IAI
Quality and Innovation

Field Network Controllers
ROBONET/PCON/ACON/SCON
PSEL/ASEL/SSEL/XSEL

DeviceNet

CC-Link

FIELD NETWORK

ProfiBus

Ethernet

Introducing the Network Specification PSEL/ASEL Controllers

All models of the ROBO Cylinder controllers now support field network connection*

*Excludes PCON-CF

NEW

NEW

Features

1 The controller can be connected directly to major networks

- DeviceNet
- CC-Link
- ProfiBus
- Ethernet

*Ethernet is only supported on XSEL controllers

2 To control the actuator, all you need is to turn the position number I/O ON via network, and the actuator will move to the specified position

Movement by position number specification
The actuator is operated by turning the I/O signals ON/OFF to specify desired coordinate numbers (position numbers) that have been input to the controller beforehand

3 The ROBONET, PCON and ACON controllers can operate actuators based on direct specification of target positions as numerical values

Movement by direct numerical specification
The coordinates of the target position are sent via network to move the actuator to position

Functions

Controller Type	Positioner Type				Program Type			
Controller Series	ROBONET	PCON	ACON	SCON	PSEL NEW	ASEL NEW	SSEL	XSEL
External View								
Supported ROBO Cylinders	RCP2/RCP3 RCA/RCA2	RCP2/RCP3	RCA/RCA2	RCS2	RCP2/RCP3	RCA/RCA2	RCS2	RCS2
Number of Positioning Points	768 points*	768 points*	768 points*	512 points	1500 points	1500 points	20000 points	20000 points
Operation Method — Movement by Position number specification	○	○	○	○	○	○	○	○
Operation Method — Movement by Direct numerical specification	○	○	○	×	×	×	×	×

* If the actuator is operated based on movement by direct numerical specification, an infinite number of positioning points can be supported.

Note) The ROBONET, PCON, ACON and SCON are supported by PC software and teaching pendants of RCM-101-MW (PC software) Version 6.0.5.0 or later and CON-T (teaching pendant) Version 1.04 or later, respectively. The PSEL, ASEL, SSEL and XSEL are supported by PC software and teaching pendants of IA-101-X-MW (PC Software) Version 7.2.7.0 or later and SEL-T (teaching pendant) Version 1.02 or later, respectively.

Models

Network Type	Network Symbol	Model	
DeviceNet	DV	PCON - C (CG) - □ - DV - 0 - 0	—
		ACON−C（CG）−□−DV−0−0	
		SCON−C−□−DV−0−□	
		PSEL−C−□−□−DV−0−0	—
		ASEL−C−□−□−DV−0−0	
		SSEL−C−□−□−DV−0−□	
		XSEL−□−□−□−DV−□−0−□	—
CC-Link	CC	PCON−C（CG）−□−CC−0−0	—
		ACON−C (CG)−□−CC−0−0	
		SCON−C−□−CC−0−□	
		PSEL−C−□−□−CC−0−0	—
		ASEL−C−□−□−CC−0−0	
		SSEL−C−□−□−CC−0−□	
		XSEL−□−□−□−CC−□−0−□	—
ProfiBus	PR	PCON−C (CG)−□−PR−0−0	—
		ACON−C (CG)−□−PR−0−0	
		SCON−C−□−PR−0−□	—
		PSEL−C−□−□−PR−0−0	
		ASEL−C−□−□−PR−0−0	—
		SSEL−C−□−□−PR−0−□	
		XSEL−□−□−□−PR−□−0−□	—
Ethernet	ET	XSEL−□−□−□−ET−□−0−□	—

Specifications

■ DeviceNet

Item	Specification			
Communication Protocol	DeviceNet2.0			
	Group 2 only server			
	Insulated node operated by network power			
Baud Rate	500k/250k/125kbps			
Communication Cable Length	Baud Rate	Maximum Network Length	Maximum Branch Length	Total Branch Length
	500kbps	100m	6m	39m
	250kbps	250m		78m
	125kbps	500m		156m
	Note) When a thick DeviceNet cable is used			
Communication Power Supply	DC24V (supplied from DeviceNet)			
Current Draw	Typ.30mA / Max.55mA			
Number of occupied nodes	1node			
Connector	MSTBA2.5/5-G-5.08AU by Phoenix Contact [1]			

[1] The connector on cable end is standard accessory.
Phoenix Contact: SMSTB 2.5/5-ST-5.08AU (other than XSEL - P/Q)
MSTB 2.5/5-ST-5.08AU (XSEL - P/Q)

■ CC-Link

Item	Specification				
Communication Protocol	CC-Link Ver1.10 (Other than ROBONET) / Ver 2.0 (ROBONET)				
Baud Rate	10M/5M/2.5M/625k/156kbps				
Communication Method	Broadcast polling method				
Number of occupied stations	ASEL/PSEL/SSEL: Up to 3 remote device stations SCON: 1 remote I/O station ROBONET/ACON/PCON: Up to 4 remote device stations				
Communication Cable Length [1]	Baud rate(bps)	10M	5M	2.5M	625K	156K
	Total cable length (m)	100	160	400	900	1200
Connector [2]	Phoenix Contact: MC1.5/5-G-3.81 (SCON) MSTBA2.5/5-G-5.08AU (XSEL, SSEL, ACON, PCON)				

[1] If T-branch communication is to be used, refer to the operation manuals for the master unit and the PLC installed in the master unit.
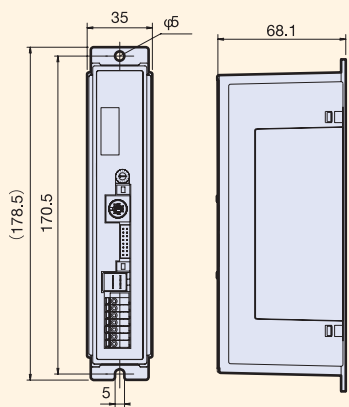[2] The connector on the cable end is standard accessory.

■ ProfiBus

Item	Specification	
Communication Information	DP Slave	
Baud Rate	9.6kbps ~ 12Mbps	
Communication Cable Length	9.6kbps	1500m
	500kbps	400m
	1.5Mbps	200m
	3Mbps	200m
	12Mbps	100m
Connector	D-sub connector, 9 pins, socket	

■ Ethernet

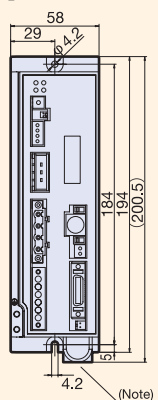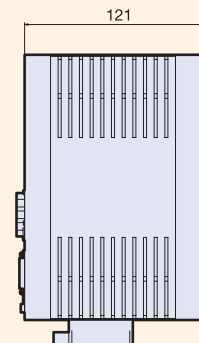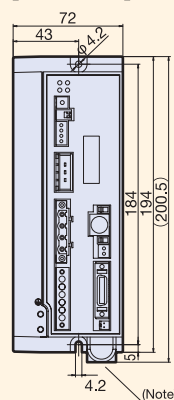| Item	Specification
Network	10BASE-T/100BASE-T (auto negotiation)
Communication Protocol	IEEE802.3
Baud Rate	10/100Mbps
Protocol	TCP/IP message communication (IAI protocol B/TCP, SEL program send/receive)
	Open Modbus/TCP (remote I/O)
Connector	RJ-45

External Dimensions

PCON/ACON

35 φ5 68.1

(178.5) 170.5 5

SCON

【Less than 400W】

58
29 φ4.2

184 194 (200.5)

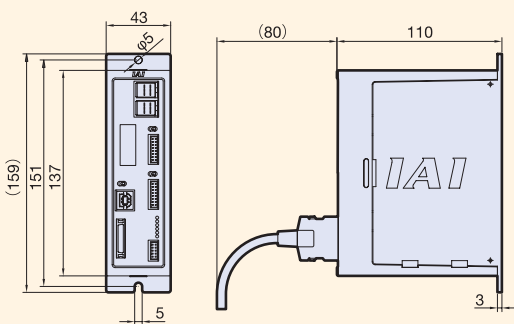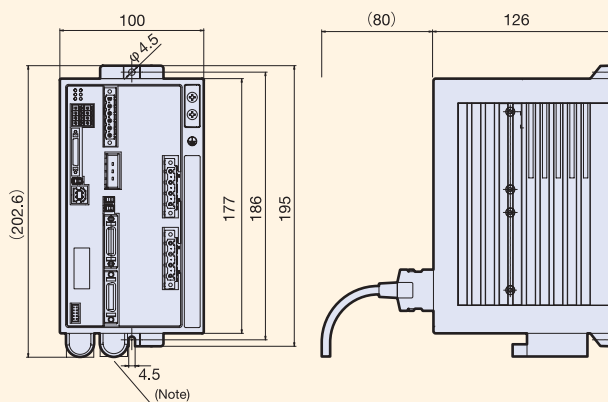4.2 5 (Note)

【Over 400W】

72
43 φ4.2

184 194 (200.5)

4.2 5 (Note)

121

(Note) This is an absolute-date backup battery. It is not provided for incremental specification controllers.

PSEL/ASEL

43 φ5

(159) 151 137 5

(80) 110

IAI

3

SSEL

100 φ4.5

(202.6) 177 186 195

4.5 (Note)

(80) 126

(Note) This is an absolute-date backup battery. It is not provided for incremental specification controllers.