



I-8093W-G

High-speed 3-axis Encoder Module

Features

- 3-axis Encoder Inputs
- 1 MHz Input Rate for Quadrant Input Mode
- 4 MHz Input Rate for Pulse/Direction and cw/ccw Input Modes
- 32-bit Count Range
- 2500 Vrms Optical Isolation



Introduction

I-8093W is a high-speed 3-axis encoder module. Its each axis can be independently configured as one of Quadrant, Pulse/Direction or CW/CCW input mode. The maximum input rate for Quadrant mode is 1 MHz, and for Pulse/Direction and CW/CCW modes is 4 MHz.

The high-end specifications of I-8093W and complete software support make it ideal for wide range applications in position measurement of motion systems for industrial and laboratory environment.

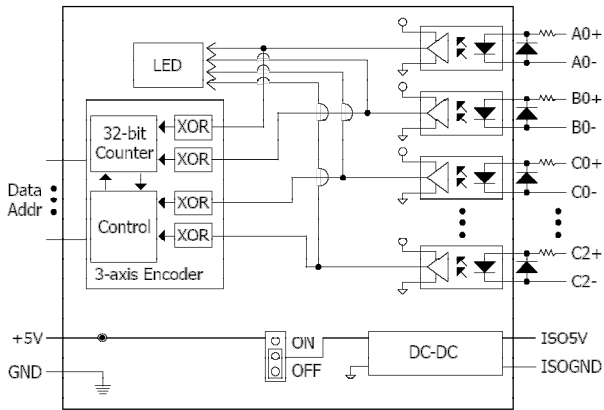
System Specifications

LED Indicators/Display	
System LED Indicators	1 as Power Indicator
I/O LED Indicators	9 as Status Indicator
Isolation	
Intra-module Isolation, Field-to-Logic	2500 Vrms
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
Power	
Power Consumption	Max. 2 W
Mechanical	
Dimensions (W × L × H)	30 mm x 102 mm x 115 mm
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Humidity	10 ~ 90% RH, Non-condensing

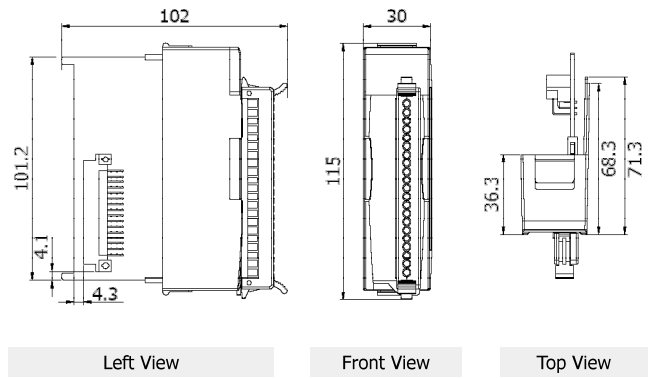
I/O Specifications

Encoder Input	
Input Axis	3-axis
Encoder Counter	32-bit
Counting Mode	1. Quadrant Counting 2. CW/CCW 3. Pulse/Dir
Maximum Counting Rate	1. Quadrant Counting : 1 MHz 2. CW/CCW : 4 MHz 3. Pulse/Dir : 4 MHz
Limit Switches	3 optical isolated inputs per axis
Interpolation Command	2-axis linear, 2-axis circular

Internal I/O Structure



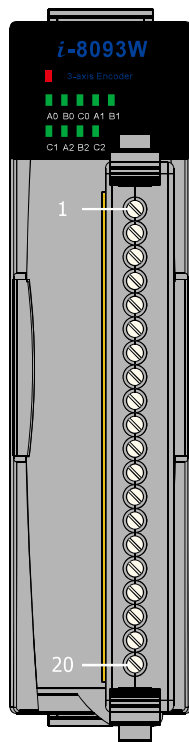
Dimensions (Units: mm)



Wire Connections

Input Type	ON State LED ON Readback as 0	OFF State LED OFF Readback as 1
Relay Contact	Relay ON 	Relay OFF
TTL/CMOS Logic	Voltage > 4V Logic Power Logic Level Low 	Voltage < 0.8V Logic Power Logic Level High
NPN Output	Open Collector ON 	Open Collector OFF
PNP Output	Open Collector ON 	Open Collector OFF

Pin Assignments



Terminal No.	Pin Assignment
01	A0+
02	A0-
03	B0+
04	B0-
05	C0+
06	C0-
07	A1+
08	A1-
09	B1+
10	B1-
11	C1+
12	C1-
13	A2+
14	A2-
15	B2+
16	B2-
17	C2+
18	C2-
19	ISO5V
20	ISOGND

Ordering Information

I-8093W-G CR	High-speed 3-axis Encoder Module (Gray Cover) (RoHS)
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