



Introduction

The I-87028UW is an analog output module that includes 8 single-ended analog output channels, and provides options for setting power-on and safe value. It also provides a programmable output range on all analog outputs ($0 \sim 5\text{ V}$, $\pm 5\text{ V}$, $0 \sim 10\text{ V}$, $\pm 10\text{ V}$, $+4 \sim +20\text{ mA}$ or $0 \sim +20\text{ mA}$), and each analog output can be configured for an individual range and provides an RF immunity level matching that defined by IEC 61000-4-2. Voltage and current outputs are jumper selectable, and the module also features per-channel open wire detection for $+4 \sim +20\text{ mA}$ and $0 \sim +20\text{ mA}$ outputs, together with 4 kV ESD protection as well as 2500 VDC intra-module isolation.

System Specifications

Communication	
Interface	RS-485
Format	N, 8, 1
Baud Rate	1200 ~ 115200 bps
Protocol	DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
LED Indicators/Display	
System LED Indicator	1 LED as Power/Communication Indicator
I/O LED Indicator	-
Isolation	
Intra-module Isolation, Field-to-Logic	2500 Vdc
EMS Protection	
ESD (IEC 61000-4-2)	4 kV Contact for Each Terminal
	8 kV Air for Random Point
RS Immunity (IEC 61000-4-2)	5 V/m, 80 MHz ~ 1 GHz
Power	
Power Consumption	0.9 W Max.
Mechanical	
Dimensions (W x L x H)	31 mm x 81 mm x 114 mm
Environment	
Operating Temperature	$-25 \sim +75^{\circ}\text{C}$
Storage Temperature	$-40 \sim +85^{\circ}\text{C}$
Humidity	10 ~ 95% RH, Non-condensing

Features

- 8-Channel Voltage or Current Output
- Jumper Selectable Voltage or Current Output
- Source Type Current Output
- Individual Channel Configuration
- Open Wire Detection for Current Output
- RF Immunity
- Power-on Value
- Safe Value
- Short Circuit Protection
- 4 kV ESD Protection
- 2500 VDC Intra-module Isolation
- RoHS Compliant
- Wide Operating Temperature Range: $-25 \sim +75^{\circ}\text{C}$



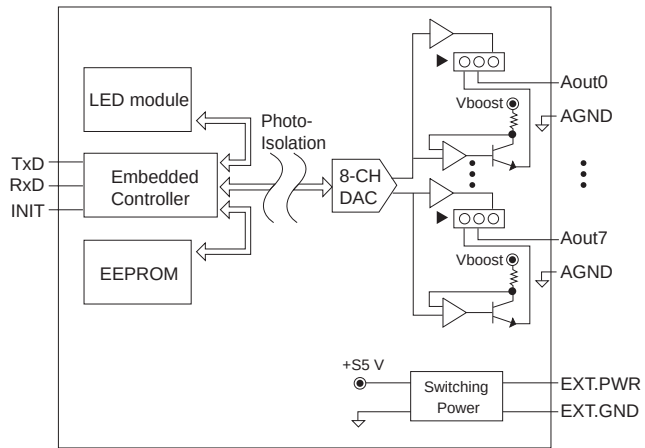
Applications

Building Automation, Factory Automation, Machine Automation, Remote Maintenance, Remote Diagnosis, Testing Equipment.

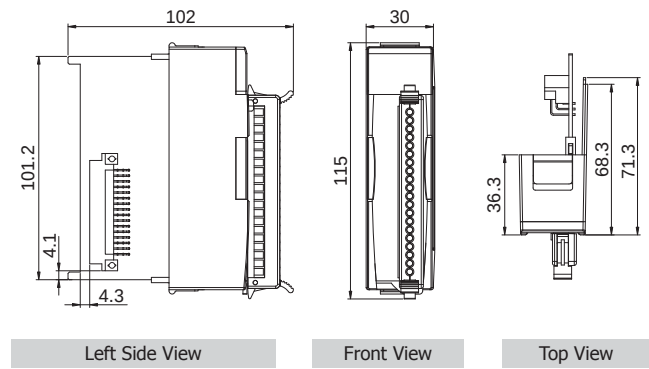
I/O Specifications

Analog Output		
Channels		8
Current Output Wiring		Source
Range		0 ~ +5 Vdc, ±5 Vdc, 0 ~ +10 VDC, ±10 VDC, 0 ~ +20 mA, +4 ~ +20 mA
Resolution		16-bit
Accuracy		+/- 0.02% of FSR
Zero Drift		+/- 0.2 μV/°C
Span Drift		+/- 25 ppm/°C
DA Output Responses Time		10 ms per channel
Programmable Output Slope	Voltage	0.0625 ~ 512 V/Second
	Current	0.125 ~ 1024 mA/Second
Current Output Capacity		1050 Ω
Channel-to-Channel Isolation		-
Open Wire Detection		Yes, 0 ~ +20 mA and +4 ~ +20 mA
Short Circuit Protection		Yes
Power-on Value		Yes
Safe Value		Yes
External Power Requirements		
Reverse Polarity Protection		Yes
Powered from Terminal Block		Yes, 15 ~ 30 VDC
Consumption		7.0 W

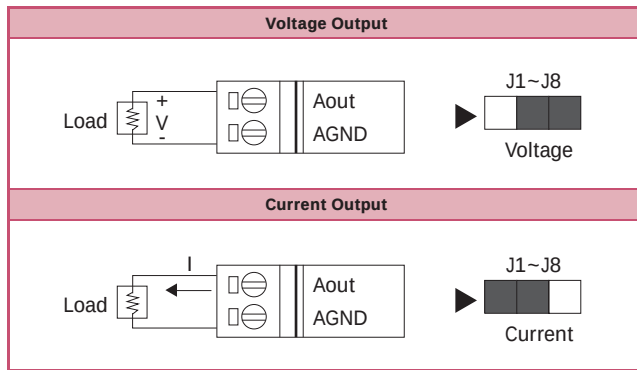
Internal I/O Structure



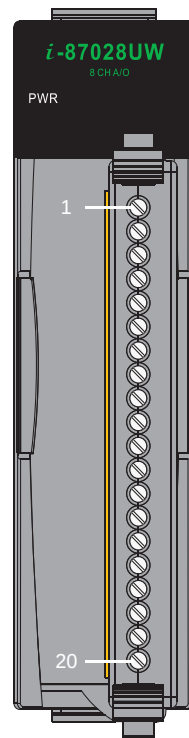
Dimensions (Units: mm)



Wire Connections



Pin Assignments



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

Ordering Information

I-87028UW-G CR	8-channel 16-bit Isolated Voltage or Current Output Module (Gray Cover) (RoHS)
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Accessories

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