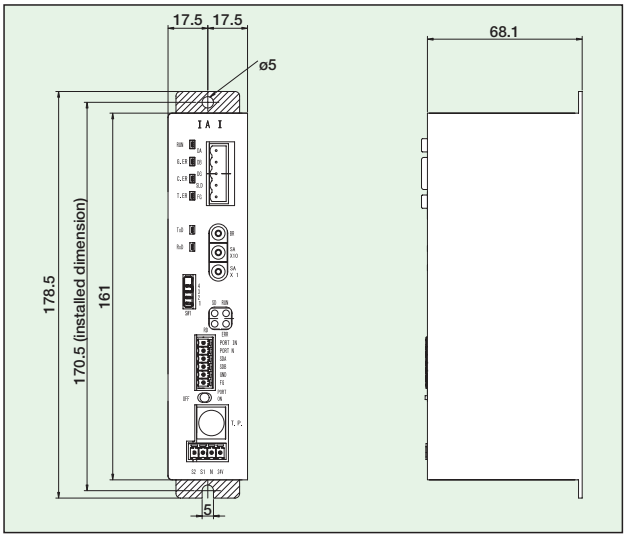
CC-Link Gateway Unit

■ Model RCM-GW-CC

Operation Modes and Key Functions

Key functions	Position-number specification mode	Position-data only specification mode	Positioning-data specification mode		Simple direct/ position-number specification mode
			Normal positioning mode	Push-motion operation mode	
Movement by position data specification	×	○	○	○	○
Direct speed & acceleration/deceleration specification	×	×	○	○	○
Push-motion operation	○	×	×	○	○
Current position read	×	○	○	○	○
Position number specification	○	×	×	×	○
Completed position number read	○	×	×	×	○
Various status signal read	○	○	○	○	○
Number of connectable axes	14	14	7	3	16
Maximum specifiable position data	Set as position data	327.67	327.67	999.99	999.99

External Dimensions



Specifications

Item		Specifications					
Power supply		DC24V ±10%					
Current consumption		300mA max.					
CC-Link specifications	Communication standard	CC-Link Ver1.10 (*1)					
	Baud rate	10M/5M/2.5M/625k/156kbps (switched using a rotary switch)					
	Communication method	Broadcast polling method					
	Synchronization method	Frame synchronization method					
	Encoding method	NRZI					
	Transmission path type	Bus type (conforming to EIA RS485)					
	Transmission format	Conforming to HDLC					
	Error control method	CRC($X^{16}+X^{12}+X^5+1$)					
	Number of occupied stations	Total cable length					
	Communication cable length (*2)	Baud rate (bps)	10M	5M	2.5M	625k	156k
		Total cable length(m)	100	160	400	900	1200
	Communication cable	CC-Link cable					

Item		Specifications
SIO communication specifications	Transmission path configuration	IAI's original multi-drop differential communication
	Communication method	Half-duplex
	Synchronization method	Asynchronous
	Transmission path type	EIA RS485, 2 wires
	Baud rate	230.4kbps
	Error control method	No parity bit, CRC (*2)
	Communication cable length	Total cable length 100m max.
	Number of connected units	Up to 3/7/14/16 axes (The exact number varies depending on the operation mode)
	Communication cable	2-pair twisted pair shield cable (Recommended: Taiyo Electric Wire & Cable HK-SB/20276xL 2PxAWG22)
Environmental conditions	Ambient operating temperature	0~40˚C
	Ambient operating humidity	85% RH or below (non-condensing)
	Operating ambience	Free from corrosive dust, flammable gases, oil mist or powder dust
	Storage temperature	–10~65˚C
	Storage humidity	90% RH or below (non-condensing)
	Vibration resistance	4.9m/s² (0.5G)
Protection class		IP20
Weight		480g or less

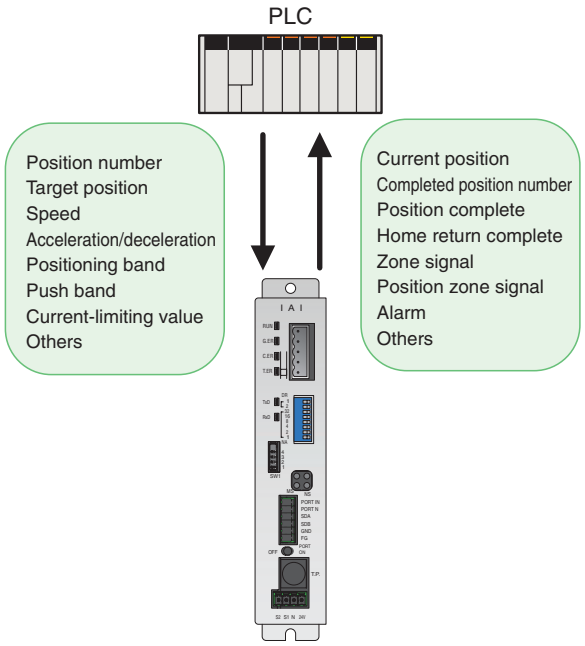
*1 Already certified.
*2 If you wish to use T-junction communication, refer to the operation manual for your master unit or PLC used.
*3 CRC: Cyclic Redundancy Check. A data error detection method widely used in synchronous transmission.

Gateway Unit

The gateway unit is a conversion unit for connecting a ROBO Cylinder controller to a field network such as DeviceNet or CC-Link. Connect a gateway unit to your field network, and link the gateway unit and each controller via serial communication (RS485). Numerical data such as coordinates, speeds, accelerations and current values can be sent and received between the network master (PLC) and controller by means of I/O-level communication.

Features

1. Move the actuator by specifying positions from a PLC via network.
2. Perform push-motion operation via network.
3. Operate the actuator by directly sending the target position, speed, acceleration/deceleration and positioning band as numerical values from a PLC.
4. Read the current actuator position and various signals using a PLC.
5. Connectable to a maximum of 16 axes.



Functions

One of the following three operation modes can be selected.

(1) Position-number specification mode

Input target positions, speeds, accelerations/decelerations, positioning bands and other settings to the controller in advance as position data, and specify a desired position number via network, just like you do with PIO signals, to move the actuator. A maximum of 64 positioning points can be set. Various status signals can be read using a PLC.

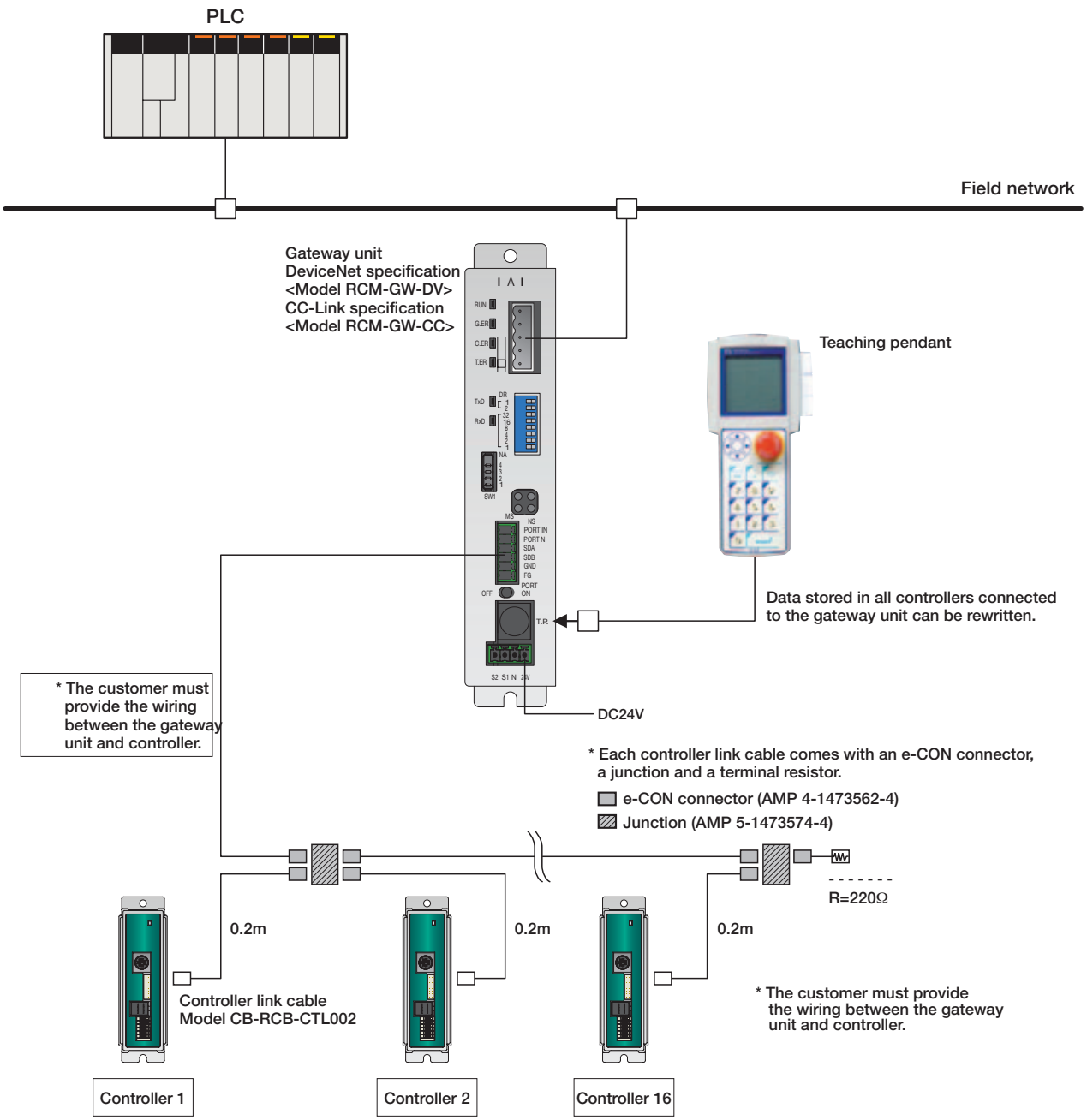
(2) Positioning-data specification mode

Specify a desired target position, speed, acceleration/deceleration, positioning band, push band, current-limiting value, etc., directly as numerical values to move the actuator or cause it to perform push-motion operation. Various status signals can be input/output and current position data read using a PLC.

(3) Simple direct/position-number specification mode

Call desired position data except for a target position (by specifying an applicable position number), and specify only a target position as a numerical value, to move the actuator. A maximum of 512 positioning points can be set.

System Configuration Diagram

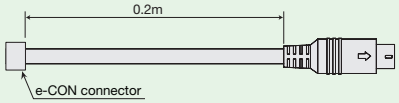


Connectable Controllers ERC2 / PCON / ACON / SCON (*1)
(*1) SCON will communicate at the I/O level when connected to the field network even if the gateway unit is not used.
It is necessary to use the gateway unit when communicating positional data.

■ Controller link cable

(Comes with e-CON connector, junction and terminal resistor)

Model CB-RCB-CTL002



Color	Signal	No.
Yellow	SGA	1
Orange	SGB	2
Blue	GND	3
		4

No.	Signal	Color
1	SGA	Yellow
2	SGB	Orange
3	+5V	
4	ENBL	
5	EMGA	
6	+24V	
7	GND	Blue
8	EMGB	