



**I-87053W-A5    I-87053W-E5**  
 16-channel 68 ~ 150 Vdc Isolated Digital Input Module  
 with 16-bit Counters

### Introduction

I-87053W-A5 features high on voltage level up to +68 V ~ +150 Vdc and offers 16 channels for digital input which cover dry contact and wet contact. Its effective distance for dry contact is up to 500 meters. All of its channels are not only with isolation but also able to be used as counters. I-87053W-A5 has 16 LED indicators for channel status as well as qualification for 4 KV ESD protection and 3750 Vdc intra-module isolation.

### Features

- Support Digital Inputs (Dry and Wet)
- High On Voltage Level: +68 Vdc ~ +150 Vdc
- Photocouple Isolation
- Long Distance Measurement
- Can Be Used As Counters
- 4 kV ESD Protection
- 3750 Vdc Intra-module Isolation
- RoHS Compliant
- Wide Operating Temperature Range: -25 ~ +75°C



### Applications

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

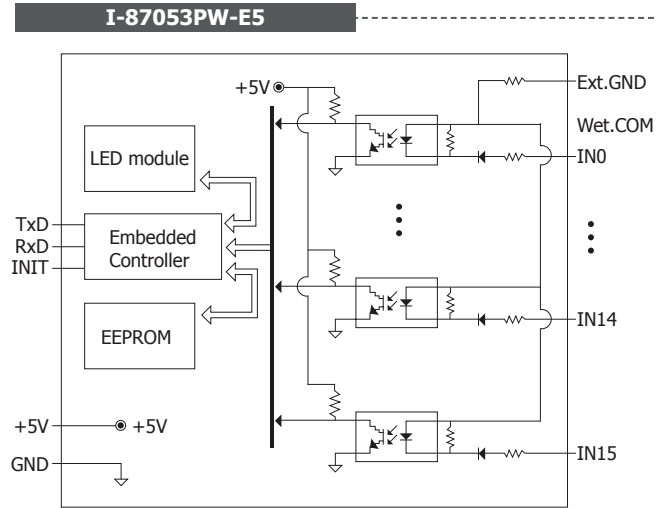
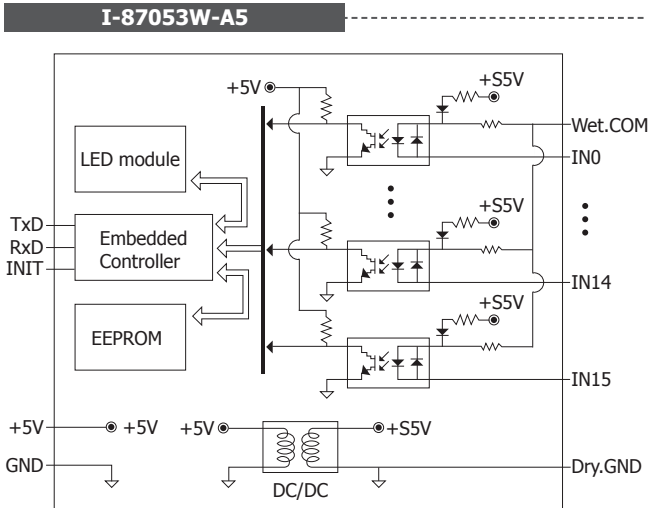
### System Specifications

Models	I-87053W-A5	I-87053PW-E5
<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	16 LEDs as High/Low Alarm Signals	
<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	0.9 W Max.	0.8 W Max.
<b>Mechanical</b>		
Dimensions (W x L x H)	30 mm x 102 mm x 115 mm	
<b>Environment</b>		
Operating Temperature	-25 ~ +75°C	
Storage Temperature	-40 ~ +85°C	
Humidity	10 ~ 95% RH, Non-condensing	

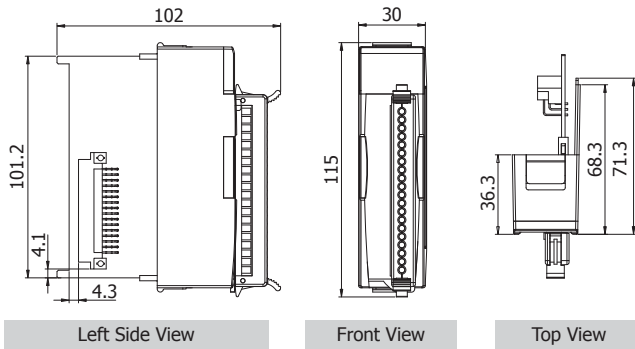
### I/O Specifications

Models	I-87053W-A5	I-87053PW-E5
<b>Digital Input</b>		
Channels	16	
Type	Dry+Wet	
Sink /Source (NPN /PNP)	Sink, Source	Sink
Dry Contact	On Voltage Level	Close to GND.
	Off Voltage Level	Open
Wet contact	On Voltage Level	+68 V <sub>DC</sub> ~ +150 V <sub>DC</sub>
	Off Voltage Level	+48 V <sub>DC</sub> Max.
Input Impedance	3 kΩ, 0.33 W	
Counters	Channels	16
	Max. Counts	16-bit (65535)
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Channel to Channel Isolation	Yes	
Low Pass Filter	Yes	
Effective Distance for Dry Contact	500 m Max.	

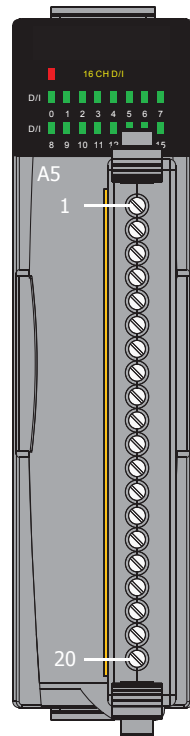
### Internal I/O Structure



### Dimensions (Units: mm)



### Pin Assignments



Terminal No.	I-87053W-A5	I-87053PW-E5
	Pin Assignment	
01	IN0	IN0
02	IN1	IN1
03	IN2	IN2
04	IN3	IN3
05	IN4	IN4
06	IN5	IN5
07	IN6	IN6
08	IN7	IN7
09	IN8	IN8
10	IN9	IN9
11	IN10	IN10
12	IN11	IN11
13	IN12	IN12
14	IN13	IN13
15	IN14	IN14
16	IN15	IN15
17	Wet.COM	N.C.
18	Wet.COM	N.C.
19	Dry.GND	Ext.GND
20	Dry.GND	Ext.GND

### Wire Connections

I-87053W-A5		
Input Type	ON State Readback as 1	OFF State Readback as 0
Dry Contact	Close to GND 	Open 
Wet Contact (Sink)	+10 Vdc ~ +50 Vdc 	+4 Vdc Max. 
Wet Contact (Source)	+10 Vdc ~ +50 Vdc 	+4 Vdc Max. 

I-87053PW-E5		
Input Type	ON State Readback as 1	OFF State Readback as 0
Wet Contact (Sink)	Voltage > 68V 	Voltage < 48V 

### Ordering Information

I-87053W-A5-G	16-channel 68-150 Vdc Isolated Digital Input Module with 16-bit Counters (Gray Cover)
I-87053W-E5-G CR	16-channel 68-150 Vdc Isolated Digital Input Module with 16-bit Counters (Gray Cover) (RoHS)

### Accessories

SG-770 CR	7 channel differential or 14 channel single-ended surge protector (RoHS)
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