



## I-87052W-G

8-channel Isolated Digital Input Module

### Introduction

The I-87052W module offers 8 fully independent differential Digital Input channels that feature 2 kV channel-to-channel Photocouple isolation. In addition, either sink- or source-type input can be selected via the wire connections, while all channels are able to be used as 16-bit counters. The I-87052W also includes 8 LED indicators that can be used to monitor the status of the Digital Input channels. 4 kV ESD protection and 5000 Vrms intra-module isolation are provided as standard.

### System Specifications

Communication	
Interface	RS-485
Format	N, 8, 1
Baud Rate	1200 to 115200 bps
Protocol	DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
LED Indicators/Display	
System LED Indicators	Yes, 1 as Power/Communication Indicator
I/O LED Indicators	8 as Digital Input Indicators
Isolation	
Intra-module Isolation, Field-to-Logic	5000 Vrms
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
	±8 kV Air for Random Point
Power	
Power Consumption	0.3 W Max.
Mechanical	
Dimensions (L × W × H)	115 mm × 30 mm × 102 mm
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-40 to +85°C
Humidity	10 to 95% RH, Non-condensing

### Features

- 8-channel Isolated Digital Input
- 2 kV Channel-to-Channel Isolation
- Sink- or Source-type Input
- 4 kV ESD Protection
- 5000 Vrms Isolation Voltage
- All Channels can be used as 16-bit Counters
- RoHS Compliant
- Wide Operating Temperature Range: -25 to +75°C



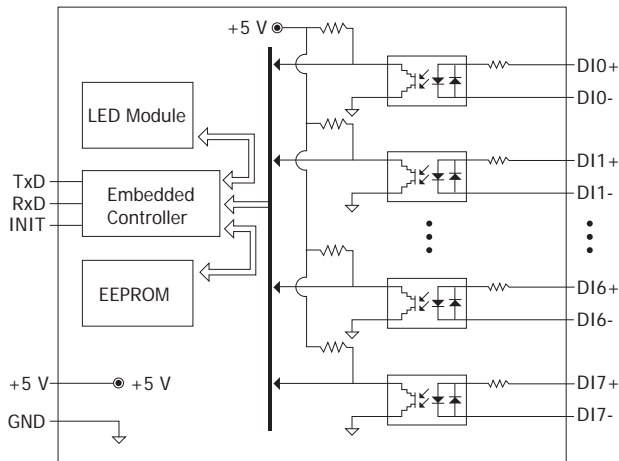
### Applications

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

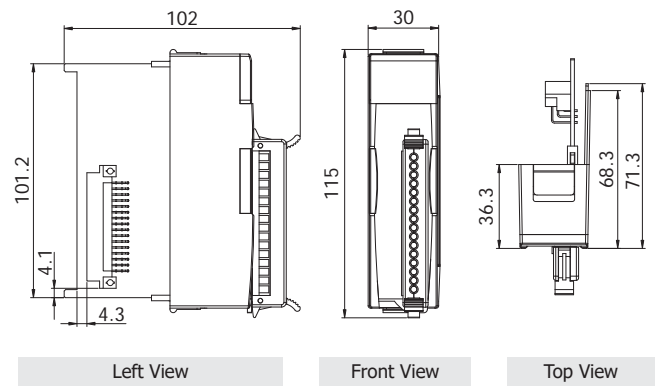
### I/O Specifications

Digital Input		
Channels	8	
Type	Wet, Differential	
Sink/Source (NPN/PNP)	Sink, Source	
ON Voltage Level	+3.5 VDC ~ 30 VDC	
OFF Voltage Level	+1 VDC Max.	
Input Impedance	3 kΩ, 0.25 W	
Counters	Channels	8
	Max. Count	16-bit (65535)
	Max. Input Frequency	100 Hz
	Min. Pulse Width	5 ms
Channel-to-Channel Isolation	Yes, 2 kV	
Low Pass Filter	Yes	
Effective Distance for Dry Contact	-	

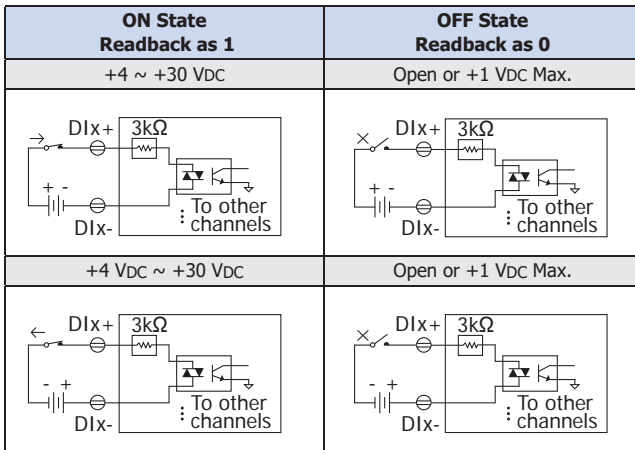
## Internal I/O Structure



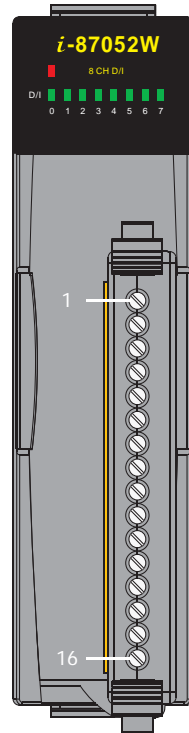
## Dimensions (Units: mm)



## Wire Connections



## Pin Assignments



Terminal No.	Pin Assignment
01	DI0+
02	DI0-
03	DI1+
04	DI1-
05	DI2+
06	DI2-
07	DI3+
08	DI3-
09	DI4+
10	DI4-
11	DI5+
12	DI5-
13	DI6+
14	DI6-
15	DI7+
16	DI7-

## Ordering Information

<b>I-87052W-G CR</b>	8-channel Isolated Digital Input Module with 2 kV Channel-to-Channel Isolation using the DCON Protocol (Gray Cover) (RoHs)
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## Accessories

SG-770 CR	7-channel Differential or 14-channel Single-ended Surge Protector (RoHs)
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