

I-87042W-G

16-channel Isolated Digital Input &
16-channel Isolated Digital Output Module

Features

- Digital Input for Sink Type or Source Type
- Digital Outputs for Sink Type
- Power-on Value Setting
- Safe Value Setting
- Photocouple Isolation
- 4 kV ESD Protection
- 3750 VDC Intra-module Isolation

Introduction

I-87042W offers 16 channels for digital input and 16 channels for digital output.Each of which features Photo-couple isolation. I-87042W supports sink type output with short-circuits protection. There are option for Power-on value and safe value for your consideration. About Input, you can chose sink type or source type input by wire connection. All channels are able to be used as 16-bit counter. I-87042W also has 32 LED indicators for channel status. 4 kV ESD protection and 3750 VDC intra-module isolation are standard.



I-8017DW, I-8040W, I-8040PW, I-8041W, I-8041AW, I-8041PW, I-8042W, I-87017DW, I-87024DW, I-87028CDW, I-87040W, I-87040PW, I-87041W, I-87041PW and I-87042W with DN-37-381-A & DB37 Male to Female Cable (Optional)



I-8042W and I-87042W with DN-8K16P16R & DB37 Male to Female Cable (Optional)

Applications

- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

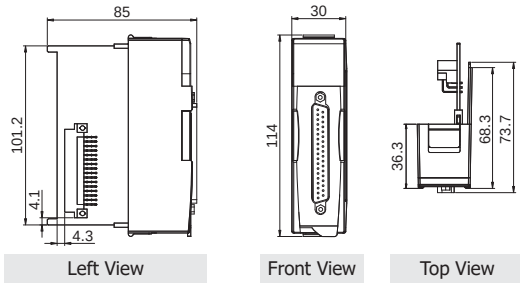
System Specifications

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)
Safe Value (When Host Fail or Communication Fail)	Yes
Power-on Preset Value	Yes
LED Indicators/Display	
System LED Indictors	Yes, 1 as Power/Communication Indicator
I/O LED Indicators	32 as Digital Input and Output Indicators
Isolation	
Intra-module Isolation, Field-to-Logic	3750 VDC
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
	±8 kV Air for Random Point
Power	
Power Consumption	1.25 W ,±5% For Hardware
Mechanical	
Dimensions (W × L × H)	30 mm × 114 mm × 85 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	16
Type	One common for all Inputs
Sink/Source (NPN/PNP)	Sink, Source
ON Voltage Level	+3.5 VDC ~ 30 VDC
OFF Voltage Level	+1 VDC Max.
Input Impedance	3 kΩ
Counter (100 Hz, 16-bit)	Yes
Channel-to-Channel Isolation	Yes
Digital Output	
Channels	16
Type	Open Collector
Sink/Source (NPN/PNP)	Sink
Load Voltage	+5 VDC ~ +30 VDC
Max. Load Current	100 mA/Channel
Overload Protection	Yes
Short Circuit Protection	-
Power-on Value	Yes
Safe Value	Yes

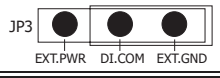
Dimensions (Units: mm)

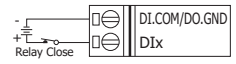
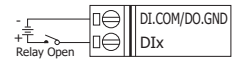
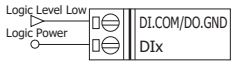
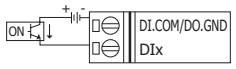
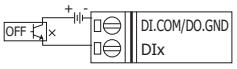
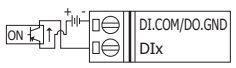
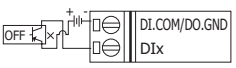


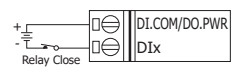
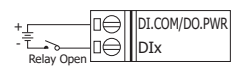
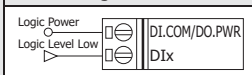
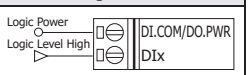
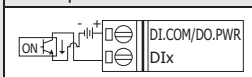
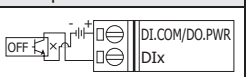
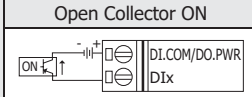
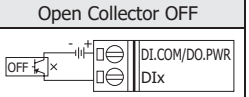
Left View | Front View | Top View

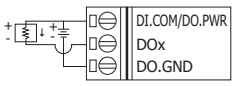
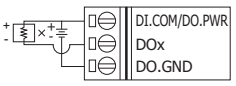
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Wire Connections

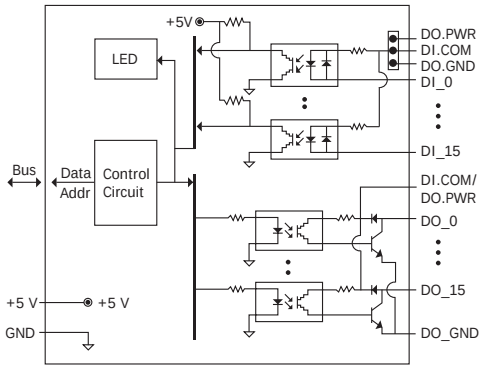
Select Type	
Source Type	Sink Type
	

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact (Sink)	Relay ON	Relay OFF
		
TTL/CMOS Logic (Sink)	Voltage > +3.5 V	Voltage < +1 V
		
NPN Output (Sink)	Open Collector ON	Open Collector OFF
		
PNP Output (Sink)	Open Collector ON	Open Collector OFF
		

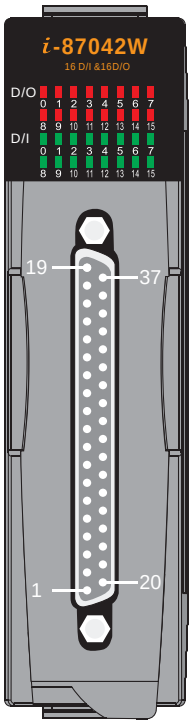
Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact (Source)	Relay ON	Relay OFF
		
TTL/CMOS Logic (Source)	Voltage > +3.5 V	Voltage < +1 V
		
NPN Output (Source)	Open Collector ON	Open Collector OFF
		
PNP Output (Source)	Open Collector ON	Open Collector OFF
		

Output Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Drive Relay	Relay ON	Relay OFF
		
Resistance Load		

Internal I/O Structure



Pin Assignments



Pin Assignment	Terminal No.	Pin Assignment
DI.COM/ DO.PWR	19	37 DI.COM/ DO.PWR
DO.GND	18	36 DO.GND
DO.GND	17	35 DO_15
DI_15	16	34 DO_14
DI_14	15	33 DO_13
DI_13	14	32 DO_12
DI_12	13	31 DO_11
DI_11	12	30 DO_10
DI_10	11	29 DO_9
DI_9	10	28 DO_8
DI_8	09	27 DO_7
DI_7	08	26 DO_6
DI_6	07	25 DO_5
DI_5	06	24 DO_4
DI_4	05	23 DO_3
DI_3	04	22 DO_2
DI_2	03	21 DO_1
DI_1	02	20 DO_0
DI_0	01	

37-pin Male D-Sub Connector

Ordering Information

I-87042W-G CR	16-ch Isolated DI & 16-channel Isolated DO (Sink, NPN) Module (Gray Cover) (RoHS) Includes CA-4002F (DB37 connector Female with plastic cover)

Accessories

 DN-8K16P16R CR	16-channel digital input terminal and 16-channel relay output board Female DB37 to Screw Terminal Board (Pitch= 3.81 mm) with DIN-rail Mounting (RoHS) Include: CA-3705A (DB37 Male to Female Cable, 90º, 50 CM)
 DN-37-A CR	Female DB37 to Screw Terminal Board (Pitch= 5.08 mm) with DIN-rail Mounting (RoHS) Include: CA-3710A (DB37 Male to Female Cable, 90º, 1 M)
 DN-37-381-A CR	Female DB37 to Screw Terminal Board (Pitch=3.81 mm) with DIN-rail Mounting (RoHS) Include: CA-3710A (DB37 Male to Female Cable, 90º, 1 M)
 CA-3705A CR CA-3710A CR CA-3715A CR	DB37 Male to Female Cable, 90º, 0.5 M/1 M/1.5 M (RoHS)
 CA-3710AM CR CA-3720AM CR CA-3730AM CR CA-3750AM CR CA-37100AM CR	DB37 Male to Female, with Molded Cable, 45º, 1 M/2 M/3 M/5 M/10 M (RoHS)

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