

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 confi gured 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 specifi cations 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

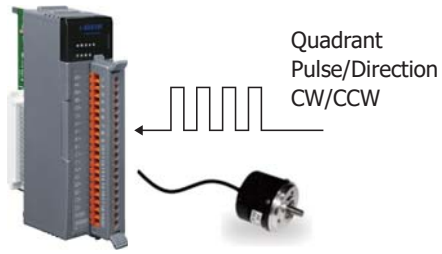
I/O Specifications

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.)

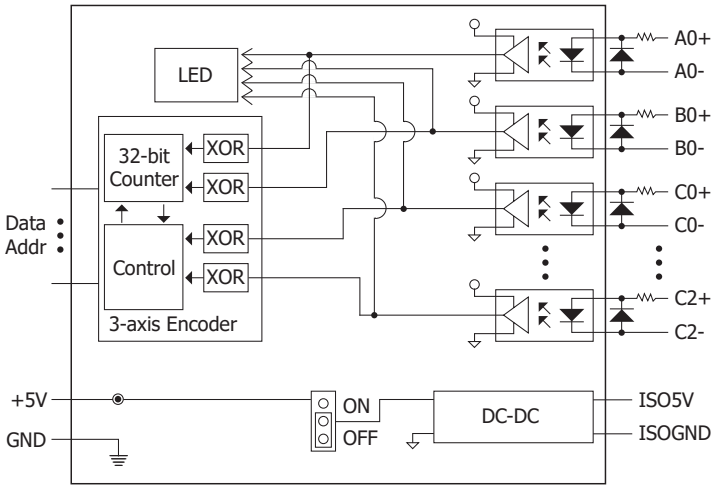
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Applications

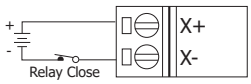
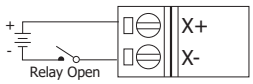
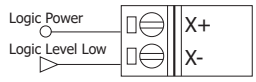
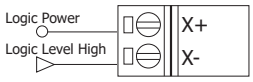
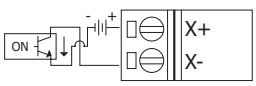
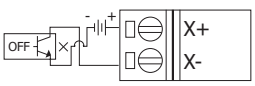
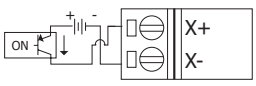
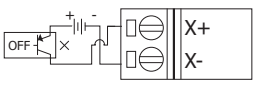
- Position Measure of Motion System



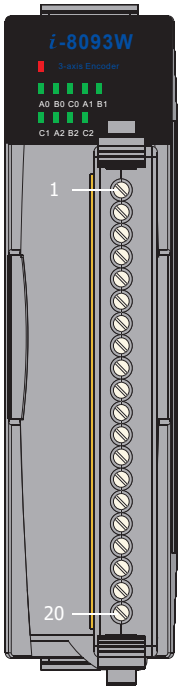
Internal I/O Structure



Wire Connections

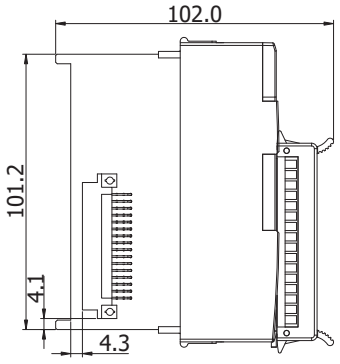
Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	Relay ON	Relay OFF
		
TTL/CMOS Logic	Voltage > 5V	Voltage < 0.8V
		
NPN Output	Open Collector ON	Open Collector OFF
		
PNP Output	Open Collector ON	Open Collector OFF
		

Pin Assignments

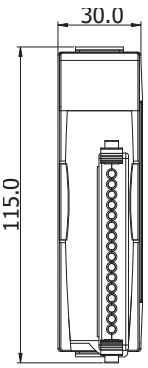


Terminal No.	Pin Assignment
01	A0+
02	A0-
03	B0+
04	B0-
05	C0+
06	C0-
07	A1+
08	A1-
09	B1+
10	B1-
11	C1+
12	C1-
13	A2+
14	A2-
15	B2+
16	B2-
17	C2+
18	C2-
19	ISO5V
20	ISOGND

Dimensions (Unit: mm)



Left View



Front View

Ordering Information

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

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