

XV308

8-ch Isolated AI and 8-ch Isolated Universal Digital I/O Expansion Board

Features

- 8-channel Analog Input
- 8-channel Universal Digital Input/Output
- Digital Input Channels can be used as 32-bit Counters
- Configurable Power-on Value Settings
- Open Wire Detection for 4 ~ 20 mA
- Individual Channel Configuration
- 120 VDC Overvoltage Protection for Analog Input
- 60 VDC Overvoltage Protection for Digital Input
- Overload Protection for Digital Output
- Short-circuit Protection for Digital Output



Introduction

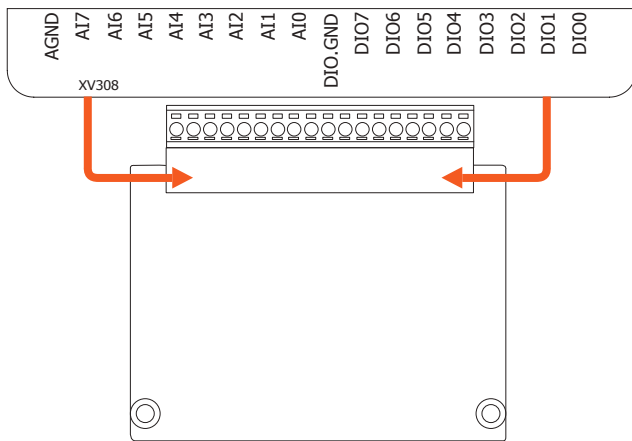
The XV308 provides 8 channels for analog input and 8 channels for universal digital input/output. Analog Input channels are Single-ended type and provide a programmable input range (± 1 V, ± 2.5 V, ± 5 V, ± 10 V, ± 20 mA, 0 ~ 20 mA, 4 ~ 20 mA). Each Analog Input channels also provides a high overvoltage protection of 120 VDC. Universal digital input/output can be selected via wire connections. Digital input channels are sourcetype and can be used as 32-bit counters. Digital output channels are sink-type with short circuit protection and options for configuring power-on digital output values.

Specifications

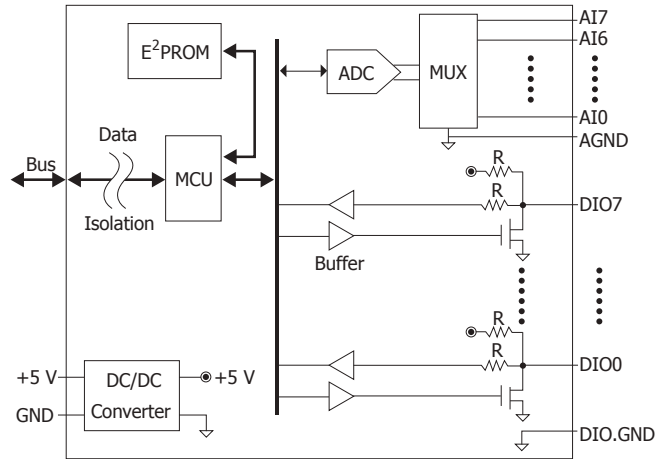
| Isolation | | |
|----------------------------------|--|----------------|
| Intra-module Isolation | 2000 VDC | |
| EMS Protection | | |
| ESD (IEC 61000-4-2) | ± 4 kV Contact For Each Terminal | |
| | ± 8 kV Air For Random Terminal | |
| Analog Input | | |
| Channels | 8 | |
| Type | ± 1 V, ± 2.5 V, ± 5 V, ± 10 V, ± 20 mA, 0 ~ 20 mA, 4 ~ 20 mA (Jumper Selectable) | |
| Resolution | 16-bit | |
| Accuracy | Normal Mode | $\pm 0.1\%$ |
| | Fast Mode | $\pm 0.5\%$ |
| Sampling Rate | Normal Mode | 10 Hz |
| | Fast Mode | 200 Hz (Total) |
| Input Impedance | 20 M Ω | |
| Overvoltage Protection | 120 VDC | |
| Individual Channel Configuration | Yes | |
| Digital Input/Counter | | |
| Channels | Digital Input and Digital Output=8 (By Wire Connection) | |
| Wet Contact | ON Voltage Level | +1 VDC Max. |
| | OFF Voltage Level | +4 ~ 30 VDC |
| Dry Contact | ON Voltage Level | Close to GND |
| | OFF Voltage Level | Open |
| Max. Counts | 32-bit (0~4,294,967,285) | |
| Frequency | 50 Hz | |
| Min. Pulse Width | 10 ms | |
| Overvoltage Protection | 60 VDC | |

| Digital Output | |
|-----------------------------|---|
| Channels | Digital Input and Digital Output=8 (By Wire Connection) |
| Type | Sink |
| Load Voltage | 3.5 ~ 50 VDC |
| Max. Load Current | 700 mA |
| Overvoltage Protection | 60 VDC |
| Overload Protection | Yes |
| Short-circuit Protection | Yes |
| Power-on Value | Yes, Programmable |
| COM Ports | |
| Ports | 1 x RS-232 |
| Baud Rate | 115200 bps |
| Data Format | N, 8, 1 |
| Protocol | Modbus/RTU |
| Power | |
| Consumption | 0.8 W Max. |
| Powered from Terminal Block | 5 VDC |
| Mechanical | |
| Dimensions (mm) | 59 mm x 82 mm x 13 mm (W x L x H) |
| Mechanical | |
| Operating Temperature | -25 ~ +75 °C |
| Storage Temperature | -30 ~ +80 °C |
| Humidity | 10 ~ 90% RH, Non-condensing |

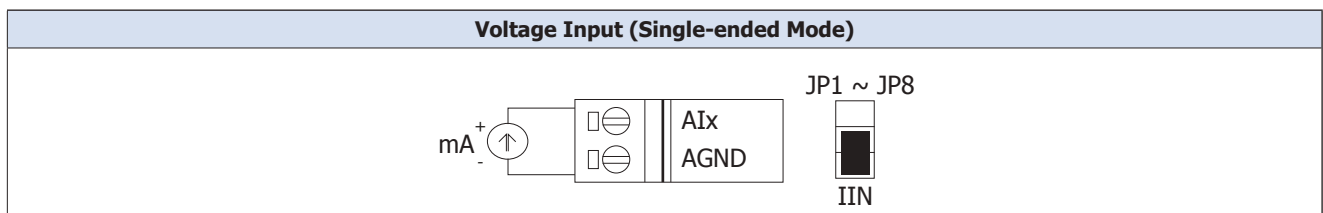
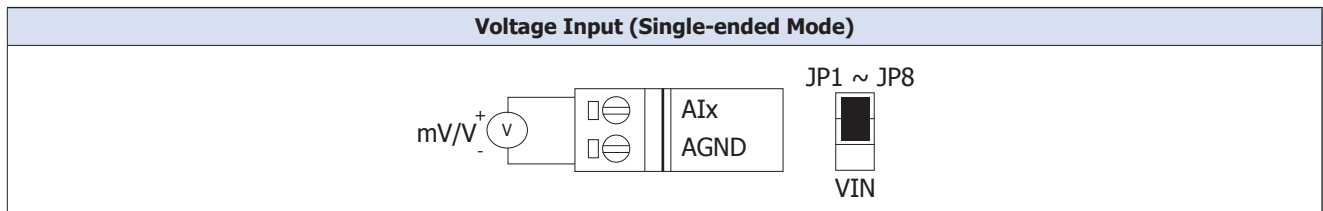
Pin Assignments



Internal I/O Structure



Wire Connections



| Digital Input/Counter | ON State Readback as 1 | OFF State Readback as 0 |
|-----------------------|---------------------------|----------------------------|
| | +1 VDC Max. | +4 ~ 30 VDC |
| Wet Contact (Sink) | | |
| Dry Contact (Source) | | |
| Digital Output | ON State Readback as 1 | OFF State Readback as 0 |
| Open Collector (Sink) | | |

Ordering Information

| | |
|-----------------|---|
| XV308 CR | 8-ch Isolated AI and 8-ch Isolated Universal Digital I/O Expansion Board (RoHS) |
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