Specifications of the RS-232C port and RS-422A/485 port

RS-232C Port

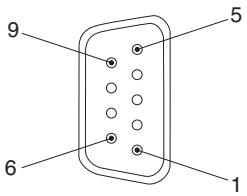
Protocol	Host Link	Protocol macro	1:N NT Links
Communications method	Full-duplex	Full-duplex or half-duplex	Half-duplex
Synchronization	Start-stop synchronization (asynchronous)		
Baud rate	1,200/2,400/4,800/9,600/19,200/38,400/57,600/115,200/230,400 bps *1		Standard NT link or high-speed NT link *2
Connections	1:1 (1:N is possible using Link Adapters)		
Transmission distance	15 m max. *3		
Interface	Complies with EIA RS-232C		

Protocol	No-protocol	Serial Gateway	Modbus-RTU
Communications method	Full-duplex	—	—
Synchronization	—	—	—
Baud rate	1,200/2,400/4,800/9,600/19,200/38,400/57,600/115,200/ 230,400 bps *1		
Connections	1:1 (1:N is possible using Link Adapters)		
Transmission distance	15 m max. *3		
Interface	Complies with EIA RS-232C		

*1. The CJ1W-SCU□2 is required for communications at 230,400 bps.
*2. High-speed NT link is only available with Serial Communications Units manufactured on or after December 20th, 1999. With earlier models, only standard NT link is available.
*3. The maximum cable length for RS-232C is 15 m. The RS-232C standard, however, does not cover baud rates above 19.2 Kbps. Refer to the manual for the device being connected to confirm support.

Connector Pin Layout

Pin No.	Abbreviation	Signal name	I/O
1 *1	FG	Shield	—
2	SD	Send data	Output
3	RD	Receive data	Input
4 *2	RTS (RS)	Request to send	Output
5 *2	CTS (CS)	Clear to send	Input
6 *3	5V	Power supply	—
7 *2	DSR (DR)	Data set ready *4	Input
8 *2	DTR (ER)	Data terminal ready	Output
9	SG	Signal ground	—
Shell *1	FG	Shield	—



*1. Pin No. 1 and the shell are connected to the ground terminal (GR) of the Power Supply Unit inside of the Serial Communications Unit. Therefore, the cable shield can be grounded by grounding the GR of the Power Supply Unit.
*2. The status of the RTS (RS), CTS (CS), DSR (DR), and DTR (ER) signals can be monitored in the words allocated in the CIO Area. For details, refer to 2-3 I/O Memory Allocations.
*3. Pin 6 (5 V) is required when the NT-AL001 Link Adapter is connected.
*4. The DSR signal is used to monitor the signal cable. It can also be used as a CD (carrier detect) signal. (The DSR signal does not affect system operation, and is available for use by the user.)

Note: Do not connect the 5-V power supply of Pin 6 to any external device other than an NT-AL001 Link Adapter. Otherwise, the external device and the Serial Communications Unit may be damaged.

The following cables are provided for connection to NT-AL001 Link Adapters. We recommend that these cables be used.
NT-AL001 connecting cables: XW2Z-070T-1 (0.7 m)
XW2Z-200T-1 (2 m)

Applicable Connectors

Plug : XM3A-0921 (manufactured by OMRON) or equivalent
Hood : XM2S-0911-E (manufactured by OMRON) or equivalent

Recommended Cables

UL2426 AWG28 × 5P IFS-RVV-SB (UL-approved, Fujikura Ltd.)
AWG28 × 5P IFVV-SB (not UL-approved, Fujikura Ltd.)

UL2426-SB (MA) 5P × 28AWG (7/0.127) (UL-approved, Hitachi Metals, Ltd.)
CO-MA-VV-SB 5P × 28AWG (7/0.127) (not UL-approved, Hitachi Metals, Ltd.)
Cable length: 15 m max.