolution** 16 bits (compatible with 12 bits simultaneously)
- **Isolation Voltage** 3,000 V_{DC}
- **Programmable Output Slope** 0.125 ~ 128 mA/sec.
0.0625 ~ 64.0 V/sec.
- **Readback Accuracy** ±1% of FSR
- **Span Temperature Coefficient** ±25 ppm/°C
- **Zero Drift**
Voltage output: ±30 μV/°C
Current output: ±0.2 μA/°C



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 ~ 20mA, ±10 V
- **Output Type** mA, V (Differential)
- **Accuracy** ±0.1 % of FSR for current output
±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/°C
- **Zero Drift**
Voltage output: ±30 μV/°C
Current output: ±0.2 μA/°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}

Common Specifications

General

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

Environment

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

Ordering Information

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

ADAM-4050

ADAM-4051

ADAM-4052

16路Modbus数字量输入/输出模块

16路Modbus隔离数字量输入模块

8路Modbus隔离数字量输入模块



ADAM-4050



ADAM-4051



ADAM-4052



规格

常规

- 认证 FCC, CE
- 连接器 2 x plug-in 接线端子 (#14 ~ 22 AWG)
- 功耗 0.2 W @ 24 V DC typ.
0.4 W @ 24 V DC max.
- 看门狗 系统 (1.6 秒)
- 通讯协议 ASCII command and Modbus/RTU

数字量输入

- 通道数 7
- 输入电平 干接点 Logic level 0: Closed to GND
Logic level 1: Open
- 湿接点 Logic level 0: 1 V max
Logic level 1: +3.5 ~ 30 V or floating
Pull up current: 0.5 mA,
10 kΩ resistor to 5 V
Support DO type: Sink (NPN) only

数字量输出

- 通道数 8
open collector to 30 V,
30 mA max. load
- 功耗 300 mW

规格

常规

- 认证 FCC, CE
- 连接器 2 x plug-in 接线端子 (#14 ~ 28 AWG)
- 功耗 0.7 W @ 24 V DC typ.
1.25 W @ 24 V DC max.
- 看门狗 系统 (1.6 秒)
- 通讯协议 ASCII command and Modbus/RTU
- LED指示灯 支持

数字量输入

- 通道数 16
- 输入电压 50 V max
- 输入电平 干接点 Logic level 0: Open
Logic level 1: Closed to GND
- 湿接点 Logic level 0: 3 V max or floating
Logic level 1: 10 ~ 50 V
Support DO type:
Sink (NPN) and Source (PNP)

- 隔离电压 2,500 V_{DC}
- 输入电阻 5.2 kΩ
- 过载保护 70 V_{DC}

规格

常规

- 认证 FCC, CE
- 连接器 2 x plug-in 接线端子
- 功耗 0.4 W @ 24 V DC
- 看门狗 系统 (1.6 秒)
- 通讯协议 ASCII command

数字量输入

- 通道数 8
(6 个完全隔离独立通道,
2 个共地隔离通道)
- 输入电平 Logic level 0: 1V or floating
Logic level 1: 3 ~ 30 V
Support DO type:
Sink (NPN) and Source (PNP)
- 隔离电压 5,000 VRMS
- 输入电阻 3 kΩ

通用规格

常规

- 电源 Unregulated 10 ~ 30 V_{DC}

环境

- 工作湿度 5 ~ 95% RH
- 工作温度 -10 ~ 70°C (14 ~ 158°F)
- 存储温度 -25 ~ 85°C (-13 ~ 185°F)

订购信息

- **ADAM-4050-F** 16路Modbus数字量输入/输出模块
- **ADAM-4051-C** 16路Modbus隔离数字量输入模块
- **ADAM-4052-BE** 8路Modbus隔离数字量输入模块

ADAM-4053 ADAM-4055 ADAM-4080

16-ch Digital Input Module

16-ch Isolated Digital I/O Module with Modbus

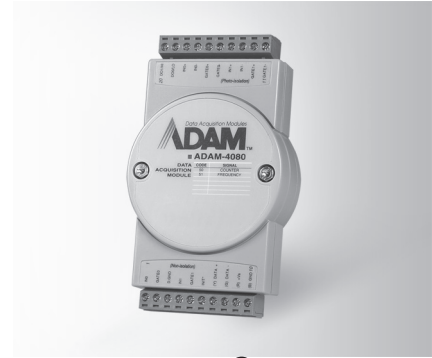
2-ch Counter/Frequency Module



ADAM-4053



ADAM-4055



ADAM-4080



Specifications

General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Power Consumption** 0.4 W @ 24 V DC typ.
0.7 W @ 24 V DC max.
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command and Modbus/RTU

Digital Input

- **Channels** 16
- **Input Level**
 - Dry contact: Logic level 0: Closed to GND
 - Logic level 1: Open
 - Wet contact: Logic level 0: 2 V
 - Logic level 1: 4 ~ 30 V or floating
 - Support DO type: Sink (NPN) only
- **Effective Distance** 500 m max. (dry contact only)

Specifications

General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** 1 W @ 24 V DC typ.
1.7 W @ 24 V DC max.
- **Watchdog Timer** System (1.6 second) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU
- **Isolation Voltage** 2,500 V_{DC}
- **LED Indicators** Yes

Digital Input

- **Channels** 8
Dry/Wet Contact decided by switch or jumper
- **Input Level**
 - Dry Contact: Logic level 0: Open
 - Logic level 1: Closed to GND
 - Wet Contact: Logic level 0: 0 ~ 3 V max. or floating
 - Logic level 1: 10 ~ 50 V
 - Support DO type: Sink (NPN) and Source (PNP)
- **Overvoltage Protection** 70 V_{DC}

Digital Output

- **Channels** 8, open collector to 40 V (1 channel 200 mA max. load, total channel 800 mA max. load)
- **Power Dissipation** Channel: 1 W max.
Total: 2.2 W (8 Channels)

Specifications

General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Power Consumption** 2.0 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command
- **LED Indicators** 5-digit readout, Ch 0 or Ch 1 (programmable)

Counter Input

- **Channels** 2 independent counters (32-bit + 1-bit overflow)
- **Input Frequency** 50 kHz max.
- **Input Pulse Width** >10 μs.
- **Input Mode** Isolated or non-isolated
- **Isolated Input Level** Logic level 0: 1 V max.
Logic level 1: 3.5~30 V
- **Isolation Voltage** 2,500 V_{RMS}
- **Non-isolated Input Level** Programmable threshold:
Logic level 0: 0.8 V_{max}.
Logic level 1: 2.4 ~ 5.0 V
- **Maximum Count** 4,294,967,295 (32 bits)
- **Preset Type** Absolute or relative
- **Programmable Digital Noise Filter** 2 μs ~ 65 ms
- **Alarm** Alarm comparators on each counter
- **Frequency Measurement Range** 5 Hz ~ 50 kHz
- **Programmable Built-in Gate Time** 1 or 0.1 second

Digital Output

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

Common Specifications

General

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

Environment

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

Ordering Information

- **ADAM-4053** 16-ch Digital Input Module
- **ADAM-4055** 16-ch Isolated Digital I/O Module with Modbus
- **ADAM-4080** 2-ch Counter/Frequency Modules

ADAM-4060

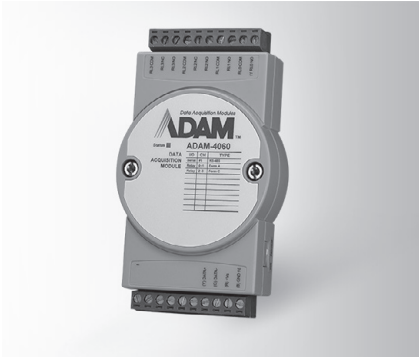
ADAM-4068

ADAM-4069

4-ch Relay Output Module with Modbus

8-ch Relay Output Module with Modbus

8-ch Power Relay Output Module with Modbus



ADAM-4060



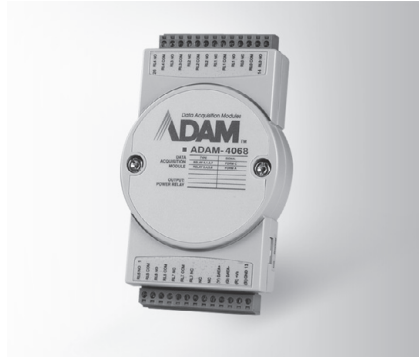
Specifications

General

- **Certification** FCC, CE
- **Connectors** 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Power Consumption** 0.9 W @ 24 V DC typ.
1.3 W @ 24 V DC max.
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command and Modbus/RTU

Relay Output

- **Breakdown Voltage** 500 V_{AC} (50/60 Hz)
- **Channels** 2 x Form A
2 x Form C
- **Contact Rating (Resistive)** 0.6 A @ 125 V_{AC}
0.3 A @ 250 V_{AC}
2 A @ 30 V_{DC}
0.6 A @ 110 V_{DC}
- **Initial Insulation Resistance** 100 MΩ min. at 500 V_{DC}
- **Relay off Time (Typical)** 5 ms
- **Relay on Time (Typical)** 4 ms
- **Maximum Operating Speed** 20 operations/min (at related load)



ADAM-4068



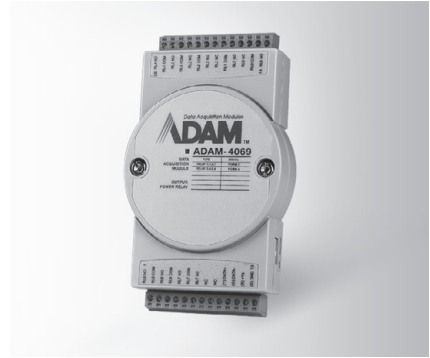
Specifications

General

- **Certification** FCC, CE
- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** 1 W @ 24 V DC typ.
1.7 W @ 24 V DC max.
- **Watchdog Timer** System (1.6 second) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU

Relay Output

- **Breakdown Voltage** 500 V_{AC} (50/60 Hz)
- **Channels** 4 x Form A
4 x Form C
- **Contact Rating (Resistive)** 0.5 A @ 120 V_{AC}
0.25 A @ 240 V_{AC}
1 A @ 30 V_{DC}
0.3 A @ 110 V_{DC}
- **Initial Insulation Resistance** 1 GΩ min. at 500 V_{DC}
- **Relay off Time (Typical)** 4 ms
- **Relay on Time (Typical)** 3 ms
- **Maximum Operating Speed** 50 operations/min (at related load)



ADAM-4069



Specifications

General

- **Certification** FCC, CE
- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** 1.3 W @ 24 V DC typ.
2.3 W @ 24 V DC max.
- **Watchdog Timer** System (1.6 second) & Communication
- **Supported Protocols** ASCII command and Modbus/RTU

Relay Output

- **Breakdown Voltage** 1,000 V_{AC} (50/60 Hz)
- **Channels** 4 x Form A
4 x Form C
- **Contact Rating (Resistive)** 5 A @ 250 V_{AC}
5 A @ 30 V_{DC}
- **Initial Insulation Resistance** 1 GΩ min. at 500 V_{DC}
- **Relay off Time (Typical)** 5.6 ms
- **Relay on Time (Typical)** 5 ms
- **Maximum Operating Speed** 6 operations/min (at related load)

Common Specifications

General

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

Environment

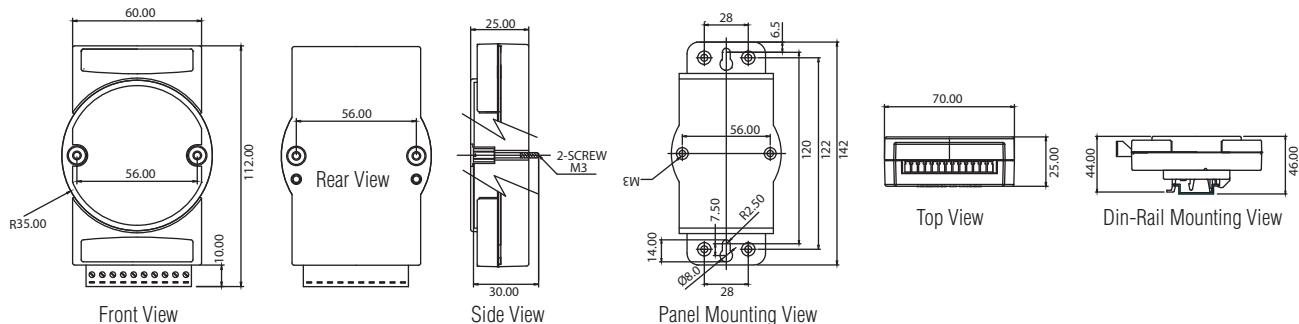
- **Operating Humidity** 5 ~ 95% RH
- **Operating Temperature** -10 ~ 70°C (14 ~ 158°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

Ordering Information

- **ADAM-4060-F** 4-ch Relay Output Module with Modbus
- **ADAM-4068-C** 8-ch Relay Output Module with Modbus
- **ADAM-4069-B** 8-ch Power Relay Output Module with Modbus

Dimensions

Unit: mm



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

Specifications

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

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)

Ordering Information

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

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

Specifications

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

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)

Ordering Information

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

ADAM-4510I

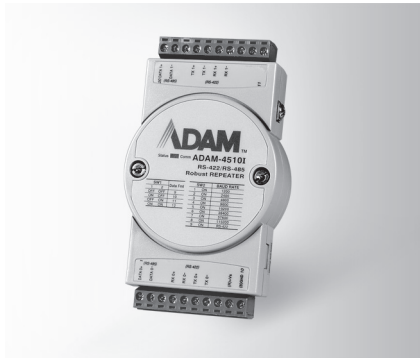
ADAM-4520I

ADAM-4117

Robust RS-422/485 Repeater

Robust RS-232 to RS-422/485 Converter

Robust 8-ch Analog Input Module with Modbus



ADAM-4510I



ADAM-4520I



ADAM-4117



Specifications

General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Power Consumption** 1.4 W @ 24 V_{DC}
- **Certification** FCC, CE, UL, UL C1D2

Communications

- **Input** RS-485 (2-wire) or RS-422 (4-wire)
- **Output** RS-485 (2-wire) or RS-422 (4-wire)
- **Speed Modes (bps)** 1,200, 2,400, 4,800, 9,600, 19.2 k, 38.4 k, 57.6 k, 115.2 k, RTS control and RS-422 (switchable)
- **Supports Auto Baud-Rate**
- **Provide RS-485 to RS-422 Convert Ability**

Specifications

General

- **Connectors** 1 x plug-in terminal block (#14 ~ 22 AWG) (RS-422/485)
1 x DB9-F (RS-232)
- **Power Consumption** 1.2 W @ 24 V_{DC}
- **Certification** FCC, CE, UL, UL C1D2

Communications

- **Input** RS-232 (DB9)
- **Output** RS-485 (2-wire) or RS-422 (4-wire)
- **Speed Modes (bps)** 1,200, 2,400, 4,800, 9,600, 19.2 k, 38.4 k, 57.6 k, 115.2 k, RTS control and RS-422 (switchable)
- **Supports Auto Baud-Rate**

Specifications

General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Watchdog Timer** System (1.6 second) & Communication
- **Supported Protocols** ASCII Command and Modbus/RTU
- **Power Consumption** 1.2 W @ 24 V_{DC}
- **Interface (B version)** RS-485, micro USB
- **Certification** FCC, CE

Analog Input

- **Channels** 8 differential and independent configuration channels
- **Input Impedance** 20 M Ω
- **Input Type** mV, V, mA
- **Input Range** 0 ~ 150mV, 0 ~ 500mV, 0 ~ 1V, 0 ~ 5V, 0 ~ 10V, 0 ~ 15V, ± 150 mV, ± 500 mV, ± 1 V, ± 5 V, ± 10 V, ± 15 V, ± 20 mA, 0 ~ 20 mA, 4 ~ 20mA
- **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
- **Over Voltage Protection** ± 60 V_{DC}
- **High Common Mode** 200 V_{DC}
- **Span Drift** ± 25 ppm/ $^{\circ}$ C (Typical)
- **Zero Drift** $\pm 6\mu$ V/ $^{\circ}$ C
- **Built-in TVS/ESD Protection**

Common Specifications

General

- **Power Input** Unregulated 10 ~ 48 V_{DC} w/power reversal protection
- **Isolation Voltage** 3,000 V_{DC}

Environment

- **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)
- **Supports Noise Rejection**

Ordering Information

- **ADAM-4510I-AE** Robust RS-422/485 Repeater
- **ADAM-4520I-AE** Robust RS-232 to RS-422/485 Converter
- **ADAM-4117-C** Robust 8-ch Analog Input Module with Modbus

ADAM-4118

ADAM-4150

ADAM-4168

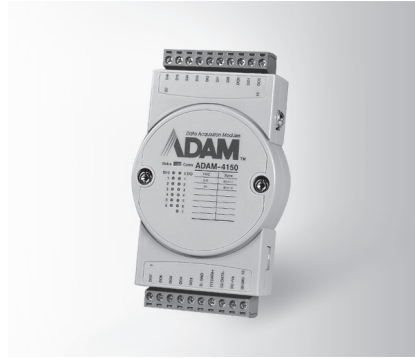
Robust 8-ch Thermocouple Input Module with Modbus

Robust 15-ch Digital I/O Module with Modbus

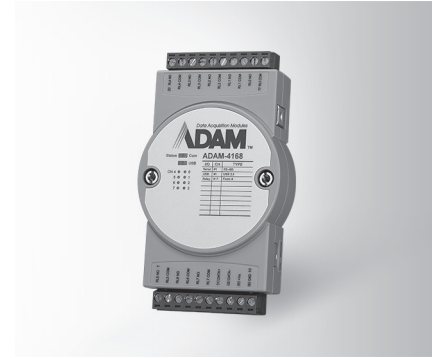
Robust 8-ch Relay Output Module with Modbus



ADAM-4118



ADAM-4150



ADAM-4168



Specifications

General

- **Certification** FCC, CE
- **Power Consumption** 0.5W @ 24 V_{DC}

Analog Input

- **Channels** 8 differential and independent configuration channels
- **Input Impedance** 20 MΩ
- **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	N	-200 ~ 1300°C

- Voltage mode 0~15 mV, 0~50 mV, 0~100 mV, 0~500 mV, 0~1 V, 0~2.5 V, ±15 mV, ±50 mV, ±100 mV, ±500 mV, ±1 V, ±2.5 V
- Current mode 0~20mA, ±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
- **Overvoltage Protection** ±60 V_{DC}
- **High Common Mode** 200 V_{DC}
- **Span Drift** ±25 ppm/°C (Typical)
- **Zero Drift** ±6μV/°C
- **Built-in TVS/ESD Protection**
- **Burnout Detection**

Specifications

General

- **Certification** FCC, CE
- **Power Consumption** 1.6 W @ 24 V_{DC}

Digital Input

- **Channels** 7
- **Input Level** Dry contact: Logic level 0: Closed to GND
Logic level 1: Open
Wet contact: Logic level 0: 3 V max
Logic level 1: 10 ~ 30 V or floating
Support DO type: Sink (NPN) only

- **Supports 3 kHz Counter Input (32-bit + 1-bit overflow)**
- **Supports 3 kHz Frequency Input**
- **Over Voltage Protection** 40 V_{DC}

Digital Output

- **Channels** 8, open collector to 40 V (0.1A max. per channel)
- **Power Dissipation** 1W load max
- **RON Maximum** 150 mΩ
- **Supports 1 kHz Pulse Output**
- **Supports High-to-Low Delay Output**
- **Supports Low-to-High Delay Output**

Specifications

General

- **Certification** FCC, CE
- **Power Consumption** 2.3 W @ 24 V_{DC}

Relay Output

- **Output Channels** 8 Form A
- **Contact Rating (Resistive)** 0.5 A @ 120 V_{AC}
0.25 A @ 240 V_{AC}
1 A @ 30 V_{DC}
0.3 A @ 110 V_{DC}
- **Breakdown Voltage** 750 V_{AC} (50/60 Hz)
- **Initial Insulation Resistance** 1 G Ω min. @ 500 V_{DC}
- **Relay Response Time (Typical)** On:4ms
Off:4ms
- **Total Switching Time (Typical)** 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_{DC}
- **Watchdog Timer** System (1.6 second) & Communication
- **Connector** 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Isolation Voltage** 3,000 V_{DC}
- **Interface (B version)** RS-485, micro USB

- **Supported Protocols** ASCII Command and Modbus/RTU

Environment

- **Operating Humidity** 5 ~ 95% RH
- **Operating Temperature** -40 ~ 85°C (-40 ~ 185°F)
- **Storage Temperature** -40 ~ 85°C (-40 ~ 185°F)

Ordering Information

- **ADAM-4118-C** Robust 8-ch Thermocouple Input Module w/ Modbus
- **ADAM-4150-C** Robust 15-ch Digital I/O Module with Modbus
- **ADAM-4168-C** Robust 8-ch Relay Output Module with Modbus

ADAM-4510/S

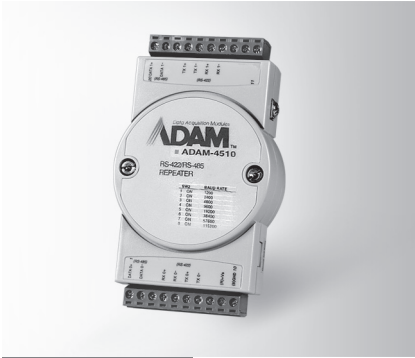
ADAM-4520

ADAM-4521

RS-422/485 Repeater

Isolated RS-232 to RS-422/485 Converter

Addressable RS-422/485 to RS-232 Converter



ADAM-4510/4510S FCC CE RoHS COMPLIANT 2002/95/EC



ADAM-4520 FCC CE RoHS COMPLIANT 2002/95/EC



ADAM-4521 UL LISTED ENEC RoHS COMPLIANT 2002/95/EC

Specifications

General

- **Connectors** 2 x plug-in terminal blocks (#14 ~ 22 AWG) (RS-422/485)
- **Isolation Voltage** 3,000 V_{DC} (ADAM-4510S)
- **Power Consumption** ADAM-4510
Typical: 1.1 W @ 24 V_{DC}
Max.: 1.2 W @ 24 V_{DC}
ADAM-4510S
Typical: 1.5 W @ 24 V_{DC}
Max.: 1.6 W @ 24 V_{DC}

Serial Communications

- **Input** RS-485 (2-wire) or RS-422 (4-wire)
- **Output** RS-485 (2-wire) or RS-422 (4-wire)
- **Speed Modes (bps)** 1,200, 2,400, 4,800, 9,600, 19.2 k, 38.4 k, 57.6 k, 115.2 k, RTS control and RS-422 (switchable)

Specifications

General

- **Connectors** 1 x plug-in terminal block (#14 ~ 22 AWG) (RS-422/485)
1 x DB9-F (RS-232)
- **Isolation Voltage** 3,000 V_{DC}
- **Power Consumption** Typical: 0.8 W @ 24 V_{DC}
Max.: 1 W @ 24 V_{DC}

Serial Communications

- **Input** RS-232 (DB9)
- **Output** RS-485 (2-wire) or RS-422 (4-wire)
- **Speed Modes (bps)** 1,200, 2,400, 4,800, 9,600, 19.2 k, 38.4 k, 57.6 k, 115.2 k, RTS control and RS-422 (switchable)

Specifications

General

- **Connectors** 1 x plug-in terminal block (#14 ~ 22 AWG) (RS-422/485)
1 x DB9-F (RS-232)
- **Isolation Voltage** 1,000 V_{DC}
- **Power Consumption** 1.0 W @ 24 V_{DC}
- **Built-in microprocessor and watchdog timer**

Serial Communications

- **Input** RS-485 (2-wire) or RS-422 (4-wire)
- **Output** RS-232 (DB9)
- **Speed Modes (bps)** 300, 600, 1,200, 2,400, 4,800, 9,600, 19.2 k, 38.4 k, 57.6 k, 115.2 k (software configurable)
- **RS-232 and 485 can be set to different baudrates**
- **RS-485 surge protection and automatic RS-485 data flow control**
- **Software configurable to either addressable or non-addressable mode**

Common Specifications

General

- **Power Input** Unregulated 10 ~ 30 V_{DC} w/ power reversal 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-4510** RS-422/485 Repeater
- **ADAM-4510S** Isolated RS-422/485 Repeater
- **ADAM-4520** Isolated RS-232 to RS-422/485 Converter
- **ADAM-4521** Addressable RS-422/485 to RS-232 Converter