



I-87026PW-G

6-channel Analog Input, 2-channel Analog Output, 2-channel Digital Input and 2-channel Digital Output Module

Introduction

The 87026PW is a multifunction module that includes 6 analog input channels, 2 analog output channels, 2 digital input channels, 2 digital output channels. It provides a programmable input range on all analog input (± 150 mV, ± 500 mV, ± 1 V, ± 5 V, ± 10 V, ± 20 mA or $0 \sim +20$ mA), analog outputs are 12-bit at ± 5 V, ± 10 V, $0 \sim +20$ mA or $+4 \sim +20$ mA and all digital outputs can be set as alarm output. Each analog input can be configured for an individual range and provides a high overvoltage protection of 240 Vrms. Voltage and current inputs/outputs are jumper selectable.

Applications

- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

System Specifications

Communication	
Interface	RS-485
Format	N, 8, 1
Baud Rate	1200 to 115200 bps
Protocol	DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
LED Indicators/Display	
System LED Indicators	Yes, 1 as Power/Communication Indicator
	Yes, 2 as Digital Input indicator
	Yes, 2 as Digital Output indicator
I/O LED Indicators	16 as High/Low Alarm Signals
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
Power	
Power Consumption	1.8 W
Mechanical	
Dimensions (L x W x H)	115 mm x 30 mm x 102 mm
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-40 to +85°C
Humidity	10 to 95% RH, Non-condensing

Features

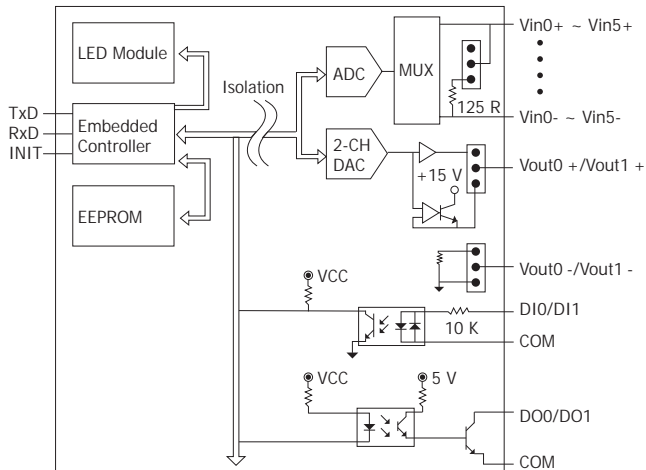
- Multifunction (6AI, 2AO, 2DI and 2DO)
- Supports Fast Mode and Normal Mode
- Individual Channel Configuration
- Open Wire Detection for Current Output
- Overload and Short Circuit Protection for Digital Output
- Configurable Power-on Value Settings
- Configurable Safe Value Settings
- 240 Vrms Overvoltage Protection for Voltage Input
- 70 Vdc Overvoltage Protection for Digital Input
- Jumper Selectable Voltage or Current Input/Output
- Dual Watchdog
- ± 4 kV Contact ESD Protection
- Wide Operating Temperature Range: -25°C to +75°C



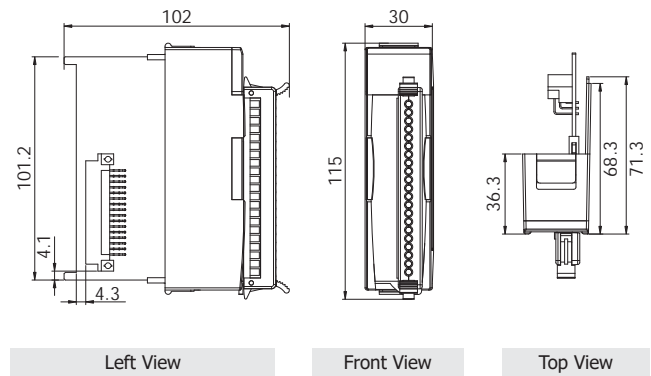
I/O Specifications

Analog Input		
Channels	6	
Wiring	Differential	
Range	± 150 mV, ± 500 mV, ± 1 VDC, ± 5 VDC, ± 10 VDC, ± 20 mA, (Jumper Selectable)	
Resolution	Normal Mode	16-bit
	Fast Mode	12-bit
Accuracy	Normal Mode	$\pm 0.1\%$ of FSR
	Fast Mode	$\pm 0.5\%$ or better
Sampling Rate	Normal Mode	10 Hz (Total)
	Fast Mode	60 Hz (Total)
Bandwidth	Normal Mode	15.7 Hz
	Fast Mode	78.7 Hz
Input Impedance	2 M Ω (Voltage), 125 Ω (Current)	
Common Mode Rejection	86 dB Min.	
Normal Mode Rejection	100 dB	
Overvoltage Protection	240 Vrms	
Individual Channel Configuration	Yes	
Analog Output		
Channels	2	
Range	$+0 \sim +5$ VDC, $+0 \sim +10$ VDC, ± 5 VDC, ± 10 VDC, $+0 \sim +20$ mA, $+4 \sim +20$ mA (Jumper Selectable)	
Resolution	12-bit	
Accuracy	$\pm 0.1\%$ of FSR	
Output Capacity	10 V @ 20 mA	
Current Load Resistance	500 Ω	
Power-on and Safe Values	Yes	
Open Wire Detection for Current Output	Yes, Only $+4 \sim +20$ mA.	
Digital Input		
Channels	2	
Type	Wet	
Sink/Source (NPN/PNP)	Sink	
ON Voltage Level	$+3.5$ VDC ~ 50 VDC	
OFF Voltage Level	$+1$ VDC Max.	
Input Impedance	10 k Ω , 0.66 W	
Counters	Channels	2
	Max. Count	32-bit
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Overvoltage Protection	70 VDC	
Channel-to-Channel Isolation	Yes	
Digital Output		
Channels	2	
Type	Open Collector	
Sink/Source (NPN/PNP)	Sink	
Load Voltage	$+3.5$ VDC $\sim +50$ VDC	
Max. Load Current	700 mA/channel	
Overvoltage Protection	60 VDC	
Overload Protection	Yes	
Short Circuit Protection	Yes	
Power-on and Safe Values	Yes	

Internal I/O Structure



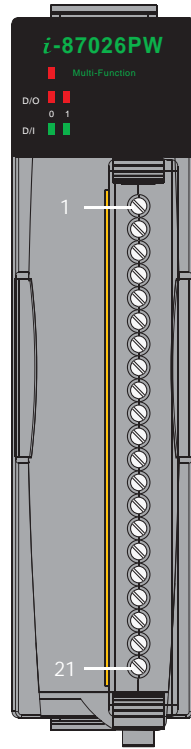
Dimensions (Units: mm)



Wire Connections

Voltage Input		
Current Input		
Voltage Output		
Current Output		
Digital Input/Counter	ON State Readback as 1	OFF State Readback as 0
Wet Contact (Sink)		
Digital Output	ON State Readback as 1	OFF State Readback as 0
Open Collector (Sink)		

Pin Assignments



Terminal No.	Pin Assignment
01	Vin0+
02	Vin0-
03	Vin1+
04	Vin1-
05	Vin2+
06	Vin2-
07	Vin3+
08	Vin3-
09	Vin4+
10	Vin4-
11	Vin5+
12	Vin5-
13	Vout0+
14	Vout0-
15	Vout1+
16	Vout2-
17	DO0
18	DO1
19	DI0
20	DI1
21	COM

Ordering Information

I-87026PW CR	6-channel Analog Input, 2-channel Analog Output, 2-channel Digital Input and 2-channel Digital 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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