

IAI

Quality and Innovation



EtherCAT®

EtherCAT Field Network Controllers

PCON-C/CG ACON-C/CG

High-speed communication to eliminate the bottlenecks of networks. PCON/ACONs are now available in EtherCAT-ready versions.

Features

1

High-speed communication

EtherCAT is a 100-Mbps field network based on Ethernet technology designed to achieve higher speed/shorter period than other field networks. EtherCAT lets you improve the productivity of your operations.

2

Wire-saving

EtherCAT controllers input and output data to/from the master via an Ethernet cable. This not only reduces the number of wires, but also prevents mis-wiring and achieves greater ease of maintenance.

3

Operate by Remote I/O mode (position table movements) or through Direct Control

When operating an actuator you can choose to communicate with the controller in a mode most suited for the application. Remote I/O mode allows the selection of movements that have been predefined (varying positions, speeds, and other conditions) in the controller's position data table, whereas with Direct Control, these values may be specified directly to controller from the host.

EtherCAT is registered trademark of Beckhoff Automation GmbH, Germany.

www.intelligentactuator.com

Types

	PCON-C/CG	ACON-C/CG
Connectable actuator	RCP2 series/RCP3 series	RCA series/RCA2 series/RCL series

Model Items

PCON Series - Type - Motor type - Encoder type - I/O type - I/O cable length - Power voltage

C	Positioner type	I	Incremental	EC	EtherCAT	0	No cable	0	DC24V
CG	Conforming to safety category compatible type	20P	20 square pulse motor compatible	28P	28 square pulse motor compatible	28SP	28 square pulse motor compatible (*)	35P	35 square pulse motor compatible
		42P	42 square pulse motor compatible	56P	56 square pulse motor compatible				

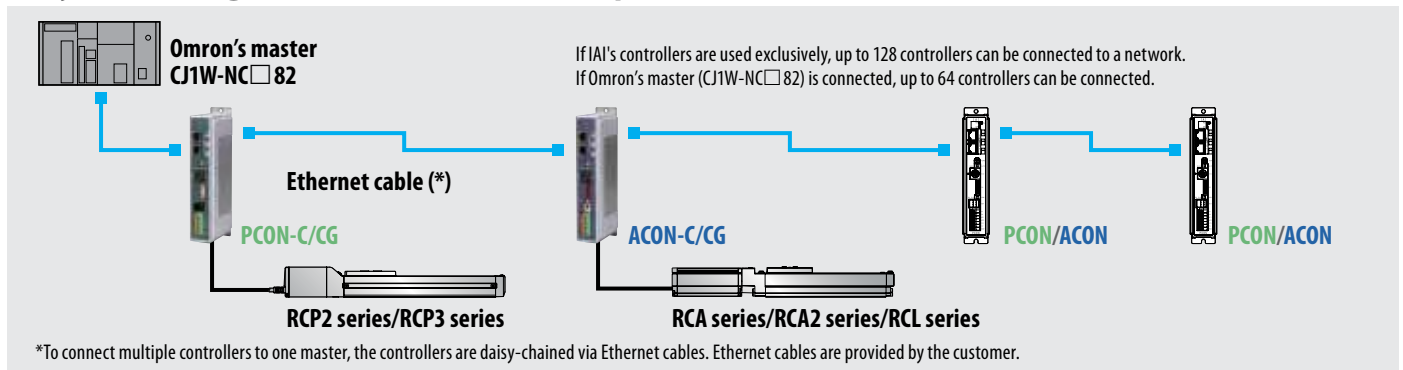
* If a RCP2-RA3C/RGD3C is to be connected, specify 28SP for the motor type.

ACON Series - Type - Motor type - Encoder type - I/O type - I/O cable length - Power voltage

C	Positioner type	I	Incremental	EC	EtherCAT	0	No cable	0	DC24V
CG	Conforming to safety category compatible type	2	2W motor	5	5W motor	10	10W motor	20S	20W motor (*)
		20	20W motor	20	20W motor	30	30W motor		

* If a RCA-RA3□/RG53□/RGD3□ or RCA2-SA4□/TA5□ is to be connected, specify 20S for the motor type.

System Configuration (Connection Example)



EtherCAT Communication Specifications

Item	Specification
Communication protocol	Dedicated EtherCAT protocol
Physical layer	100BASE-TX (IEEE802.3)
Communication period	Automatically set according to the master
Communication cable length	Not to exceed 100 m between each pair of controllers
Slave type	I/O slave
Settable node addresses	0 to 127 (17 to 80 if Omron's master (CJ1W-NC□ 82) is connected)
Communication cable	Straight cable of category 5e or above (Double-shield cable braided with aluminum tape is recommended)
Connectors	RJ45 connector x 2 (1 for input, 1 for output)
Connection	Daisy-chain only

- For detailed explanations of EtherCAT, refer to the operation manual for the programmable controller in which the master unit is installed.
- Synchronous control is not possible because the distribution clock of EtherCAT is not supported.
- Configuration connections for systems based on Omron's EtherCAT master have been verified by IAI. If a master manufactured by other company is used, the customer is advised to follow the connection instructions provided by the manufacturer. When an Omron master is used, a network will be established automatically, for all others, manual configuration is required.

The versions of teaching tools supporting EtherCAT are listed below:
 • PC software: V8.02.00.00 or later • CON-PT/PD/PG: V1.20 or later
 • CON-T/TG: V1.10 or later • RCM-E/P: V2.20 or later

*If you are using any of these teaching tools of an earlier version, please contact IAI.

External Dimensions – PCON-C/CG, ACON-C/CG

