ADAM-4050
ADAM-4051
ADAM-4052

16-ch Digital I/O Module with Modbus
16-ch Isolated Digital Input Module with Modbus

8-ch Isolated Digital Input Module

ADAM-4050

ADAM-4051

ADAM-4052

Specifications

General

- **Certification** FCC, CE
- **Connectors** 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Power Consumption** 0.2 W @ 24 V DC typ.
  0.4 W @ 24 V DC max.
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command and Modbus/RTU

Digital Input

- **Channels** 8
- **Input Level**
  Dry contact: Logic level 0: close to GND
  Logic level 1: open
  Wet contact: Logic level 0: 1 V max
  Logic level 1: +3.5 ~ 30 V
  Pull up current: 0.5 mA, 10 kΩ resistor to 5 V

Digital Output

- **Channels** 8
  open collector to 30 V, 30 mA max. load
- **Power Dissipation** 300 mW

Specifications

General

- **Certification** FCC, CE
- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** 0.7 W @ 24 V DC typ.
  1.25 W @ 24 V DC max.
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command and Modbus/RTU
- **LED Indicators** Yes

Digital Input

- **Channels** 16
- **Input Voltage** 50 V max
- **Input Level**
  Dry contact: Logic level 0: open
  Logic level 1: close to GND
  Wet contact: Logic level 0: 3 V max
  Logic level 1: 10 ~ 50 V
  (Note: Digital Input levels 0 and 1 can be inverted)
- **Isolation Voltage** 2,500 V_{DC}
- **Input Resistance** 5.2 kΩ
- **Overvoltage Protection** 70 V_{DC}

Specifications

General

- **Certification** FCC, CE, UL
- **Connectors** 2 x plug-in terminal blocks (#14 ~ 22 AWG)
- **Power Consumption** 0.4 W @ 24 V_{DC}
- **Watchdog Timer** System (1.6 second)
- **Supported Protocols** ASCII command

Digital Input

- **Channels** 8
  (6 fully independent isolated channels, 2 isolated channels with common ground)
- **Input Level** Logic level 0: 1 V max.
  Logic level 1: 3 ~ 30 V
- **Isolation Voltage** 5,000 V_{RMS}
- **Input Resistance** 3 kΩ

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-4050-F** 16-ch Digital I/O Module with Modbus
- **ADAM-4051-C** 16-ch Isolated Digital Input Module with Modbus
- **ADAM-4052-BE** 8-ch Isolated Digital Input Module

Last updated: 4-May-2022

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: close to GND
  Logic level 1: open
  Wet contact: Logic level 0: 2 V max.
  Logic level 1: 4 ~ 30 V
- **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
- **Input Level**
  Dry Contact: Logic level 0: open
  Logic level 1: close to GND
  Wet Contact: Logic level 0: 3 V max.
  Logic level 1: 10 ~ 50 V
- **Overvoltage Protection** 70 V_{DC}

Digital Output

- **Channels** 8, open collector to 40 V (200 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 Vmax.
  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

Last updated: 26-Oct-2021

ADAM-4055
ADAM-4056S/4056SO
ADAM-4080

16-ch Isolated Digital I/O Module with Modbus
12-ch Sink/Source Type Isolated Digital Output Modules with Modbus
2-ch Counter/Frequency Module

ADAM-4055

ADAM-4056S/4056

ADAM-4080

Specifications

General

- **Certification** FM, CE, UL
- **Connectors** 2 x plug-in terminal blocks (#14 ~ 28 AWG)
- **Power Consumption** 1 W @ 24 V_{DC}
- **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
- **Input Level**
  Dry Contact: Logic level 0: open; Logic level 1: close to GND
  Wet Contact: Logic level 0: 3 V max.; Logic level 1: 10 ~ 50 V
- **Overvoltage Protection** 70 V_{DC}

Digital Output

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

Specifications

General

- **Certification** FCC, CE, UL, UL Class I Division 2 (ADAM-4056SO)
- **Connectors** 2 x Plug-in terminal blocks (#14 ~ 22 AWG)
- **Watchdog Timer** System (1.6 second) & Communication
- **Support Protocol** ASCII command and Modbus/RTU
- **Isolation Voltage** 5000 V_{DC}
- **LED Indicators** Yes

ADAM-4056S

- **Digital Output Channels** 12 Open collector to 40V (200mA max. load)
- **Power Dissipation** Channel: 1 W max Total: 4 W (12 Channels)
- **Digital Output Type** Sink

ADAM-4056SO

- **Digital Output Channels** 12 VCC: 10 ~ 35 V_{DC} Current: 1A (per channel)
- **Digital Output Type** Source
- **Over Current Detection and Protection**

Specifications

General

- **Certification** FCC, CE
- **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 modbus/RTU (E version)

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 Vmax. Logic level 1: 2.4 ~ 5.0 V
- **Maximum Count** 4,294,967,295 (32-bit)
- **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

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

Ordering Information

- **ADAM-4055** 16-ch Isolated Digital I/O Module with Modbus
- **ADAM-4056S** 12-ch Sink Type Isolated Digital Output Module with Modbus
- **ADAM-4056SO** 12-ch Source Type Isolated Digital Output Module with Modbus
- **ADAM-4080** 2-ch Counter/Frequency Modules

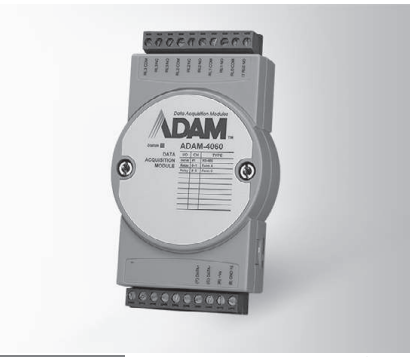
Last updated: 25-Feb-2020

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

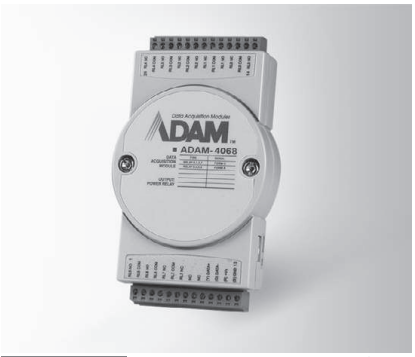
Specifications

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

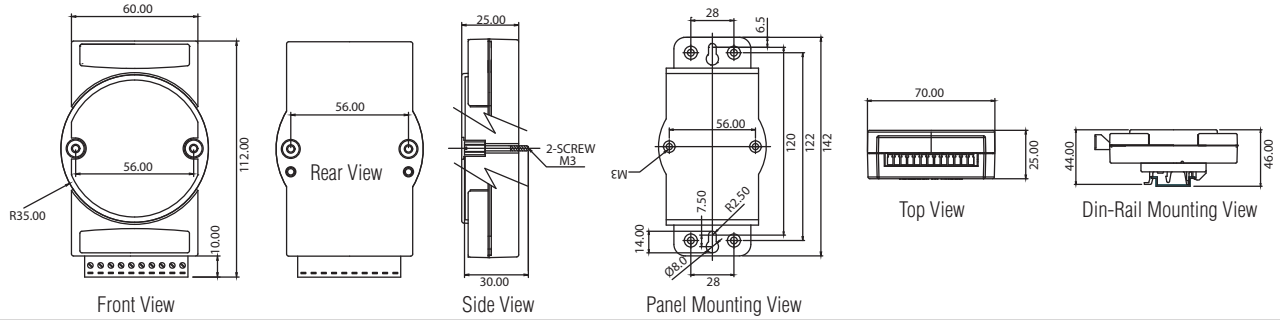
- **Operating Humidity** 5 ~ 95% RH
- **Operating Temperature** -10 ~ 70°C (14 ~ 158°F)
- **Storage Temperature** -25 ~ 85°C (-13 ~ 185°F)

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



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