

Communication Adapters and Communication Modules

All MicroSmart CPU modules have communication port 1 for RS232C communication. In addition, all-in-one type CPU modules have a port 2 connector. An optional communication adapter can be installed on the port 2 connector for RS232C or RS485 communication.

A communication module can be attached to any slim type CPU module to use port 2 for additional RS232C or RS485 communication. When the HMI base module is attached to a slim type CPU module, a communication adapter can be installed to the port 2 connector on the HMI base module.

When using the RS232C communication adapter or communication module for port 2, maintenance communication, user communication, and modem communication are made possible. With the RS485 communication adapter or communication module installed, maintenance communication, user communication, data link communication, and Modbus master and slave communication can be used on port 2.

Communication Adapter and Communication Module Type Numbers

Name	Termination	Type No.
RS232C Communication Adapter	Mini DIN connector	FC4A-PC1
RS485 Communication Adapter	Mini DIN connector	FC4A-PC2
	Screw Terminal Block	FC4A-PC3
RS232C Communication Module	Mini DIN connector	FC4A-HPC1
RS485 Communication Module	Mini DIN connector	FC4A-HPC2
	Screw Terminal Block	FC4A-HPC3

Communication Adapter and Communication Module Specifications

Type No.	FC4A-PC1 FC4A-HPC1	FC4A-PC2 FC4A-HPC2	FC4A-PC3 FC4A-HPC3
Standards	EIA RS232C	EIA RS485	EIA RS485
Communication Method	Asynchronous	Asynchronous	Asynchronous
Port No.	2	2	2
Maximum Connectable Quantity	1	1	1
Maximum Baud Rate	115,200 bps (Note 1)	115,200 bps (Note 1)	115,200 bps (Note 1)
Maintenance Communication (Computer Link)	Possible	Possible	Possible
User Communication	Possible	Possible	Possible
Modem Communication	Possible	—	—
Data Link Communication	—	Possible (31 slaves max.) (Note 2)	Possible (31 slaves max.) (Note 2)
Modbus ASCII/RTU Communication	Possible	Possible	Possible
Modbus TCP Communication (Note 3)	Possible	Possible	Possible
Maximum Cable Length	Special cable (Note 4)	Special cable (Note 4)	200m (Note 5)
Isolation between Internal Circuit and Communication Port	Not isolated	Not isolated	Not isolated

Note 1: Maximum baud rate is 57,600 bps when using CPU modules apart from for FC5A-D12K1E/S1E.

Note 2: Maximum baud rate when using data link communication is 57,600 bps.

Note 3: Though Modbus TCP communication cannot be used on port 2 of FC5A-D12K1E and FC5A-D12S1E, it can be used on the built-in Ethernet port.

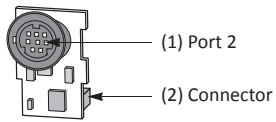
Note 4: For special cables, see page A-12.

Note 5: Recommended cable for RS485: Twisted-pair shielded cable with a minimum core wire of 0.3 mm².
Conductor resistance 85 Ω/km maximum, shield resistance 20 Ω/km maximum.

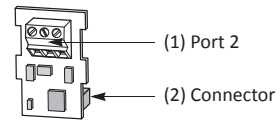
The proper tightening torque of the terminal screws on the RS485 communication adapter and RS485 communication module is 0.22 to 0.25 N·m. For tightening the screws, use screwdriver SZS 0,4 x 2,5 (Phoenix Contact).

Parts Description

RS232C Communication Adapter (Mini DIN)
RS485 Communication Adapter (Mini DIN)

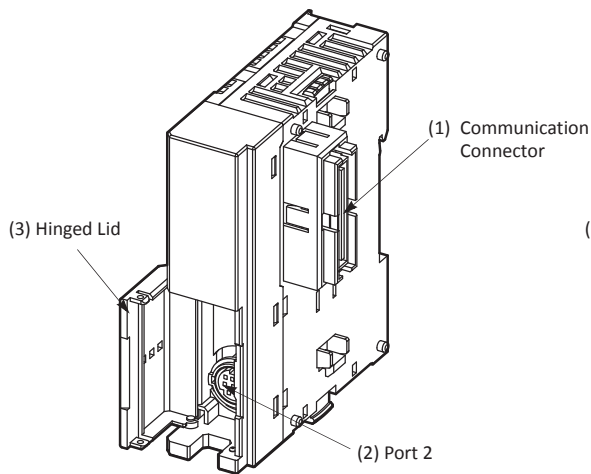


RS485 Communication Adapter (Screw Terminal)

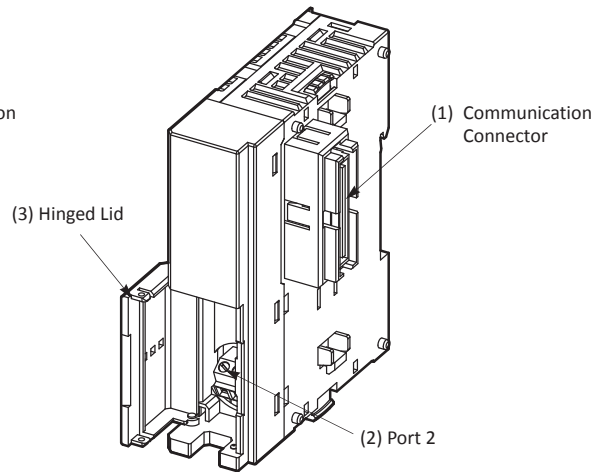


(1) Port 2 RS232C or RS485 communication port 2.
(2) Connector Connects to the port 2 connector on the all-in-one type CPU module or HMI base module.

RS232C Communication Module (Mini DIN)
RS485 Communication Module (Mini DIN)



RS485 Communication Module (Screw Terminal)



(1) Communication Connector Connects to the slim type CPU module.
(2) Port 2 RS232C or RS485 communication port 2.
(3) Hinged Lid Open the lid to gain access to port 2.