



**I-87040W**

**I-87040PW**

32-channel Isolated Digital Input Module with 16-bit Counters

### Introduction

I-87040W/I-87040PW offer 32 channels for digital input, each of which features photocouple isolation. Moreover, you can choose sink type or source type input by wire connections. All channels are able to be used as 16-bit counters and it has 32 LED indicators for channel status. 4 kV ESD protection and 3750 VDC intra-module isolation are also provided. Paired with a daughter board like DN-37-381-A, it makes wiring easier than ever! I-87040PW is suitable for +24VDC digital input system provides the noise protection ability for industrial environment.

### Features

- Sink- or Source-type Digital Inputs
- Photocouple Isolation
- All Channels Can Be Used As 16-bit Counters
- Optional Daughter Boards
- 4 kV ESD Protection
- 3750 V<sub>rms</sub> Intra-module Isolation
- D-Sub DB37 Wiring
- Dual Watchdog
- RoHS Compliant
- Wide Operating Temperature Range: -25 ~ +75°C



### Applications

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

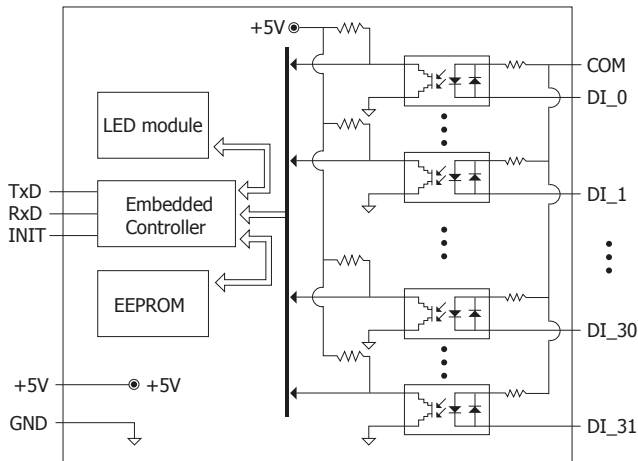
### System Specifications

Models	I-87040W	I-87040PW
<b>Communication</b>		
Interface	RS-485	
Format	N, 8, 1	
Baud Rate	1200 ~ 115200 bps	
Protocol	DCON	
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)	
<b>LED Indicator/Display</b>		
System LED Indicator	1 LED as Power/Communication Indicator	
I/O LED Indicator	32 LEDs as Digital Input Indicators	
<b>Isolation</b>		
Intra-Module Isolation, Field-to-Logic	3750 V <sub>rms</sub>	
<b>EMS Protection</b>		
ESD (IEC 61000-4-2)	4 kV Contact for Each Terminal	
	8 kV Air for Random Point	
<b>Power</b>		
Power Consumption	1.6 W Max.	
<b>Mechanical</b>		
Dimensions (W x L x H)	30 mm x 85 mm x 115 mm	
<b>Environment</b>		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-40 ~ +85°C	
Humidity	10 ~ 95% RH, Non-condensing	

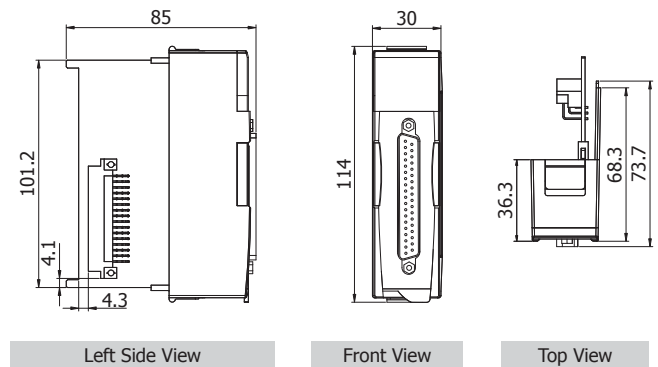
### I/O Specifications

Models	I-87040W	I-87040PW
<b>Digital Input</b>		
Channels	32	
Type	Isolation, One Common for All Digital Inputs	
Sink /Source (NPN /PNP)	Sink, Source	
On Voltage Level	+3.5 V <sub>dc</sub> ~ +30 V <sub>dc</sub>	+19 V <sub>dc</sub> ~ +30 V <sub>dc</sub>
Off Voltage Level	+1 V <sub>dc</sub> Max.	+11 V <sub>dc</sub> Max.
Input Impedance	4.7 kΩ, 0.25 W	
Counters	Channels	32
	Max. Counts	16-bit (65535)
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Channel to Channel Isolation	-	
Low Pass Filter	Yes	
Effective Distance for Dry Contact	-	

### Internal I/O Structure



### Dimensions (Units: mm)

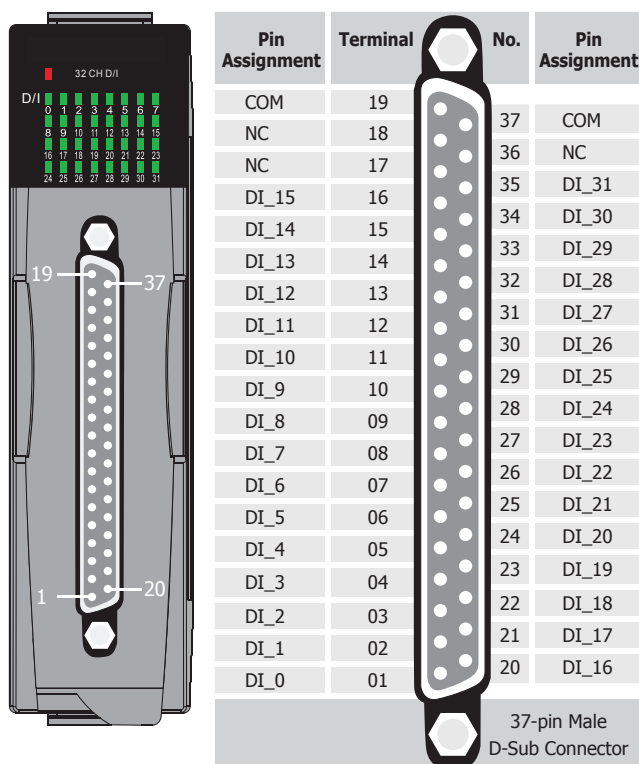


### Wire Connections

I-87040W		
Digital Input/Counter	ON State Readback as 1	OFF State Readback as 0
Sink	OPEN or <1 V <sub>DC</sub>	+4 ~ +30 V <sub>DC</sub>
Source	OPEN or <1 V <sub>DC</sub>	+4 ~ +30 V <sub>DC</sub>

I-87040PW		
Digital Input/Counter	ON State Readback as 1	OFF State Readback as 0
Sink	OPEN or <11 V <sub>DC</sub>	+19 ~ +30 V <sub>DC</sub>
Source	OPEN or <11 V <sub>DC</sub>	+19 ~ +30 V <sub>DC</sub>

### Pin Assignments



### Accessories

	DN-37-A	I/O Connector Block with DIN-Rail Mounting and 37-pin D-sub Connector (pitch:5.08 mm)
	DN-37-381-A	I/O Connector Block with DIN-Rail Mounting and 37-pin D-sub Connector (pitch:3.81 mm)
	CA-3705A	Male-Female D-sub Cable 0.5 M
	CA-3710A	Male-Female D-Sub Cable 1M
	CA-3715A	Male-Female D-Sub Cable 1.5M
	MD-11	Input Type MagicWire for I-8041W/I-87041W
	MD-11	Output Type MagicWire for I-8040W/I-87040W
	SG-770 CR	7 channel differential or 14 channel single-ended surge protector (RoHS)
		I-8040W/40PW/41W/41AW/42W and I-87040W/41W with DN-37-381-A

### Ordering Information

I-87040W-G CR	32-channel Isolated Digital Input Module with 16-bit Counters (Gray Cover) (RoHS)
I-87040PW-G CR	32-channel Isolated Digital Input Module with 16-bit Counters (Gray Cover) (RoHS)