



I-8084W-G

4/8-channel Counter/Frequency/Encoder Module

Features

- Support 8 Up Counter (Minimum Pulse Width=2 μ s).
- Support 8 Frequency (Minimum Pulse Width=2 μ s).
- Support 4 Up/Down Counter (Minimum Pulse Width=2 μ s).
- Support 4 Dir/Pulse Counter (Minimum Pulse Width=2 μ s).
- Support 4 A/B Phase Counter (Minimum Pulse Width=2 μ s).
- Support 1~32767 (μ s) digital filter.
- Support isolated and non-isolated input signals.
- Equip with Power and Input signal LED indicators.



Introduction

I-8084W-G is a 32 bits (hardware) high speed Counter/Frequency/Encoder I/O with "Up Counter", "Frequency", "Up/Down Counter", "Dir/Pulse Counter" and "A/B Phase Counter" mode.

I-8084W-G can has variety mode combination for all 8 channels. That means it can use some channels as "Up Counter" and others as "Frequency" or "A/B Phase".

System Specifications

LED Indicators/Display	
System LED Indictors	1 as Power Indicator
I/O LED Indicators	8 as Digital Input Indicators
Isolation	
Intra-module Isolation, Field-to-Logic	1000 Vrms
EMS Protection	
ESD (IEC 61000-4-2)	± 2 kV Contact for each Terminal
Power	
Power Consumption	1 W
Mechanical	
Dimensions (W $\times$ L $\times$ H)	30 mm $\times$ 102 mm $\times$ 115 mm
Environment	
Operating Temperature	-25 $\sim$ +75 $^{\circ}$ C
Storage Temperature	-40 $\sim$ +85 $^{\circ}$ C
Humidity	10 $\sim$ 90% RH, Non-condensing

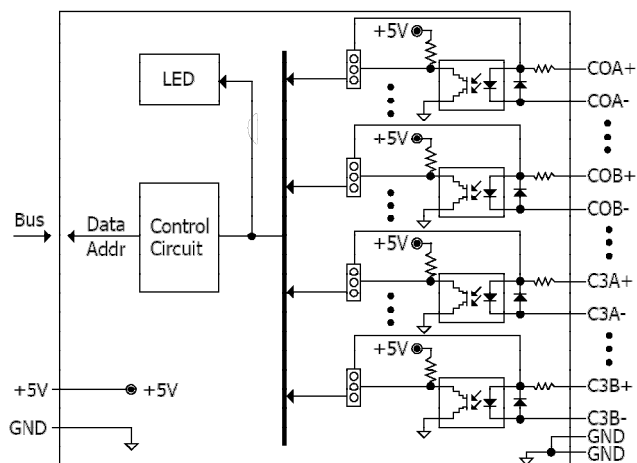
I/O Specifications

Counter/Frequency/Encoder Input		
Mode	Counter & Frequency	4-ch Up/Down Counter (CW/CCW) 4-ch Dir/Pulse Counter (Bi-direction) 4-ch A/B Phase (Quadrant Counting) 8-ch Up Counter 8-ch Frequency
	Digital Noise Filter	1 $\sim$ 32767 μ s
Isolated Input Level	On Voltage Level	+4.5 VDC $\sim$ +10 VDC
	Off Voltage Level	+1 VDC max.
	Minimum Pulse Width	2 μ s
	Input Frequency	1 Hz $\sim$ 250 kHz Frequency Accuracy= ± 0.02 % $\sim$ 0.025 % (Note 1)
TTL Input Level	On Voltage Level	+2 VDC $\sim$ +5 VDC
	Off Voltage Level	0 VDC $\sim$ +0.8 VDC
	Input Frequency	1 Hz $\sim$ 1 MHz Frequency Accuracy= ± 0.02 % $\sim$ 0.1 % (Note 1)

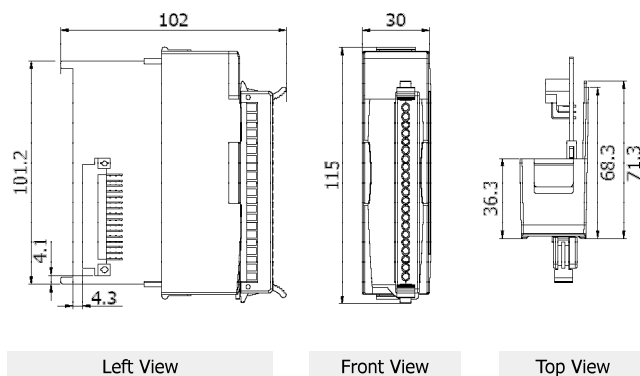
Note1:

Input Frequency (Hz)	Measurement Mode	Accuracy (%)
< 10	1 Pulse Mode	+/- 0.02
10 $\sim$ 10 K	11 Pulse average Mode	+/- 0.01
10 K $\sim$ 100 K	11 Pulse average Mode	+/- 0.015
100 K $\sim$ 250 K	11 Pulse average Mode	+/- 0.025
250 K $\sim$ 1 M (TTL only)	11 Pulse average Mode	+/- 0.10

Internal I/O Structure



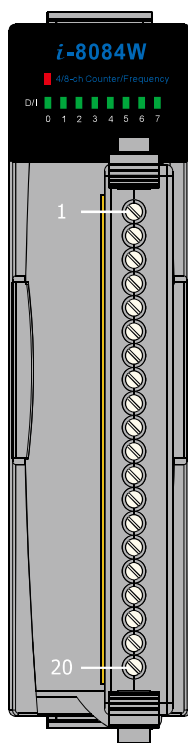
Dimensions (Units: mm)



Wire Connections

Counter Type	Isolated	Non-isolated
Dir/Pulse	Pulse+ CxA+ Pulse- CxA- Dir+ CxB+ Dir- CxB-	Pulse+ CxA+ Dir+ CxB+ Pulse- & Dir- GND
Up/Down	Up+ CxA+ Up- CxA- Down+ CxB+ Down- CxB-	Up+ CxA+ Down+ CxB+ Up- & Down- GND
Up	Up0+ CxA+ Up0- CxA- Up1+ CxB+ Up1- CxB-	Up0+ CxA+ Up1+ CxB+ Up0- & Up1- GND
A/B Phase	A0+ CxA+ A0- CxA- B0+ CxB+ B0- CxB-	A0+ CxA+ B0+ CxB+ A0- & B0- GND
Frequency Type	Isolated	Non-isolated
Frequency	Freq0+ CxA+ Freq0- CxA- Freq1+ CxB+ Freq1- CxB-	Freq0- CxA+ Freq1- CxB+ Freq0- & Freq1- GND

Pin Assignments



Terminal No.	Pin Assignment
01	COA+
02	COA-
03	COB+
04	COB-
05	C1A+
06	C1A-
07	C1B+
08	C1B-
09	C2A+
10	C2A-
11	C2B+
12	C2B-
13	C3A+
14	C3A-
15	C3B+
16	C3B-
17	GND
18	GND
19	N.C
20	N.C

Ordering Information

I-8084W-G CR	4/8-channel Counter/Frequency/Encoder Module (Gray Cover) (RoHS)
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