

Option details

Field network system with minimal wiring

NETWORK

Each field path setting file can be downloaded from the website.
<https://global.yamaha-motor.com/business/robot/download/fieldbus/>

RCX320 P.660 RCX221/RCX222 P.670 RCX340 P.678

CC-Link Basic specifications for network

Item	CC-Link
Applicable controllers	RCX320 / RCX221 / RCX222 / RCX340
Version supporting CC-Link	Ver. 1.10
Remote station type	Remote device node
Number of occupied stations	Fixed to 4 stations
Station number setting	1 to 61 RCX320/RCX221/RCX222 (Set from the rotary switch on the board) RCX340 (Set from the programming box or support software)
Communication speed setting	10Mbps, 5Mbps, 2.5Mbps, 625Kbps, 156Kbps (set from the Rotary switch on board)
No. of CC-Link I/O ^{Note1}	General input 96 points, General output 96 points, Dedicated input 16 points, Dedicated output 16 points
Parallel external I/O ^{Note2}	A function that simulates serial communication enables individual control of the various points from a master sequencer, regardless of the robot program.
Shortest distance between nodes ^{Note3}	0.2 m or more
Overall length ^{Note3}	100m/10Mbps, 150m/5Mbps, 200m/2.5Mbps, 600m/625Kbps, 1200m/156Kbps
Monitor LED	RUN, ERR, SD, RD

Note 1. In case of RCX320/RCX221/RCX222, the controller I/Os are updated every 10ms.
 For RCX 340, the controller I/Os are updated every 5ms for the shortest. The actual update time changes depending on the communication cycle of the master unit.
 Note 2. With RCX 141/142, the exclusive input of the parallel I/O cannot be used other than the interlock input. With RCX221 / 222, the exclusive input of the parallel I/O cannot be used. (The interlock input terminal is located on the SAFETY connector side.)
 Note 3. These values apply when a cable that supports CC-Link Ver.1.10 is used.

DeviceNet Basic specifications for network

Item	DeviceNet™
Applicable controllers	RCX320 / RCX221 / RCX222 / RCX340
Applicable DeviceNet™ specifications	Volume 1 Release2.0 / Volume 2 Release2.0
Device Profile Name	Generic Device (device number 0)
Number of occupied CH ^{Note1}	Normal: Input/output 24ch each, Compact: Input/output 2ch each
MAC ID setting	0 to 63
Transmission speed setting	500Kbps, 250Kbps, 125Kbps (set using DIP switch on board)
DeviceNet™ I/O ^{Note2}	Normal: General input 96 points, General output 96 points, Dedicated input 16 points, Dedicated output 16 points Compact: General input 16 points, General output 16 points, Dedicated input 16 points, Dedicated output 16 points
Parallel external I/O ^{Note3}	The master module and up to four ports can be controlled regardless of the robot program by using the pseudoserialization function.
Network length	Overall length ^{Note4} : 100m/500Kbps, 250m/250Kbps, 500m/125Kbps Branch length / Overall branch length: 6m max./39m max., 6m max./78m max., 6m max./156m max.
Monitor LED	MS (Module Status), NS (Network Status)

Note 1. Use the robot parameter to select Normal or Compact. However, with the controllers earlier than Ver.9.08 of RCX221 / 222, this selection is not available and the setting remains the same as Normal.
 Note 2. In case of RCX320/RCX221/RCX222, the controller I/Os are updated every 10ms.
 For RCX 340, the controller I/Os are updated every 5ms for the shortest. The actual update time changes depending on the communication cycle of the master unit.
 Note 3. With RCX221 / 222, the exclusive input of the parallel I/O cannot be used. (The interlock input terminal is located on the SAFETY connector side.)
 Note 4. These values apply when a thick cable is used. The distance is less when a fine cable is used or when thick and fine cables are mixed in use.

PROFIBUS Basic specifications for network

Item	PROFIBUS
Applicable controllers	RCX320 / RCX221 / RCX222 / RCX340
Communication profile	PROFIBUS-DP slave
Number of occupied nodes	1 node
Setting of station address	1 to 99 (set using Rotary switch on board)
Setting of communication speed	9.6Kbps, 19.2Kbps, 93.75Kbps, 187.5Kbps, 500Kbps, 1.5Mbps, 3Mbps, 6Mbps, 12Mbps (automatic recognition)
PROFIBUS I/O ^{Note1}	General input 96 points, General output 96 points, Dedicated input 16 points, Dedicated output 16 points
Parallel external I/O ^{Note2}	The master module and up to four ports can be controlled regardless of the robot program by using the pseudoserialization function.
Overall length	100m/3M-6M-12Mbps, 200m/1.5Mbps, 400m/500Kbps, 1000m/187.5Kbps, 1200m/9.6K-19.2K-93.75Kbps
Monitor LED	RUN, ERR, SD, RD, DATA-EX

Note 1. In case of RCX320/RCX221/RCX222, the shortest I/O update interval of the controller is 10ms but the actual I/O update time varies depending on the update time with the master station.
 For RCX 340, the controller I/Os are updated every 5ms for the shortest. The actual update time changes depending on the communication cycle of the master unit.
 Note 2. With RCX221 / 222, the exclusive input of the parallel I/O cannot be used. (The interlock input terminal is located on the SAFETY connector side.)

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 Cartesian robots XY-X
 SCARA robots YK-X
 Pick & place robots YP-X
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 INFORMATION
 Robot positioner
 Pulse string driver
 Robot controller
 RCXIVY2+ Electric gripper
 Option