



# GP3000H Series Connection Guide

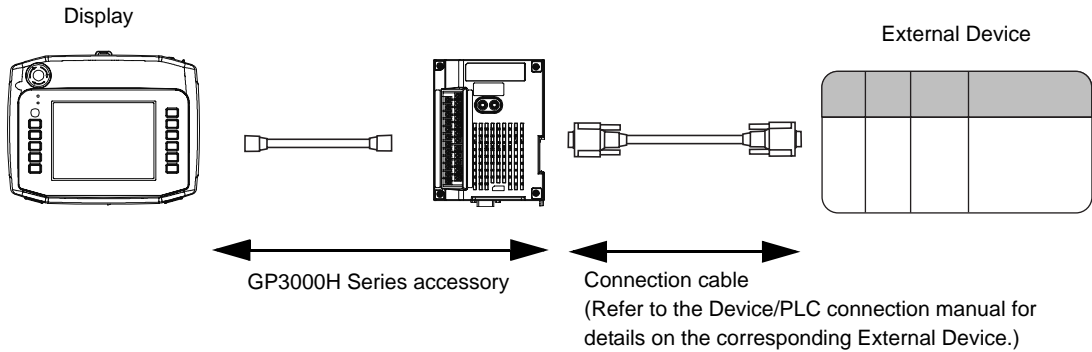
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## Introduction

This manual describes GP3000H accessories required to connect the GP3000H series display unit (hereinafter referred to as "Display") and the External Device (target PLC). Refer to the "GP3000H Series Hardware Manual" for details on the Display.

Depending on the External Device, different types of connection cables are used for connecting the GP3000H. Refer to the External Device connection manual for corresponding External Device details.

- Connection Configuration of Display



# 1 System Configuration

The following table lists system configurations for connecting the External Device and the Display.

Display	Optional Items	SIO Type	Cable Diagram
GP3000H	GP3000H Direct-connect cable (with connector) GP3000H-CBL■D-□M and GP3000H Conversion Adaptor AGP3000H-ADPCOM-01	RS-232C	"Cable Diagram 1" (page 11)
		RS-422/485 (4 wire)	"Cable Diagram 1" (page 11)
		RS-422/485 (2 wire )	"Cable Diagram 1" (page 11)
		Ethernet (UDP or TCP)	"Cable Diagram 4" (page 16)
	GP3000H Direct-connect cable GP3000H-CBL■-□M	RS-232C	"Cable Diagram 2" (page 12)
		RS-422/485 (4 wire)	"Cable Diagram 3" (page 14)
		RS-422/485 (2 wire )	"Cable Diagram 3" (page 14)
		Ethernet (UDP or TCP)	"Cable Diagram 5" (page 17)

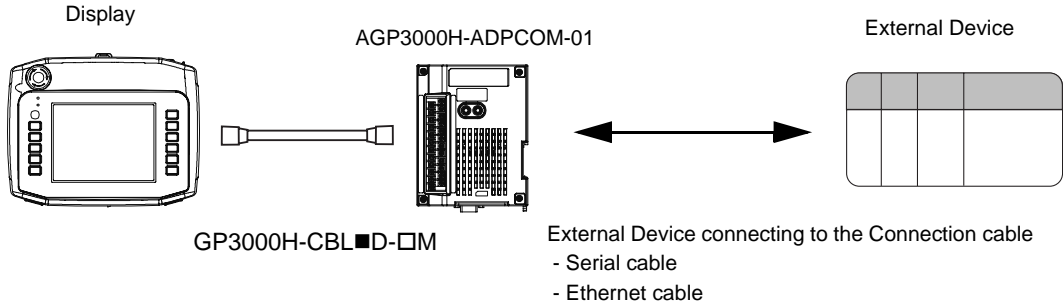
## NOTE

- In the cable model names, the ■ symbol represents H or S (for Hard-type or Soft-type). The □ symbol represents 3, 5, or 10 (for meters of cable length).

☞ "2 Optional Items" (page 10)

## ■ Connection Configuration

- ◆ When using the GP3000H Direct-connect cable (with connector) (GP3000H-CBL■D-□M) and GP3000H Conversion Adaptor (AGP3000H-ADPCOM-01)

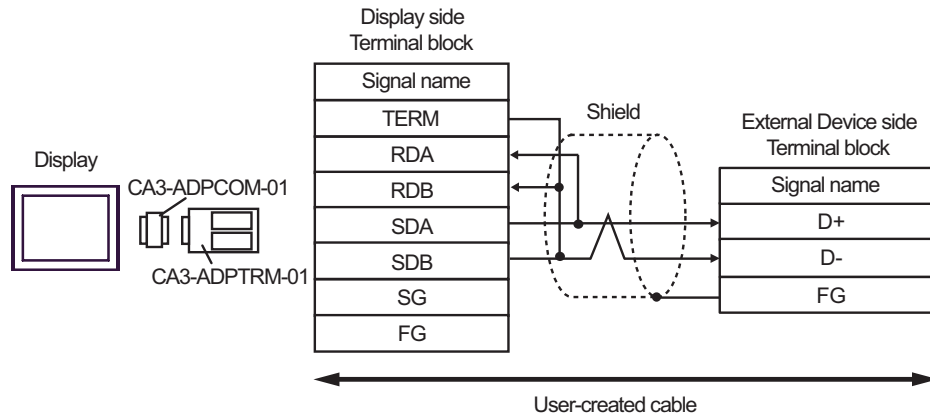


**IMPORTANT** • The required connection cable differs depending on the type of External Device being used. Confirm the content in the corresponding Device/PLC connection manual.

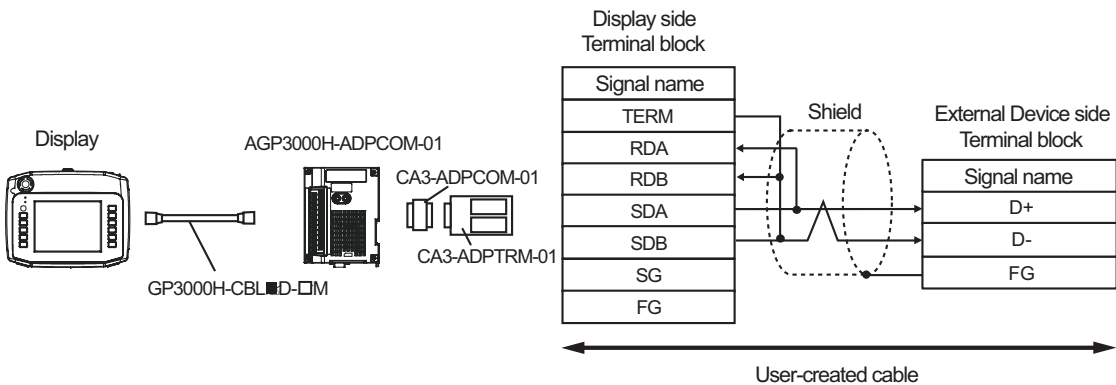
- Connection Cable Diagram

Connection cable diagrams are the same for "GP (COM1)" in each Device/PLC connection manual. When using the cable diagrams from the Device/PLC connection manual for the GP3000H series, transpose the "Display" section with "Conversion Adaptor".

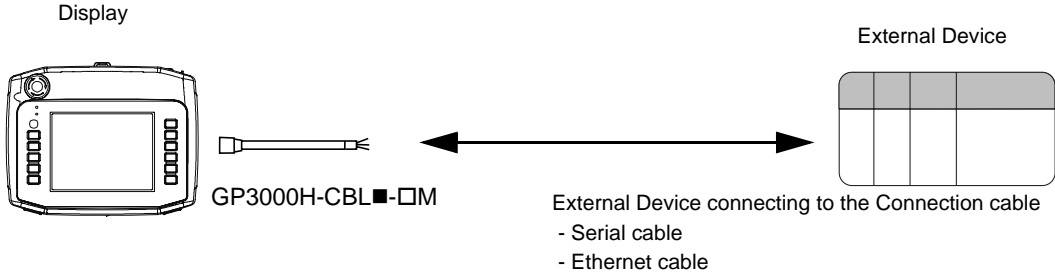
The following is an example of a cable diagram in an Device/PLC connection manual:



The following is a cable diagram for connecting the GP3000H series using the abovementioned External Device connection cable:



◆ When using the GP3000H Direct-connect cable (GP3000H-CBL■-□M)



**IMPORTANT**

The required connection cable differs depending on the type of External Device being used. Confirm the content in the corresponding Device/PLC connection manual.

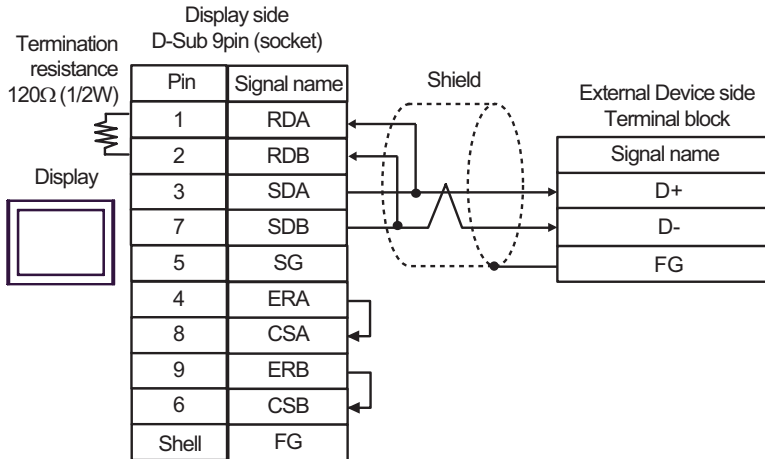
• Connection Cable Diagram

The connection cable diagram is the same for "GP (COM1)" in each Device/PLC connection manual.

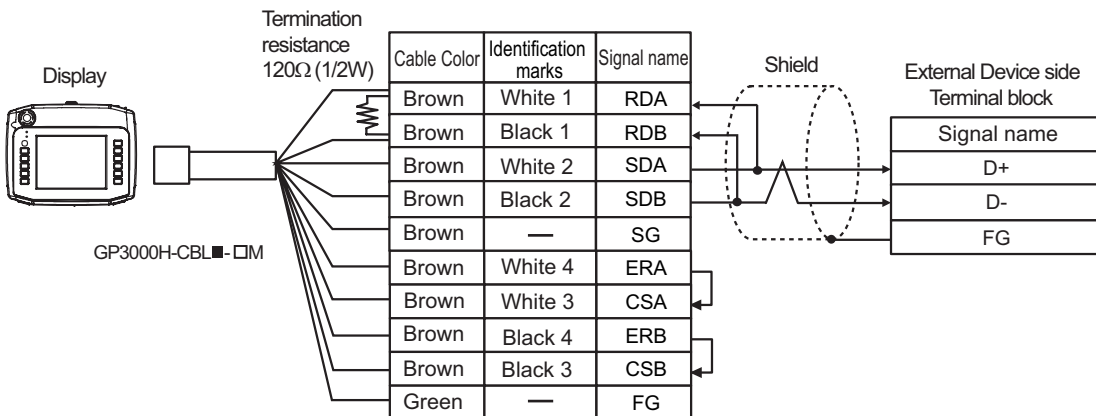
Alternatively you can create your own cables using the connector diagram.

When using the cable diagrams from the Device/PLC connection manual for the GP3000H series, transpose the "Display" section with "GP3000H Direct-connect cable".

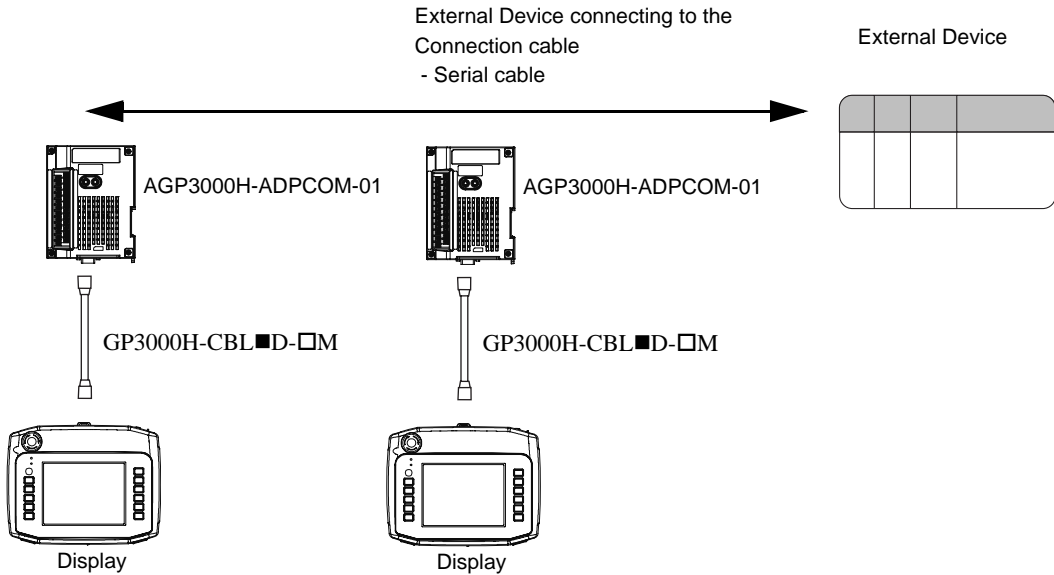
The following is an example of a cable diagram in an Device/PLC connection manual:



The following is a cable diagram for connecting the GP3000H series using the abovementioned External Device connection cable:



◆When using the GP3000H Direct-connect cables (with connectors) (GP3000H-CBL■D-□M) and GP3000H Conversion Adaptors (AGP3000H-ADPCOM-01) for the multilink connection



**IMPORTANT**

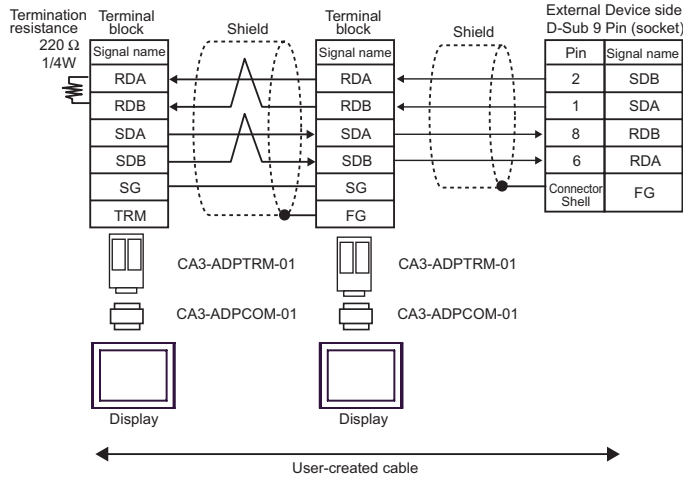
- The required connection cable differs depending on the type of External Device being used. Confirm the content in the corresponding Device/PLC connection manual.
- Refer to "Serial Multilink" at the front of the GP-Pro EX Device/PLC connection manual, and confirm the driver compliant with the multilink connection.
- For the multilink connection settings, refer to the "Serial Multilink Guide" from "Serial Multilink".

- Connection Cable Diagram

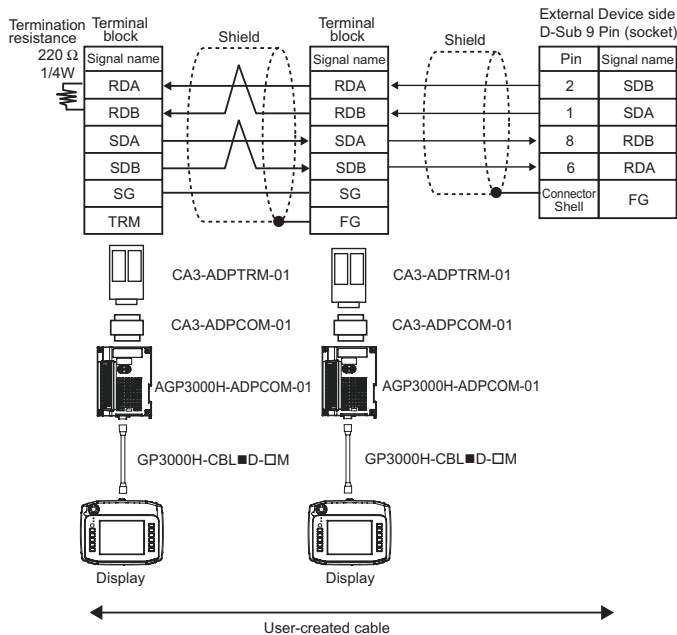
The connection cable diagram is the same for "GP (COM1)" in each Device/PLC connection manual.

When using the cable diagrams from the Device/PLC connection manual for the GP3000H series, transpose the "Display" section with "Conversion Adaptor".

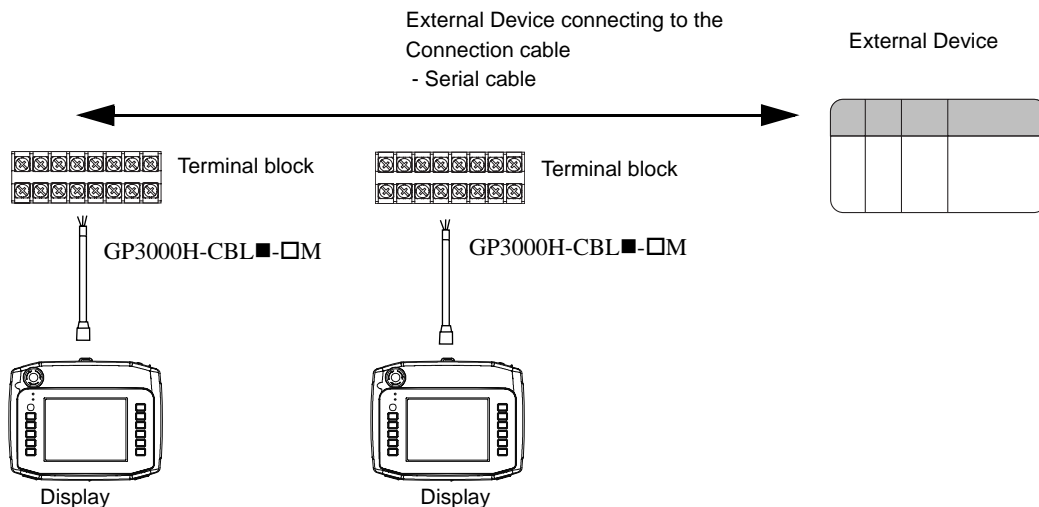
The following is an example of a cable diagram in an Device/PLC connection manual:



The following is a cable diagram for connecting the GP3000H series using the abovementioned External Device connection cable:



◆When using the GP3000H Direct-connect cables (GP3000H-CBL■-□M) for the multilink connection



**IMPORTANT**

- The required connection cable differs depending on the type of External Device being used. Confirm the content in the corresponding Device/PLC connection manual.
- Refer to "Serial Multilink" at the front of the GP-Pro EX Device/PLC connection manual, and confirm the driver compliant with the multilink connection.
- For the multilink connection settings, refer to the "Serial Multilink Guide" from "Serial Multilink".



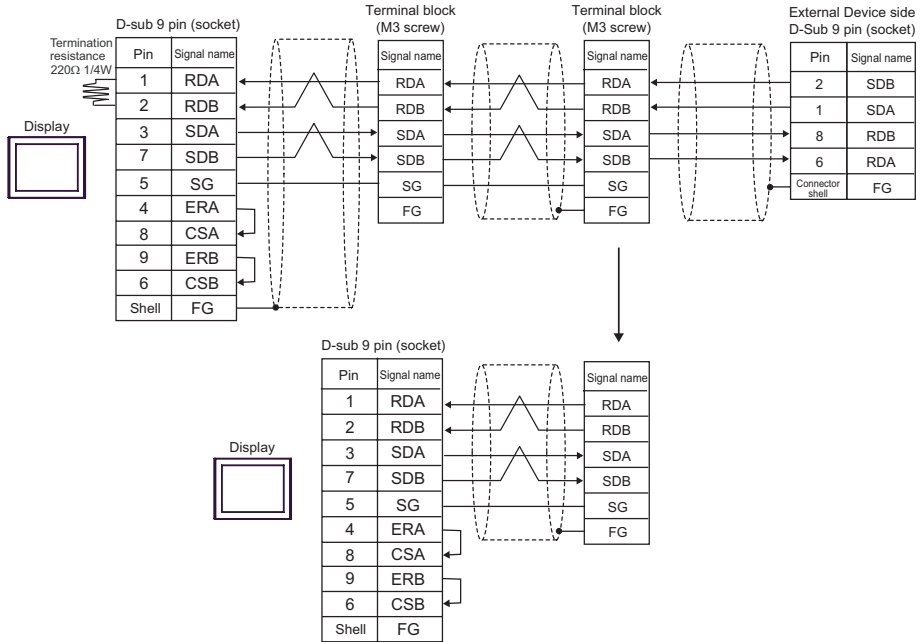
- Connection Cable Diagram

The connection cable diagram is the same for "GP (COM1)" in each Device/PLC connection manual.

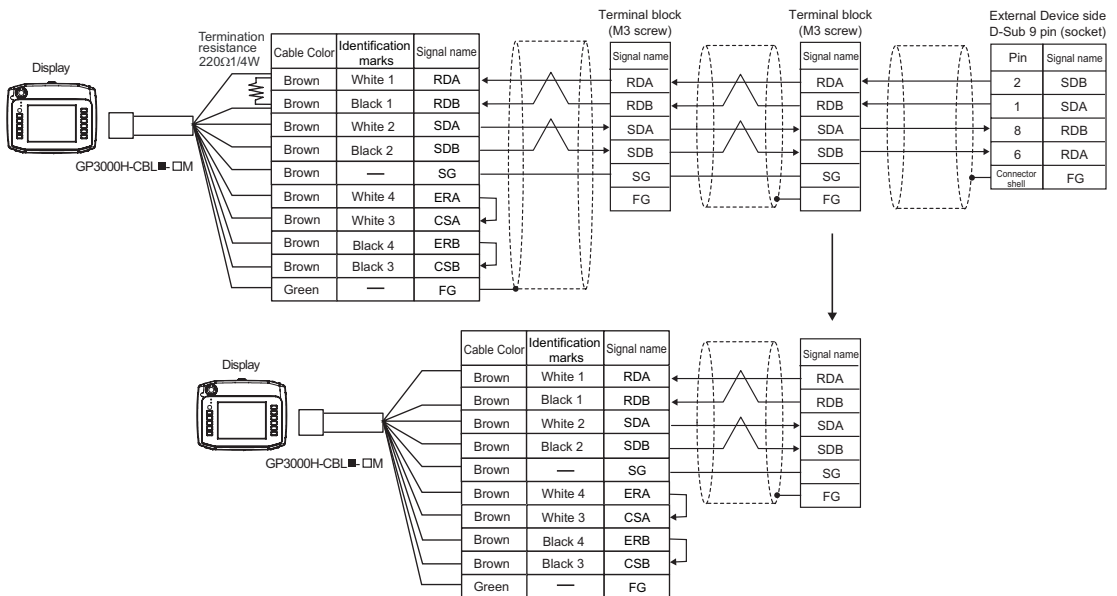
Use terminal blocks to connect the GP3000H direct-connect cable to the External Device.

When using the cable diagrams from the Device/PLC connection manual for the GP3000H series, transpose the "Display" section with "GP3000H Direct-connect cable".

The following is an example of a cable diagram in an Device/PLC connection manual:



The following is a cable diagram for connecting the GP3000H series using the abovementioned External Device connection cable:



## 2 Optional Items

The following table describes optional GP3000H series cables and conversion adaptors.

Name	Type	Description
GP3000H Hard-type 10m Direct-connect cable (with connector)	GP3000H-CBLHD-10M	Heavy-duty <sup>*1</sup> type cable between the GP3000H Conversion Adaptor and the GP3000H.
GP3000H Soft-type 3m Direct-connect cable (with connector)	GP3000H-CBLSD-3M	Standard type cable between the GP3000H Conversion Adaptor and the GP3000H.
GP3000H Soft-type 5m Direct-connect cable (with connector)	GP3000H-CBLSD-5M	
GP3000H Soft-type 10m Direct-connect cable (with connector)	GP3000H-CBLSD-10M	
GP3000H Hard-type 10m Direct-connect cable	GP3000H-CBLH-10M	Heavy-duty <sup>*1</sup> type interface cable for communication between the GP3000H and External Device (e.g. host controller), equipped with common mode filter.
GP3000H Soft-type 3m Direct-connect cable	GP3000H-CBLS-3M	Standard type interface cable for communication between the GP3000H and External Device (e.g. host controller), equipped with common mode filter.
GP3000H Soft-type 5m Direct-connect cable	GP3000H-CBLS-5M	
GP3000H Soft-type 10m Direct-connect cable	GP3000H-CBLS-10M	
GP3000H Conversion adaptor	AGP3000H-ADPCOM-01	This is the conversion adaptor which converts the output to RS-232C/422/485 serial interface output (DSUB) or to Ethernet output (RJ45).

\*1 Heavy-duty type cables are built stronger than Standard type cables, so they can be used in situations where durability is required.

### 3 Cable Diagrams

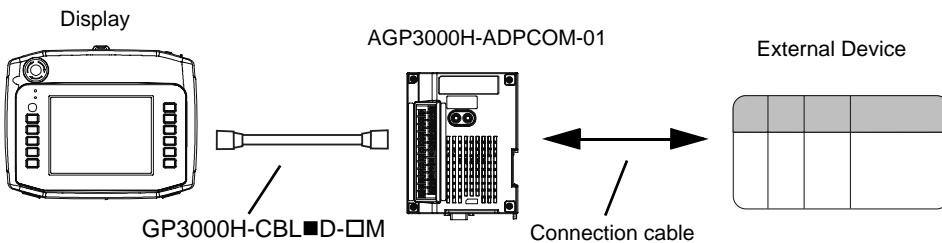
- The FG pin of the External Device unit must be D-class grounded. Please refer to the External Device manual for more details.
- SG and FG are connected inside the Display. When connecting SG to the External Device, avoid short-circuit loops when designing the system.
- Connect the isolation unit when noise or interference is present during communication.
- Refer to the GP3000H series hardware manual for cables other than serial interface cables and Ethernet interface cables.

Cable Diagram 1

Display (Connection Port)	Cable	Notes
GP3000H (COM1)	GP3000H Direct-connect cable (with connector) by Pro-face GP3000H-CBL■D-□M* <sup>1</sup> + GP3000H Conversion Adaptor by Pro-face AGP3000H-ADPCOM-01	The cable length differs depending on the External Device. Cable lengths are total lengths including GP3000H Direct-connect cable, if attached.

\*1 In the cable model names, the ■ symbol represents H or S (for Hard-type or Soft-type). The □ symbol represents 3, 5, or 10 (for meters of cable length).

☞ "2 Optional Items" (page 10)



#### ■ Connection Cables

Cable connections between the GP3000H Conversion Adaptor and the External Device differs depending on the External Device. Refer to the corresponding Device/PLC connection manual for cable diagrams or setting details. The GP3000H series COM port is indicated as "GP (COM1)" in the Device/PLC connection manual.

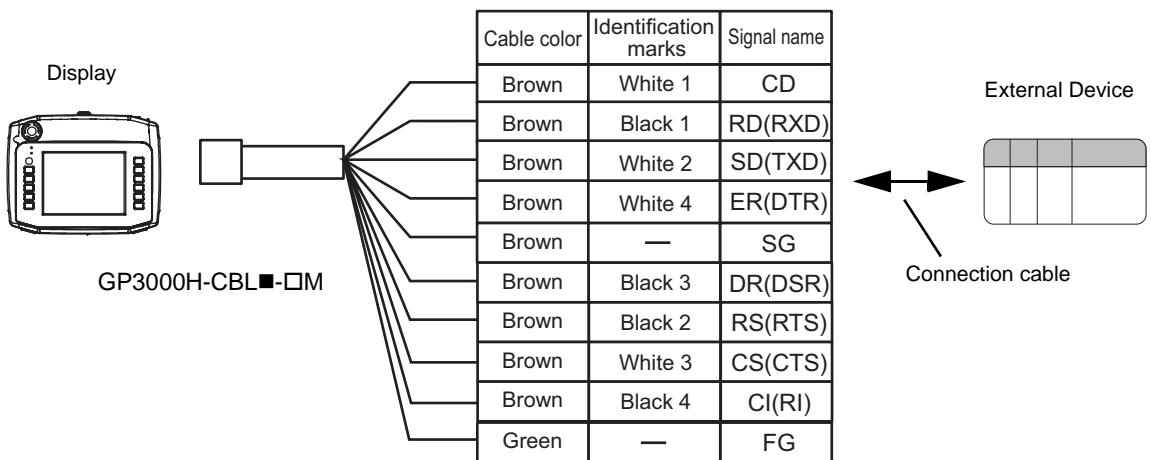
☞ "■ Connection Configuration" (page 4)

Cable Diagram 2

Display (Connection Port)	Cable	Notes
GP3000H (COM1)	GP3000H Direct-connect cable by Pro-face GP3000H-CBL■-□M*1	The cable length differs depending on the External Device. Cable lengths are total lengths including GP3000H Direct-connect cable should they be attached.

\*1 In the cable model names, the ■ symbol represents H or S (for Hard-type or Soft-type). The □ symbol represents 3, 5, or 10 (for meters of cable length).

☞ "2 Optional Items" (page 10)



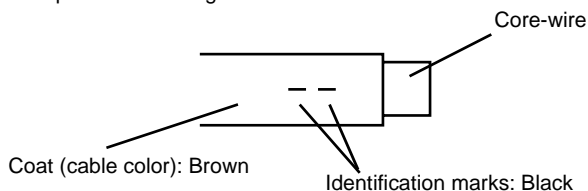
**NOTE**

- Keep unused cables from contacting other cables or connector cases.

**■ Cable Color and Identification Marks for GP3000H Direct-connect Cable**

The connection device side of the GP3000H Direct-connect cable requires trimming. When you trim the cable, check the cable color and an identification to identify the signal type.

Example of cable image



In the example above, the cable color is brown, and the identification mark shows two black lines, which means RS (RTS).

## ■ Connection Cables

Cable connections between the GP3000H Direct-connect cable and the External Device differ depending on the External Device. Refer to the corresponding Device/PLC connection manual for cable diagrams or setting details. The GP3000H series COM port is indicated as "GP (COM1)" in the Device/PLC connection manual.

Configure the optional cable end for External Device in accordance with the signal used for GP (COM1) in the cable diagram.

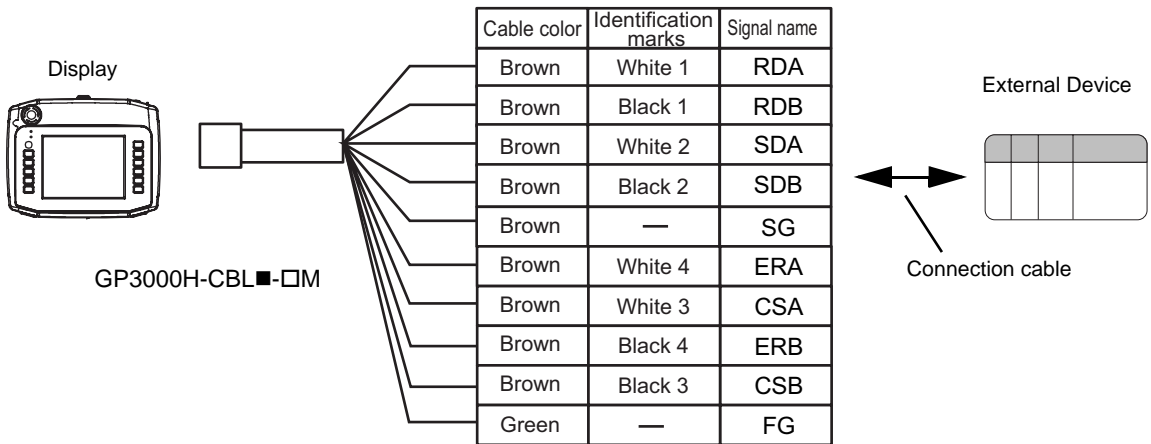
 " ■ Connection Configuration" (page 4)

Cable Diagram 3

Display (Connection Port)	Cable	Notes
GP3000H (COM1)	GP3000H Direct-connect cable by Pro-face GP3000H-CBL■-□M*1	The cable length differs depending on the External Device. Cable lengths are total lengths including GP3000H Direct-connect cable, if attached.

\*1 In the cable model names, the ■ symbol represents H or S (for Hard-type or Soft-type). The □ symbol represents 3, 5, or 10 (for meters of cable length).

☞ "2 Optional Items" (page 10)

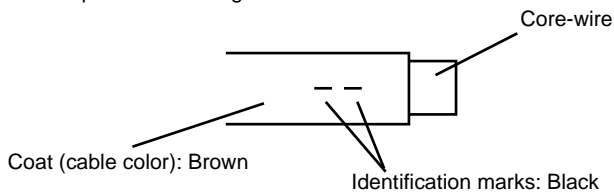


**NOTE** • Keep unused cables from contacting other cables or connector cases.

### ■ Cable Color and Identification Marks for GP3000H Direct-connect Cables

The External Device side of the GP3000H Direct-connect cable requires trimming. When you trim the cable, check the cable color and an identification to identify the signal type.

Example of cable image



In the example above, the cable color is brown, and the identification mark shows two black lines, which means SDB.

## ■ Connection Cables

Cable connections between the GP3000H Direct-connect cable and the External Device differ depending on the External Device. Refer to the corresponding Device/PLC connection manual for cable diagrams or setting details. The GP3000H series COM port is indicated as "GP (COM1)" in the Device/PLC connection manual.

Configure the optional cable end for External Device in accordance with the signal used for GP (COM1) in the cable diagram.

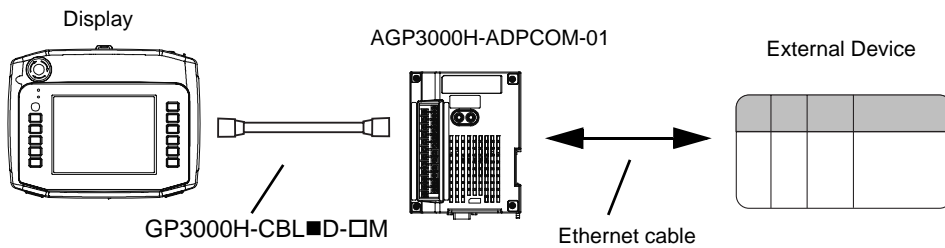
 " ■ Connection Configuration" (page 4)

Cable Diagram 4

Display (Connection Port)	Cable	Notes
GP3000H (Ethernet)	GP3000H Direct-connect Cable (with connector) by Pro-face GP3000H-CBL■D-□M <sup>*1</sup> + GP3000H Conversion Adaptor by Pro-face AGP3000H-ADPCOM-01	

\*1 In the cable model names, the ■ symbol represents H or S (for Hard-type or Soft-type). The □ symbol represents 3, 5, or 10 (for meters of cable length).

☞ "2 Optional Items" (page 10)



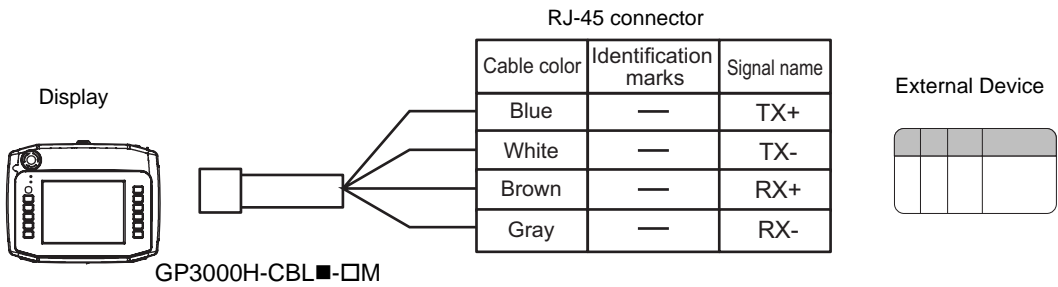


Cable Diagram 5

Display (Connection Port)	Cable	Notes
GP3000H (Ethernet)	GP3000H Direct-connect cable by Pro-face GP3000H-CBL■-□M <sup>*1</sup>	

\*1 In the cable model names, the ■ symbol represents H or S (for Hard-type or Soft-type). The □ symbol represents 3, 5, or 10 (for meters of cable length).

☞ "2 Optional Items" (page 10)



**NOTE** • Keep unused cables from contacting other cables or connector cases.

