



**I-8090**

**I-8090-G**

3-axis Encoder Input Module

**Features**

- 3-axis, 16-bit Encoder Counter
- 32-bit Encoder Counter by Software
- Maximum Counting Rate : 1M pulse/sec
- Differential Input A+, A-, B+, B-, C+, C-
- Quadrant Counting Mode, CW/CCW Counting Mode, Pulse/Dir Counting Mode
- 2500 Vdc Optical Isolation



**Introduction**

I-8090 is a 3-axis encoder counter board on I-8000 platform. 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. The application of I-8090 board is position/distance measurement, velocity measurement, feedback for motor control, handwheel input and so on.

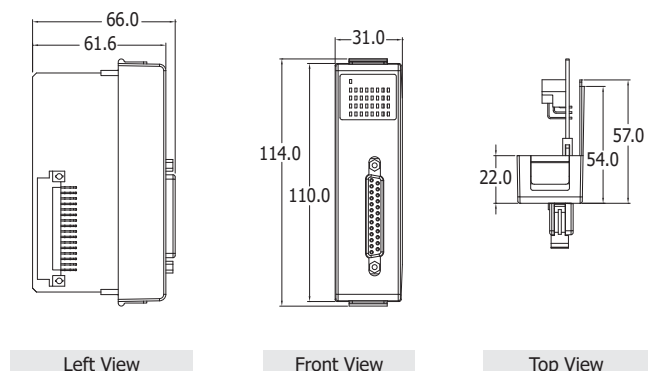
**System Specifications**

LED Indicators/Display	
System LED Indictors	1 as Powe Indicator
I/O LED Indicators	8 as Status Indicator
Isolation	
Intra-module Isolation, Field-to-Logic	2500 Vdc
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
Power	
Power Consumption	3.4 W max.
Mechanical	
Dimensions (W × L × H)	31 mm x 114 mm x 66 mm
Environment	
Operating Temperature	-25 ~ +75 °C
Storage Temperature	-40 ~ +85 °C
Humidity	10 ~ 90% RH, Non-condensing

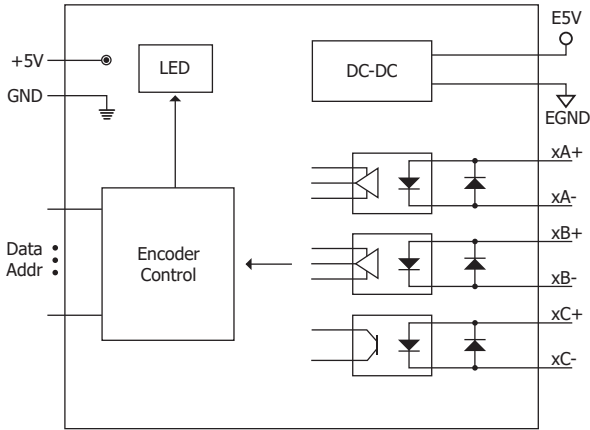
**I/O Specifications**

Encoder Input	
Resolution	16-bit (32-bit encoder counter by software)
No. of Axes	3-axis
Mode	1. Quadrant Counting 2. CW/CCW 3. Pulse/Dir
Counting Rate	1 MHz

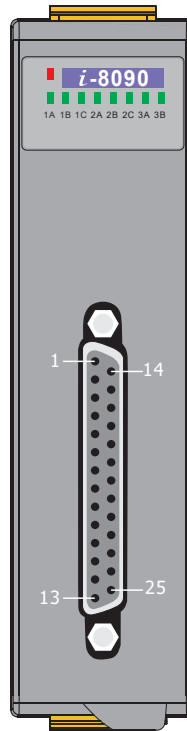
**Dimensions (Units: mm)**



## Internal I/O Structure



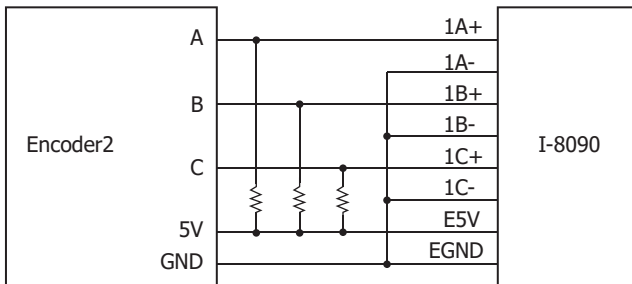
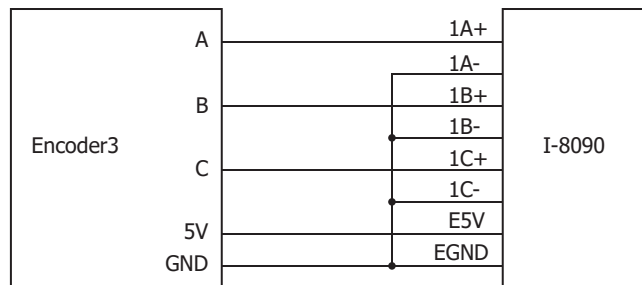
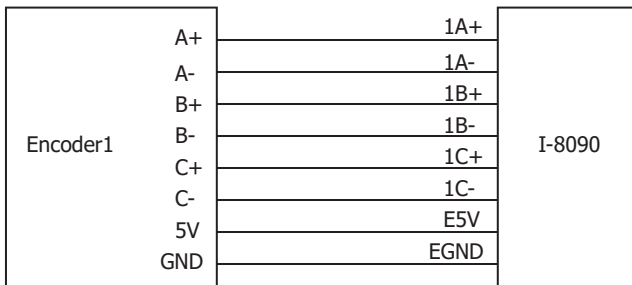
## Pin Assignments



Pin Assignment	Terminal No.	Pin Assignment
A+	01	14
B+	02	15
C+	03	16
E5V	04	17
2A+	05	18
2B+	06	19
2C+	07	20
E5V	08	21
3A+	09	22
3B+	10	23
3C+	11	24
E5V	12	25
EGND	13	EGND

25-pin Female D-Sub Connector

## Wire Connections



## Ordering Information

<b>I-8090 CR</b>	3-axis Encoder Module (Blue Cover) (RoHS) Includes CA-PC25M (DB25 connector Male with plastic cover)
<b>I-8090-G CR</b>	3-axis Encoder Module (Gray Cover) (RoHS) Includes CA-PC25M (DB25 connector Male with plastic cover)

## Accessories

<p>DN-25 CR</p>	<p>25/9 pin D-sub I/O Connector Block (Pitch = 5.08 mm) with DIN-rail Mounting (RoHS) Include: CA-0920 (DB9 (Male) to DB9 (Male) Cable [RS-232; Pin1-Pin9], 2 M) and CA-2520 (DB25 Male to Male, 45°, 2 M)</p>
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