



## Digital Input

RS-485 Remote I/O Modules



### 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.

### 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-87KW Series

### 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 x W x H)	115 mm x 30 mm x 102 mm
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-40 to +85°C
Humidity	10 to 95% RH, Non-condensing

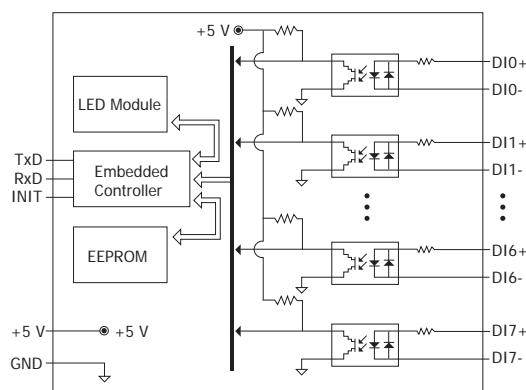
### I/O Specifications

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		-

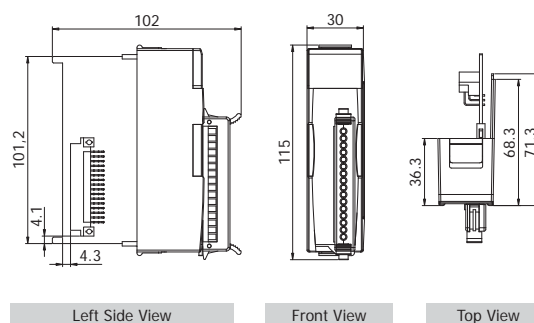
I-87052W



## Internal I/O Structure



### 📏 Dimensions (Units: mm)

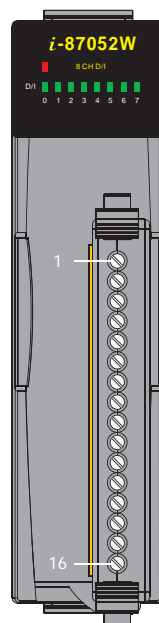


















## RS-485 Remote I/O Modules

## Wire Connections

ON State Readback as 1	OFF State Readback as 0
+4 ~ +30 VDC	Open or +1 Vdc Max.
+4 VDC ~ +30 Vdc	Open or +1 Vdc Max.

## 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-

## I-87KW Series

## 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)
----------------------	--

## Accessories

	<b>SG-770 CR</b> 7-channel Differential or 14-channel Single-ended Surge Protector (RoHS)
---	--

1-87052W