

Ezi-IO[®] CC-Link IE TSN

Network Input/Output DIO

- CC-Link IE TSN-compatible Digital I/O Module
- Input Filter Function
- Simple and Easy Wiring
- DIN Rail Mounting

Class B CE



Fast Accurate Smooth Motion

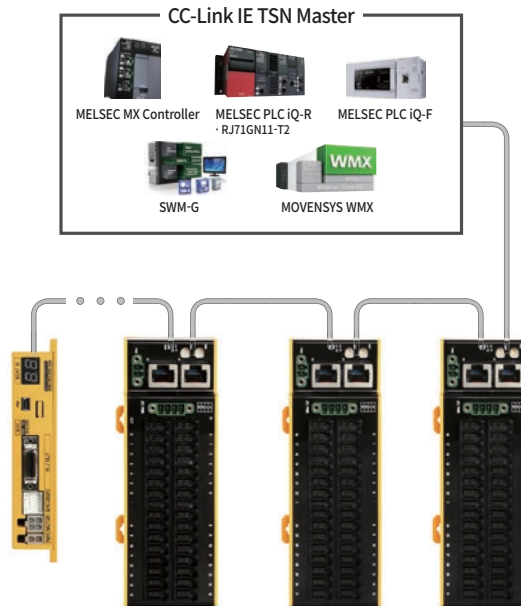
Ezi-IO[®] CC-Link IE TSN

Network Input/Output **DIO**



CC-Link IE TSN-compatible Digital I/O Module

Ezi-IO CC-Link IE TSN DIO is Digital I/O Module whipoins supports CC-Link IE TSN, a industrial network based on high speed Ethernet(1 Gbps, Full-Duplex). Ezi-IO CC-Link IE TSN DIO is a remote device station connected to the CC-Link IE TSN system. It supports various topologies to configure the system flexibly.



Simple and Easy Wiring

Ezi-IO CC-Link IE TSN DIO uses e-CON connectors. The e-CON connector is widely used in the sensor connector industry, and making the wiring mupoints simpler and easier.

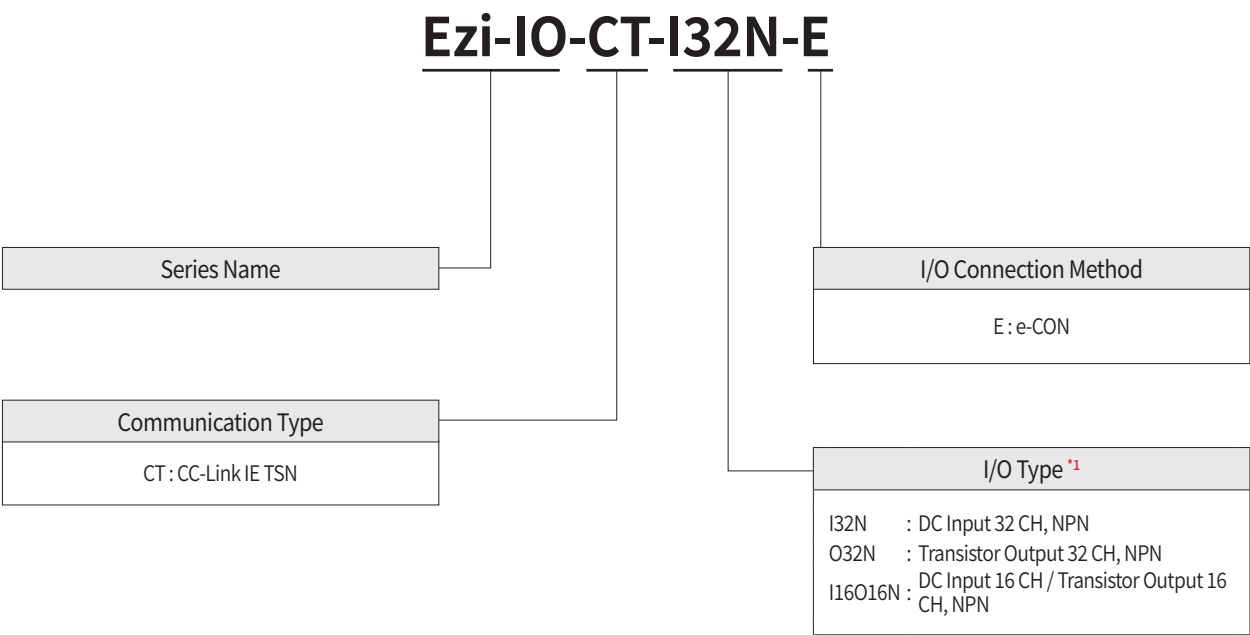
Various I/O Module Supported

Ezi-IO CC-Link IE TSN DIO provides 32 CH DC input module, 32 CH transistor output module, and 16 CH DC input/8CH transistor output module.

Input Filter Function

The input module can prevent unstable operation of the input signal due to pointsattering or noise with the input filter function.

Ezi-IO CC-Link IE TSN DIO Part Numbering



^{*1}: NPN and PNP are classified as follows according to I/O type.

DC Input	NPN	Positive Common Type
	PNP	Negative Common Type
Transistor Output	NPN	Sink Type
	PNP	Source Type

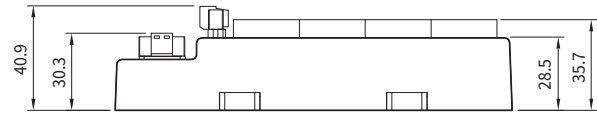
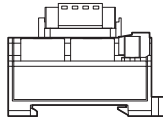
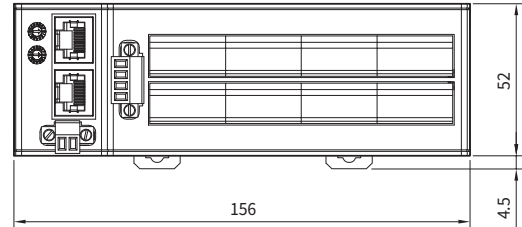
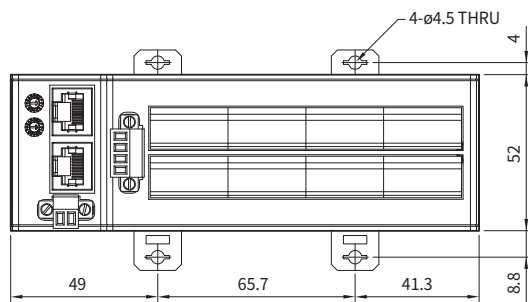
Ezi-IO CC-Link IE TSN DIO Part Number

Part Number	Remarks
Ezi-IO-CT-I32N-E	32 CH e-CON Connector type
Ezi-IO-CT-O32N-E	
Ezi-IO-CT-I16O16N-E	

Specifications of Module

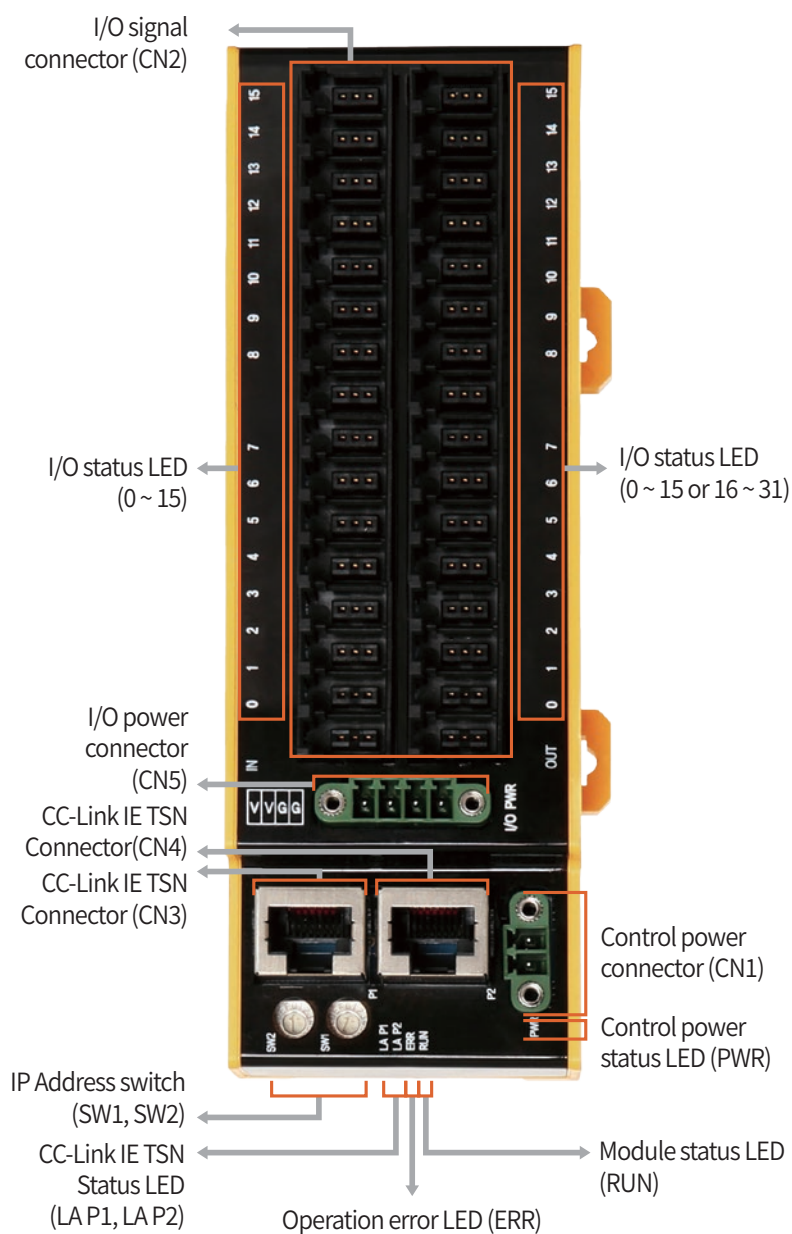
Model			Ezi-IO-CT-I32N-E	Ezi-IO-CT-O32N-E	Ezi-IO-CT-I16O16N-E
Input Voltage			24 V DC ± 10 %		
Current Consumption			· Control Power: Max. 150 mA · I/O Power : Max. 110 mA (Except Load Current)	· Control Power: Max. 180 mA · I/O Power : Max. 70mA (Except Load Current)	· Control Power: Max. 170 mA · I/O Power : Max. 90mA (Except Load Current)
Operating Condition	Ambient Temperature		· In Use: 0 ~ 50 °C · In Storage: -20 ~ 70 °C		
	Humidity		· In Use: 35 ~ 85 % RH (Non-Condensing) · In Storage: 10 ~ 90 % RH (Non-Condensing)		
	Vib. Resist.		0.5 g		
Function	Input	Number of Input Channels	32 CH	-	16 CH
		Rated Input Voltage	24 V DC		24 V DC
		Rated Input Current	5 mA/CH		5 mA/CH
		Isolation Method	Photocoupler Isolation		Photocoupler Isolation
		Common Method	16 CH/COM		16 CH/COM
		Input filter	Max. 40 ms (Filter Resolution: 200 μs)		Max. 40 ms (Filter Resolution: 200 μs)
		Off→On Response Time	10 μs or lower		10 μs or lower
		On→Off Response Time	70 μs or lower		70 μs or lower
	Output	Number of Output Points	-	32 CH	16 CH
		Rated Input Voltage		24 V DC	24 V DC
		Rated Input Current		0.5 A/CH (3 A/COM)	0.5 A/CH (3 A/COM)
		Isolation Method		Photocoupler Isolation	Photocoupler Isolation
		Common Method		16 CH/COM	16 CH/COM
		Off→On Response Time		4 μs or lower	4 μs or lower
		On→Off Response Time		190 μs or lower	190 μs or lower
LED Display			· Control Power Status (PWR) · Module Status (RUN) · Operation Error (ERR) · CC-Link IE TSN Connection (LA P1, LA P2) · I/O Status (0 ~ 31)		· Control Power Status (PWR) · Module Status (RUN) · Operation Error (ERR) · CC-Link IE TSN Connection (LA P1, LA P2) · I/O Status (0 ~ 15 / 0 ~ 15)
CC-Link IE TSN	Communication Protocol		CC-Link IE TSN Class B		
	Synpointstronization		Asynpointstronous Comm. (Minimum Cycle Time: 250 μs)		

Dimensions of Module [mm]



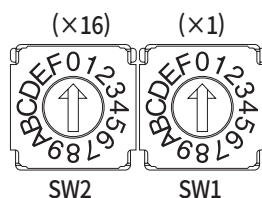
※ Install the product on a din rail with a width of 35 mm.

Names and Functions of Each Part [32 CH e-CON Connector Type]



1. IP Address Setting Switch (SW1, SW2)

These Switches set the 4th octet of IP address for CC-Link IE TSN communication.



e.g.) In case of SW2 : 5 and SW1
 $(5 \times 16) + (7 \times 1) = 87$
 IP is to be set as 192.168.3.87

2. Status LED

Control Power Status LED

Indicator	Color	Status	Description
PWR	Red	OFF	Power is not supplied
		ON	Power is supplied

Module Status LED

Indicator	Color	Status	Description
RUN	Green	OFF	INIT state or power off
		ON	OPERATIONAL state

Operation Error LED

Indicator	Color	Status	Description
ERR	Red	OFF	No error or power off
		ON	Data link error

CC-Link IE TSN Status LED

Indicator	Color	Status	Description
LA P1 / LA P2	Green	OFF	Link inactive
		ON	Link active

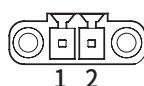
I/O Status LED

Indicator ^{*1}	Color	Status	Description
0 ~ 31 0 ~ 15 / 0 ~ 15	Green	OFF	Input Module: Input is off Output Module: Output is off
		ON	Input Module: Input is on Output Module: Output is on

^{*1}: For Ezi-IO-CT-I16016N-E module, the name is written as 0~15 / 0~15.

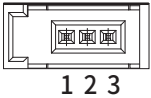
3. Control Power Connector (CN1)

No.	Function	I/O
1	24 V DC	Input
2	GND	Input



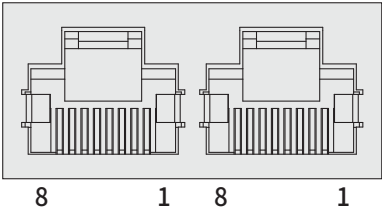
4. I/O Connector (CN2)

No.	Function	I/O
1	EXT_24 V DC	Output
2	SIGNAL	Input/ Output
3	EXT_GND	Output



5. CC-Link IE TSN Connector (CN3, CN4)

No.	Function	No.	Function
1	TD+	6	RD-
2	TD-	7	----
3	RD+	8	----
4	----	Connector Hood	F.GND
5	----		

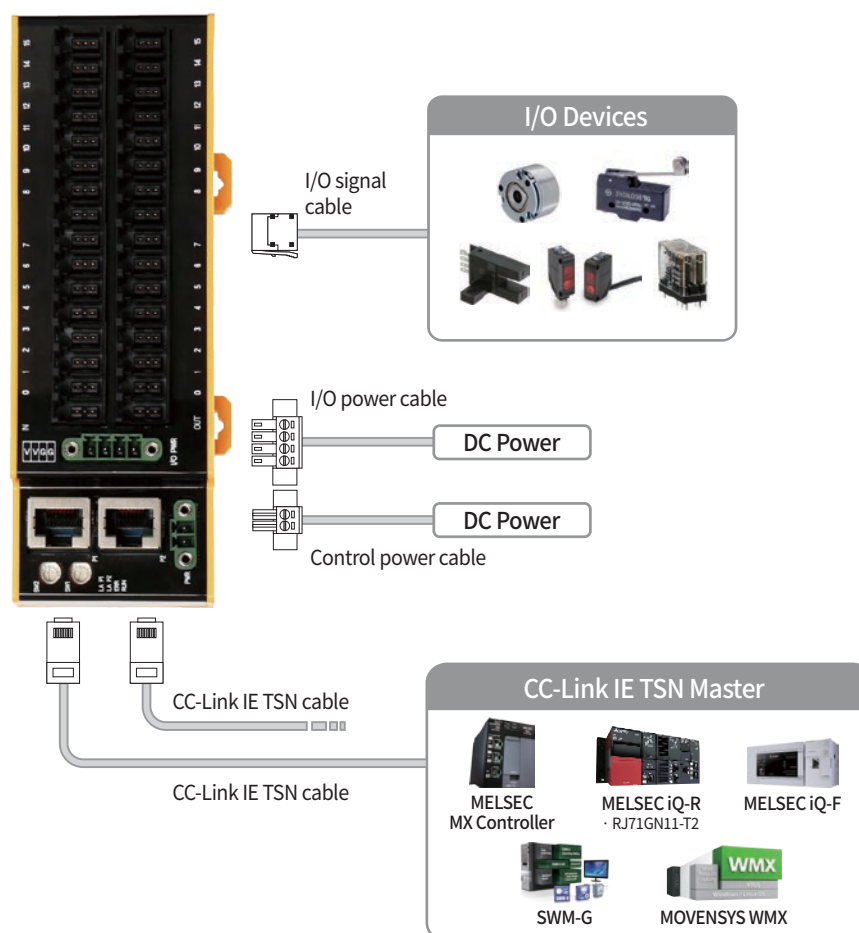


6. I/O Power Connector (CN5)

No.	Function	I/O
1	EXT_24 V DC	Input
2	EXT_24 V DC	Input
3	EXT_GND	Input
4	EXT_GND	Input



System Configuration



1. Accessories

Connectors

Purpose	Item	Part Number	Manufacturer
Control Power (CN1)	Terminal Block	MC421-38102	DECA
I/O Power (CN5)	Terminal Block	MC421-38104	DECA
I/O Connection (CN2)	e-CON Plug Connector	CNE-P03-YW	Autonics

※ The connectors above are supplied with the product. If you are using other parts, please make sure they meet the specifications.

2. Options

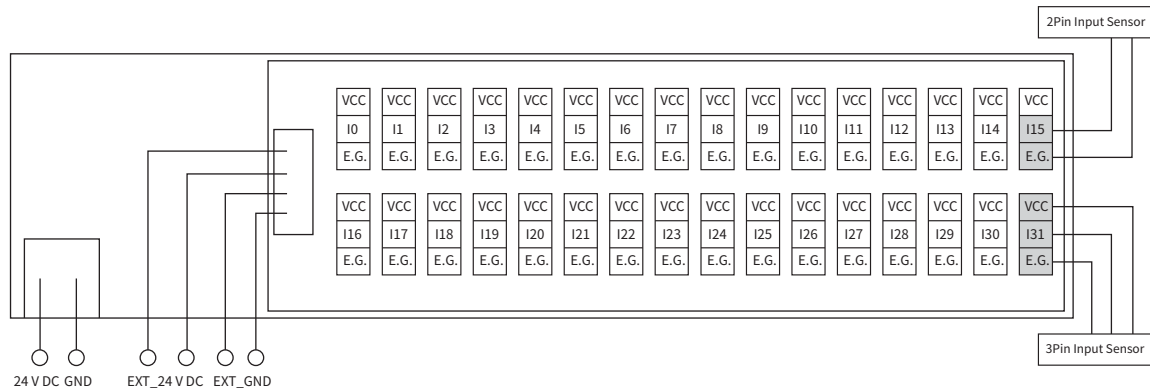
CC-Link IE TSN Cable

Purpose	Part Number	Length [m]	Remarks
CC-Link IE TSN Connection (CN3, CN4)	CGNR-EC-001F	1	- STP(Shielded Twisted Pair) Cable - Category 5e or higher - Max. Cable Length: 100 m - Flexible Cable
	CGNR-EC-002F	2	
	CGNR-EC-003F	3	
	CGNR-EC-005F	5	

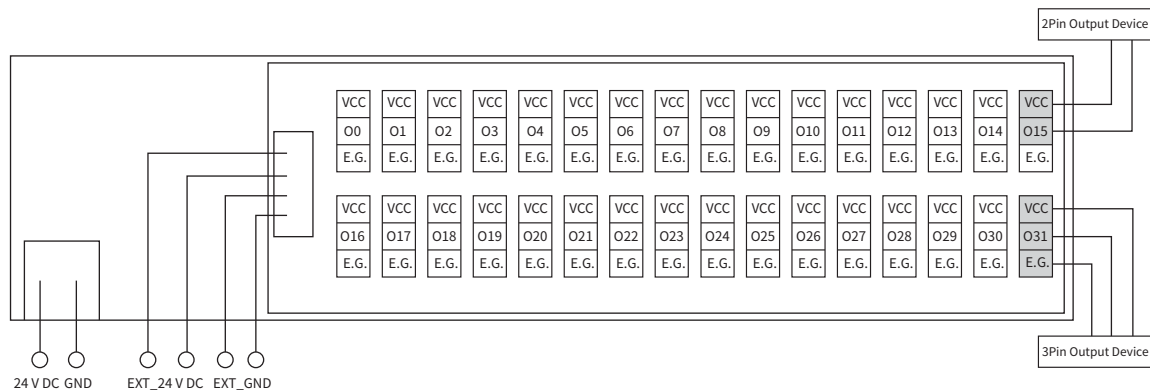
※ If you need cables with length(in units of 1 m) not listed on the table or robot cables, please contact FASTECH Points for more information.

External Wiring Diagram

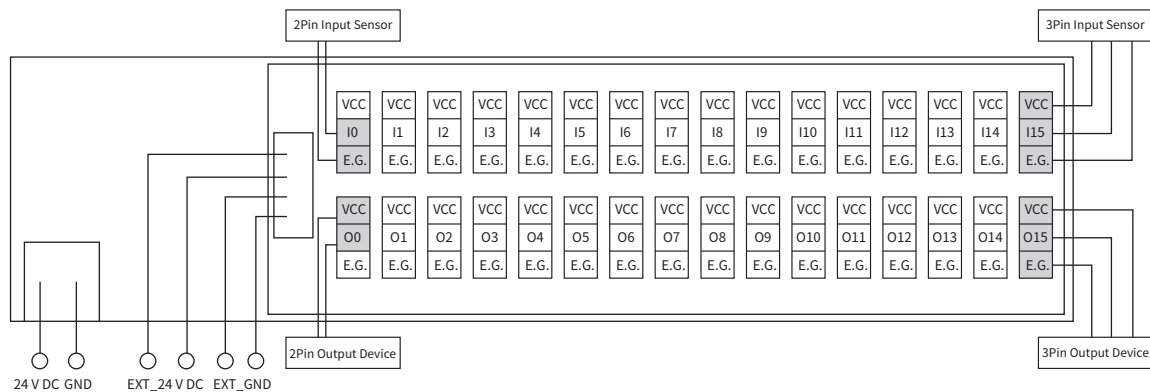
Ezi-IO-CT-I32N-E (NPN)



Ezi-IO-CT-O32N-E (NPN)



Ezi-IO-CT-I16O16N-E (NPN)



※ VC and E.G are supplied from I/O Power Connector(CN5).

※ e.g.) · 2 Pin Input Sensor : Limit Sensor, etc.

· 3 Pin Input Sensor : Position Sensor, Photo Sensor, Proximity Sensor, etc.

· 2Pin Output Device : Brake, Solenoid, Photocoupler, etc.



Fast Accurate Smooth Motion

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