



I-87082W

2-channel Counter/Frequency Input Module

Introduction

The I-87082W offers 2 high speed counter or frequency input channels and 2 digital output channels. Two types of digital input are provided, one for isolated input, and the other is for non-isolated input. The isolated input provides 3750 V_{rms} isolation voltage and the non-isolated input provides programmable threshold voltage level. The built-in digital filter is valid for both non-isolated and isolated input and can filter out noise where the high/low pulse width is smaller than the minimum high/low width of the digital filter. The maximum count is up to 32-bit and the maximum frequency is up to 100 kHz. The module also provides programmable alarm output with non-isolated open collectors.

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 Counter/Frequency status Indicators
Isolation	
Intra-module Isolation, Field-to-Logic	3750 V _{rms}
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
	±8 kV Air for Random Point
Power	
Power Consumption	0.5 W Max.
Mechanical	
Dimensions (L × W × H)	115 mm × 30 mm × 102 mm
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-40 to +85°C
Humidity	10 to 95% RH, Non-condensing

Features

- 2-channel Counter/Frequency Input
- 32-bit Counter
- Isolated or Non-isolated Input
- Programmable Alarm Output
- Programmable Digital Filter
- Programmable Threshold Voltage Level
- Maximum Frequency of up to 100 kHz
- Dual Watchdog
- Wide Operating Temperature Range: -25 to +75°C



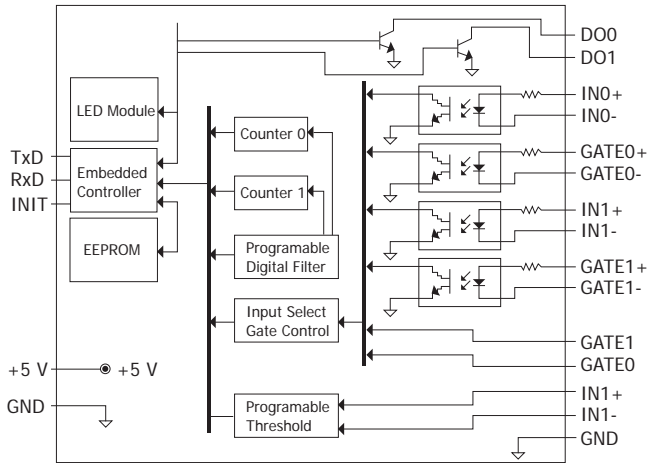
Applications

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

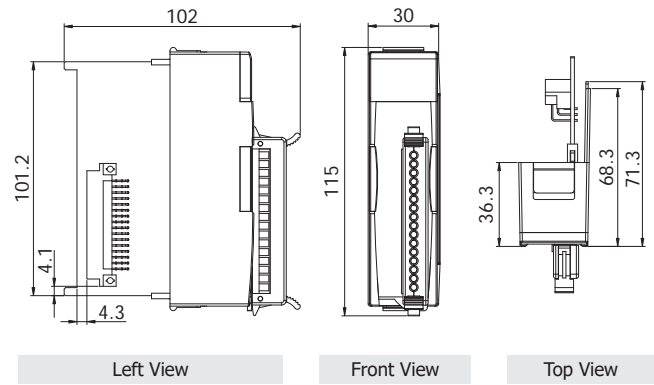
I/O Specifications

Counter/Frequency Input		
Channels	2	
Type	Counter or Frequency	
Isolated	ON Voltage Level	+3.5 VDC ~ +30 VDC
	OFF Voltage Level	+1 VDC Max.
Non-isolated	ON Voltage Level	0 ~ +5 VDC (Default > 2.4 VDC)
	OFF Voltage Level	0 ~ +5 VDC (Default < 0.8 VDC)
	Threshold Voltage	Programmable
Counter	Up	
Max. Counts	32-bits (4,294,967,295)	
Max. Counter/Frequency	100 kHz	
Digital Filter	2 ~ 65000 μs	
Frequency Accuracy	1 Hz or 10 Hz (software selectable)	
Programmable Alarm Mode	Mode 0	High Alarm Comparator on Counter 0 and Counter 1
	Mode 1	Two Steps High Alarm Comparator on Counter 1
Virtual Battery Backup for Counter Value	-	
Digital Output		
Channels	2	
Type	Sink, Open Collector	
Output Voltage	+5 VDC ~ +30 VDC	
Output Current	30 mA	
Alarm Output	Yes	

Internal I/O Structure



Dimensions (Units: mm)



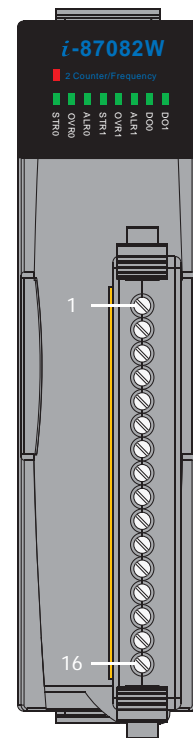
Wire Connections

Counter Type			
Isolation		Non-Isolation	
Counter Input +	INx+	Counter Input +	INx
Counter Input -	INx-	Gate Control	GATEx
Gate Control +	GATEx+	Ground	D.GND
Gate Control -	GATEx-		

Frequency Type			
Isolation		Non-Isolation	
Frequency Input +	INx+	Frequency Input +	INx
Frequency Input -	INx-	Don't be used	GATEx
Don't be used	GATEx+	Frequency Input -	D.GND
	GATEx-		

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

Pin Assignments



Terminal No.	Pin Assignment
01	DO0
02	DO1
03	IN0
04	GATE0
05	GND
06	IN1
07	GATE1
08	GND
09	IN0+
10	IN0-
11	GATE0+
12	GATE0-
13	IN1+
14	IN1-
15	GATE1+
16	GATE1-

Ordering Information

I-87082W-G CR	2-channel Counter/Frequency Input Module (Gray Cover) (RoHS)
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Accessories

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