

ECAT-2094P

4-axis Pulse Output Module

Features

- Support CiA402 protocol
- 4-axis independent control and pulse output up to 4MHz
- Pulse output options: CW/ CCW, Pulse/Direction
- 4 x Encoder interfaces (A, B, Z), differential
- Distance between stations up to 100 m (100BASE-TX)
- Support daisy chain connection

Introduction

The ECAT-2094P pulse output module is a cost-effective, four-in-one pulse output module. The ECAT-2094P simultaneously controls up to four pulse type motor drivers.

The ECAT-2094P is a standard EtherCAT SubDevice and an EtherCAT MDevice is required to operate the device. The ECAT-2094P supports two operation modes: Free-Run and Distributed Clock (DC).

Pulse type motor drivers can be directly connected to the ECAT-2094P device. The device is designed to operate a pulse-type drive with pulse output. Configuration has to be done by the EtherCAT MDevice and the application program.

The ECAT-2094P has four integrated incremental encoder interfaces. Four 32 bit high frequency encoder counter counts the input signal of external incremental encoders. The encoder can for example be used for homing purposes and for consistency checks.

For each motor three digital input channels are provided: A Left and right hardware limit switch and a home switch.The hardware limit switch which automatically stops the motor when activated, and all three digital inputs can be used for home position search.

Applications

- Automated Test Equipment
- Surveillance Systems
- Labeling Machinery
- Packaging
- Semiconductor Manufacturing
- Engraving Machine
- Automatic Feeding Machine

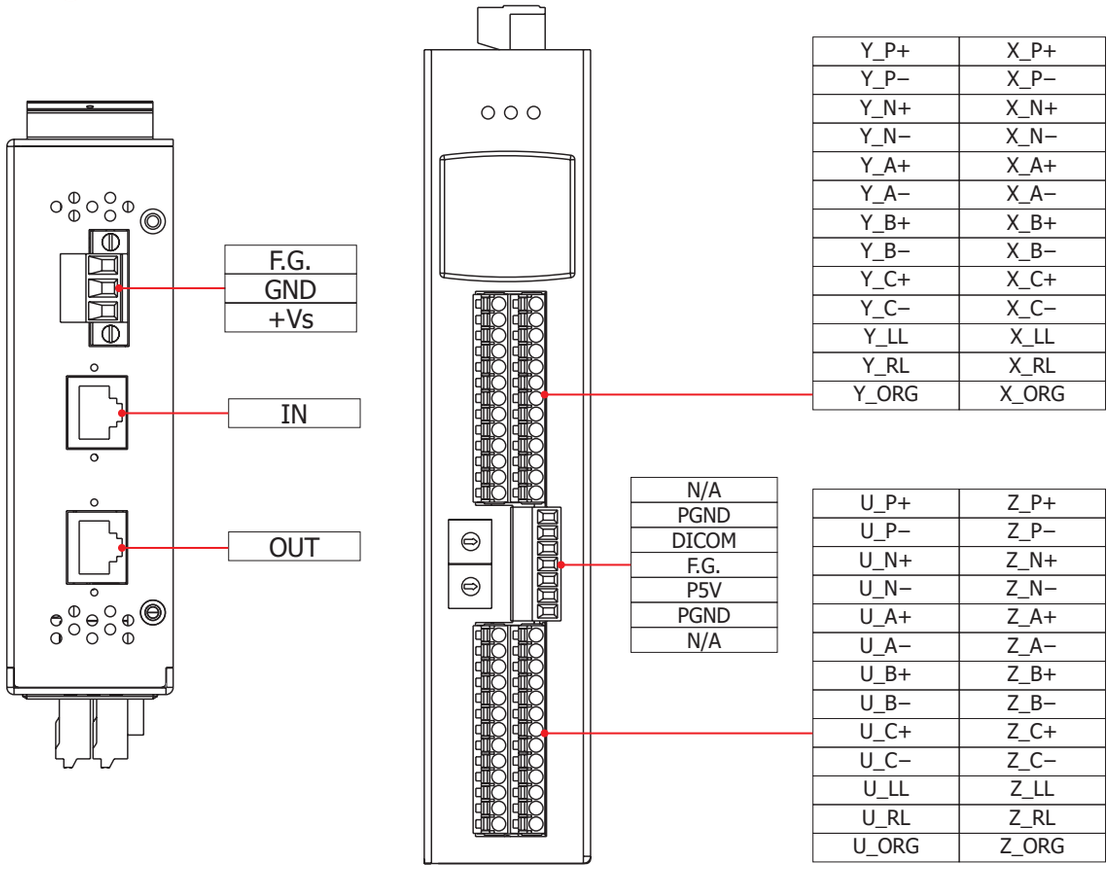
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Specifications

Model		ECAT-2094P
EMS Protection		
EFT (IEC 61000-4-4)		Signal : 1 KV Class A; Power : 1 KV Class A
ESD (IEC 61000-4-2)		4 KV Contact for each channel
Surge (IEC 61000-4-5)		1 KV Class A
LED Indicators		
Status		1 x Power 1 x Operation State 2 x Communication 12 x DI status 18 x Motion status
Encoder Input		
No. of Axes		4, differential
Mode		A/B phase, CW/CCW, Pules/Dir
Frequency		1 MHz Max.
Motor Output		
No. of Axes		4
Step Frequency		4 MHz Max.
Digital Input		
Channels		12
Type		Wet Contact
ON Voltage Level		10 ~ 24 VDC
OFF Voltage Level		4 VDC Max.
Isolation		3750 VDC
EtherCAT		
Ports		2 x RJ-45
Distance Between Stations		100 m Max. (100Base-TX)
Data Transfer Medium		Ethernet/EtherCAT Cable (Min. CAT 5), Shielded
Cycle Time		0.5 Millisecond
Distributed Clocks		Yes
Power		
Input Range		+20 VDC ~ +30 VDC
Mechanical		
Casing		Metal
Dimensions (W x L x H)	DIN-rail mounting	37 mm x 191 mm x 148 mm
	Wall mounting	37 mm x 229 mm x 142 mm
Installation		DIN-rail mounting or wall mounting
Environmental		
Operating Temperature		-25 ~ +40 °C
Storage Temperature		-30 ~ +80 °C
Ambient Relative Humidity		10 ~ 90% RH, Non-condensing

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Pin Assignments

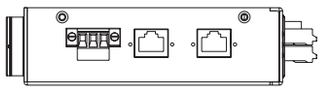


Y_P+	X_P+
Y_P−	X_P−
Y_N+	X_N+
Y_N−	X_N−
Y_A+	X_A+
Y_A−	X_A−
Y_B+	X_B+
Y_B−	X_B−
Y_C+	X_C+
Y_C−	X_C−
Y_LL	X_LL
Y_RL	X_RL
Y_ORG	X_ORG

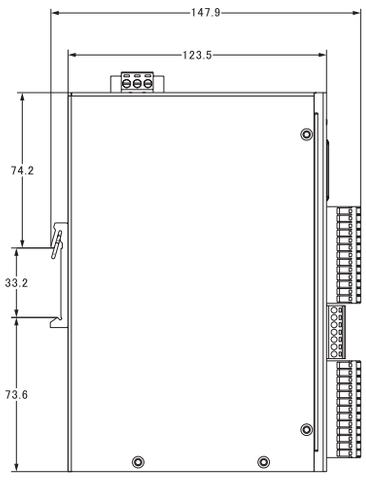
U_P+	Z_P+
U_P−	Z_P−
U_N+	Z_N+
U_N−	Z_N−
U_A+	Z_A+
U_A−	Z_A−
U_B+	Z_B+
U_B−	Z_B−
U_C+	Z_C+
U_C−	Z_C−
U_LL	Z_LL
U_RL	Z_RL
U_ORG	Z_ORG

Dimensions (Units: mm)

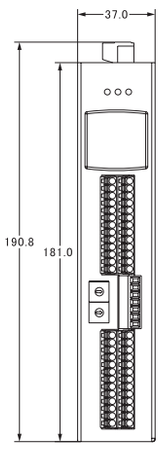
DIN-rail mounting



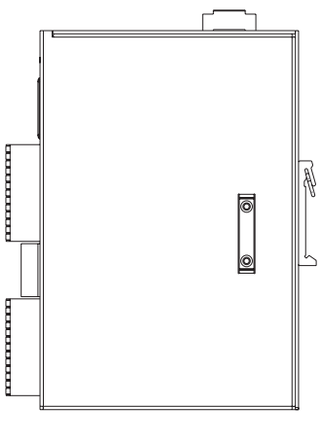
Top View



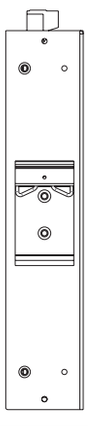
Left Side View



Front View



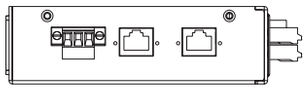
Right View



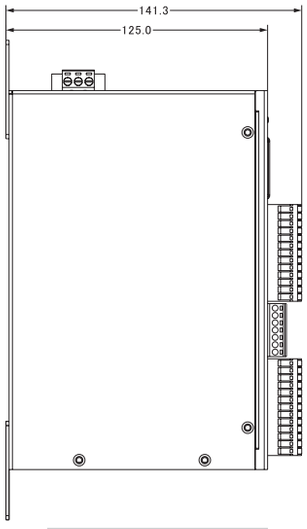
Rear View

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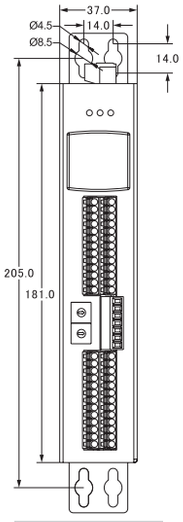
Wall mounting



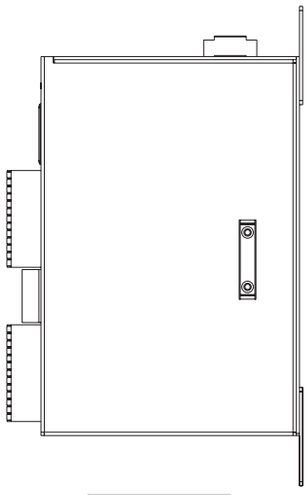
Top View



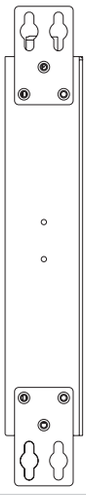
Left Side View



Front View

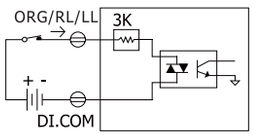
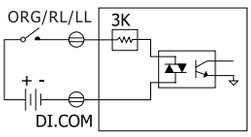
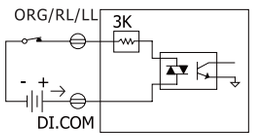
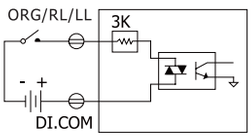


Right View



Rear View

Wire Connections

Digital Input	Readback as 1	Readback as 0
Sink	+10 ~ +24 VDC	OPEN or <4 VDC
		
Source	+10 ~ +24 VDC	OPEN or <4 VDC
		

Ordering Information

ECAT-2094P CR	EtherCAT SubDevice CiA402 Standard 4-axis pulse output module (Metal Case) (RoHS)

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