



**I-87028CW**

**I-87028UW**

8-channel Isolated Analog Output Module

### 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
<b>Communication</b>		
Interface	RS-485	
Format	N, 8, 1	
Baud Rate	1200 to 115200 bps	
Protocol	DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)	
<b>LED Indicators/Display</b>		
System LED Indicator	Yes, 1 as Power/Communication Indicator	
I/O LED Indicators	-	
<b>Isolation</b>		
Intra-module Isolation, Field-to-Logic	1000 Vdc	2500 Vdc
<b>EMS Protection</b>		
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
<b>Power</b>		
Power Consumption	1.4 W Max.	0.9 W Max.
<b>Mechanical</b>		
Dimensions (L x W x H)	115 mm x 30 mm x 102 mm	
<b>Environment</b>		
Operating Temperature	-25 to +75°C	
Storage Temperature	-40 to +85°C	
Humidity	10 to 95% RH, Non-condensing	

### Features

- I-87028UW
  - 8-channel Voltage or Current Output
  - Jumper Selectable Voltage or Current Output
  - Individual Channel Configuration
  - 2500 VDC Intra-module Isolation
- I-87028CW
  - 1 kV Channel-to-Channel Isolation
- Open Wire Detection for Current Output
- RF Immunity
- Short Circuit Protection
- Power-on Value Setting
- Safe Value Setting
- 4 kV ESD Protection
- Wide Operating Temperature Range: -25 to +75°C



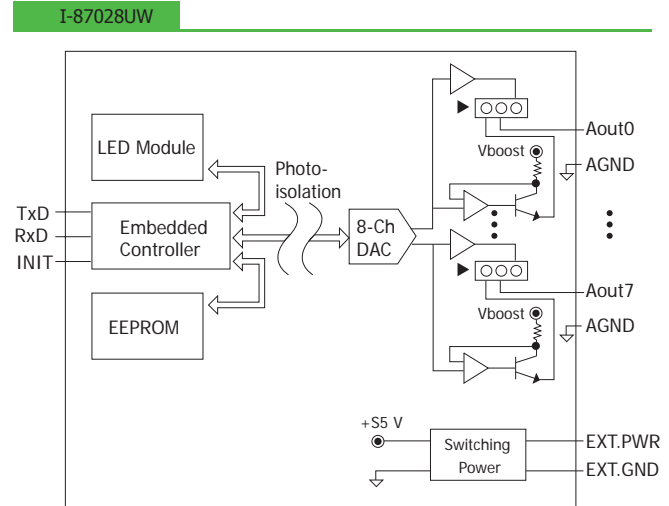
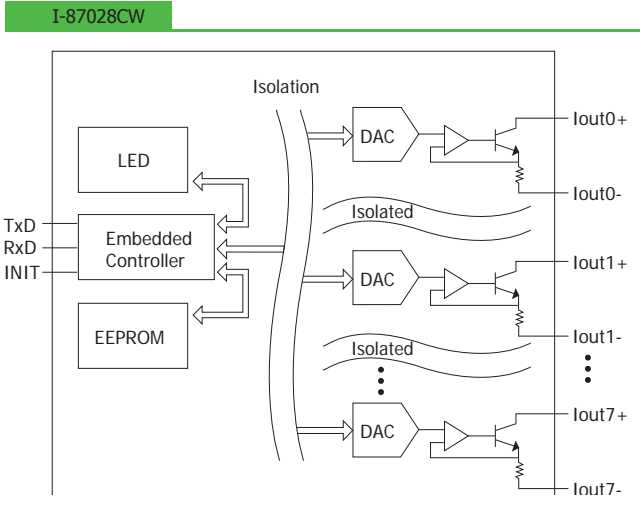
### Applications

- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

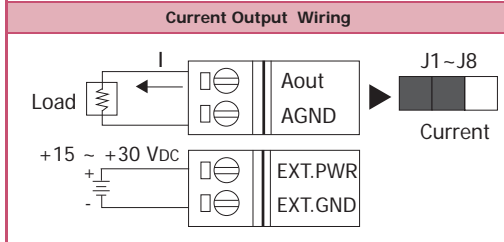
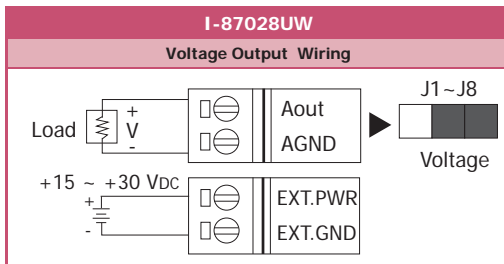
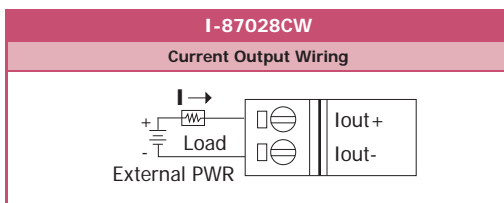
### I/O Specifications

Model	I-87028CW	I-87028UW
<b>Analog Output</b>		
Channels	8	
Current Output Wiring	Sink	Source
Range	0 ~ +20 mA, +4 ~ +20 mA	0 ~ +5 VDC, ±5 VDC, 0 ~ +10 VDC, ±10 VDC, 0 ~ +20 mA, +4 ~ +20 mA
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	Voltage	-
	Current	0.125 ~ 1024 mA/Second
Output Capacity	External +24 Vdc @ 1050 Ω	1000Ω
Channel-to-Channel Isolation	Yes, 1 kV	-
Open Wire Detection	Yes, +4 ~ +20 mA	
Short Circuit Protection	Yes	
Power-on Value	Yes	
Safe Value	Yes	
<b>External Power Requirements</b>		
Reverse Polarity Protection	-	Yes
Powered from Terminal Block	-	Yes, 15 ~ 30 VDC
Consumption	-	7.0 W

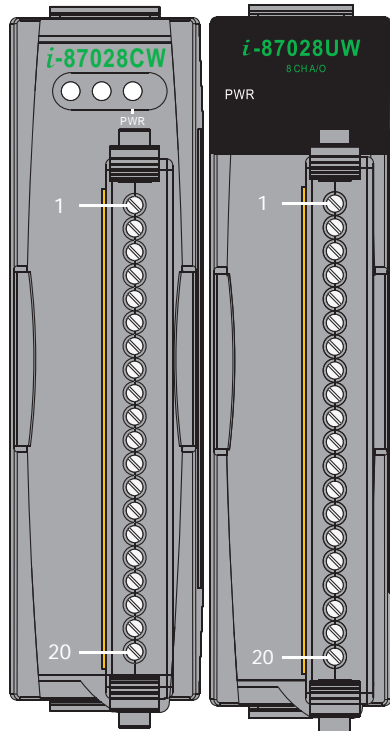
### Internal I/O Structure



### Wire Connections

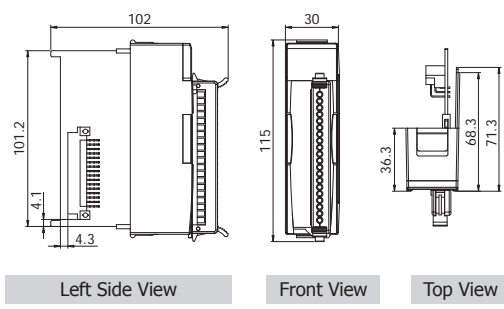


### Pin Assignments



Terminal No.	Pin Assignment	
	I-87028CW	I-87028UW
01	Iout0+	Aout0
02	Iout0-	AGND
03	Iout1+	Aout1
04	Iout1-	AGND
05	N.C.	Aout2
06	Iout2+	AGND
07	Iout2-	Aout3
08	Iout3+	AGND
09	Iout3-	Aout4
10	N.C.	AGND
11	Iout4+	Aout5
12	Iout4-	AGND
13	Iout5+	Aout6
14	Iout5-	AGND
15	N.C.	Aout7
16	Iout6+	AGND
17	Iout6-	EXT.PWR
18	Iout7+	EXT.PWR
19	Iout7-	EXT.GND
20	N.C.	EXT.GND


### Dimensions (Units: mm)



### Ordering Information

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

### Accessories

 <b>SG-770 CR</b>	7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)
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RS-485 Remote I/O Modules

I-87Kw Series

I-87028CW/I-87028UW