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

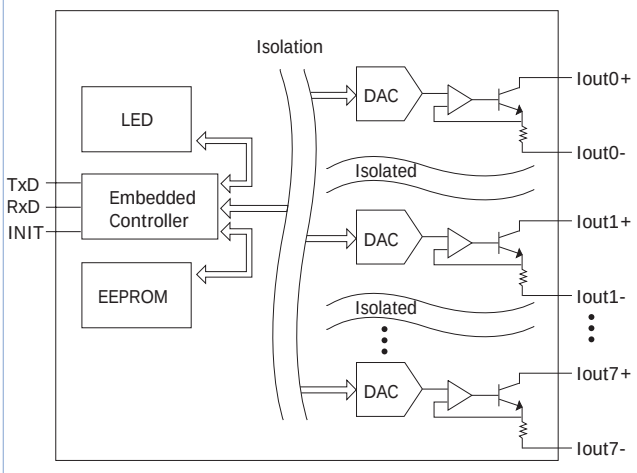
Model	I-87028CW	I-87028UW
CPU Module		
Dual Watchdog Timer	Module (1.6 Seconds), Communication (Programmable)	
COM Ports		
Ports	1 x RS-485	
Baud Rate	1200 ~ 115200 bps	
Data Format	N, 8, 1	
Protocol	DCON	
LED Indicators		
Status	Power/Communication x 1	Power/Communication x 1, I/O x 16
Isolation		
Intra-module 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

I-87028CW



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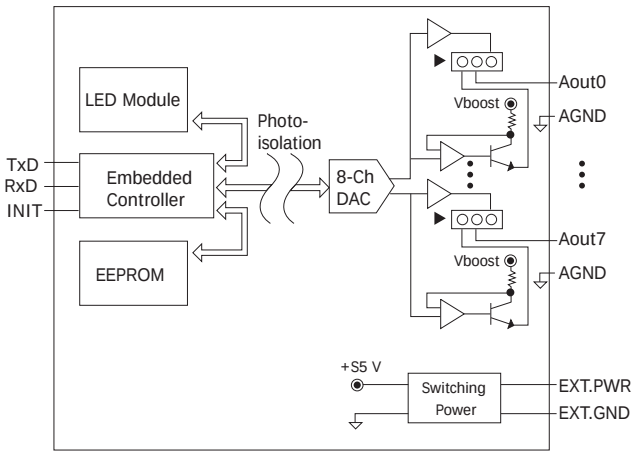
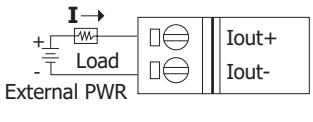


Wire Connections

I-87028CW

Current Output Wiring



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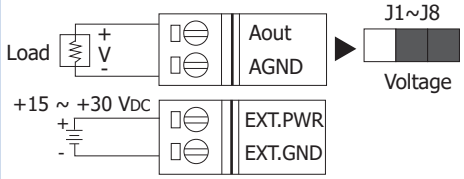
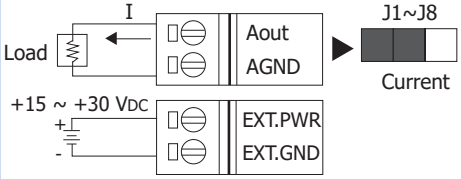
Voltage Output Wiring

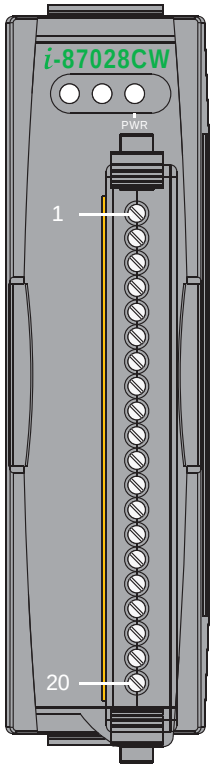


Current Output Wiring



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.

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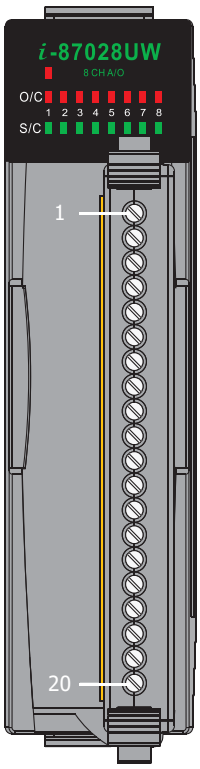
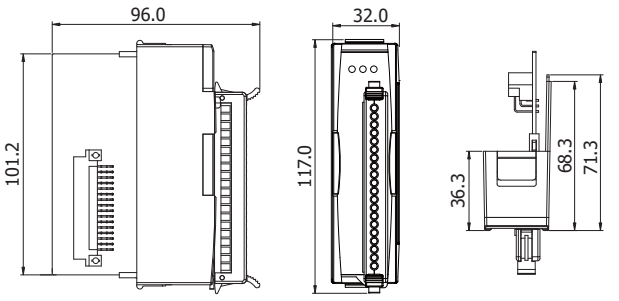


Terminal No.	Pin Assignment
01	Aout0
02	AGND
03	Aout1
04	AGND
05	Aout2
06	AGND
07	Aout3
08	AGND
09	Aout4
10	AGND
11	Aout5
12	AGND
13	Aout6
14	AGND
15	Aout7
16	AGND
17	EXT.PWR
18	EXT.PWR
19	EXT.GND
20	EXT.GND

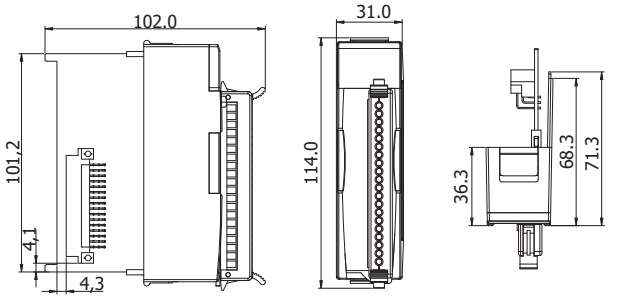
Dimensions (Units: mm)

I-87028CW



Left Side View | Front View | Top View

I-87028UW



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)