



## I-87053W | I-87053PW | I-87053W-A2

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

### Introduction

The I-87053W, I-87053PW and I-87053W-A2 offer 16 channels for digital input, catering for both dry and wet contact, with an effective distance for dry contact of up to 500 meters. All channels feature photocouple isolation, and can also be used as 16-bit counters. The I-87053W series provides 16 LED indicators that can be used to monitor the DI channel status. 4 kV ESD protection and 3750 VDC intra-module isolation are also provided to enhance noise immunity capabilities in industrial environments. ICP DAS recommends selecting either the "P" or "A2" version of the digital input module for industrial use.

### Applications

- Building Automation
- Factory Automation
- Machine Automation
- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

### System Specifications

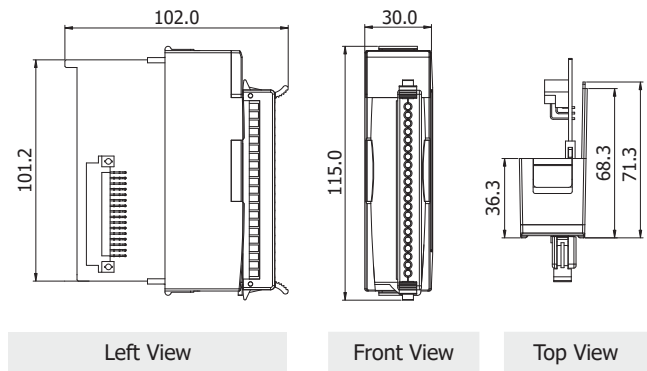
Model	I-87057W	I-87057PW	I-87057W-A2
<b>COM Port</b>			
Ports	RS-485		
Data Format	N, 8, 1		
Baud Rate	1200 ~ 115200 bps		
Protocol	DCON		
<b>CPU Module</b>			
Dual Watchdog Timer	Module (1.6 Seconds), Communication (Programmable)		
<b>LED Indicators</b>			
System LED Indicator	1 LED as Power Indicator		
I/O LED Indicator	16 as High/Low Alarm Signals		
<b>Isolation</b>			
Intra-module Isolation, Field-to-Logic	3750 VDC		
<b>EMS Protection</b>			
ESD (IEC 61000-4-2)	±4 kV Contact for Each port, ±8 kV Air for Random Poin		
<b>Power</b>			
Consumption	0.8 W Max.		
<b>Mechanical</b>			
Dimensions (W x L x H)	30 mm x 115 mm x 102 mm		
<b>Environment</b>			
Operating Temperature	-25 ~ +75 °C		
Storage Temperature	-40 ~ +85 °C		
Humidity	10 ~ 95 % RH, Non-condensing		

### Features

- 16-channel Digital Inputs
- Dry and Wet Contact, Selectable via Wire Connections
- Photocouple Isolation
- Long Distance Measurement
- 4 kV ESD Protection
- All Channels can be used as 16-bit Counters
- 3750 VDC Intra-module Isolation



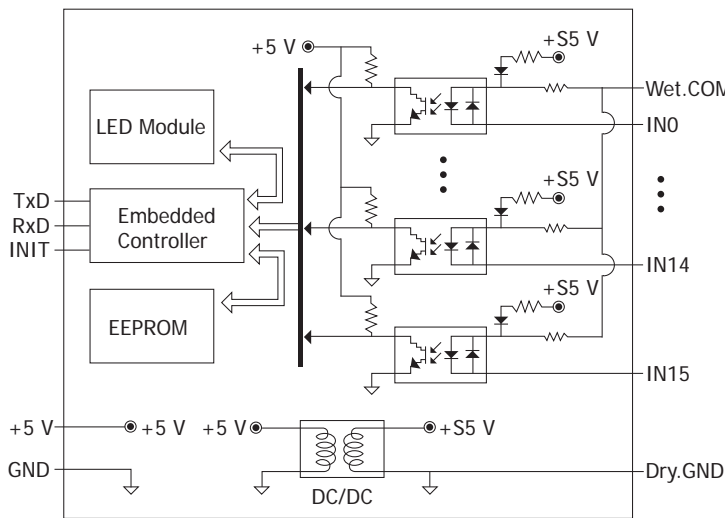
### Dimensions



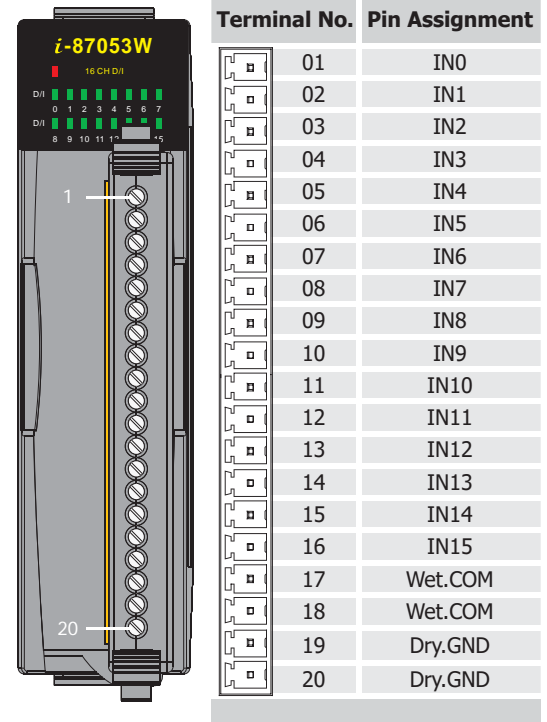
### I/O Specifications

Model	I-87057W	I-87057PW	I-87057W-A2
<b>Digital Input/Counter</b>			
Channels	16		
Type	Dry, Wet		
Sink/Source (NPN/PNP)	Sink, Source		
Dry Contact	On Voltage Level	Close to GND.	
	Off Voltage Level	Open	
Wet Contact	On Voltage Level	+3.5 ~ +30 VDC	+19 ~ +30 VDC
	Off Voltage Level	+1 VDC Max.	+11 VDC Max.
Input Impedance	3 kΩ, 1 W		10 kΩ, 1 W
Max. Counts	16-bit (65535)		
Frequency	100 Hz		
Min. Pulse Width	5 ms		
Effective Distance	500 m Max.		
Low Pass Filter	Yes		
Overvoltage Protection	50 VDC		100 VDC

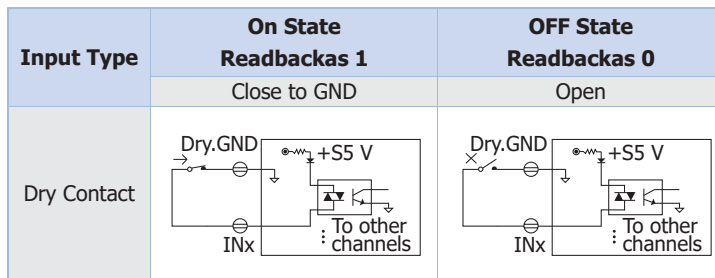
## Internal I/O Structure



## Pin Assignments



## Wire Connections



Input Type	Model	On State Readbacks 1	OFF State Readbacks 0
Wet Contact (Sink)	I-87057W	+3.5 VDC ~ +30 VDC	+1 VDC Max.
	I-87057PW	+19 VDC ~ +30 VDC	+11 VDC Max.
	I-87057W-A2	+19 VDC ~ +50 VDC	+11 VDC Max.
Wet Contact (Sink)	I-87057W	+3.5 VDC ~ +30 VDC	+1 VDC Max.
	I-87057PW	+19 VDC ~ +30 VDC	+11 VDC Max.
	I-87057W-A2	+19 VDC ~ +50 VDC	+11 VDC Max.

## Accessories

<b>SG-770 CR</b>	16-channel Isolated Digital Input Module with 16-bit Counters (Gray Cover) (RoHS)
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## Ordering Information

<b>I-87053W-G CR</b>	16-channel Isolated Digital Input Module with 16-bit Counters (Gray Cover) (RoHS)
<b>I-87053PW-G CR</b>	16-channel Isolated Digital Input Module with 16-bit Counters (Gray Cover) (RoHS)
<b>I-87053W-A2-G CR</b>	16-channel Isolated Digital Input Module with 16-bit Counters (Gray Cover) (RoHS)