



I-87026PW

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 ~ +20 mA), analog outputs are 12-bit at +/-5 V, +/-10 V, 0 ~ +20 mA or +4 ~ +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 V_{rms}. 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 ~ 115200 bps
Protocol	DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
LED Indicator/Display	
System LED Indicator	1 LED as Power/Communication Indicator 2 LED as Digital Input indicator 2 LED as Digital Output indicator
I/O LED Indicator	16 LEDs as High/Low Alarm Signals
Isolation	
Intra-Module Isolation, Field-to-Logic	2500 V _{dc}
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 (W x L x H)	30 mm x 102 mm x 115 mm
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-40 ~ +85°C
Humidity	10 ~ 95% RH, Non-condensing

Features

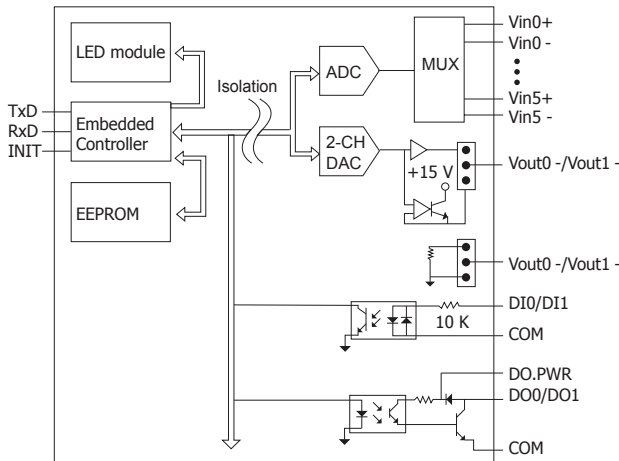
- Multifunction (6AI, 2AO, 2DI and 2DO)
- Supports Fast Mode and Normal Mode
- Individual Channel Configuration
- Open Wire Detection for Current Output
- Overload and Short Circuit Protection for Digital Output
- Configurable Power-on Value Settings
- Configurable Safe Value Settings
- 240 V_{rms} Overvoltage Protection for Voltage Input
- 70 V_{dc} 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 ~ +75°C



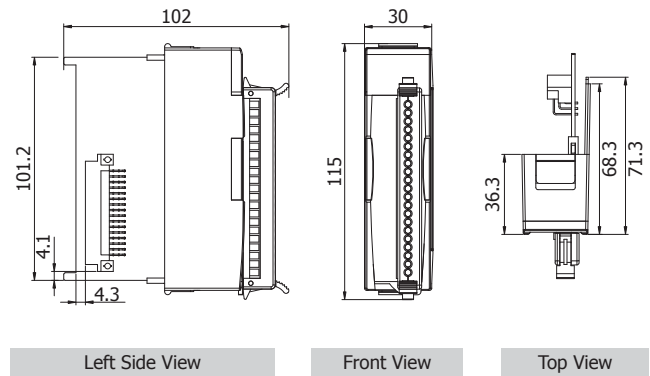
I/O Specifications

Analog Input	
Channels	6
Wiring	Differential
Range	+/-150 mV, +/-500 mV, +/-1 V _{dc} , +/-5 V _{dc} , +/-10 V _{dc} , +/-20 mA, +/-20 mA, (Jumper Selectable)
Resolution	Normal Mode 16-bit Fast Mode 12-bit
Accuracy	Normal Mode +/-0.1% of FSR Fast Mode +/-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 MΩ (Voltage), 125 Ω (Current)
Common Mode Rejection	86 dB Min.
Normal Mode Rejection	100 dB
Overvoltage Protection	240 V _{rms}
Individual Channel Configuration	Yes
Analog Output	
Channels	2
Range	+0 ~ +5 V _{dc} , +0 ~ +10 V _{dc} , +/-5 V _{dc} , +/-10 V _{dc} , +0 ~ +20 mA, +4 ~ +20 mA (Jumper Selectable)
Resolution	12-bit
Accuracy	+/-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 ~ +20 mA.
Digital Input	
Channels	2
Type	Wet
Sink /Source (NPN /PNP)	Sink
On Voltage Level	+3.5 V _{dc} ~ 50 V _{dc}
Off Voltage Level	+1 V _{dc} Max.
Input Impedance	10 KΩ, 0.66W
Counters	Channels 2 Max. Count 32-bit Max. Input Frequency 100 Hz Min. Pulse Width 5 ms
Overvoltage Protection	70 V _{dc}
Channel to Channel Isolation	Yes
Digital Output	
Channels	2
Type	Open Collector
Sink /Source (NPN /PNP)	Sink
Load Voltage	+3.5 V _{dc} ~ +50 V _{dc}
Max. Load Current	700 mA/channel
Overvoltage Protection	60 V _{dc}
Overload Protection	Yes
Short Circuit Protection	Yes
Power-on and Safe Values	Yes

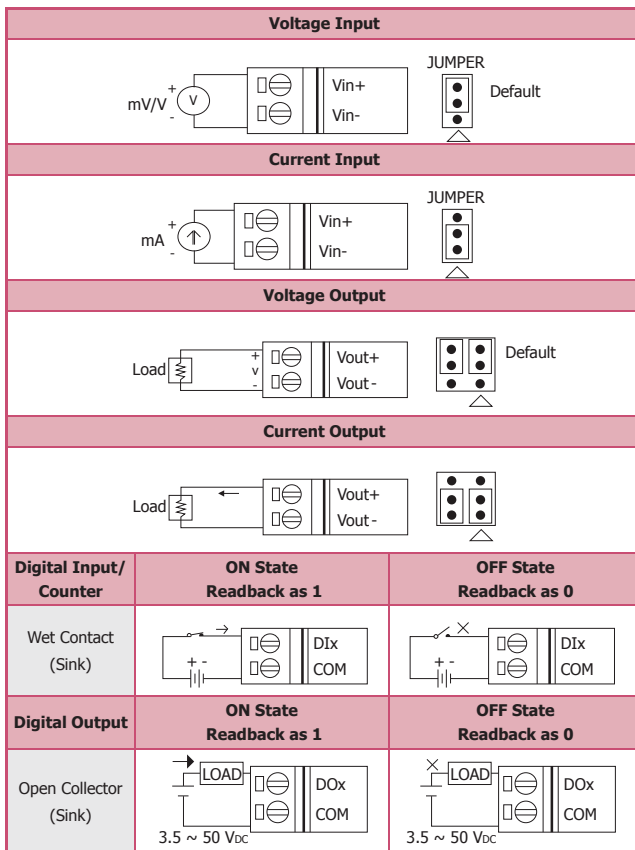
Internal I/O Structure



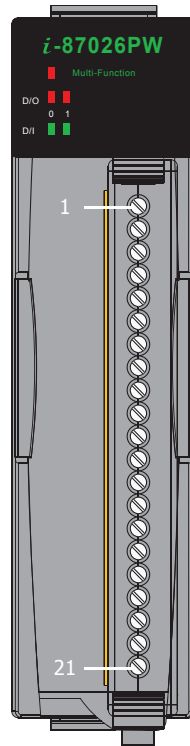
Dimensions (Units: mm)



Wire Connections



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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