I-87052W

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

Features

- Support Digital Inputs (Sink Type or Source Type)
- Photocouple Isolation
- Can Be Used As Counters
- 4 KV ESD Protection
- 5000 V_{DC} Intra-Module Isolation
- RoHS Compliant
- Wide Operating Temperature Range: -25 ~ +75°C

Introduction

I-87052W offers 8 channels for digital input, each of which features Photocouple isolation. Moreover, you can choose sink type or source type input by wire connections. All channels are able to be used as 16-bit counters. I-87052W not only has 8 LED indicators for channel status but also get qualification for 4 KV ESD protection and 5000 V_{DC} intra-module isolation.

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 ~ 115200 bps
Protocol	DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
LED Indicator/Display	
System LED Indicator	1 LED as Power/Communication Indicator
I/O LED Indicator	8 LEDs as Digital Input Indicators
Isolation	
Intra-Module Isolation, Field-to-Logic	5000 V_{rms}
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 (W x L x H)	30 mm x 102 mm x 115 mm
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-40 ~ +85°C
Humidity	10 ~ 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. 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		-

◪ Internal I/O Structure

◪ Dimensions (Units: mm)

| Left Side View | Front View | Top View |
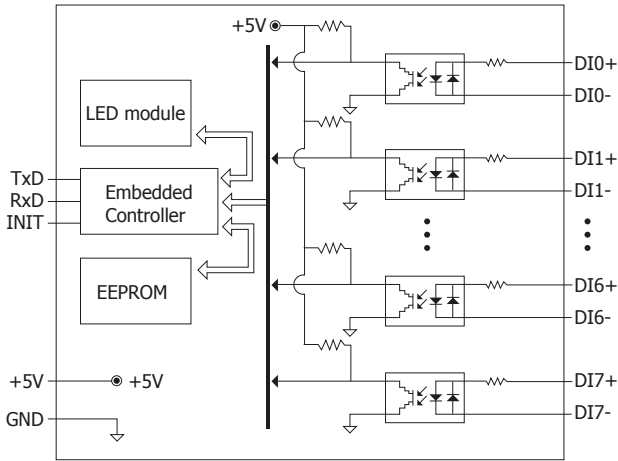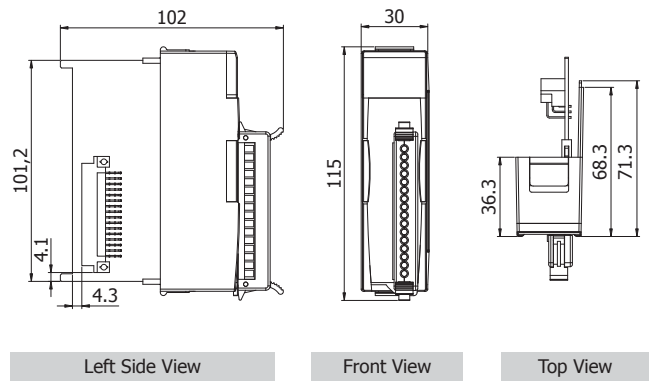
◪ Wire Connections

Input Type	ON State Readback as 1	OFF State Readback as 0
Channel 0 to 5 Wet Contact (Sink)	+4 V_{DC} ~ +30 V_{DC}	Open or +1 V_{DC} Max.
	INx+ 10K / To other channels INx-	INx+ 10K / To other channels INx-
Channel 0 to 5 Wet Contact (Source)	+4 V_{DC} ~ +30 V_{DC}	Open or +1 V_{DC} Max.
	INx+ 10K / To other channels INx-	INx+ 10K / To other channels INx-
Channel 6 to 7 Wet Contact (Sink)	+4 V_{DC} ~ +30 V_{DC}	Open or +1 V_{DC} Max.
	INx+ 10K / To other channels IN.GND	INx+ 10K / To other channels IN.GND

◪ Pin Assignments

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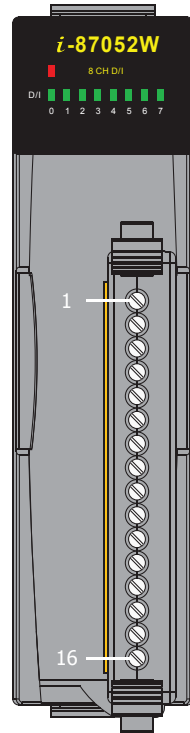
Terminal No.	Pin Assignment
01	DI0+
02	DI0 -
03	DI1+
04	DI1 -
05	DI2+
06	DI2 -
07	DI3+
08	DI3 -
09	DI4+
10	DI4 -
11	DI5+
12	DI5 -
13	DI6+
14	DI6 -
15	DI7+
16	DI7 -

◪ Ordering Information

I-87052W-G CR	8-channel Isolated Digital Input Module with 16-bit Counters (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