

## Field network system with minimal wiring

## NETWORK

## SR1-X/SR1-P

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

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 **Basic specifications for network**

Item	CC-Link
Applicable controllers	SR1-X / SR1-P
Version supporting CC-Link	Ver. 1.10
Remote node type	Remote device node
Number of occupied nodes	Two nodes fixed
Node number setting	1 to 63
Communication speed setting	10Mbps, 5Mbps, 2.5Mbps, 625Kbps, 156Kbps
No. of CC-Link I/O <sup>Note1</sup>	General input 32 points, General output 32 points, Dedicated input 16 points, Dedicated Output 16 points
Parallel external I/O (ERCX, SRCP30, DRCX only)	All points usable as parallel external I/O for controller. Each point controllable from master station sequencer (PLC) by emulated serialization, regardless of robot program.
Shortest distance between nodes <sup>Note2</sup>	0.2m or more
Overall length <sup>Note2</sup>	100m/10Mbps, 160m/5Mbps, 400m/2.5Mbps, 900m/625Kbps, 1200m/156Kbps
Monitor LED	RUN, ERR, SD, RD

Note 1. Controller I/Os are updated every 10ms.

Note 2. These values apply when a cable that supports CC-Link Ver 1.10 is used.

 **Basic specifications for network**

Item	DeviceNet™
Applicable controllers	SR1-X / SR1-P
Applicable DeviceNet™ specifications	Volume 1 Release2.0/Volume 2 Release2.0
Device type	Generic Device (device number 0)
Number of occupied CH	Input 2ch <sup>Note1</sup> , Output 2ch <sup>Note1</sup>
MAC ID setting	0 to 63
Communication speed setting	500Kbps, 250Kbps, 125Kbps
DeviceNet™ I/O <sup>Note2</sup>	General input 16 points <sup>Note3</sup> , General output 16 points <sup>Note3</sup> , Dedicated input 16 points, Dedicated Output 16 points
Parallel external I/O (ERCX, SRCP30, DRCX only)	All points usable as parallel external I/O for controller. Each point controllable from master station sequencer (PLC) by emulated serialization, regardless of robot program.
Network length	Overall length <sup>Note4</sup> 100m/500Kbps, 250m/250Kbps, 500m/125Kbps
Branch length/Overall branch length	6m or less/39m or less, 6m or less/78m or less, 6m or less/156m or less
Monitor LED	Module, Network

Note 1. Inputs / Outputs are 12ch each when using SR1-P / SR1-X with extension model.

Note 2. Controller I/Os are updated every 10ms.

Note 3. General Inputs / Outputs are 32 each when using SR1-P / SR1-X with extension model.

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.

 **Basic specifications for network**

Item	PROFIBUS
Applicable controllers	SR1-X / SR1-P
Communication profile	PROFIBUS-DP slave
Number of occupied nodes	1 node
Setting of station address	0 to 126
Communication speed setting	9.6Kbps, 19.2Kbps, 93.75Kbps, 187.5Kbps, 500Kbps, 1.5Mbps, 3Mbps, 6Mbps, 12Mbps (automatic recognition)
PROFIBUS I/O <sup>Note</sup>	General input 32 points, General output 32 points, Dedicated input 16 points, Dedicated Output 16 points
Parallel external I/O (ERCX / DRCX only)	All points usable as parallel external I/O for controller. Each point controllable from master station sequencer (PLC) by emulated serialization, regardless of robot program.
Overall length	100m/12Mbps, 200m/1.5Mbps, 400m/500Kbps, 1000m/187.5Kbps, 1200m/9.6K · 19.2K · 93.75Kbps

Note. 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.

 **Basic specifications for network**

Item	Ethernet
Applicable controllers	SR1-X / SR1-P
Network specification	As specified for Ethernet (IEEE802.3)
Connector specification	RJ-45 connector (8-pole modular connector) 1 port
Baud rate / Communication mode	10Mbps (10BASE-T) / Half Duplex (Half-duplex)
Network protocol	Application layer: TELNET / Transport layer: TCP / Network layer: IP, ICMP, ARP / Data link layer: CSMA/CD / Physical layer: 10BASE-T
Number of simultaneous log inputs	1
Setting of IP address, etc.	Set from HPB / HPB-D
Monitor LED	Run, Collision, Link, Transmit, Receive

Articulated robots  
YALinear conveyor modules  
LCMSingle-axis robots  
CXMotor-less single axis actuator  
RobonityCompact single-axis robots  
TRANSEVOSingle-axis robots  
FLIP-XLinear motor single-axis robots  
PHASERCartesian robots  
XY-XSCARA robots  
YK-XPick & place robots  
YP-X

CLEAN

CONTROLLER

INFORMATION

Robot positioner

Pulse string driver

Robot controller

RCX+VYZ Electric gripper

Option