# ADAM-4150 Digital I/O Module

## ADAM-4168 Relay Output Module

## ADAM-4914V 4-channel Voltage Input Surge Protection Module

## Specifications

### Digital Input/Output
- **Channels**: 7 input channels, 8 output channels
- **Digital Input (Supports 3 kHz counter)**
  - Dry contact: Logic level 0: Close to GND, Logic level 1: Open
  - Wet contact: Logic level 0: +3 V max., Logic level 1: +10 V to +30 V
- **Isolation Voltage**: 3000 V DC
- **Digital Output**: Open drain to 40 V, 0.8A max.
  - Maximum power dissipation: 1 W load
  - Ron Maximum: 150m ohm
  - Supports 1 kHz pulse output
- **Power Consumption**: 0.4 W (Typical), 0.7 W (Max)
- **Watchdog Timer**: System, Communication

### Relay Output
- **Output Channels**: 8 Form A
- **Contact Rating**
  - AC: 125 V @ 0.6 A
  - 250 V @ 0.3A
  - DC: 30 V @ 2 A
  - 110 V @ 0.6 A
- **Breakdown Voltage**: 750 Vac (50/60 Hz)
- **Insulation Resistance**: 1 G ohm min. @ 500 V DC
- **Power Consumption**: 0.4 W (Typical), 1.8 W (Max)
- **Relay Response Time**: ON: 3 ms, Off: 1 ms (Typical)
- **Total Switching Time**: 10 ms
- **Supports 100 Hz pulse output**
- **Watchdog Timer**: System, Communication

### Input
- **Channels**: 4 differential voltage input and thermocouple

### Performance
- **Discharge Current**: 5,000 A (8/20 µsec.)
- **Discharge Voltage**: BETWEEN LINES: 18 V min, LINE TO GND: 350 V max.
- **Internal Series Resistance**: Approx. 20 Ω including return
- **Max. Surge Voltage**: BETWEEN LINES: 23 V min, LINE TO GND: +4,000 V max.
- **Leakage Current**: BETWEEN LINES: ≤ 10 µA @ 7.5 Vdc, LINE TO GND: ≤ 5 µA @ +140 Vdc
- **Maximum Line Voltage**: 10 V
- **Response Time**: ≤ 0.1 µsec.

### Environment
- **Humidity**: 5 – 95% RH
- **Operating Temperature**
  - 4914V: -10 – 70 °C (14 – 158° F)
  - 4150/4168: -40 – 85 °C (-40 – 185° F)
- **Storage Temperature**
  - 4914V: -25 – 85 °C (-13 – 185° F)
  - 4150/4168: -40 – 85 °C (-40 – 185° F)

### Common Specifications
- **Dimensions**: 70 x 122 x 30 mm
- **Enclosure**: ABS+PC
- **Mounting**: DIN 35 rail, stack, wall
- **Power Input**: Unregulated 10~48 V DC
  - 1.6 sec. (system)
- **Watchdog Timer**: 2 x Plug-in terminal blocks (#14 – 22 AWG)
- **Connector**: A

### Ordering Information
- **ADAM-4150**: Digital I/O Module
- **ADAM-4168**: Relay Output Module
- **ADAM-4914V**: 4-channel Voltage Input Surge Protection Module
Remote DA&C Modules

ADAM 4000/4100 Series

Common Specifications

Communication
- RS-485 (2-wire) to host
- Speeds: 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 bps (ADAM-4080, ADAM-4080D only support up to 38400 bps)
- Max. communication distance: 4000 feet (1.2 km)
- Power and communication LED indicator
- ASCII command/response protocol
- Communication error checking with checksum
- Asynchronous data format:
  Advantech protocol: 1 start bit, 8 data bits, 1 stop bit, no parity
  Modbus protocol: 1 start bit, 8 data bits, 1 or 2 stop bit, parity check (none, odd, even) (ADAM-4100 series only)
- Up to 256 multidrop modules per serial port
- Online module insertion and removal
- Transient suppression on RS-485 communication lines

Dimensions

Unit: mm

Front View

Rear View

Side View

Panel Mounting Bracket

Top View

DIN-Rail Mounting Adapter