



RS-485 Remote I/O Modules



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 $0 \sim 20$ 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 V_{rms}. Voltage and current inputs/outputs are jumper selectable.

I/O Specifications

Analog Input		
Input Channels		6 (Differential)
Input Type		± 150 mV, ± 500 mV, ± 1 V, ± 5 V, ± 10 V ± 20 mA, (Jumper Selectable)
Resolution	Normal Mode	16-bit
	Fast Mode	12-bit
Sampling Rate	Normal Mode	10 Samples/Sec.
	Fast Mode	60 Samples/Sec. (Total)
Accuracy	Normal Mode	$\pm 0.1\%$
	Fast Mode	$\pm 0.5\%$ or better
Bandwidth	Normal Mode	15.7 Hz
	Fast Mode	78.7 Hz
Zero Drift		± 20 μ V/ $^{\circ}$ C
Span Drift		± 25 ppm/ $^{\circ}$ C
Input Impedance	Voltage	2 M Ω
	Current	125 Ω
Common Mode Rejection		86 dB Min.
Normal Mode Rejection		100 dB
Overvoltage Protection		240 V _{rms}
Individual Channel Configuration		Yes
Analog Output		
Output Channels		2
Output Type		$+0$ V $\sim +5$ V, ± 5 V, $+0$ V $\sim +10$ V, ± 10 V, $+0$ mA $\sim +20$ mA, ± 4 mA $\sim +20$ mA (Jumper Selectable)
Resolution		12-bit
Accuracy		$\pm 0.1\%$ of FSR
Voltage Output Capability		10 V @ 20 mA
Current Load Resistance		500 Ω
Power-Up and Safe Value		Yes
Open Wire Detection for Current Output		Yes, Only $4 \sim 20$ mA.
Digital Output		
Output Channels		2
Output Type		Isolated Open Collector (Sink)
Max Load Current		700 mA/channel Max.
Load Voltage		$+3.5$ V _{oc} $\sim +50$ V _{oc}
Overvoltage Protection		60 V _{oc}
Overload Protection		Yes
Short Circuit Protection		Yes
Power-on Value		Yes, Programmable
Safe Value		Yes, Programmable

Multifunction Module

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_{oc} Overvoltage Protection for Digital Input
- Jumper Selectable Voltage or Current Input/Output
- Dual Watchdog
- ± 4 kV Contact ESD Protection
- Wide Operating Temperature Range: -25 $^{\circ}$ C $\sim +75$ $^{\circ}$ C



Applications

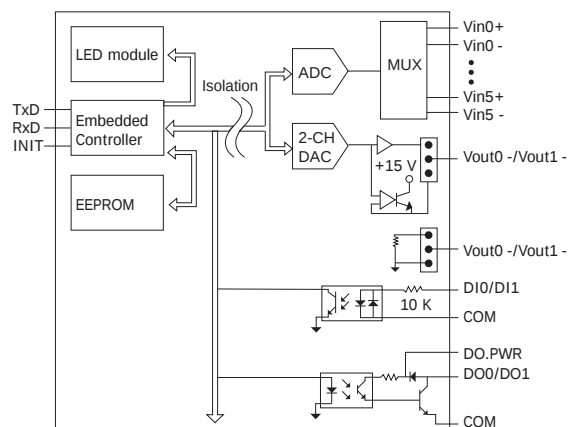
- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

Digital Input		
Input Channels	2	
Input Type	Wet contact (Sink)	
On Voltage Level	+3.5 V _{OC} ~ 50 V _{OC}	
Off Voltage Level	+1 V _{OC} Max.	
Input Impedance	10 K Ω , 0.66W	
Counters	Channels	2
	Max. Count	32-bit
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Overvoltage Protection		70 V _{OC}

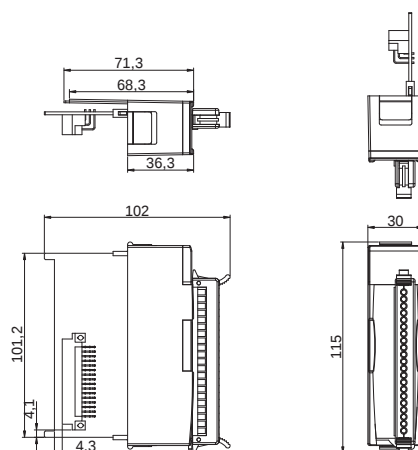
System Specifications

Communication	
Interface	RS-485
Format	N, 8, 1
Baud Rate	1200 $\sim$ 115200 bps
Protocol	DCON
Dual Watchdog	Yes, Module (1.6 Seconds) Communication (Programmable)
LED Display	1 LED as Power Indicator
	2 LED as Digital Input indicator
	2 LED as Digital Output indicator
Isolation	
Intra-module Isolation, Field-to-Logic	2500 V _{oc}
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
Environment	
Operating Temperature	$-25 \sim +75$ $^{\circ}$ C
Storage Temperature	$-30 \sim +80$ $^{\circ}$ C
Relative Humidity	$5 \sim 95\%$ RH, Non-condensing
Dimensions	
30 mm x 102 mm x 115 mm (W x L x H)	

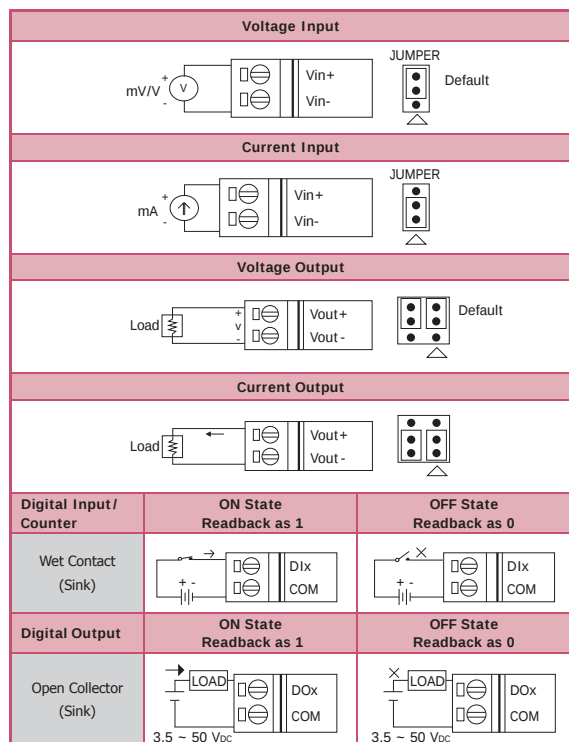
Internal I/O Structure



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	Vout1 -
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 (RoHS)
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Related Products

Converters	USB, RS-232, Fiber Optical to RS-485 Converters and Repeaters	Learning Kit	Beginner Learning Kit
Power Supply	24 Vdc Power Supply	Application Books	Application Books Designed for Our Products
Relay Module	External Relay Modules for 87000 DO Modules	Data Logger Software	User Friendly Data Logger Software (free)