ICP DAS

I-87052W

8-channel Isolated Digital Input Module

■ 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
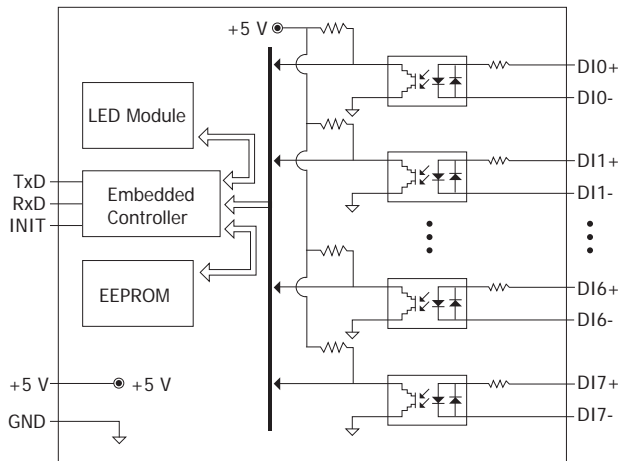- Wide Operating Temperature Range: -25 to +75°C

■ 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.

■ Applications

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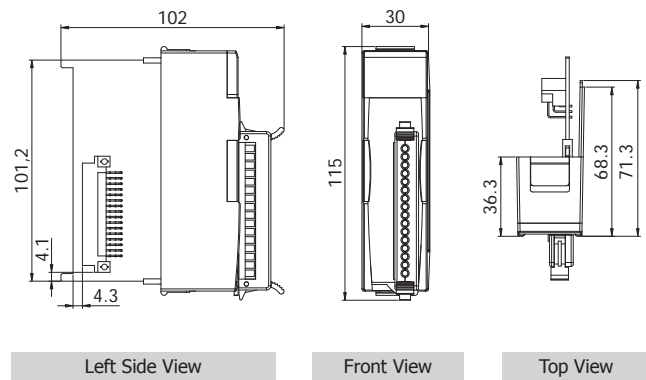- Remote Maintenance
- Remote Diagnosis
- Testing Equipment

■ 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 Indictors	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 V_{DC} ~ 30 V_{DC}
OFF Voltage Level		+1 V_{DC} 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)

Left Side View Front View Top View

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

i-87052W
8 CH D/I
D/I 0 1 2 3 4 5 6 7
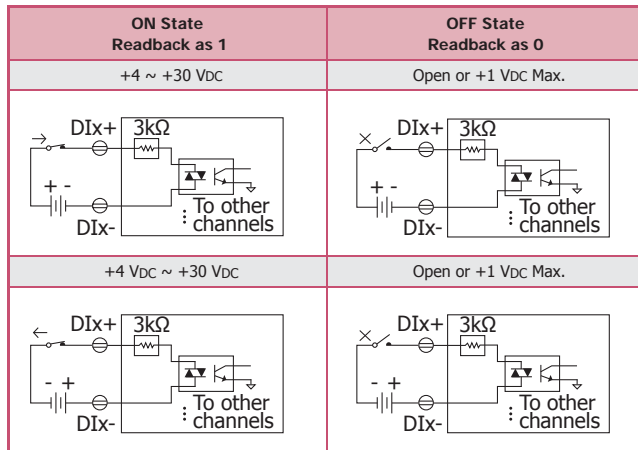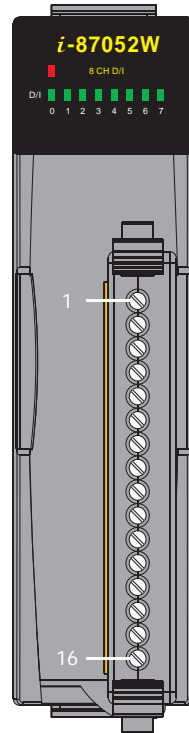
Terminal No.	Pin Assignment
01	DI0+
02	DI0-
03	DI1+
04	DI1-
05	DI2+
06	DI2-
07	DI3+
08	DI3-
09	DI4+
10	DI4-
11	DI5+
12	DI5-
13	DI6+
14	DI6-
15	DI7+
16	DI7-

Ordering Information

| I-87052W-G CR | 8-channel Isolated Digital Input Module with 2 kV Channel-to-Channel Isolation using the DCON Protocol (Gray Cover) (RoHs) |

Accessories

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

RS-485 Remote I/O Modules
I-87KW Series
I-87052W