



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.

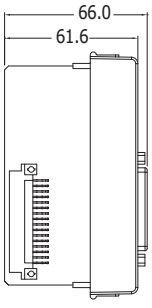
System Specifications

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

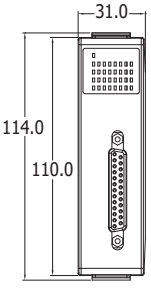
I/O Specifications

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

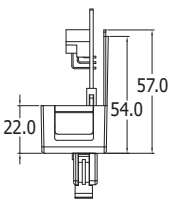
Dimensions (Units: mm)



Left View



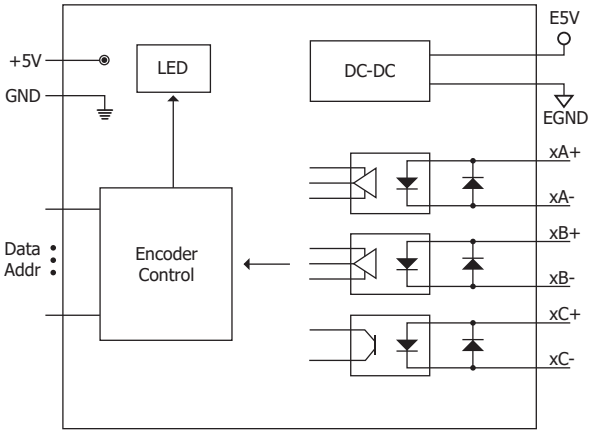
Front View



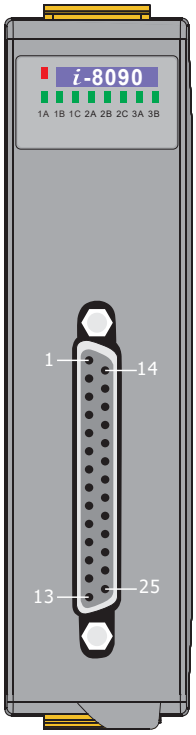
Top View

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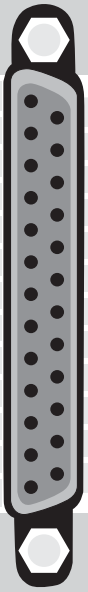
Internal I/O Structure



Pin Assignments

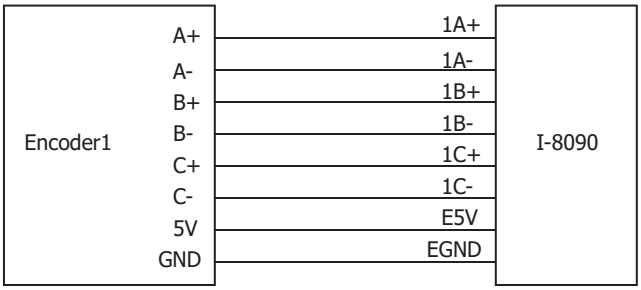


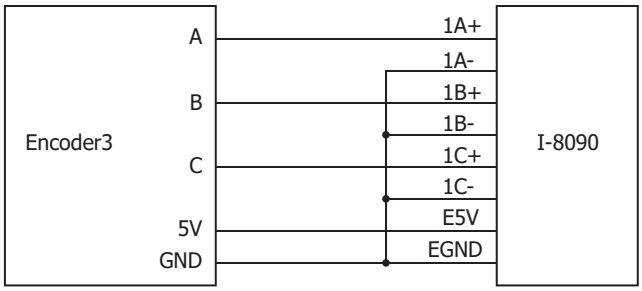
Pin Assignment	Terminal No.		Pin Assignment
A+	01		
B+	02	14	A-
C+	03	15	B-
E5V	04	16	C-
2A+	05	17	EGND
2B+	06	18	2A-
2C+	07	19	2B-
E5V	08	20	2C-
3A+	09	21	EGND
3B+	10	22	3A-
3C+	11	23	3B-
E5V	12	24	3C-
EGND	13	25	EGND

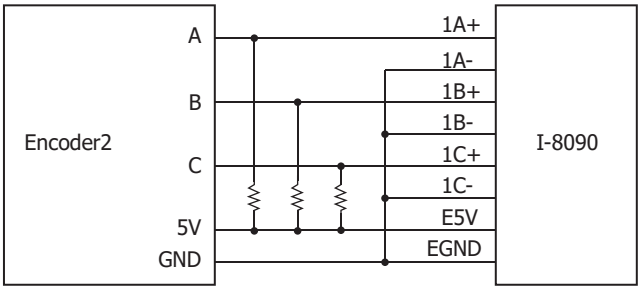


25-pin Female
D-Sub Connector

Wire Connections







Ordering Information

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

Accessories

 DN-25 CR	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, 45º, 2 M)

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