

Device/PLC Connection Manuals



About the Device/PLC Connection Manuals

Prior to reading these manuals and setting up your device, be sure to read the "Important: Prior to reading the Device/PLC Connection manual" information. Also, be sure to download the "Preface for Trademark Rights, List of Units Supported, How to Read Manuals and Documentation Conventions" PDF file. Furthermore, be sure to keep all manual-related data in a safe, easy-to-find location.

16 Connecting to the Handy Type GP

The following describes the System Design and Cable Diagram used when connecting a PLC and a Handy Type GP.

16.1 Connecting a GP-H70 Series Unit

16.1.1 Connecting a GP-H70 Series Unit

■ GP-H70 Optional Items

The following optional cables and cable conversion adapters can be used to connect a PLC to a GP-H70.

ITEM	DESCRIPTION
GP-H70 Option Cable [RS-232C type] GPH70-C232-0 (3m) GPH70-C232-MS (10m)	Included in this cable are the power line to the GP-H70; the communications lines(RS-232C) used with various Host (PLC)s; the GP-H70's DOUT signal line, as well as other lines. This cable has no PLC connector attached so the user can set up the cable's PLC side wires to suit any type or PLC connector.
GP-H70 Option Cable [RS-422 type] GPH70-C422-0 (3m) GPH70-C422-MS (10m)	Included in this cable are the power line to the GP-H70; the communications lines(RS-422) used with various Host (PLC)s; the GP-H70's DOUT signal line, as well as other lines. This cable has no PLC connector attached so the user can set up the cable's PLC side wires to suit any type or PLC connector.
GP-H70 Option Cable [RS-232C type] GPH70-D232 (3m) GPH70-D232-MS (10m)	Included in this cable are the power line to the GP-H70; the communications lines (RS-232C) used with various Host (PLC)s; the GP-H70's DOUT signal line, as well as other lines. This cable's PLC side connector is a standard Dsub25 pin type.
GP-H70 Option Cable [RS-422 type] GPH70-D422 (3m) GPH70-D422-MS (10m)	Included in this cable are the power line to the GP-H70; the communications lines (RS-422) used with various Host (PLC)s; the GP-H70's DOUT signal line, as well as other lines. This cable's PLC side connector is a standard Dsub25 pin type.
GP-H70 Conversion Adapter [RS-232C type] GPH70-AP232-0	This adapter is used to convert the wiring from the GP-H70 to either a Dsub25 or a standard terminal block connector. Digital's 232C cable (GP410-IS00-O) can be connected to the D-sub25 connector, and Digital's GPH70-D232 and GPH70-D232-MS cable can be used to connect the adapter to the GP-H70 unit.
GP-H70 Conversion Adapter [RS-422 type] GPH70-AP422-0	This adapter is used to convert the wiring from the GP-H70 to a standard terminal block connector. Digital's GPH70-D422 and GPH70-D422-MS cable can be used to connect the adapter to the GP-H70 unit.

■ Connection Methods

The optional cable (GPH70-C232-0/MS, GPH70-C422-0/MS) will require some preparation before it can be used. This Manual “Chapter 2. Connecting Each PLC with the GP” includes connection diagram(s) of the wiring connections used between the GP and PLC. However, the pin number assigned to each connector pin on the Handy Type GP’s interface will differ from that of other GP series unit. Therefore, be sure to use Connector Pin Comparison Tables 1 and 2 below when creating a cable used between the GP-H70 and the PLC. An additional cable will be required to supply electric power to the GP-H70.

Comparison Tables 1 and 2 correspond to option cables <GPH70-C232-0/MS> and <GPH70-C422-0/MS>, respectively.

Comparison Table 1 GPH70-C232-0/MS (RS-232C)

GPH70 Pin No.	Signal name	Wire Color	Mark Band Color/Q'ty	Non-GPH70 Pin No.
1	RS	Purple	White (1band)	Pin 4
2	CS	Orange	White (2bands)	Pin 5
3	CD	Brown	White (2 bands)	Pin 8
19	SD	White	Blue (1band)	Pin 2
20	RD	Blue	Red (2bands)	Pin 3
21	ER	Green	white (2 bands)	Pin 20
22	SG	Black	—	Pin 7
case	FG	Outer Shield	—	Pin 1

Comparison Table 2 GPH70-C422-0/MS (RS-422)

GPH70 Pin No.	Signal name	Wire Color	Mark Band Color/Q'ty	Non-GPH70 Pin No.
5	TRMX	Pink	—	Pin 9
6	RDA	White	—	Pin 10
7	SDA	Orange	White (1bands)	Pin 11
8	CSA	Brown	White (1bands)	Pin 21
9	ERA	Red	White (1bands)	Pin 22
24	RDB	Blue	Red (1 bands)	Pin 16
25	SDB	Green	White (1bands)	Pin 15
26	CSB	Gray	White (1bands)	Pin 18
27	ERB	Black	White (1bands)	Pin 19
22	SG	Black	—	Pin 7
Case	FG	Outer Shield	—	Pin1



- Be sure to connect this unit’s SG/GND (Signal Ground) terminal to the other unit’s Signal Ground terminal.
- When making a cable, please be aware of the following:
<For RS-422 Connection>
 - The following pairs of pin #'s must be connected to each other
...#26 (CBS) <-> #27 (ERB)
...#8 (CSA) <-> #9 (ERA)
 - When connecting the RS-422 cable and the #5 (TRMX) and #6 (RDA) points, a termination resistance of 100Ω is added between RDA and RDB.

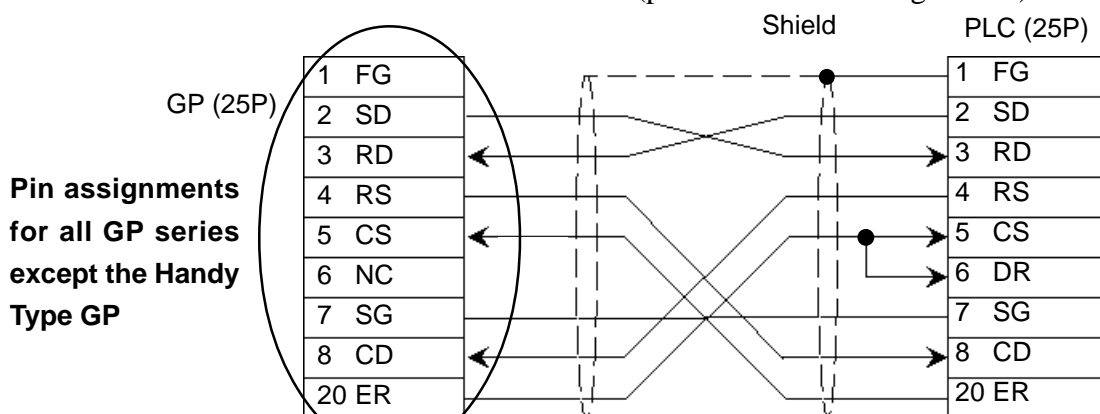


- When the GP is set as a Memory Link type and the cable type is RS-422, a 4-wire system must be used.

<For RS-232C Connection>

- Do not connect #5 (TRMX), #6 (RDA), #7 (SDA), #25 (SDB), #24 (RDB), #26 (CBS), #27 (ERB), #8 (CSA), #9 (ERA).

The following describes an example of converting the pin assignments for other GP series to those on the Handy Type GP. The following example connects a GP-H70 with a Mitsubishi PLC (p.2-1-10 <Cable Diagram 1>).



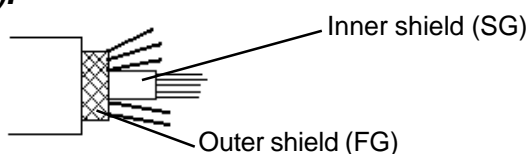
When using GP-H70 optional cable (GPH70-C232-0)

Pin assignments for the GP-H70 converted from those of other GP series

Outer shield	FG
19	SD White/Blue(1band)
20	RD Blue/Red(2bands)
1	RS Purple/White(1band)
2	CS Orange/White(2bands)
22	SG Black
3	CD Brown/White(2bands)
21	ER Green/White(2bands)



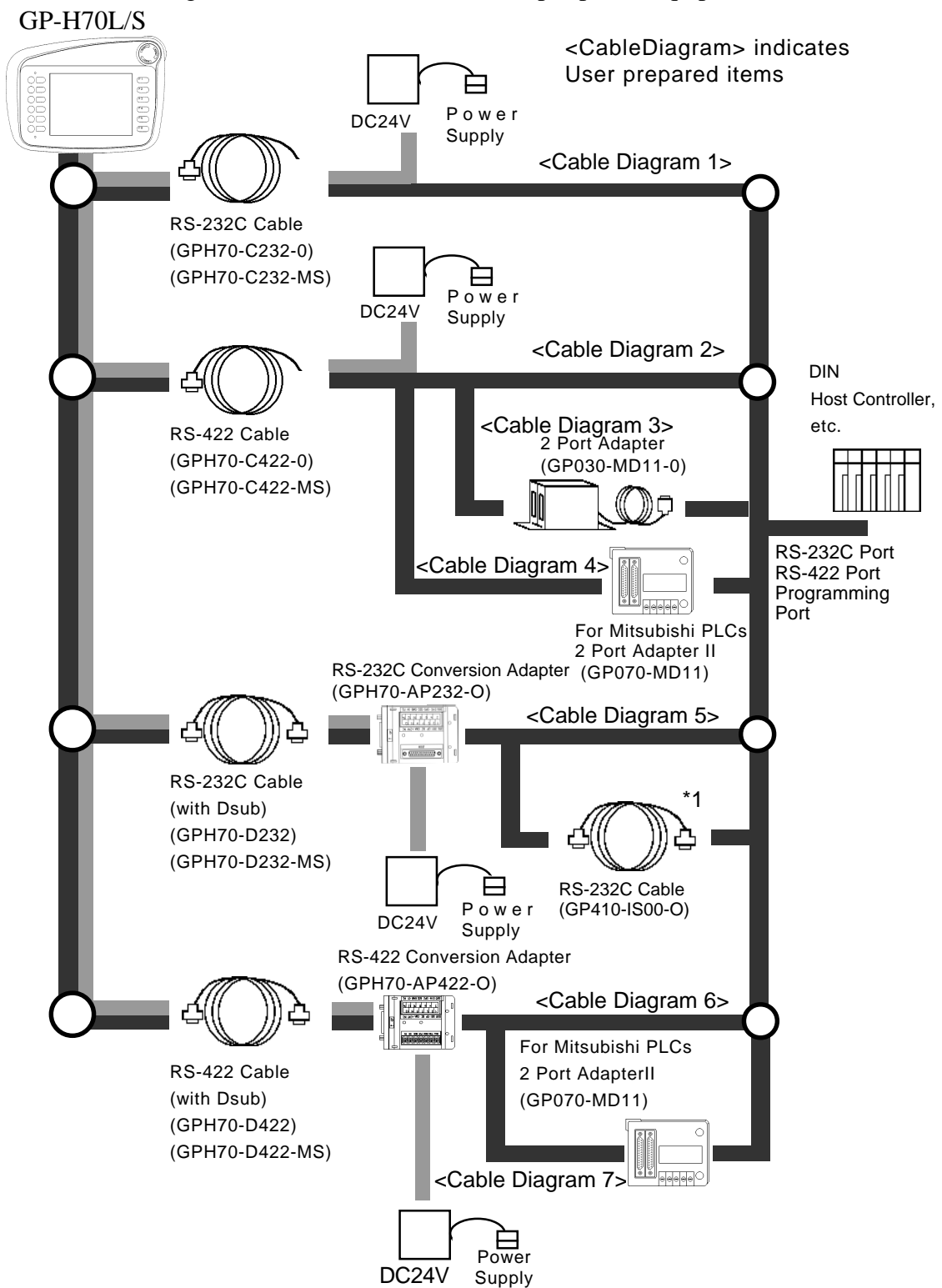
- If any wires in the above table's "Wire Color" column are not used, be sure those wires do not touch other signal wires or the connector case.
- Be sure to connect the cable's outer shield to the FG wire (field ground).



- Be sure to connect the inner shield to the external device's signal ground, in the same way as the Pin 22's SG connection.

16.1.2 GP-H70 System Design

The diagram below shows the GP unit's peripheral equipment.



In the above system design diagram, the line indicates power supply routes. Be sure to supply electricity through conversion adapters or cables.

**1 This cable may not be able to be connected to some PLCs. Be sure to check compatibility before connecting.*

16.1.3 Cable Diagrams

The connection diagram of wiring connections used between the equipment described in “15.1.2 GP-H70 System Design” is shown below. This connection diagram only shows those sections used for connecting to the PLC.

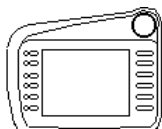


- ***Be sure to connect this cable while the GP-H70's power is turned OFF, otherwise an electrical shock may occur.***
- ***When live lines are either connected or disconnected, if a difference in potential is created between the GP-H70 and the connected device(s), the driver IC may be damaged. Therefore, be sure to connect this cable while the GP-H70's power is turned OFF.***
- ***Since the GP-H70 interface signal wires and the GP power supply wires are contained inside a single cable, power supply noise may occur. Therefore, be sure to take appropriate precautions to prevent the connected device(s) from being interrupted by noise. (i.e. install a noise filter, etc.)***

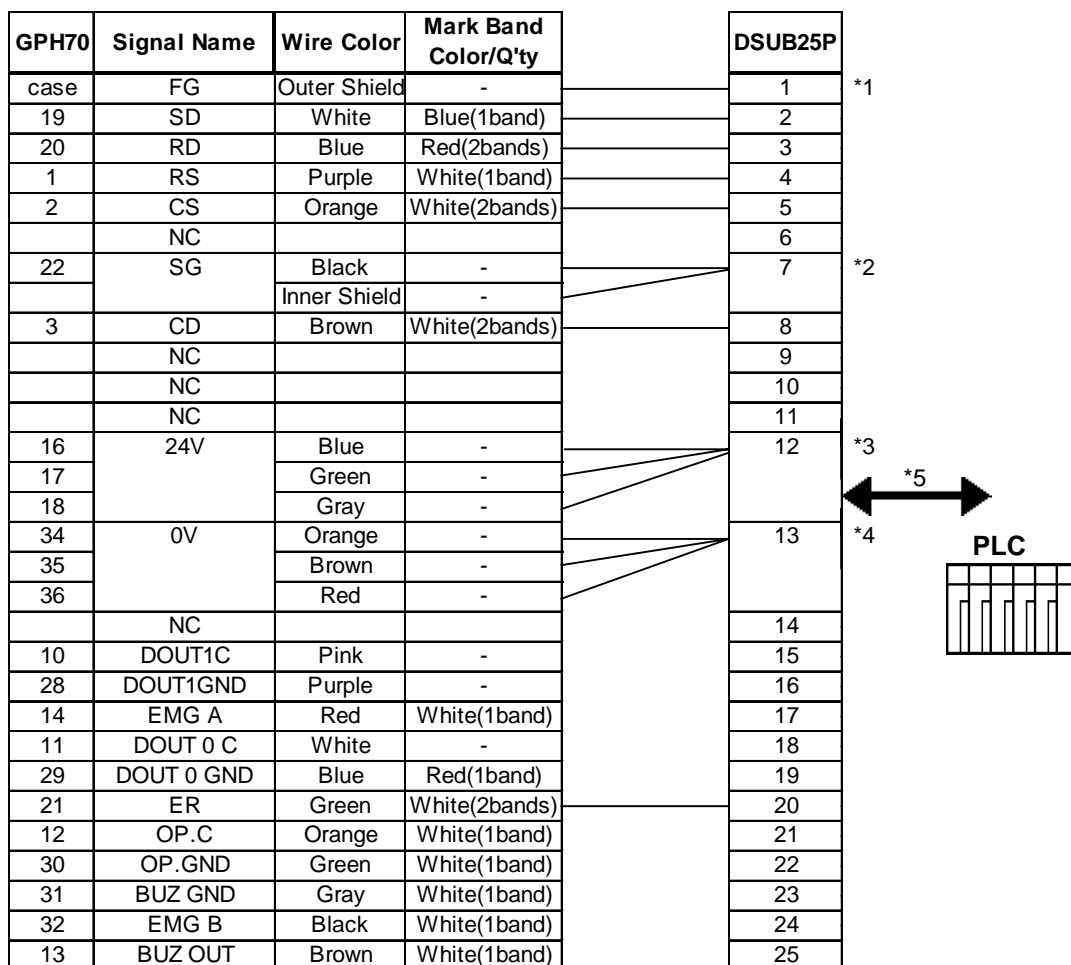
<Cable Diagram 1>

- When connecting GP-H70 to PLC with GPH70-C232-O (3m) or GPH70-C232-MS (10m)

GP-H70



GP Series other than Handy Type GP Pin No.



- *1 Connect the cable's outer shield to Pin 1.
- *2 Connect the cable's inner shield and all black wires to Pin 7.
- *3 Connect all the blue, green, and gray wires to Pin 12.
- *4 Connect all the orange, brown, and red wires to Pin 13.
- *5 Refer to the cable diagrams in **Chapter 2 PLC-GP Connection**.



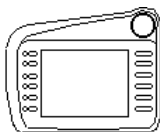
Note:

- The wiring arrangement shown above cannot be used with the RS-232C cable's Conversion Adapter.
- To connect the Conversion Adapter, the wiring diagram in the GP-H70's RS-232 Conversion Adapter's Operation Instructions manual must be used.
- The customer will need to perform this cable's PLC connector wiring. The wires used this cable are AWG 28 (dia.=0.3mm/area=0.08mm²). Using a solder cap tape connector is recommended.
- Be sure the wires do not touch other signal wires or connector case when they are not used.

<Cable Diagram 2>

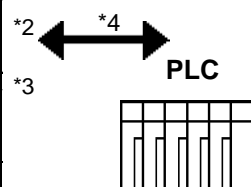
- When connecting GP-H70 to PLC with GPH70-C422-O (3m) or GPH70-C422-MS (10m)

GP-H70



GP Series other than Handy Type GP Pin No.

GPH70	Signal Name	Wire Color	Mark Band Color/Q'ty	DSUB25P	
case	FG	Shield	-	1	*1
10	DOUT 1C	Yellow	Black(1band)	2	
28	DOUT 1 GND	Pink	Black(1band)	3	
11	DOUT 0 C	Purple	White(1band)	4	
29	DOUT 0 GND	White	Blue(1band)	5	
12	OP. C	Blue	Red(2bands)	6	
22	SG	Black	-	7	
30	OP. GND	Orange	White(2bands)	8	
5	TRMX	Pink	-	9	
6	RDA	White	-	10	
7	SDA	Orange	White(1band)	11	
16	24V	Pink	Black(2bands)	12	*2
17		White	Blue(2bands)		
18		Orange	Black(1band)		
34	0V	Purple	White(2bands)	13	*3
35		Blue	Black(1band)		
36		Green	Black(1band)		
	NC		-	14	
25	SDB	Green	White(1band)	15	
24	RDB	Blue	Red(1band)	16	
14	EMG A	Gray	White(2bands)	17	
26	CSB	Gray	White(1band)	18	
27	ERB	Black	White(1band)	19	
	NC			20	
8	CSA	Brown	White(1band)	21	
9	ERA	Red	White(1band)	22	
31	BUZ GND	Brown	White(2bands)	23	
32	EMG B	Red	White(2bands)	24	
13	BUZ OUT	Green	White(2bands)	25	



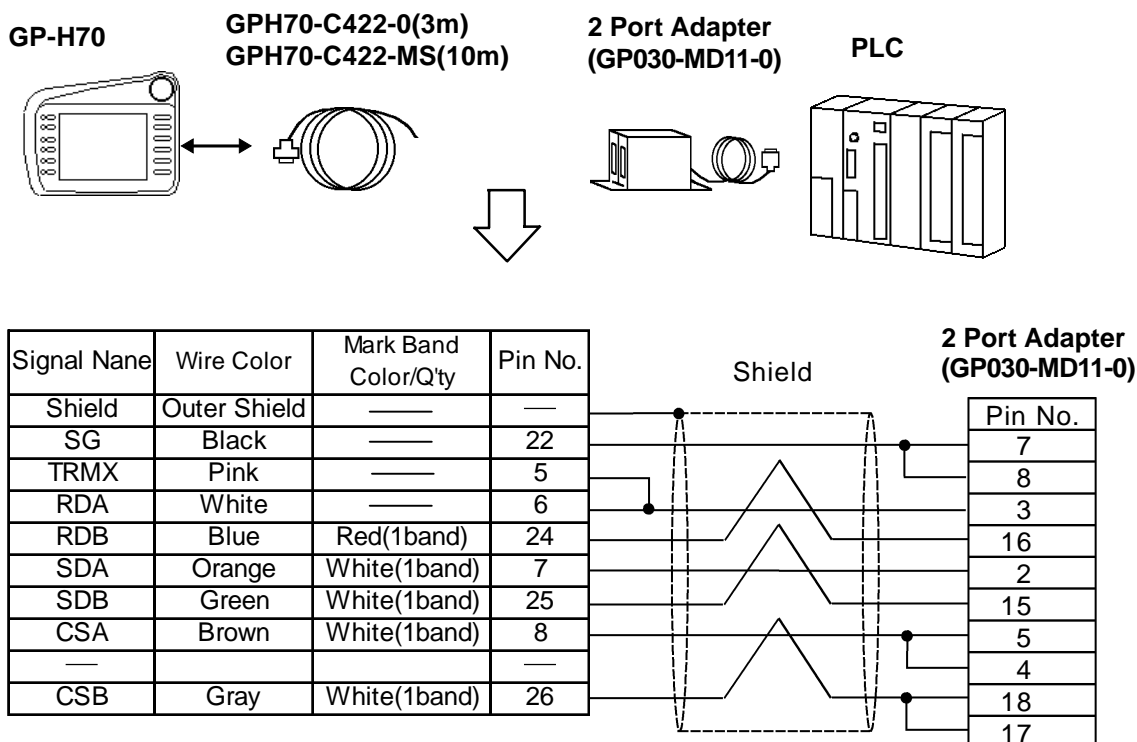
- *1 Connect the cable's outer shield to Pin 1.
- *2 Connect all the pink(black/1band), white(blue/2band) and orange(black/1band) wires to Pin 12.
- *3 Connect all the purple(white/2bands), blue(black/1band) and green(black/1band) wires to Pin 13.
- *4 Refer to the cable diagrams in **Chapter 2 PLC-GP Connection**.



- Note:**
- The wiring arrangement shown above cannot be used with the RS-232C cable's Conversion Adapter.
 - To connect the Conversion Adapter, the wiring diagram in the GP-H70's RS-232 Conversion Adapter's Operation Instructions manual must be used.
 - The customer will need to perform this cable's PLC connector wiring. The wires used for this cable are AWG 28 (dia.=0.3mm/area-0.08mm²). Using a solder cap tape connector is recommended.
 - Be sure these wires do not touch other signal wires or the connector case when they are not used.

<Cable Diagram 3>

- When connecting GP-H70 to 2 Port Adapter (GP030-MD11-0) with GPH70-C422-O (3m) or GPH70-C422-MS (10m)



[GP-H70 series]

Pin numbers shown here represent the GP-H70 unit's connection pins.

[2 Port Adapter]

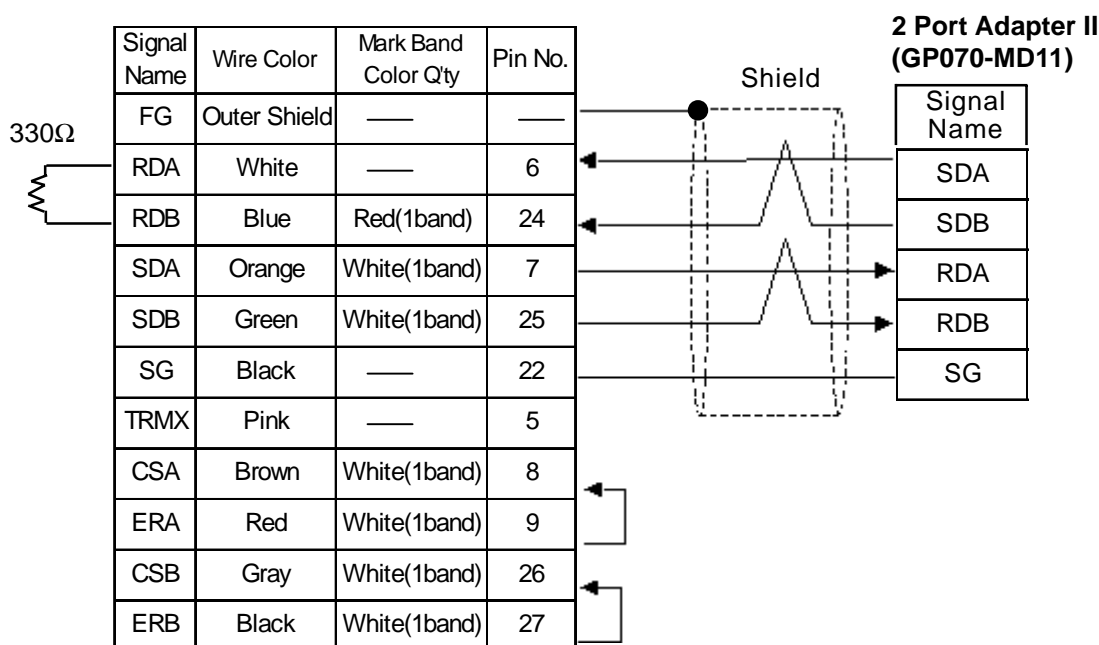
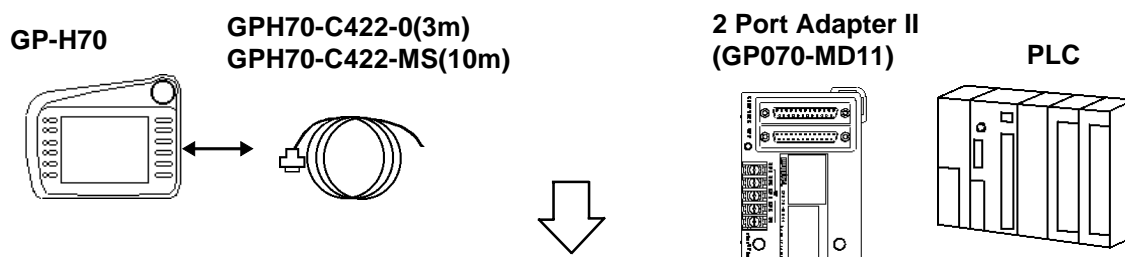
Pin numbers shown here represent the Digital's 2 Port Adapter's (GP030-MD11-0) connection pins.



Note: Be sure the wires do not touch other signal wires or connector case when they are not used.

<Cable Diagram 4>

- When connecting GP-H70 to 2 Port Adapter II (GP070-MD11) with GPH70-C422-O (3m) or GPH70-C422-MS (10m)



[GP-H70 series]

Pin numbers shown here represent the GP-H70 unit's connection pins.

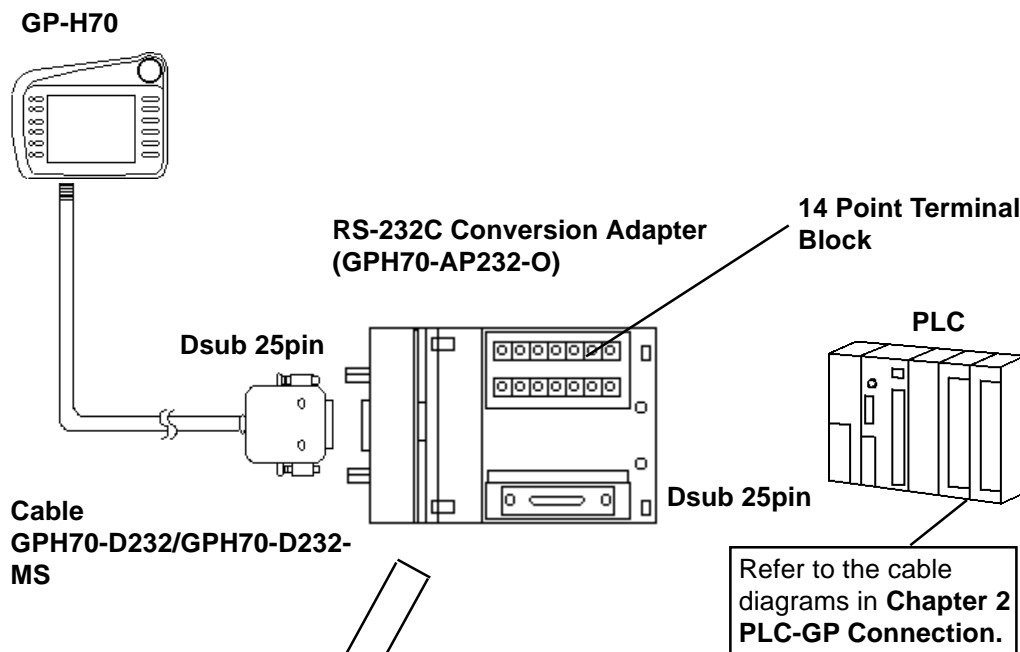


Note:

- Instead of the TRMX pin, connect the 2 Port Adapter II's 330 W termination resistor to the RDB and RDA pins.
- GP-PRO/PBIII for Windows Ver.3.0 or higher required. (Protocol version should be V3.20 or higher.)
- Select "2PORT+GPH" via "Adapter Mode/ CPU Direct Mode" on GP's offline screen.
- Be sure the wires do not touch other signal wires or connector case when they are not used.
- This cable diagram cannot be used for connection with the MELSEC-FX Series unit. When connecting the MELSEC-FX Series unit via the 2 Port Adapter II, refer to <Cable Diagram 7>.

<Cable Diagram 5>

- When connecting GP-H70 to PLC with RS-232C Conversion Adapter (GPH70-AP232-0) with GPH70-D232 (3m) or GPH70-D232-MS (10m)



Dsub Connector

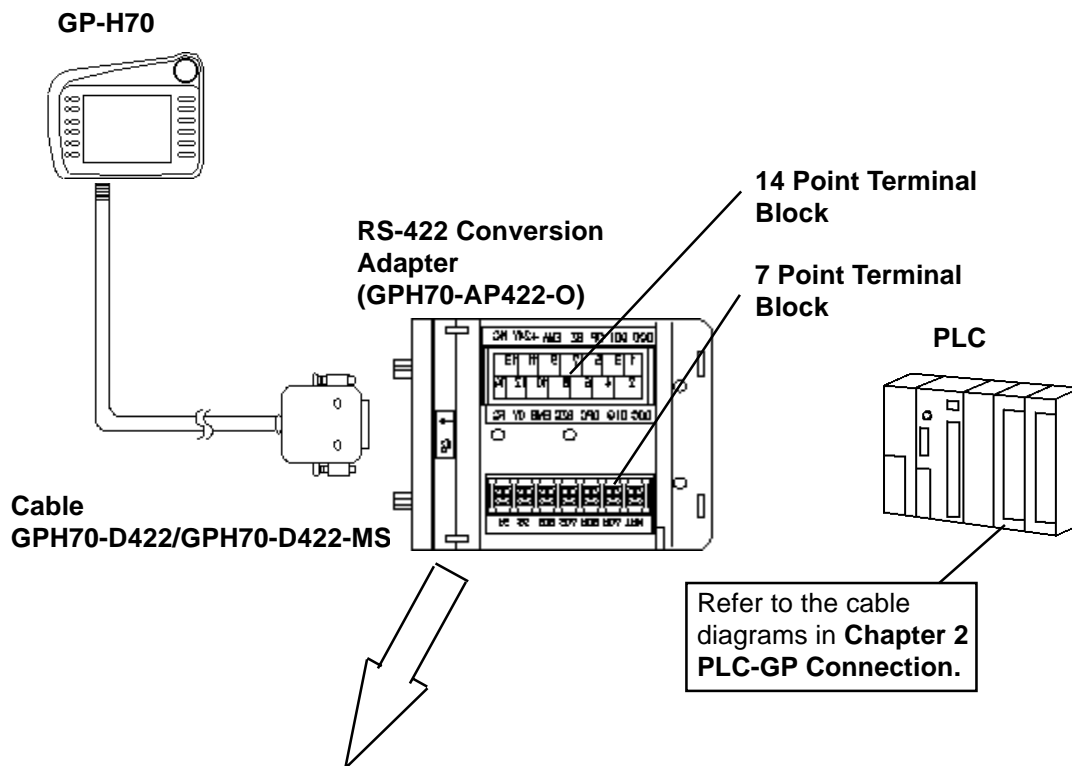
Pin No.	Signal Name
1	FG
2	SD
3	RD
4	RS
5	CS
7	SG
8	CD
14	+5V(out)
20	ER

14 Point Terminal Block

Pin No.	Signal Name(Drawing Name)
1	DOUT0.C (DO0)
2	DOUT0.GND (D0G)
3	DOUT1.C (D01)
4	DOUT1.GND (D1G)
5	OP.C (OP)
6	OP.GND (OPG)
7	BUZZ OUT (BZ)
8	BUZZ GND (BZG)
9	EMG A (EMA)
10	EMG B (EMB)
11	+24V(in) (+24V)
12	0V (0V)
13	NC (NC)
14	FG (FG)

<Cable Diagram 6>

- When connecting GP-H70 to PLC via RS-422 Conversion Adapter (GPH70-AP422-0) with GPH70-D422 (3m) or GPH70-D422-MS (10m)



7 Point Terminal Block

Pin No.	Signal Name
1	FG
2	SG
3	SDB
4	SDA
5	RDB
6	RDA
7	TRMX(TRM) ^{*1}

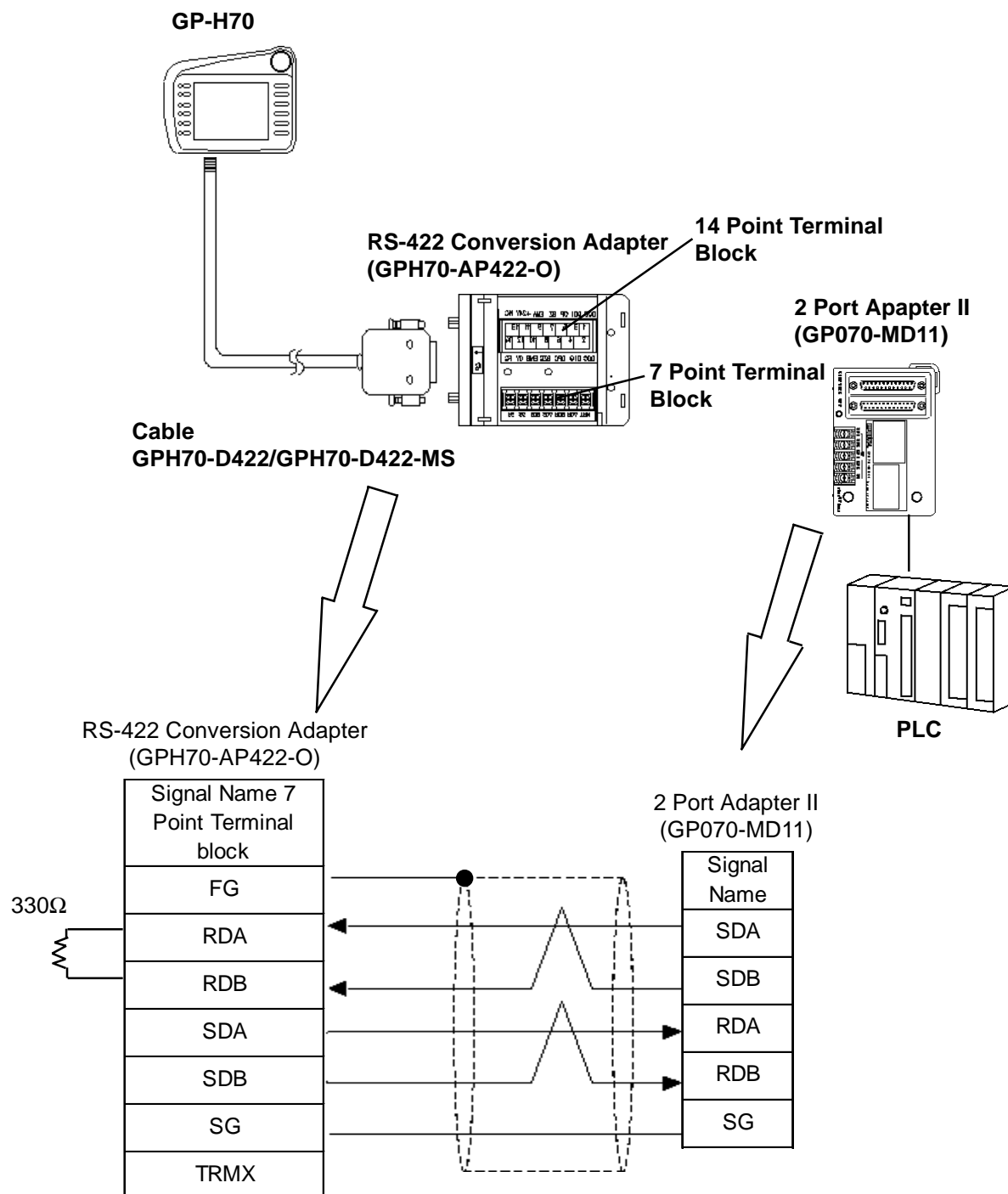
^{*1} Connecting (shorting) the TRMX and RDA pins provides 100Ω of terminating between pins RDA and RDB.

14 Point Terminal Block

Pin No.	Signal Name(Drawing Name)
1	DOUT0.C (DO0)
2	DOUT0.GND (D0G)
3	DOUT1.C (D01)
4	DOUT1.GND (D1G)
5	OP.C (OP)
6	OP.GND (OPG)
7	BUZZ OUT (BZ)
8	BUZZ GND (BZG)
9	EMG A (EMA)
10	EMG B (EMB)
11	+24V(in) (+24V)
12	0V (0V)
13	NC (NC)
14	FG (FG)

<Cable Diagram 7>

- When connecting GP-H70 to PLC via RS-422 Conversion Adapter (GPH70-AP422-0) and 2 Port Adapter II with GPH70-D422 (3m) or GPH70-D422-MS (10m)



Note: Instead of the TRMX pin, connect the 2 Port Adapter II's 330Ω termination resistor to the RDB and RDA pins.

16.2 Connecting a GP2000H Series Unit

16.2.1 Connecting a GP2000H Series Unit

■ GP2000H Optional Items

The following optional cables and cable conversion adapters below can be used to connect a PLC to a GP2000H.

ITEM	DESCRIPTION
GP2000H Series Special Purpose RS-232C Cable GP2000H-C232-3M (3m) GP2000H-C232-10M (10m)	Included in this cable are the power line to the GP2000H; the communications lines(RS-232C) used with various Host (PLC)s; the GP2000H's DOUT signal line, as well as other lines. This cable has no PLC connector attached so the user can set up the cable's PLC side wires to suit any type or PLC connector.
GP2000H Series Special Purpose RS-422 Cable GP2000H-C422-3M (3m) GP2000H-C422-10M (10m)	Included in this cable are the power line to the GP2000H; the communications lines(RS-422) used with various Host (PLC)s; the GP2000H's DOUT signal line, as well as other lines. This cable has no PLC connector attached so the user can set up the cable's PLC side wires to suit any type or PLC connector.
GP2000H Series Special Purpose RS-232C Dsub Cable GP2000H-D232-3M (3m) GP2000H-D232-10M (10m)	Included in this cable are the power line to the GP2000H; the communications lines (RS-232C) used with various Host (PLC)s; the GP2000H's DOUT signal line, as well as other lines. This cable's PLC side connector is a standard Dsub37 pin type.
GP2000H Series Special Purpose RS-422 Dsub Cable GP2000H-D422-3M (3m) GP2000H-D422-10M (10m)	Included in this cable are the power line to the GP2000H; the communications lines (RS-422) used with various Host (PLC)s; the GP2000H's DOUT signal line, as well as other lines. This cable's PLC side connector is a standard Dsub37 pin type.
GP2000H Series RS-232C Conversion Adapter GP2000H-AP232	This adapter is used to convert the wiring from the GP2000H to either a Dsub37 or standard a terminal block connector. Digital's 232C cable (GP410-IS00-O) can be connected to the Dsub25 connector, and Digital's GP2000H-D232-3M/10M cable can be used to connect the adapter to the GP2000H unit.
GP2000H Series RS-422 Conversion Adapter GP2000H-AP422	This adapter is used to convert the wiring from the GP2000H to either a Dsub25 or standard a terminal block connector. Digital's GP2000H-D422-3M/10M cable can be used to connect the adapter to the GP2000H unit.
GP2000H Series Special Purpose RS-232C Cable for GP-70H Conversion Adapter GP2000H-AP70CB-D232-3M ^{*1}	This cable is connected to the GP2000H and GP-H70 unit's conversion adapter (GPH70-AP232-0).
GP2000H Series Special Purpose RS-422 Cable for GP-70H Conversion Adapter GP2000H-AP70CB-D422-3M ^{*1}	This cable is connected to the GP2000H and GP-H70 unit's conversion adapter (GPH70-AP422-0).

**1 When using this cable, some of the GP2000H unit's external output features are not available.*

■ Connection Methods

The optional cable (GP2000H-C232-3M/10M, GP2000H-C422-3M/10M) will require some preparation before it can be used. Digital's Connection Manual "Chapter 2. Connecting Each PLC with the GP" includes connection diagram(s) of the wiring connections used between the GP and PLC. However, the pin number assigned to each connector pin on the Handy Type GP's interface will differ from that of other GP series unit. Therefore, be sure to use Connector Pin Comparison Tables 1 and 2 below when creating a cable used between the GP2000H and the PLC. An additional cable will be required to supply electric power to the GP2000H.

Comparison Tables 1 and 2 correspond to option cables <GP2000H-C232-3M/10M> and <GP2000H-C422-3M/10M>, respectively.

Comparison Table 1 GP2000H-C232-3M/10M (RS-232C)

I/F	GP2000H Pin No.	Signal Name	Wire Color	Non-GP2000H Series Pin No.
DC24V I/F	3	FG	Shield	1
Serial I/F	1	RS	Red	4
	2	SD	Blue	2
	3	CS	Brown	5
	4	RD	Orange	3
	5	CD	Purple	8
	6	ER	Gray	20
	8	SG	White	7

Comparison Table 2 GP2000H-C422-3M/10M (RS-422)

I/F	GP2000H Pin No.	Signal Name	Wire Color	Non-GP2000H Series Pin No.
DC24V I/F	3	FG	Shield	1
Serial I/F	8	SG	Gray	7
	13	RDA	White	10
	14	REB	Black	16
	15	SDA	Yellow	11
	16	SDB	Green	15
	17	CSA	Red	21
	18	CSB	Blue	18
	19	ERA	Brown	22
	20	ERB	Orange	19

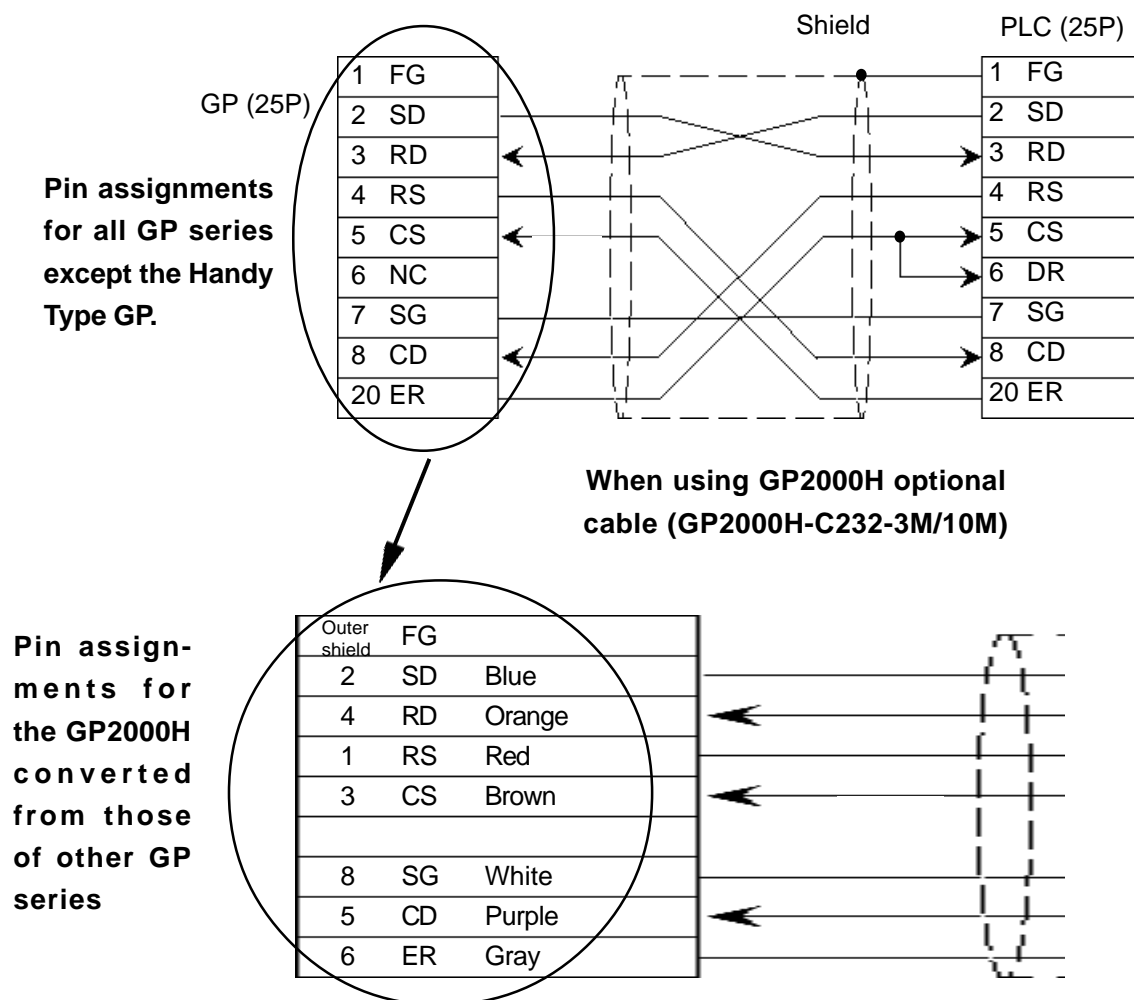


- Note:**
- Be sure to connect this unit's SG/GND (Signal Ground) terminal to the other unit's Signal Ground terminal.
 - When making a cable, please be aware of the following:
<For RS-422 Connection>
 - The following pairs of pin #'s must be connected to each other
 - ...#17 (CSA) <-> #19 (ERA)
 - ...#18 (CSB) <-> #20 (ERB)
 - When turning ON the switch inside the GP2000H rear-face's cable cover, a termination resistance of 100Ω is added between #13 (RDA) and #14 (RDB).

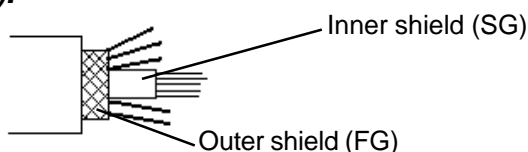


- When the GP is set as a Memory Link type and the cable type is RS-422, a 4-wire system must be used.

The following describes an example of converting the pin assignments for other GP series to those on the Handy Type GP. The following example connects a GP2000H with a Mitsubishi PLC (p.2-1-11 <Cable Diagram 1>).



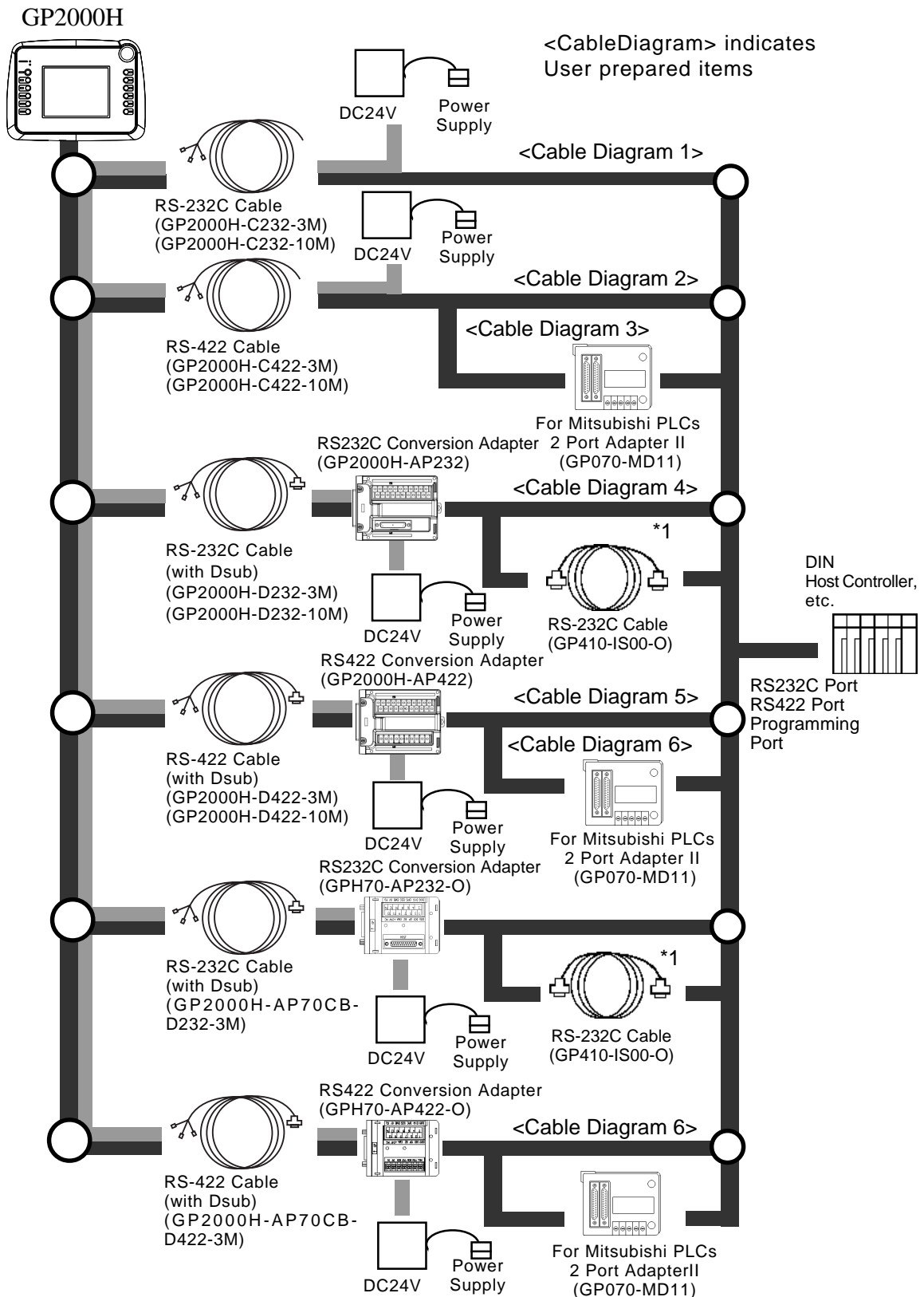
- If any wires in the above table's "Wire Color" column are not used, be sure those wires do not touch other signal wires or the connector case.
- Be sure to connect the cable's outer shield to the FG wire (field ground).



- Be sure to connect the inner shield to the external device's signal ground, in the same way as the Pin 8's SG connection.


16.2.2 GP2000H System Design

The diagram below shows the GP unit's peripheral equipment.



*1 This cable may not be able to be connected to some PLCs. Be sure to check compatibility before connecting.



In the above system design diagram, the  line indicates power supply routes. Be sure to supply electricity through conversion adapters or cables.

16.2.3

Cable Diagrams

The connection diagram of wiring connections used between the equipment described in “15.2.2 GP2000H System Design” is shown below. This connection diagram only shows those sections used for connecting to the PLC.

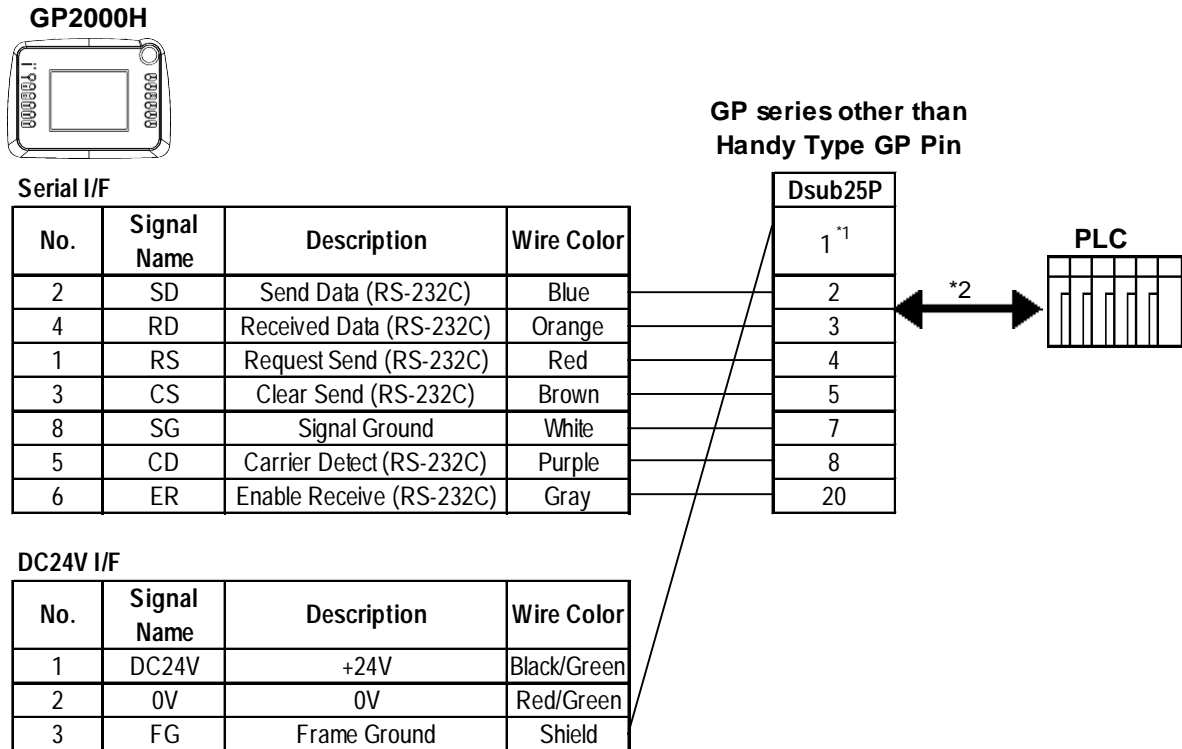


Important

- ***Be sure to connect this cable while the GP2000H's power is turned OFF, otherwise an electrical shock may occur.***
- ***When live lines are either connected or disconnected, if a difference in potential is created between the GP2000H and the connected device(s), the driver IC may be damaged. Therefore, be sure to connect or disconnect this cable while the GP2000H's power is turned OFF.***
- ***Since the GP2000H interface signal wires and the GP power supply wires are contained inside a single cable, power supply noise may occur. Therefore, be sure to take appropriate precautions to prevent the connected device(s) from being interrupted by noise. (i.e. install a noise filter, etc.)***
- ***When connecting the RS-232C cable, the maximum cable length is 15m.***
- ***When connecting the RS-422 cable, the maximum cable length is 500m.***
- ***When connecting the communication cable, be sure to connect the SG.***
- ***The AWG22 is used for DC24V and external output wires.***

<Cable Diagram 1>

- When connecting GP2000H to PLC with GP2000H-C232-3M (3m) or GP2000H-C232-10M (10m)

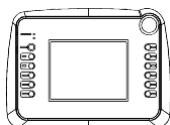


- Note:**
- The wiring arrangement shown above cannot be used with the RS-232C cable's Conversion Adapter.
 - To connect the Conversion Adapter, the wiring diagram in the GP2000H's RS-232 Conversion Adapter's Operation Instructions manual must be used.
 - The customer will need to perform this cable's PLC connector wiring. The wires used this cable are AWG 28 (dia.=0.3mm/area-0.08mm²). Using a solder cap tape connector is recommended.
 - Be sure the wires do not touch other signal wires or connector case when they are not used.

<Cable Diagram 2>

- When connecting GP2000H to PLC with GP2000H-C422-3M (3m) or GP2000H-C422-10M (10m)

GP2000H



Serial I/F

No.	Signal Name	Description	Wire Color
8	SG	Signal Ground	Gray
13	RDA	Received Data A (RS-422)	White
15	SDA	Send Data A (RS-422)	Yellow
16	SDB	Send Data B (RS-422)	Green
14	RDB	Received Data B (RS-422)	Black
18	CSB	Clear Send B (RS-422)	Blue
20	ERB	Enable Receive B (RS-422)	Orange
17	CSA	Clear Send A (RS-422)	Red
19	ERA	Enable Receive A (RS-422)	Red

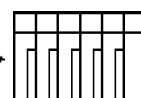
DC24V I/F

No.	Signal Name	Description	Wire Color
1	DC24V	+24V	Black/Green
2	0V	0V	Red/Green
3	FG	Frame Ground	Shield

GP series other than
Handy Type GP Pin No.

Dsub25P
1 ^{*1}
7
10
11
15
16
18
19
21
22

PLC



*2

*1 Connect the cable's outer shield to Pin 1.

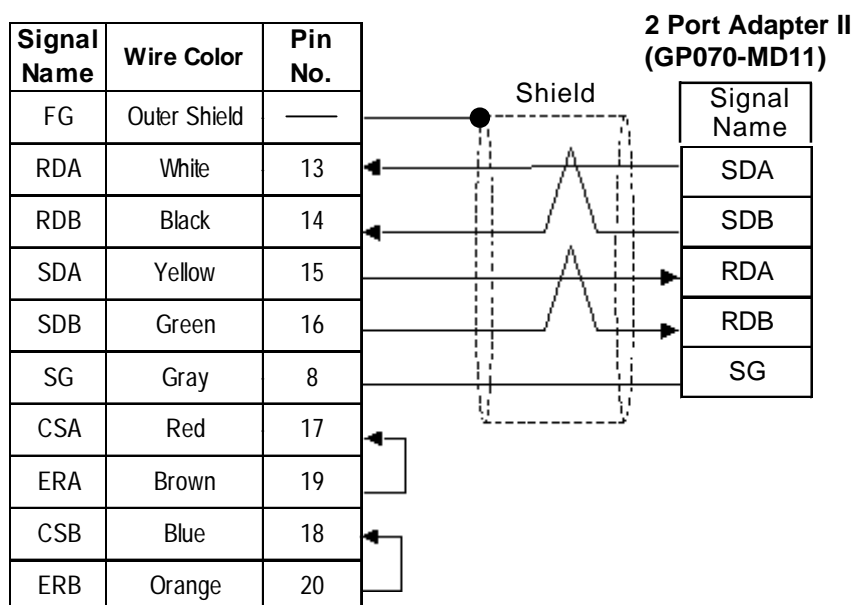
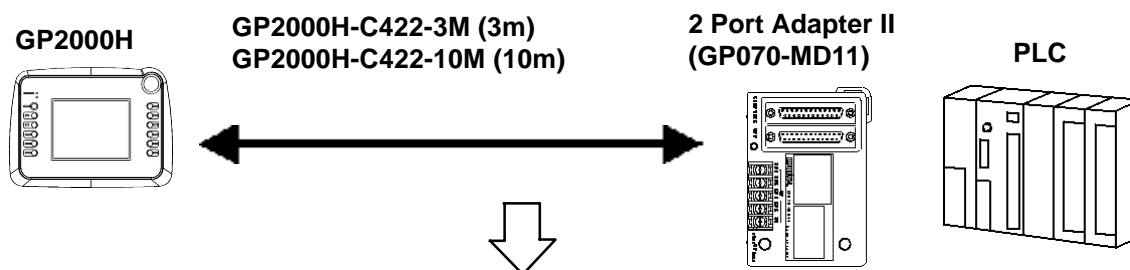
*2 Refer to the cable diagrams in **Chapter 2 PLC-GP Connection**.



- Note:**
- The wiring arrangement shown above cannot be used with the RS-232C cable's Conversion Adapter.
 - To connect the Conversion Adapter, the wiring diagram in the GP2000H's RS-232 Conversion Adapter's Operation Instructions manual must be used.
 - The customer will need to perform this cable's PLC connector wiring. The wires used for this cable are AWG 28 (dia.=0.3mm/area-0.08mm²). Using a solder cap tape connector is recommended.
 - Be sure these wires do not touch other signal wires or the connector case when they are not used.

<Cable Diagram 3>

- When connecting GP2000H to 2 Port Adapter II (GP070-MD11) with GP2000H-C422-3M (3m) or GP2000H-C422-10M (10m)



[GP2000H series]

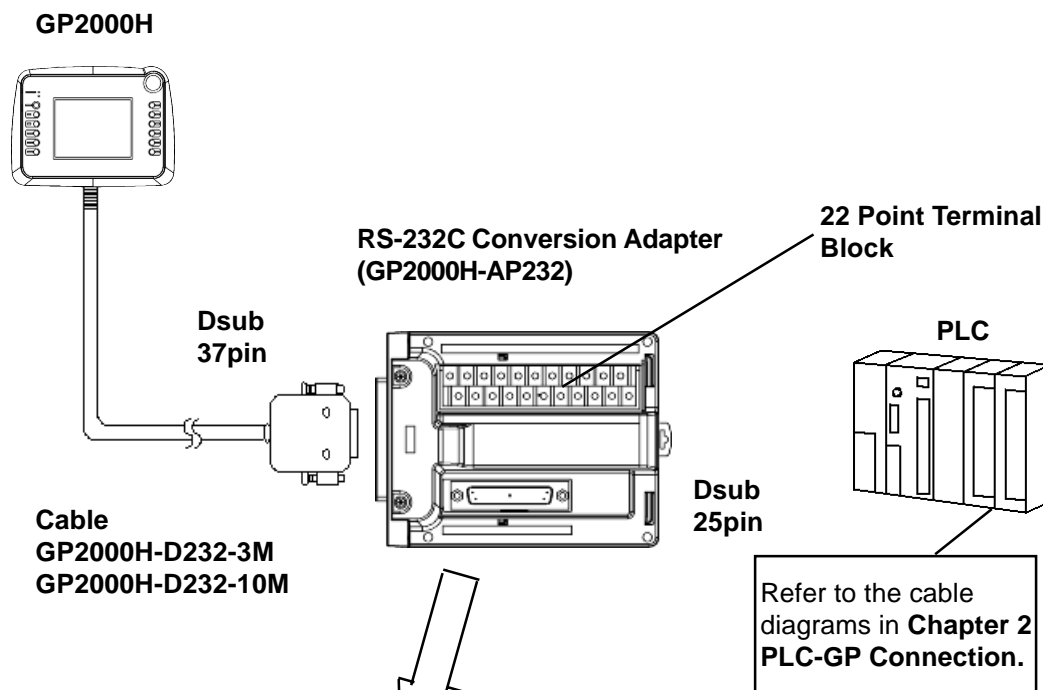
Pin numbers shown here represent the GP2000H unit's connection pins.



- Select "Adapter+GPH" via "Adapter Mode/ CPU Direct Mode" on GP's offline screen.
- Be sure the wires do not touch other signal wires or connector case when they are not used.

<Cable Diagram 4>

- When connecting GP2000H to PLC with RS-232C Conversion Adapter (GP2000H-AP232) with GP2000H-D232-3M (3m) or GP2000H-D232-10M (10m)



Dsub Connector

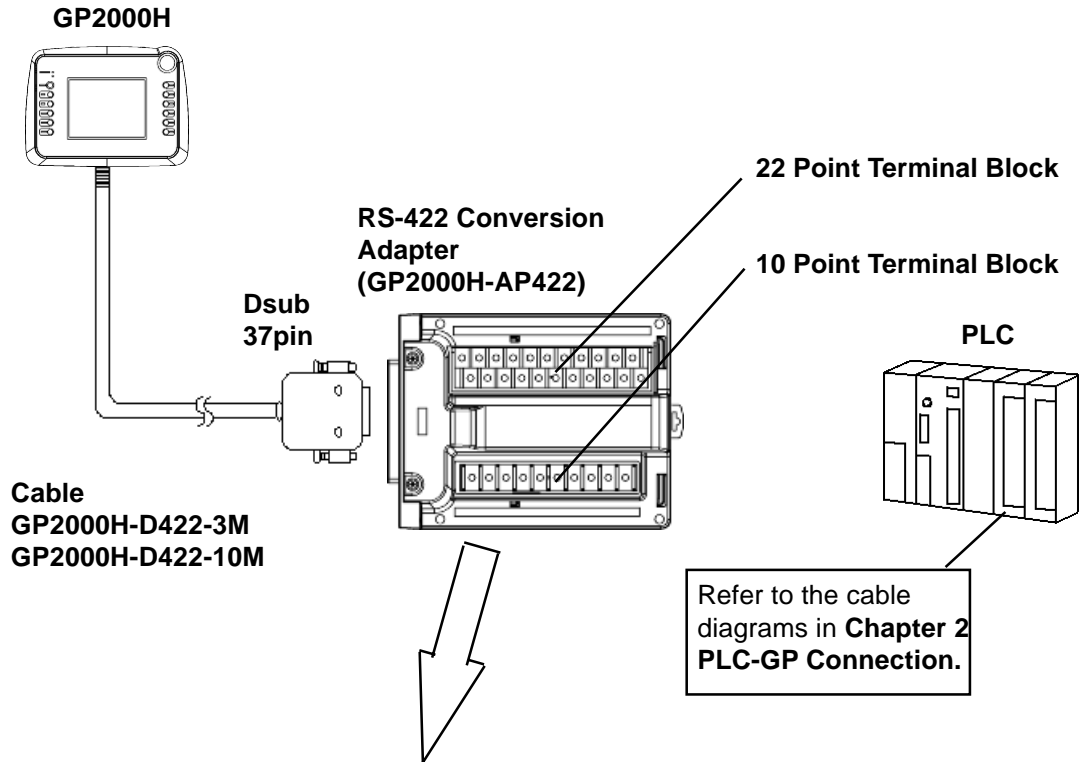
Pin No.	Signal Name
1	FG
2	SD
3	RD
4	RS
5	CS
7	SG
8	CD
14	+5V(out)
20	ER

22 Point Terminal Block

Pin No.	Signal Name(Drawing Name)
1	DOUT0.C (DO0)
2	Reserved
3	DOUT1.C (D01)
4	Reserved
5	OP.C (OP)
6	OP.GND (OPG)
7	BUZZ OUT (BZ)
8	DOUT.GND (DOG)
9	EMG0A (EM0A)
10	EMG0B (EM0B)
11	EMG1A (EM1A)
12	EMG1B (EM1B)
13	EMG2A (EM2A)
14	EMG2B (EM2B)
15	ENB0A (EN0A)
16	ENB0B (EN0B)
17	ENB1A (EN1A)
18	ENB1B (EN1B)
19	+24V (+24V)
20	0V (0V)
21	NC (NC)
22	FG (FG)

<Cable Diagram 5>

- When connecting GP2000H to PLC via RS-422 Conversion Adapter (GP2000H-AP422) with GP2000H-D422-3M (3m) or GP2000H-D422-10M (10m)



10 Point Terminal Block

Pin No.	Signal Name
1	FG
2	SG
3	SDB
4	SDA
5	RDB
6	RDA
7	CSA
8	ERA
9	CSB
10	ERB

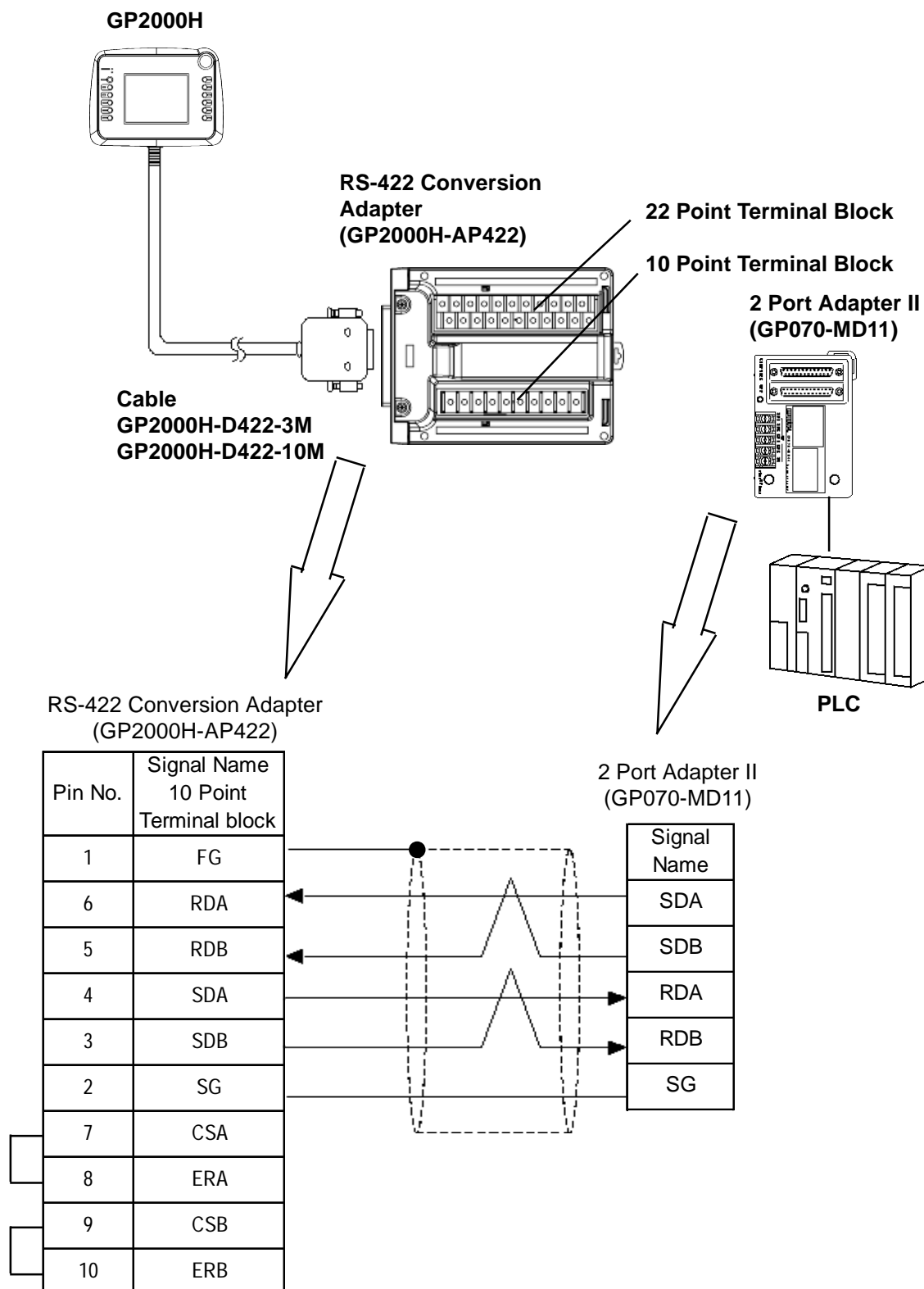
* Pin Nos. 7 and 8; Nos. 9 and 10 are respectively shorted with connecting board. When it is not necessary to short on your PLC, remove the connecting board.

22 Point Terminal Block

Pin No.	Signal Name(Drawing Name)
1	DOUT0.C (D00)
2	Reserved
3	DOUT1.C (D01)
4	Reserved
5	OP.C (OP)
6	OP.GND (OPG)
7	BUZZ OUT (BZ)
8	DOUT.GND (DOG)
9	EMG0A (EM0A)
10	EMG0B (EM0B)
11	EMG1A (EM1A)
12	EMG1B (EM1B)
13	EMG2A (EM2A)
14	EMG2B (EM2B)
15	ENB0A (EN0A)
16	ENB0B (EN0B)
17	ENB1A (EN1A)
18	ENB1B (EN1B)
19	+24V (+24V)
20	0V (0V)
21	NC (NC)
22	FG (FG)

<Cable Diagram 6>

- When connecting GP2000H to PLC via RS-422 Conversion Adapter (GP2000H-AP422) and 2 Port Adapter II with GP2000H-D422-3M (3m) or GP2000H-D422-10M (10m)



* Pins CSA and ERA; CSB and ERB are respectively shorted with connecting board