



I-9093

3-axis High-speed Encoder Module with Compare Trigger Output

Features

- 3-axis, 32-bit Encoder Counter
- Maximum Counting Rate: 6 MHz
- Encoder Input: A, B, C Differential
- Encoder Mode: Quadrant, CW/CCW, PULSE/DIR
- Compare Trigger Output
- Selectable Reset/Latch Signal Inputs
- 4 kV ESD Protection
- Wide Operating Temperature Range: -25 to +75°

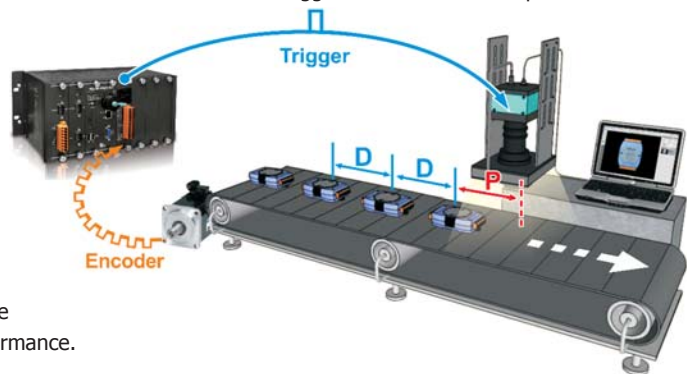


Introduction

I-9093 includes 3-axis encoder with compare trigger output function. It can generate a periodic trigger signal when the motor reaches a specified position. The specified position is called a breakpoint and is similar to a switch that is triggered after the motor passes a certain position. To use the compare trigger output function, you have to set an initial point (P) and a trigger period of the following points (D).

The trigger signal is an I/O line that can be used to fire another device. For example, when a motor reaches a certain position, the trigger signal can be used to fire the shutter of a camera to capture an image for the defect detection.

All operations of position compare and trigger pulse output are automatically done by the hardware circuit. There is no software calculation effort when the system is operating. I-9093 makes the system design simpler, and significantly increases the system performance.



Applications

- Data acquisition operation
- Image capture
- Optical inspection line-scan systems
- Position Measure

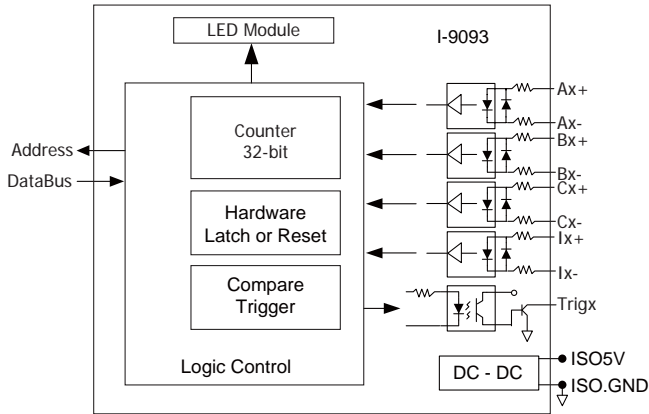
System Specifications

Model	I-9093
LED Display	
System LED Indicator	1 LED as Power Indicator /12 LED as Status Indicator
Isolation	
Intra-module Isolation, Field to logic	3000 VDC
EMS Protection	
ESD(IEC 61000-4-2)	±4 kV Contact for Each Terminal
	±8 kV Air for Random Point
Power	
Power Consumption	2 W Max.
Mechanical	
Dimensions (L x W x H)	144 mm x 30.3 mm x 134 mm
Environment	
Operating Temperature	-25 ~ +75°C
Storage Temperature	-40 ~ +85°C
Humidity	10 ~ 90% RH, Non-condensing

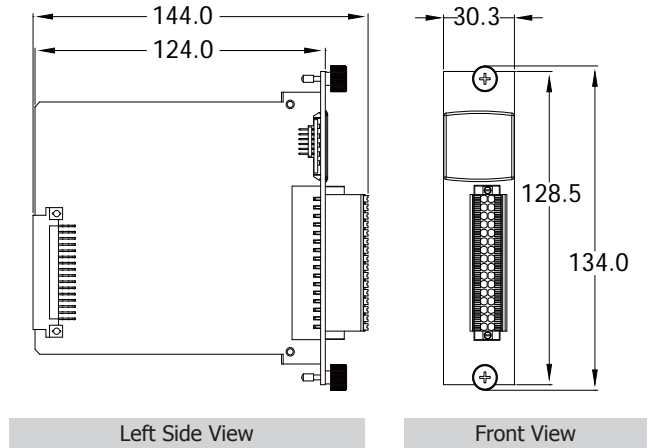
I/O Specifications

Model	I-9093	
Encoder Input		
Encoder Axis	3	
Encoder Counter	32-bit	
Encoder Mode	Quadrant , CW/CCW , Pulse/Dir	
ON Voltage Level	+3.5 VDC ~ +5 VDC Or 10 VDC ~ 24 VDC(Jumper Select)	
OFF Voltage Level	+0.8 VDC Max.	
Max. Speed	Quadrant	2 MHz Max.
	CW/CCW	6 MHz
	Pulse/Dir	6 MHz
Programmable Digital Filter	1 ~ 250 μ s	
A/B/C signal isolation	2500 VDC	
Latch/Reset Input		
Channel	3	
ON Voltage Level	+3.5 VDC ~ +5 VDC Or 10 VDC ~ 24 VDC (Jumper Select)	
OFF Voltage Level	+0.8 VDC Max.	
Trigger Output		
Channel	3	
Trigger Pulse Width	10 μ s~ 128 μ s	
Load Voltage	5 ~ 48 V	
Max Load Current	100 mA	

Internal I/O Structure



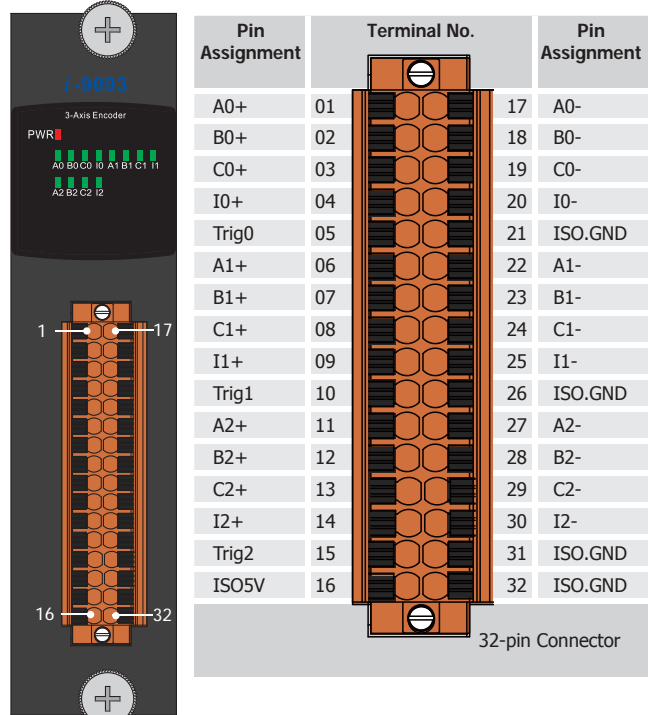
Dimensions (Units: mm)



Wire Connections

Output Type	ON State Readback as 1	OFF State Readback as 0
Drive Relay	Relay ON 	Relay OFF
Resistance Load		
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 > 4 V 	Voltage < 0.8 V
NPN Output	Open Collector ON 	Open Collector OFF
PNP Output	Open Collector ON 	Open Collector OFF

Pin Assignments



Ordering Information

I-9093-G CR	3-axis High-speed Encoder Module with Compare Trigger Output (Gray Cover) (RoHS)
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