RS-485 Remote I/O Modules

I-87KW Series

I-87055W

I-87055W

8-channel Non-Isolated Digital Input and 8-channel
Non-Isolated Digital Output Module with 16-bit Counters

Features

- Support Digital Inputs (Sink Type)
- Support Digital Outputs (Sink Type)
- DI Can Be Used As Counters
- 4 kV ESD Protection
- RoHS Compliant
- Wide Operating Temperature Range: -25 ~ +75°C

Introduction

I-87055W offers 8-channel sink type digital inputs and 8-channel sink type digital outputs. All DI channels are also able to be used as 16-bit counters. I-87055W has 16 LED indicators for both DI & DO channel status. 4 KV ESD protection for input/output channels is 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 ~ 115200 bps
Protocol	DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
Safe Value (When Host Fail or Communication Fail)	Yes
Power-on Preset Value	Yes
LED Indicator/Display	
System LED Indicator	1 LED as Power/Communication Indicator
I/O LED Indicator	16 LEDs as High/Low Alarm Signals
Isolation	
Intra-Module Isolation, Field-to-Logic	3000 V$_{DC}$
EMS Protection	
ESD (IEC 61000-4-2)	4 kV Contact for Each Terminal
	8 kV Air for Random Point
Power	
Power Consumption	0.6 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		Dry Contact
Sink /Source (NPN /PNP)		Sink
On Voltage Level		Close to GND.
Off Voltage Level		Open
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		100 m Max.
Digital Output		
Channel		8
Type		Open Collector
Sink /Source (NPN /PNP)		Sink
Load Voltage		+5 V$_{DC}$ ~ +30 V$_{DC}$
Max. Load Current		100 mA/ channel
Short Circuit Protection		-
Power-on Value		Yes
Safe Value		Yes

☑ Internal I/O Structure

☑ Dimensions (Units: mm)

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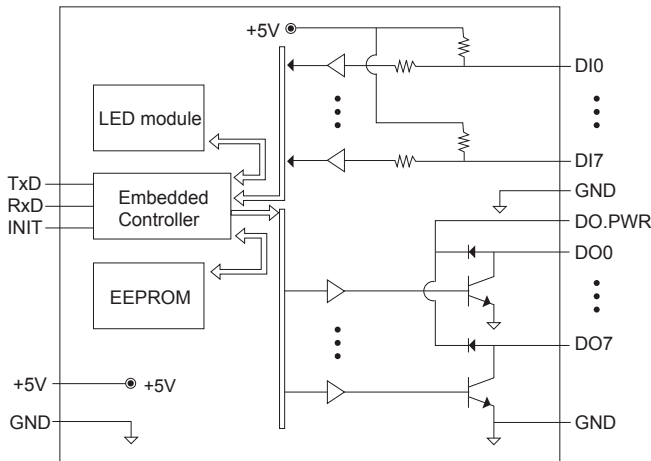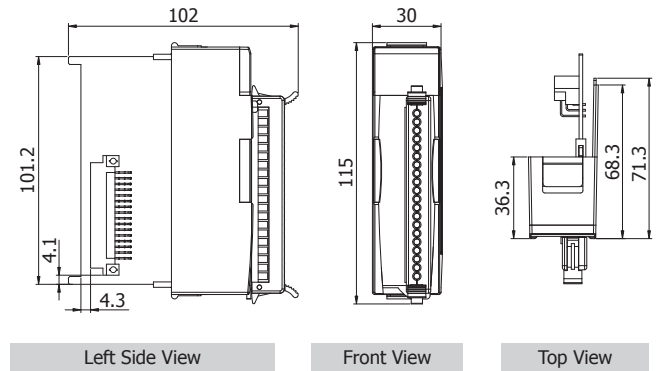
☑ Wire Connections

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	Relay ON	Relay OFF
	Relay Close — DIx / GND	Relay Open — DIx / GND
TTL/CMOS Logic	Voltage > 1 V	Voltage < 3.5 V
	Logic Level Low / Logic GND — DIx / GND	Logic Level High / Logic GND — DIx / GND
Open Collector	Open Collector ON	Open Collector OFF
	On — DIx / GND	Off — DIx / GND

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Drive Relay	Relay ON	Relay OFF
	DO.PWR / DOx / DO.GND	DO.PWR / DOx / DO.GND
Resistance Load		
	DO.PWR / DOx / DO.GND	DO.PWR / DOx / DO.GND

☑ Pin Assignments

i-87055W
8 D/I & 8 D/O
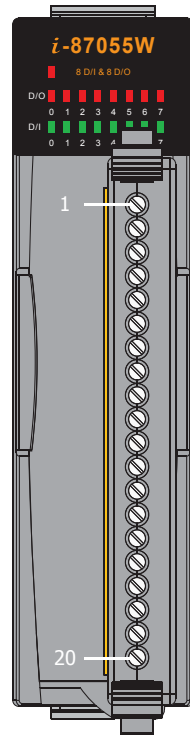
Terminal No.	Pin Assignment
01	DI0
02	DI1
03	DI2
04	DI3
05	DI4
06	DI5
07	DI6
08	DI7
09	GND
10	GND
11	GND
12	DO0
13	DO1
14	DO2
15	DO3
16	DO4
17	DO5
18	DO6
19	DO7
20	DO.PWR

☑ Ordering Information

I-87055W-G CR	8-channel Non-Isolated Digital Input and 8-channel Non-Isolated Digital Output Module with 16-bit Counters (Gray Cover) (RoHS)

☑ Accessories

	RM-104/108/116	Power Relay Module ,1 form C
	RM-204/208/216	Power Relay Module ,2 form C
	DN-SSR4	4-channel Solid state Relay Module ,1 form A

	RM-22.22	2 Pole, 20 A relay for direct 35 mm rail (EN 50022) mounting
	SG-770 CR	7 channel differential or 14 channel single-ended surge protector (RoHS)

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