



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		+/-150mV, +/-500 mV, +/-1V, +/-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	+/-0.1%
	Fast Mode	+/-0.5% or better
Bandwidth	Normal Mode	15.7 Hz
	Fast Mode	78.7 Hz
Zero Drift		+/-20 uV/°C
Span Drift		+/-25 ppm/ °C
Input Impedance	Voltage	2 MΩ
	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 ~ +5 V, +/-5 V, +0 V ~ +10 V, +/-10 V,+0 mA ~ +20 mA, +4 mA ~ +20 mA (Jumper Selectable)
Resolution		12-bit
Accuracy		+/-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 ~ 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 _{DC} ~ +50 V _{DC}
Overvoltage Protection		60 V _{DC}
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

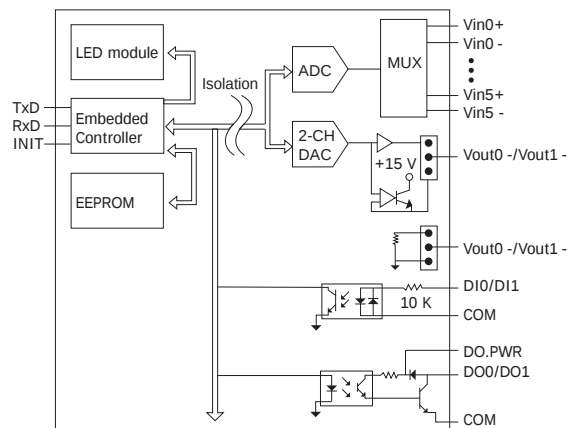
- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

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}

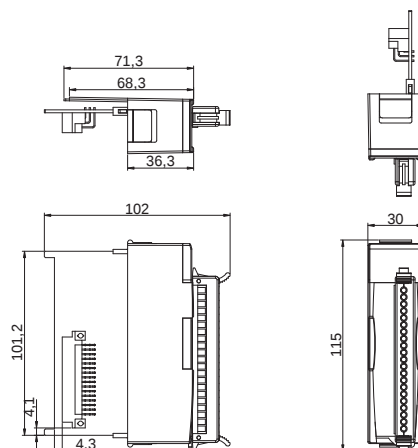
System Specifications

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)

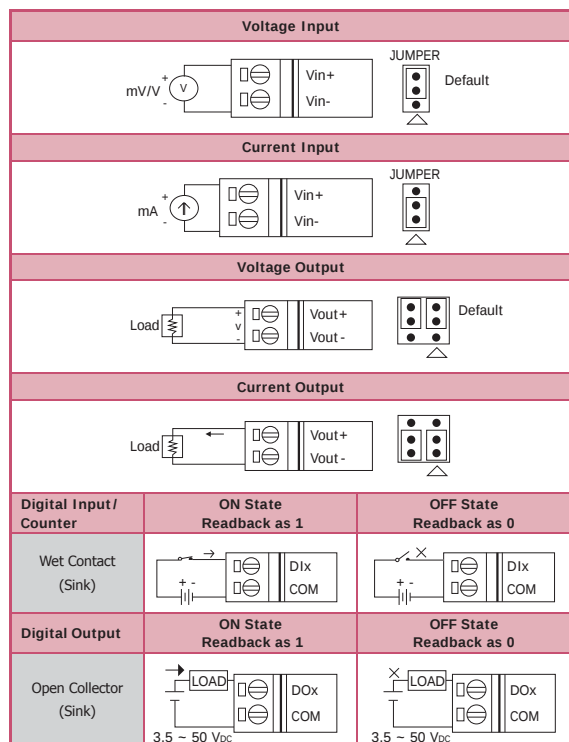
Internal I/O Structure



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)
--------------	---

Related Products

Converters	USB, RS-232, Fiber Optical to RS-485 Converters and Repeaters	Learning Kit	Beginner Learning Kit
Power Supply	24 V _{DC} 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)