![IAI Quality and Innovation logo]
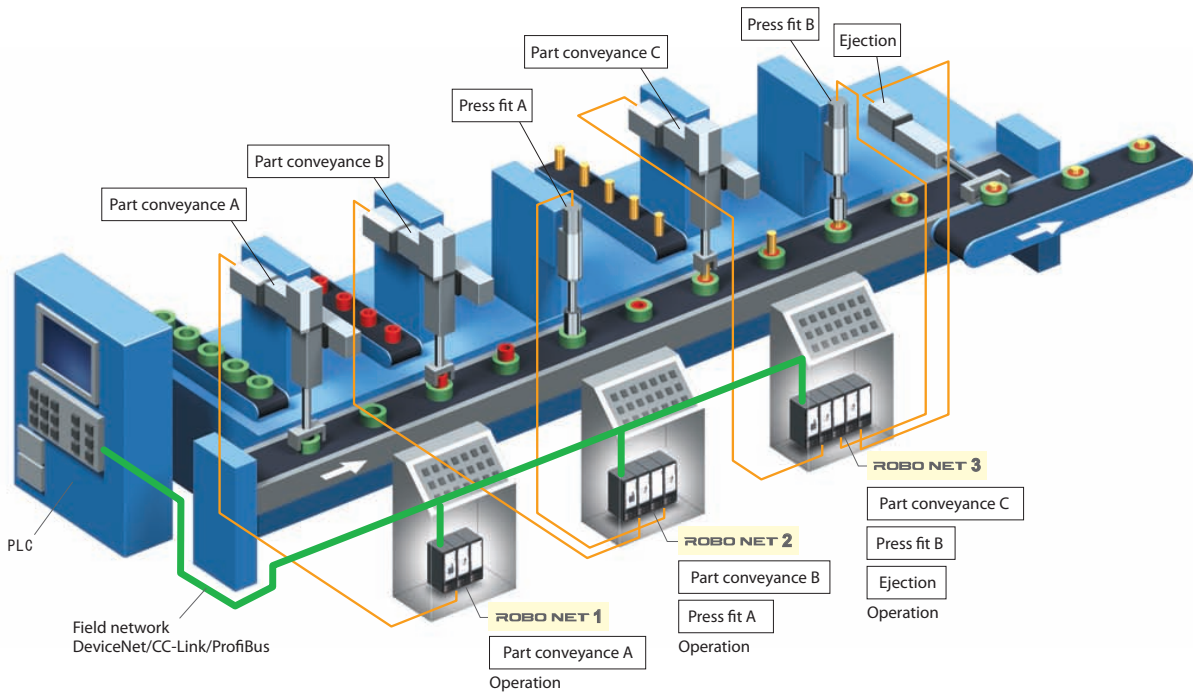
Network Controller

ROBO NET

DeviceNet

ProfiBus

CC-Link

SIO

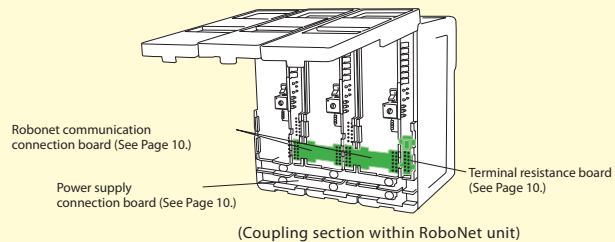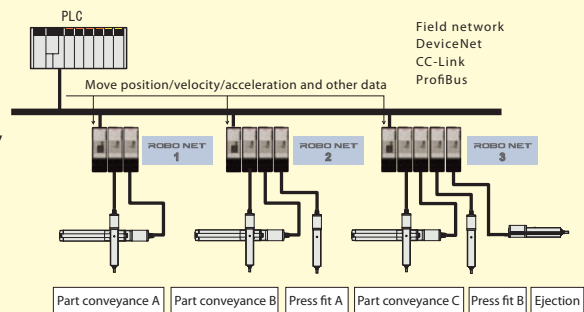# Greatly reduces time and effort of wiring and installation

RoboNet is a new type of controller unit that can freely operate robot cylinders via a field network. This makes it possible to greatly reduce the time and effort of wiring installation compared to conventional controllers by reducing wiring, making the controller smaller, and using DIN rail installation.

Part conveyance C

Press fit B

Ejection

Press fit A

Part conveyance B

Part conveyance A

PLC

Field network
DeviceNet/CC-Link/ProfiBus

ROBO NET 3
- Part conveyance C
- Press fit B
- Ejection

Operation

ROBO NET 2
- Part conveyance B
- Press fit A

Operation

ROBO NET 1
- Part conveyance A

Operation

1 Reduced wiring

By connecting each line of the I/O cable to lines wired to the PLC terminals with the field network, wiring processing is completed with one dedicated cable.

Also, since the unit can be coupled by just connecting with the unit connection board, the controller wiring work is greatly simplified.

PLC

Field network
DeviceNet
CC-Link
ProfiBus

Move position/velocity/acceleration and other data

ROBO NET 1   ROBO NET 2   ROBO NET 3

Part conveyance A | Part conveyance B | Press fit A | Part conveyance C | Press fit B | Ejection

Robonet communication connection board (See Page 10.)

Power supply connection board (See Page 10.)

Terminal resistance board (See Page 10.)

(Coupling section within RoboNet unit)

1   ROBO NET

Newly Developed Network Controller
ROBO NET Arrives!

2 — The robot can be moved by directly specifying numeric values for the move position/velocity/acceleration and other data.

Besides the conventional method of moving the robot to pre-taught positions it is also possible to operate the robot by sending information as a string of numeric data that contains position, velocity, acceleration, etc. values. This is effective for cases such as when the move position changes with each piece or when one wants to move the robot to an arbitrary position.

	ROBONET controller	Standard controller (ACON/PCON)
Position specification movement	○	○
Direct numeric value specification movement	○	Δ
Velocity/acceleration specification	○	(Not possible with PIO) (Possible with serial communications)
Current value output	○	

* RoboNet operates via the field network; the standard controller operates with PIO.

3 — Ultra-compact

Each unit is an ultra-compact size of 34mm wide by 100mm high x 73 mm deep. Also, since there is no base unit and the main unit is coupled with connectors, the controller takes up little space for installation even if there are many units.

34mm
100mm

4 — Can operate up to 16 axes

Up to 16 controller units can be connected to one communications unit (GatewayR unit).
One can also freely mix and connect RACON units (RCA controllers) and RPCON units (RCP2 controllers).

Communications Unit 2
Controller unit Up to 16 units can be connected
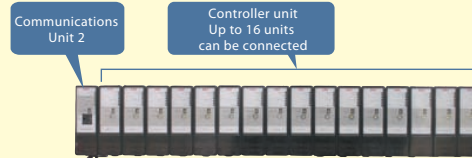
5 — Simple absolute specifications that do not require a return to home position

The simple absolute R unit makes it possible to operate incremental specification axes without returning to the home position. By mounting a simple absolute R unit on a RACON unit (RCA controller)/RPCON unit (RCP2 controller), the actuator encoder data is backed up even if the power is cut off.

Simple absolute R unit
RACON RPCON

6 — DIN rail installation

The controller is installed with DIN rails, so it can be fastened and removed with one touch.

System configuration

P L C

Field network
- DeviceNet
- CC-Link
- ProfiBus

Teaching box (option)
(Model: CON-T／RCM-E／RCM-P)
(See Page 9.)

* When an actuator is used with the simple absolute specification, a simple absolute R is mounted and the encoder cable is connected to the simple absolute R unit side.

PC software (option)
RS232 connection board
(Model: RCM-101-MW)

USB connection board
(Model: RCM-101-USB)
(See Page 9.)

Encoder cable (attached to actuator)
(Model: CB-RCP2-PA)
(See Page 10.)

Actuator RCP2 series

Motor cable (attached to actuator)
(Model: CB-RCP2-MA)
(See Page 10.)

24 VDC power supply
(Model: PS-241 (100V input))
(Model: PS-242 (200V input))
(See Page 9.)

Encoder cable (attached to actuator)
(Model: CB-ACS-PA)
(See Page 10.)

Actuator RCA series

Motor cable (attached to actuator)
(Model: CB-ACS-MA)
(See Page 10.)

Component unit/ordering method explanation

For RoboNet, you order the required units individually and use them together freely.
Even if you want to add actuators later, you can do so simply by ordering additional RACON/RPCON units.

Gateway R unit	RACON unit	RPCON unit	Simple absolute R unit

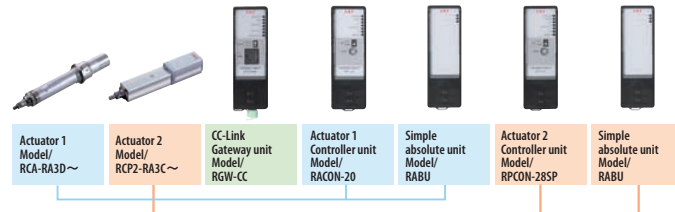| Unit name	Contents	See Page _
Gateway R unit	This unit is for connection to the field network. There are four types to select from: DeviceNet/CC-Link/ProfiBus/SIO. * This unit is a required unit for using RoboNet.	P5 P6
RACON unit	This is the controller unit for operating an RCA actuator. (Each actuator axis requires one unit.) The standard specifications are the incremental specifications, but this unit can be used with the simple absolute specifications by just combining with a simple absolute R unit.	P7
RPCON unit	This is the controller unit for operating an RCP2 actuator. (Each actuator axis requires one unit.) The standard specifications are the incremental specifications, but this unit can be used with the simple absolute specifications by just combining with a simple absolute R unit.	P7
Simple absolute R unit	This is the backup battery unit for holding the actuator encoder data when the power is switched Off.	P8

User's manual

The RoboNet user's manual comes with the RoboNet not as a printed document, but as a CD-ROM.
You can also download the user's manual from our homepage.

■ **Order method** RoboNet is used by ordering the necessary units one by one and using them together.
This means you can add or change units afterwards.

(Order example) Operating the two actuator axes below via CC-Link The models for operating with absolute specifications are as follows.

| Actuator 1 Model/ RCA-RA3D～ | Actuator 2 Model/ RCP2-RA3C～ | CC-Link Gateway unit Model/ RGW-CC | Actuator 1 Controller unit Model/ RACON-20 | Simple absolute unit Model/ RABU | Actuator 2 Controller unit Model/ RPCON-28SP | Simple absolute unit Model/ RABU |

3 ROBO NET

Operating mode explanation

RoboNet operates under instructions received from the PLC via the field network.
It can be used switching among the following three operating modes.
Use the operating mode that best suits the device operation details and control method.

	Name	Contents
1	Positioner mode	This mode operates by specifying the position number. The position data, velocity, acceleration, etc. are input for each position ahead of time. Up to 768 positions can be registered.
2	Simple direct value mode	This mode operates by directly specifying only the position data and specifying other data – velocity, acceleration, position width, electrical current limit for pressing – with the position number. Up to 768 positions can be registered.
3	Direct numeric value specification	This mode operates by directly specifying the numeric values for the position data, velocity, acceleration, position width, and electrical current limit for pressing. There is no limit on the number of position points that can be specified numerically.

List of Functions by Operating Mode

	Positioner mode	Simple direct value mode	Direct numeric value specification
Number of positions registered	768 points	768 points	——
Movement by specifying position number	○	○	×
Direct specification of position data	×	○	○
Direct specification of velocity and acceleration	× (Specified with position table)	× (Specified with position table)	○
Direct specification of positioning width	× (Specified with position table)	× (Specified with position table)	○
Pressing operation	○ (Specified with position table)	○ (Specified with position table)	○
Completion position number monitor	○	○	×
Zone output monitor	○	○	○
Position zone output monitor	○	○	×
Teaching functions	○	×	×
Jog operations	○	○	○
Incremental moves	○	○	○
Status signal monitor (*)	○	○	○
Current position monitor (*)	○	○	○
Alarm code monitor (*)	○	○	○
Velocity and electric current monitor (*)	×	×	○
Maximum value for specification of position data	9999.99mm	9999.99mm	9999.99mm
Number of axes that can be connected	16	16	8

* The status signal monitor, current position monitor, alarm code monitor, and velocity and electric current monitor can monitor by accessing each address of the GatewayR unit from the PLC.

■ Component unit explanation

GatewayR unit (DeviceNet specifications)

This is the communications unit for operating RoboNet via DeviceNet.
Model RGW-DV
Specifications

Item		Specifications	Item		Specifications			
Power supply		DC24V ±10%	DeviceNet specifications	Communications specifications Cable length (※1)	Communications speed	Maximum network length	Maximum branch line length	Total branch line length
Current consumption		600 mA max.			500kbps	100m	6m	39m
DeviceNet specifications	Communications standard	Uses DeviceNet 2.0 certified interface module			250kbps	250m		78m
		Group 2 only server			125kbps	500m		156m
		Insulated node operating with network power supply			Note: When thick DeviceNet cable is used			
	Communications specifications	Master-satellite Connection — Bit strobe		Number of nodes occupied	1 node			
		Polling	Environmental conditions	Usage ambient temperature	0～40℃			
		Cyclic		Usage ambient humidity	95% RH max. (no condensation allowed)			
	Communications speed	500k/250k/125kbps (switched with dedicated software)		Usage atmosphere	There must be no corrosive gas, combustible gas, oil mist, or dust.			
			Protection rank		IP20			
			Weight		140g			
			Accessories		Terminal resistance board (Model TN-1) Network connector/emergency stop connector			

* 1 For T branch communications, refer to the user's manuals for the master unit and for the PLC used.

Network connector

Gateway side connector
MSTBA2.5／5-G-5.08 ABGY AU
(Made by Phoenix Contact)
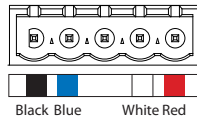
Cable side connector
MSTB2.5/5-ST-5.08 ABGY AU
(Made by Phoenix Contact)
= Standard accessory

Black Blue   White Red

Pin colors	Explanation
Black	Power cable - side
Blue	Communications data Low side
—	Shield
White	Communications data High side
Red	Power cable + side

Compatible wire for cable side connector

Item	Contents
Compatible wire diameter	Braided wire AWG24-12 (0.2～2.5 mm2)
Peeled wire length	7mm

GatewayR unit CC-Link specifications

This is the communications unit for operating RoboNet via CC-Link.
Model RGW-CC
Specifications

| Item		Specifications	Item		Specifications					
Power supply		DC24V ±10%	CC-Link specifications	Error control technique	CRC $(X^{16}＋X^{12}＋X^5＋1)$					
Current consumption		600 mA max.		Number of stations occupied	Remote device stations 1x 4 stations, 4x 2 stations, 8x 2 stations					
CC-Link specifications	Communications standard	CC-Link Ver2.0（※1）		Communications cable length (※2)	Communications speed (bps)	10M	5M	2.5M	625k	156k
	Communications speed	10M/5M/2.5M/625k/156kbps (switched with dedicated software)			Total cable length (m)	100	160	400	900	1200
	Communications technique	Broadcast polling technique		Communication cable	Special CC-Link cable					
	Synchronization technique	Frame synchronization technique	Environmental conditions	Usage ambient temperature	0～40℃					
	Encoding technique	NRZI		Usage ambient humidity	95% RH max. (no condensation allowed)					
	Transmission path format	Bus format (complies with EIA RS485)		Usage atmosphere	There must be no corrosive gas, combustible gas, oil mist, or dust.					
	Transmission format	Complies with HDLC	Protection rank		IP20					
			Weight		140g					
			Accessories		Terminal resistance board (Model TN-1) Network connector/emergency stop connector Terminal resistance cable (110Ω/130Ω)					

*1 Certification acquired
*2 For T branch communications, refer to the user's manuals for the master unit and for the PLC used.

Network connector

Gateway side connector
MSTBA2.5/5-G-5.08AU
(Made by Phoenix Contact)

Cable side connector
MSTB2.5/5-ST-5.08 ABGY AU
(Made by Phoenix Contact)
= Standard accessory

DA   DB   DG   SLD   FG
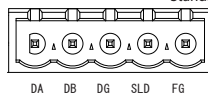
Signal name	Explanation
D A	Communications line A
D B	Communications line B
D G	Ground
S L D	Connect the shield and cable shield to the frame ground and chassis.
F G	Connect the frame ground to the shield and the chassis

Compatible wire for cable side connector

| Item	Contents
Compatible wire diameter	Braided wire AWG24-12 (0.2～2.5 mm2)
Peeled wire length	7mm

GatewayR unit (ProfiBus specifications)

This is the communications unit for operating RoboNet via ProfiBus.
Model RGW-PR
Specifications

Item		Specifications		Item	Specifications
Power supply		DC24V ±10%		Usage ambient temperature	0～40℃
Current consumption		600 mA max.		Usage ambient humidity	95% RH max. (no condensation allowed)
ProfiBus specifications	Communications standard	DP satellite	Environmental conditions	Usage atmosphere	There must be no corrosive gas, combustible gas, oil mist, or dust.
	Communications speed	9.6kbps～12Mbps		Protection rank	IP20
	Communications cable length	9.6kbps	1500m	Weight	140g
		500kbps	400m	Accessories	Terminal resistance board (Model TN-1) Emergency stop connector
		1.5Mbps	200m		
		3Mbps	200m		
		12Mbps	100m		

Network connector

Gateway side connector:
D-Sub 9-pin connector
Socket side
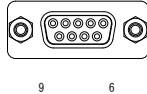
Pin No.	Signal name	Explanation	Pin No.	Signal name	Explanation
3	B－Line	Communications line B (RS485)	6	＋5V	+5V output (insulated)
4	RTS	Request to send	8	A－Line	Communications line A (RS485)
5	GND	Signal ground (insulated)	Housing	Shield	The cable shield is connected with the chassis.

* The partner side connector (D-sub 9-pin connector) does not come as an accessory. * Pins 1, 2, 7, and 9 are not connected.

GatewayR unit SIO specifications

This is the communications unit for operating RoboNet with serial communications from an XSEL controller (*1) or Modbus communications unit.
*1 A unit with XSEL Gateway functions is scheduled for release soon.
Model RGW-SIO
Specifications

Item		Specifications		Item	Specifications
SIO specifications	Power supply	DC24V ±10%	Environmental conditions	Usage ambient temperature	0～40℃
	Current consumption	600 mA max.		Usage ambient humidity	95% RH max. (no condensation allowed)
	Communications format	RS485 compliant (Modbus protocol) 1:1 communication connection		Usage atmosphere	There must be no corrosive gas, combustible gas, oil mist, or dust.
	Communications technique	Stop-start system Half duplex		Protection rank	IP20
	Communications speed	230.4 kbps max.		Weight	140g
	Cable length	100 m max.		Accessories	Terminal resistance board (Model TN-1) Network connector/emergency stop connector
	Recommended cable	2-pair twisted pair cable (with shield)			

Network connector

Gateway side connector
MC1.5/4-G-3.5
(Made by Phoenix Contact)
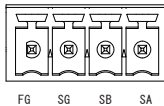
Cable side connector:
MC1.5/4-ST-3.5
(Made by Phoenix Contact)
= Standard accessory

FG   SG   SB   SA

Signal name	Explanation	
SA	Communications line A (+ side)	RS485 compliant Terminal resistance board (220 Ω) built in
SB	Communications line B (- side)	
SG	Signal ground	
FG	The frame ground is connected with the chassis.	

Compatible wire for cable side connector

Item	Contents
Compatible wire diameter	Braided wire AWG28-16 (0.14～1.5 mm^2)
Peeled wire length	7mm

ROBO NET 6

■ Component unit explanation

RACON unit RCA series controller

This is the controller unit for operating an RCA actuator with RoboNet.

Controller model	Supported actuators
RACON-20	RCA–SA4□ ／ SS4□ ／ SA5□ ／ SS5□ ／ RA4□–20 ／ RG□4□–20 ／ A4R ／ A5R RCACR–SA4C ／ SA5□ RCAW–RA4□–20
RACON-20S	RCA–RA3□ ／ RG□3□ RCAW–RA3□
RACON-30	RCA–SA6□ ／ SS6□ ／ RA4□–30 ／ RG□4□–30 ／ A6R RCACR–SA6□ RCAW–RA4□–30

Specifications

	Item	Specifications		Item	Specifications
General specifications	Power supply	DC24V ±10%	Environmental conditions	Usage ambient temperature	0～50℃
	Power supply capacity	5.1 A max. (depends on actuator)		Usage ambient humidity	95% RH max. (no condensation allowed)
	Operating actuator	RCA series		Usage atmosphere	There must be no corrosive gas, combustible gas, oil mist, or dust.
	Number of positioning points	768 points		Protection rank	IP20
	Backup memory	EEPROM		Weight	200g
	Position detection technique	Incremental encoder		Accessories	RoboNet communication connection board (JB-1 model) Power supply connection board (PP-1 model)
	Electromagnetic brake forced release	Brake release switch			
	Motor cable	Model CB-ACS-MA			
	Encoder cable	Model CB-ACS-PA			

RPCON unit RCP2 series controller

This is the controller unit for operating an RCP2 actuator with RoboNet.

Controller model	Supported actuators
RPCON-20P	RCP2–RA2C ／ GRS
RPCON-28P	RCP2–GRM ／ GR3LS ／ GR3SS ／ RTB ／ RTC
RPCON-28SP	RCP2–RA3C ／ RGD3C
RPCON-42P	RCP2–SA5□ ／ SA6□ ／ SS7□ ／ BA6□ ／ BA7□ ／ RA4C ／ RG□4C ／GR3LM ／ GR3SM RCP2CR–SA5C ／ SA6C ／ SS7C RCP2W–RA4C
RPCON-56P	RCP2–SA7□ ／ SS8□ ／ RA6C ／ RG□6C ／ RCP2CR–SA7C ／ SS8C RCP2W–RA6C

* This controller can also operate an old-type RCP2 actuator. (Please inquire for details.)

Specifications

	Item	Specifications		Item	Specifications
General specifications	Power supply	DC24V ±10%	Environmental conditions	Usage ambient temperature	0～50℃
	Power supply capacity	2 A max.		Usage ambient humidity	95% RH max. (no condensation allowed)
	Operating actuator	RCP2 series		Usage atmosphere	There must be no corrosive gas, combustible gas, oil mist, or dust.
	Number of positioning points	768 points		Protection rank	IP20
	Backup memory	EEPROM		Weight	200g
	Position detection technique	Incremental encoder		Accessories	RoboNet communication connection board (JB-1 model) Power supply connection board (PP-1 model)
	Electromagnetic brake forced release	Brake release switch			
	Motor cable	Model CB-RCP2-MA			
	Encoder cable	Model CB-RCP2-PA			

Simple absolute R unit

This is a data backup battery unit that is connected to a RACON/RCPON unit to allow incremental specifications actuators to be used as absolute specifications actuators.
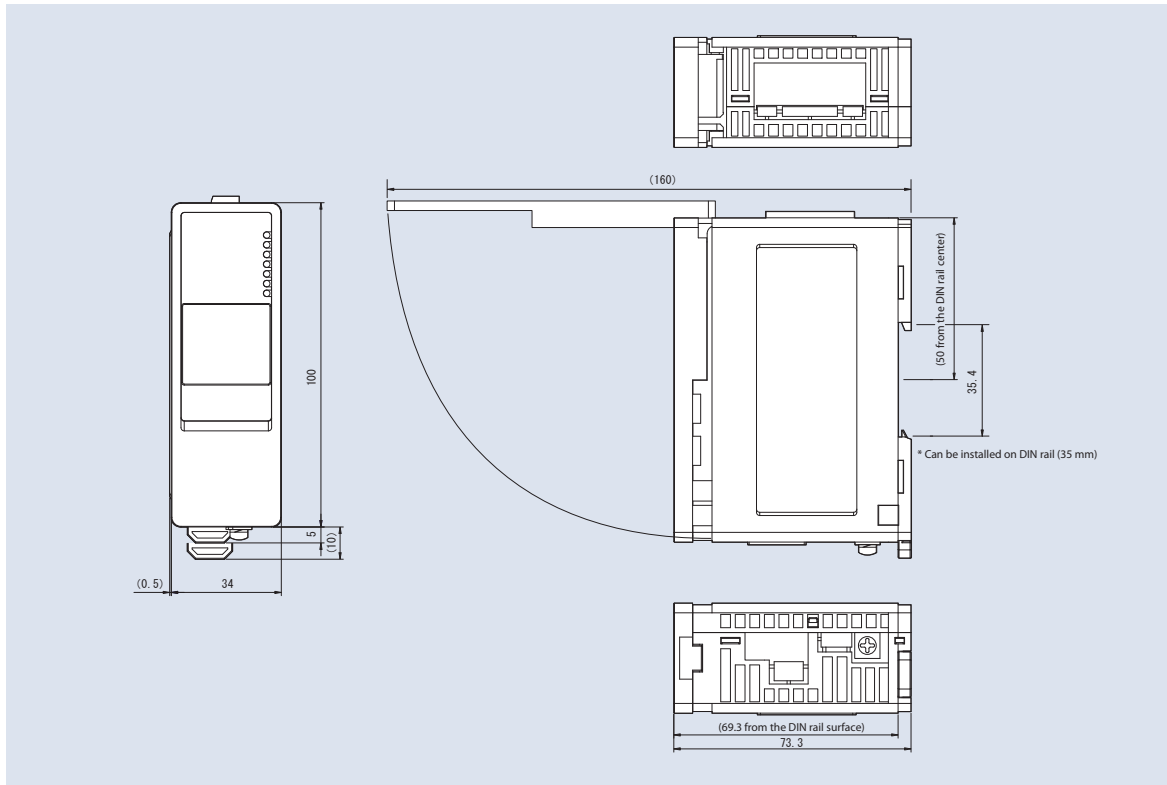*1 One simple absolute R unit is required for each RACON/RPCON unit.

Model **RABU** (Common to RACON/RPCON)

Specifications

	Item	Specifications						Item	Specifications			
General specifications	Power supply	DC24V ±10%					Environmental conditions	Usage ambient temperature	0〜40℃			
	Current consumption	300 mA max.						Usage ambient humidity	95% RH max. (no condensation allowed)			
	Battery used	Nickel metal hydride battery (Ni-MH)						Usage atmosphere	There must be no corrosive gas, combustible gas, oil mist, or dust.			
	Charge time	About 78 hours						Protection rank	IP20			
	Battery life	3 years						Weight	330g			
	Can store absolute data Maximum rotation rate (rpm)	800	400	200	100		Accessories	RoboNet communication connection board (JB-1 model) Simple absolute specifications connection board (JB-1 model) Power supply connection board (PP-1 model)				
	Absolute data storage time (h)	120	240	360	480							

External dimensions diagram

GatewayR unit/RACON unit/RPCON unit/simple absolute R unit all share the same external dimensions.

(160)

(50 from the DIN rail center)

35.4

* Can be installed on DIN rail (35 mm)

100

5

(10)

(0.5)   34

(69.3 from the DIN rail surface)

73.3

Options

Teaching box

▍ Features — This is a teaching device equipped with position input, test run, monitor, and other functions.

▍ Model
CON-T (standard type)
RCM-E (simple teaching box)
RCM-P (data setting unit)

▍ Configuration

5m

CON-T

110.0 66.6

218.3

89.6

39.0
46.9

RCM-E

(113.5) 15.1 26.2 6.3

148.5 42 23.5 20

7 72.5 (34)

RCM-P

86 23

140
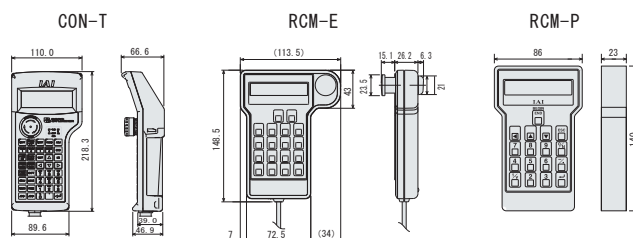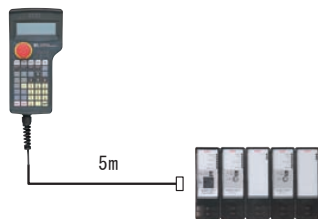
▍ Specifications

Item	CON-T	RCM-E	RCM-P
Data input	○	○	○
Actuator operation	○	○	✕
Usage ambient temperature and humidity	Temperature 0 to 40°C Relative humidity 85% max.		
Usage atmosphere	No corrosive gas allowed Dust must not be particularly bad.		
Protection rank	IP54	–	–
Weight	About 400g	About 400g	About 360g
Cable length	5m		
Display	20-character by 4-line LCD display	16-character by 2-line LCD display	16-character by 2-line LCD display

PC software (for Windows only)

▍ Features — This is startup support software equipped with program/position input, test run, monitor, and other functions.
It increases functions required for debugging operations and contributes to shortening the start-up time.

▍ Model   RCM-101-MW   (with external device communications cable + RS232 converter unit)

▍ Configuration

PC software (CD)

RS232 converter adaptor
RCB-CV-MW
0.3m

5m
External device communication cable
CB-RCA-SIO050
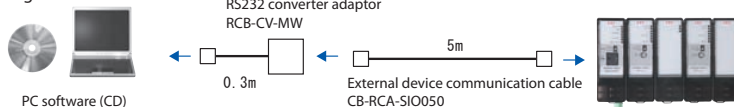
▍ Model   RCM-101-USB   (with external device communications cable + USB cable)

▍ Configuration

PC software (CD)

1m
USB cable
CB-SEL-USB010

USB converter adaptor
RCB-CV-USB

5m
External device communication cable
CB-RCA-SIO050
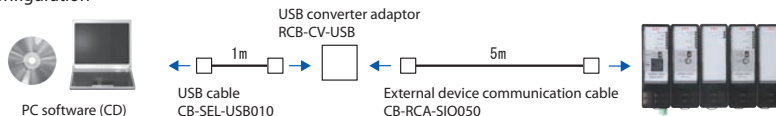
24 VDC power supply

▍ Features

This is a 24V power supply for a robocylinder that output an instantaneous maximum of 17 A.
Since power supply parallel operation is possible, if one power supply unit has insufficient capacity, up to five units can be added.

▍ Model

PS-241
(100V input specifications)

PS-242
(200V input specifications)

Relationship between actuator and power supply current

Control type	Actuator type	Power supply current [A]		PS-24 Number of units that can be connected per unit	
				When the servos come On for all axes at the same time *	When the servos does not come On for all axes at the same time *
RPCON PCON PSEL	RCP2 all models (*)	Rated (=maximum)	2	8	8
RACON ACON ASEL	SA4, SA5 (20W)	Rated	1.3	3	6
		Maximum	4.4		
	SA6 (30W)	Rated	1.3	4	6
		Maximum	4		
	RA3 (20W)	Rated	1.7	3	5
		Maximum	5.1		
	RA4 (20W)	Rated	1.3	3	6
		Maximum	4.4		
	RA4 (30W)	Rated	1.3	4	6
		Maximum	4		

* This indicates the first servo to come On after the power is switched on.
Note: Except HS8C, HS8R, or RAIOC

PS-24

9 **ROBO NET**

Maintenance parts

When it is necessary to make arrangements for a replacement cable or the like after product purchase, find the model below.
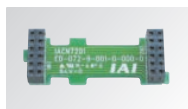
RoboNet communication connection board (simple absolute connection board) Model JB-1

Terminal resistance board Model TN-1

Power supply connection board Model PP-1

RACON motor cable — Motor cable

Model **CB-ACS-MA□□□**

* For __, enter the cable length (L), up to 20 meters. Example: 080=8 meters

Wire	Color	Signal	N0
AWG22 (press fit)	Red	U	1
	White	V	2
	Black	W	3

N o	Signal	Color	Wire
1	U	Red	AWG22 (press fit)
2	V	White	
3	W	Black	

RACON encoder cable — Encoder cable/encoder robot cable

Model **CB-ACS-PA□□□／CB-ACS-PA□□□-RB**

* The standard encoder cable is the normal cable. A robot cable is available as an option.
* For __, enter the cable length (L), up to 20 meters. Example: 080=8 meters

CN2

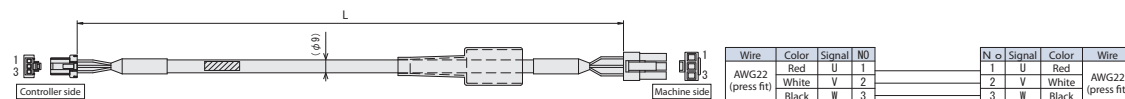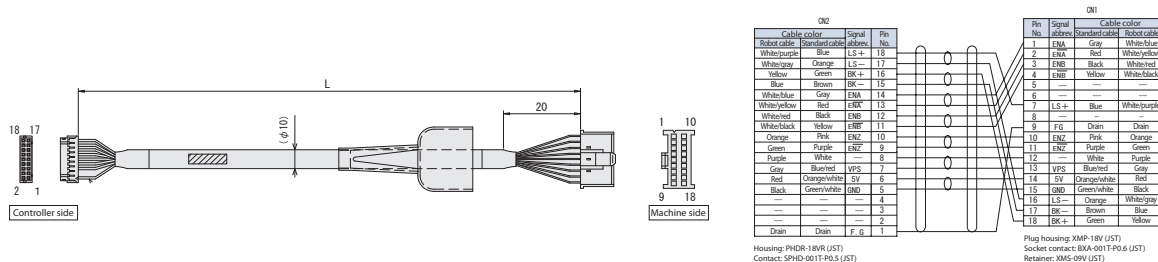| Cable color Robot cable	Standard cable	Signal abbrev.	Pin No.
White/purple	Blue	LS+	18
White/gray	Orange	LS−	17
Yellow	Green	BK+	16
Blue	Brown	BK−	15
White/blue	Gray	ENA	14
White/yellow	Red	ENA	13
White/red	Black	ENB	12
White/black	Yellow	ENB	11
Orange	Pink	ENZ	10
Green	Purple	ENZ	9
Purple	White	—	8
Gray	Blue/red	VPS	7
Red	Orange/white	5V	6
Black	Green/white	GND	5
—	—	—	4
—	—	—	3
—	—	—	2
Drain	Drain	F.G	1

Housing: PHDR-18VR (JST)
Contact: SPHD-001T-P0.5 (JST)

CN1

Pin No.	Signal abbrev.	Cable color Standard cable	Robot cable
1	ENA	Gray	White/blue
2	ENA	Red	White/yellow
3	ENB	Black	White/red
4	ENB	Yellow	White/black
5	—	—	—
6	—	—	—
7	LS+	Blue	White/purple
8	—	—	—
9	FG	Drain	Drain
10	ENZ	Pink	Orange
11	ENZ	Purple	Green
12	—	White	Purple
13	VPS	Blue/red	Gray
14	5V	Orange/white	Red
15	GND	Green/white	Black
16	LS−	Orange	White/gray
17	BK−	Brown	Blue
18	BK+	Green	Yellow

Plug housing: XMP-18V (JST)
Socket contact: BXA-001T-P0.6 (JST)
Retainer: XMS-09V (JST)

RPCON motor cable — Motor cable

Model **CB-RCP2-MA□□□**

* The standard motor cable is a robot cable. Can be selected
* For __, enter the cable length (L), up to 20 meters. Example: 080=8 meters

CN3

Orange	A	A1
Gray	VMM	A2
White	B	A3
Yellow	A	B1
Pink	VMM	B2
Yellow (Green)	B	B3

I-1318119-3（AMP）

CN1

1	A	Yellow
2	VMM	Gray
3	A	Orange
4	B	Yellow (Green)
5	VMM	Pink
6	B	White

SLP-06V (JST)

RPCON encoder cable — Encoder cable/encoder robot cable

Model **CB-RCP2-PA□□□/CB-RCP2-PA□□□-RB**

* The standard encoder cable is the normal cable. A robot cable is available as an option.
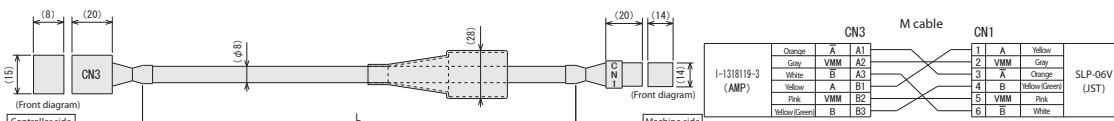* For __, enter the cable length (L), up to 20 meters. Example: 080=8 meters

CN2

Cable color Robot cable	Standard cable	Signal abbrev.	Pin No.
–	–	LS+	16
–	–	LS−	15
Purple	Red	BK+	14
White (vs.purple)	Gray	BK−	13
Blue	Brown	ENA	12
White (vs.blue)	Green	ENA	11
Yellow	Purple	ENB	10
White (vs.yellow)	Pink	ENB	9
–	–	(Reserved)	8
Green	Yellow	VPS	7
Red	Orange	5V	6
White (vs.red)	Blue	GND	5
–	–	–	4
–	–	–	3
–	–	–	2
Drain	Drain	F. G	1

Housing: PHDR-16VS (JST)
Contact: SPHD-001T-P0.5

CN1

Signal abbrev.	Pin No.	Cable color Standard cable	Robot cable
1	ENA	Brown	Blue
2	ENA	Green	White (vs.blue)
3	ENB	Purple	Yellow
4	ENB	Pink	White (vs.yellow)
5	–	–	–
6	–	–	–
7	–	–	–
8	–	–	–
9	GND	Blue	White (vs.red)
10	5V	Orange	Red
11	VPS	Yellow	Green
12	–	–	–
13	–	–	–
14	–	–	–
15	–	–	–
16	BK+	Red	Purple
17	BK−	Gray	White (vs.purple)
18	F. G	Drain	Drain

Housing: XMP-18V (JST)
Contact: BXA-001T-P0.6
Retainer: XMS-09V