



I-87028CW | I-87028UW

8-channel Isolated Analog Output Module

Features

- I-87028UW: 8-channel Voltage/Current Output
 - Short Circuit Protection
 - 2500 Vdc Intra-module Isolation
- I-87028CW: 8-channel Current Output
 - 1 kV Channel-to-Channel Isolation
- Open Wire Detection for Current Output
- Power-on Value and Safe Value Settings
- Dual Watchdog Timer



Introduction

The I-87028CW is an 8-channel current output module that features channel-to-channel isolation and also has qualification for 4 kV ESD protection and 1000 VDC intra-module isolation. Options for configuring power-on and safe values are also included.

The I-87028UW is a source type analog output module that includes 8 single-ended analog output channels, and allows a programmable output range on all analog outputs channels (0 ~ 5 V, ±5 V, 0 ~ 10 V, ±10 V, +4 ~ +20 mA or 0 ~ +20 mA). Each analog output channel can be configured for an individual range and provides an RF immunity level matching that defined by the IEC 61000-4-3 standard. Voltage and current outputs are jumper selectable, and the module also features per-channel open wire detection for +4 ~ +20 mA outputs, together with 4 kV ESD protection as well as 2500 VDC intra-module isolation. Options for configuring power-on and safe values are also included.

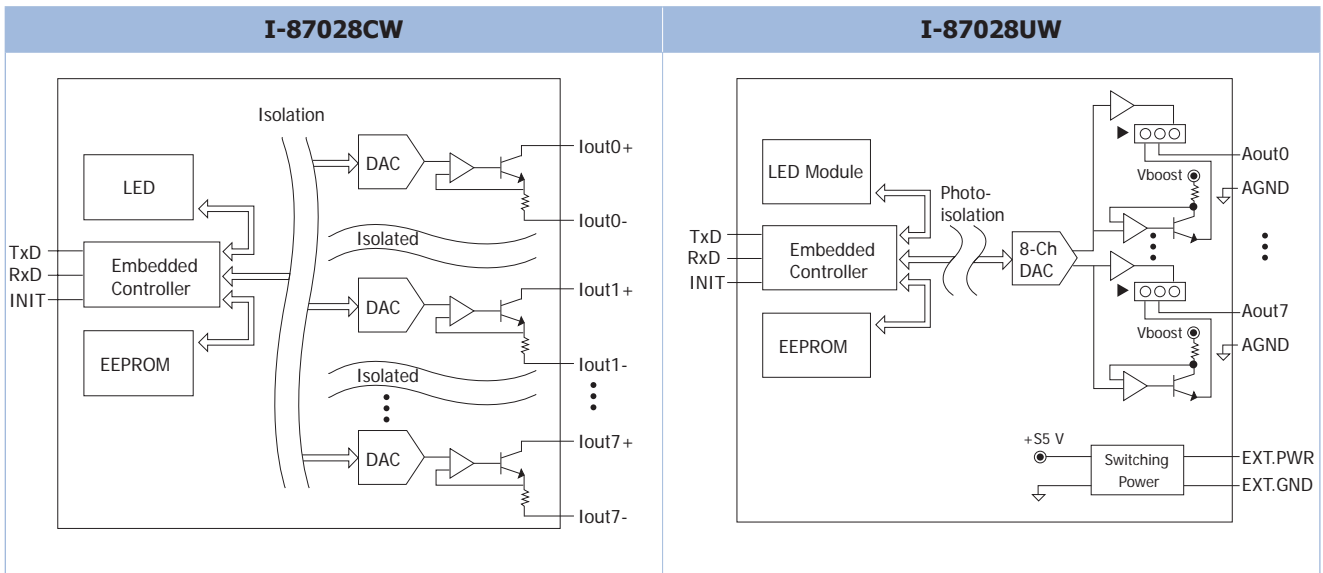
System Specifications

| Model | I-87028CW | I-87028UW |
|-----------------------------|---|-----------------------------------|
| CPU Module | | |
| Dual Watchdog Timer | Module (1.6 Seconds), Communication (Programmable) | |
| COM Ports | | |
| Ports | 1 x RS-485 | |
| Baud Rate | 1200 ~ 115200 bps | |
| Data Format | N, 8, 1 | |
| Protocol | DCON | |
| LED Indicators | | |
| Status | Power/Communication x 1 | Power/Communication x 1, I/O x 16 |
| Isolation | | |
| Intra-module Isolation | 1000 VDC | 2500 VDC |
| EMS Protection | | |
| ESD (IEC 61000-4-2) | ±4 kV Contact for each Terminal, ±8 kV Air for Random Point | |
| RS Immunity (IEC 61000-4-3) | - | 3 V/m, 80 MHz ~ 1 GHz |
| Power | | |
| Consumption | 1.4 W Max. | 0.9 W Max. |
| Reverse Polarity Protection | - | Yes |
| Powered from Terminal Block | - | 15 ~ 30 VDC |
| Consumption | - | 7.0 W |
| Mechanical | | |
| Dimensions (L × W × H) | 117 mm × 32 mm × 96 mm | 115 mm × 30 mm × 102 mm |
| Environment | | |
| Operating Temperature | -25 ~ +75 °C | |
| Storage Temperature | -40 ~ +85 °C | |
| Humidity | 10 ~ 95 % RH, Non-condensing | |

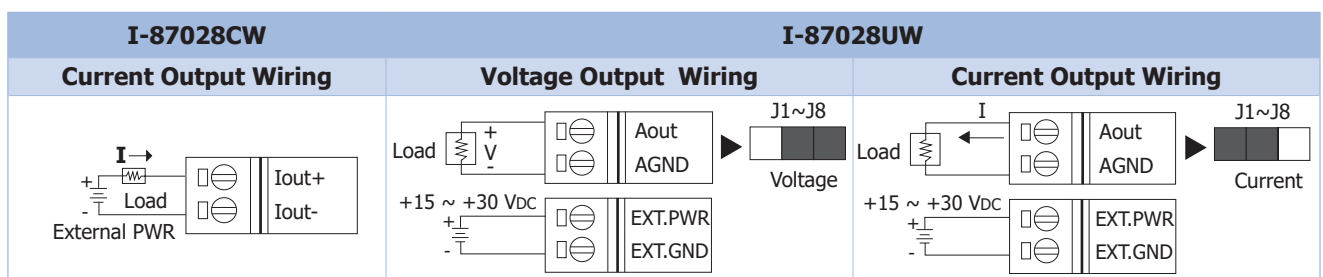
I/O Specifications

| Model | I-87028CW | I-87028UW |
|------------------------------|----------------------------------|---|
| Analog Output | | |
| Channels | 8 | |
| Current Output Wiring | Sink | Source |
| Range | Current: 0 ~ +20 mA, +4 ~ +20 mA | Voltage: 0 ~ +5 VDC, ±5 VDC, 0 ~ +10 VDC, ±10 VDC |
| Resolution | 12-bit | 16-bit |
| Accuracy | ±0.1% of FSR | ±0.02% of FSR |
| Zero Drift | ±0.2 μV/°C | |
| Span Drift | ±25 ppm/°C | |
| DA Output Response Time | 10 ms per channel | |
| Programmable Output Slope | Current: 0.125 ~ 1024 mA/sec. | Voltage: 0.0625 ~ 512 V/sec. |
| Output Capacity | External +24 VDC @ 1050 Ω | 1000 Ω |
| Channel-to-Channel Isolation | 1 kV | - |
| Open Wire Detection | +4 ~ +20 mA | +4 ~ +20 mA; 0 ~ 20 mA |
| Short Circuit Protection | - | Yes |
| Power-on Value | Yes | |
| Safe Value | Yes | |

Internal I/O Structure



Wire Connections



Pin Assignments

I-87028CW

| Terminal No. | Pin Assignment |
|--------------|----------------|
| 01 | Iout0+ |
| 02 | Iout0- |
| 03 | Iout1+ |
| 04 | Iout1- |
| 05 | N.C. |
| 06 | Iout2+ |
| 07 | Iout2- |
| 08 | Iout3+ |
| 09 | Iout3- |
| 10 | N.C. |
| 11 | Iout4+ |
| 12 | Iout4- |
| 13 | Iout5+ |
| 14 | Iout5- |
| 15 | N.C. |
| 16 | Iout6+ |
| 17 | Iout6- |
| 18 | Iout7+ |
| 19 | Iout7- |
| 20 | N.C. |

I-87028UW

| Terminal No. | Pin Assignment |
|--------------|----------------|
| 01 | Aout0 |
| 02 | AGND |
| 03 | Aout1 |
| 04 | AGND |
| 05 | Aout2 |
| 06 | AGND |
| 07 | Aout3 |
| 08 | AGND |
| 09 | Aout4 |
| 10 | AGND |
| 11 | Aout5 |
| 12 | AGND |
| 13 | Aout6 |
| 14 | AGND |
| 15 | Aout7 |
| 16 | AGND |
| 17 | EXT.PWR |
| 18 | EXT.PWR |
| 19 | EXT.GND |
| 20 | EXT.GND |

Dimensions (Units: mm)

| I-87028CW | | | I-87028UW | | |
|----------------|------------|----------|----------------|------------|----------|
| | | | | | |
| Left Side View | Front View | Top View | Left Side View | Front View | Top View |

Accessories

| | | |
|--|-----------|--|
| | SG-770 CR | 7-channel Differential or 14-channel Single-ended Surge Protector (RoHS) |
|--|-----------|--|

Ordering Information

| | |
|-----------------------|--|
| I-87028CW-G CR | 8-channel 12-bit Channel-to-Channel Isolated Current Output Module with Open-wire Detection (RoHS) |
| I-87028UW-G CR | 8-channel 16-bit Isolated Source Type Voltage or Current Output Module (RoHS) |