



## I-8093W

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

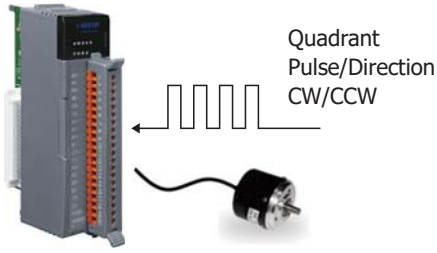
LED Indicators	
System LED Indicator	1
I/O LED Indicator	9
Isolation	
Intra-module Isolation, Field-to-Logic	2500 Vrms
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for Each Terminal
Power	
Consumption	2 W Max.
Mechanical	
Dimensions (W x L x H)	30 mm × 115 mm × 102 mm
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-30 ~ +85 °C
Humidity	5 ~ 95 % RH, Non-condensing

### I/O Specifications

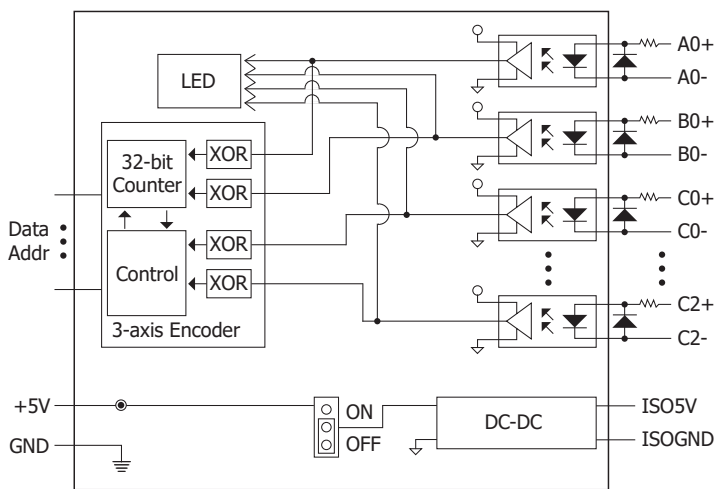
Encoder Input	
Input Axis	3-axis
Encoder Counter	32-bit
Counting Mode	Quadrant Counting CW/CCW Pulse/Dir
Encoder Counting Rate	Quadrant Counting : 1 MHz (Max.) CW/CCW : 4 MHz (Max.) Pulse/Dir : 4 MHz (Max.)

## Applications

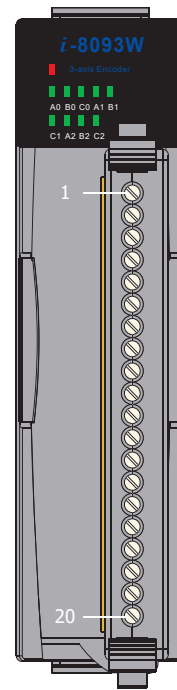
- Position Measure of Motion System



## Internal I/O Structure

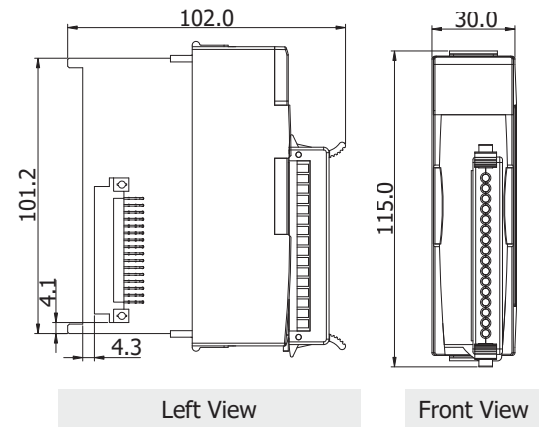


## Pin Assignments



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

## Dimensions (Unit: mm)



## Wire Connections

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	Relay ON 	Relay OFF 
	Voltage > 5V	Voltage < 0.8V
TTL/CMOS Logic	Logic Power Logic Level Low 	Logic Power Logic Level High 
	Open Collector ON	Open Collector OFF
NPN Output		
	Open Collector ON	Open Collector OFF
PNP Output		
	Open Collector ON	Open Collector OFF

## Ordering Information

I-8093-G CR

High-speed 3-axis Encoder Module (RoHS)