

# **GP2000H Series Special Purpose RS-422 Cable for GP-H70 Conversion Adapter (GP2000H-AP70CB-D422-3M) Installation Guide**

Thank you for purchasing Pro-face's GP2000H Series Special Purpose RS-422 Cable for GP-H70 Conversion Adapter, hereafter referred to as the "cable"

This product is designed to provide an RS-422 type connection to the GP-H70 Series RS-422 Conversion Adapter.

Please confirm that the following items are included in the cable's package.

- Installation Guide (This manual)
- GP2000H Series Special Purpose RS-422 Cable for GP-H70 Conversion Adapter (length: 3m [9.84ft.])

Prior to using this cable, please be sure to read this manual completely.

## **Safety Precautions**

### **WARNINGS**

- Prior to connecting the cable, check that the GP2000H's power supply is completely turned OFF to prevent an electric shock.
- Do not modify the cable, since it may lead to a fire or electric shock.
- This cable is not appropriate for use with aircraft control devices, aerospace equipment, central trunk data transmission (communication) devices, nuclear power control devices, or medical life support equipment, due to these devices inherent requirements of extremely high levels of safety and reliability.
- When using this cable with transportation vehicles (trains, cars and ships), disaster and crime prevention devices, various types of safety equipment, non-life support related medical devices, etc. redundant and/or failsafe system designs should be used to ensure the proper degree of reliability and safety.



- **Since the GP2000H unit's cable combines power and signal wires, there is a possibility of excessive noise effecting the unit's communication with the External Device/PLC. To reduce the chance of this occurring, be sure to attach noise reduction devices to the External Device/PLC.**
- **While this cable is designed for use only with GP2000H Series units, the earlier GP-H70 Series unit's Conversion Adapter can also be used.**



- **If this cable is connected to Digital's GP-H70 Series RS-422 Conversion Adapter (separately sold), the Conversion Adapter's terminal block can be used to connect a PLC or for other wiring (for external output or for power).**

**GP-H70 Series Conversion Adapter Model No.:GPH70-AP422-O**

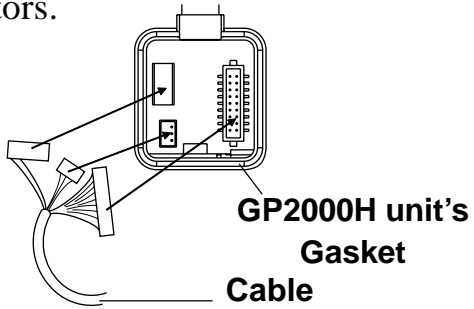
- **When the GP-H70 series Conversion Adaptor is used, the GP2000H Series unit must be set to "GP-H70 Compatible" mode.**

**▼Reference▲ GP2000H Series User Manual**

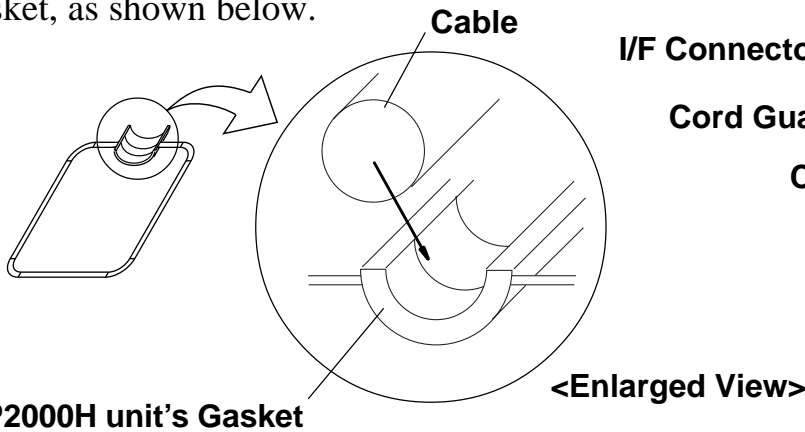
## <Wiring the RS-422 Dsub Cable>

Be sure to confirm the power supply is OFF prior to attaching this cable.

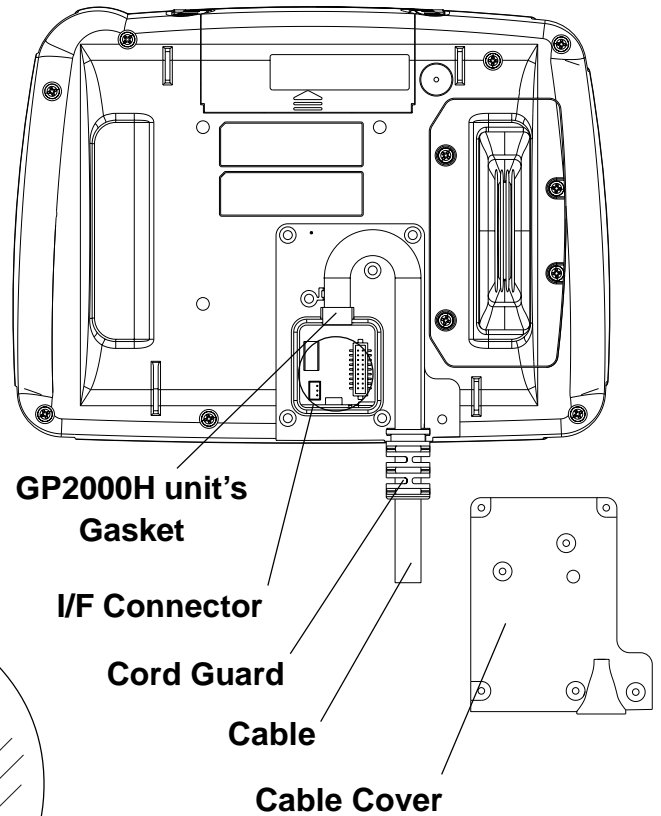
- 1) Unscrew the GP2000H unit's seven (7) rear face attachment screws and remove the Cable Cover.
- 2) Connect this cable's three (3) connectors to the corresponding GP2000H I/F connectors.



- 3) Attach the GP2000H unit's Installation Gasket, as shown below.

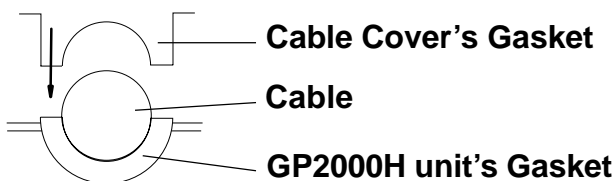


### <GP2000H unit's Rear Face>



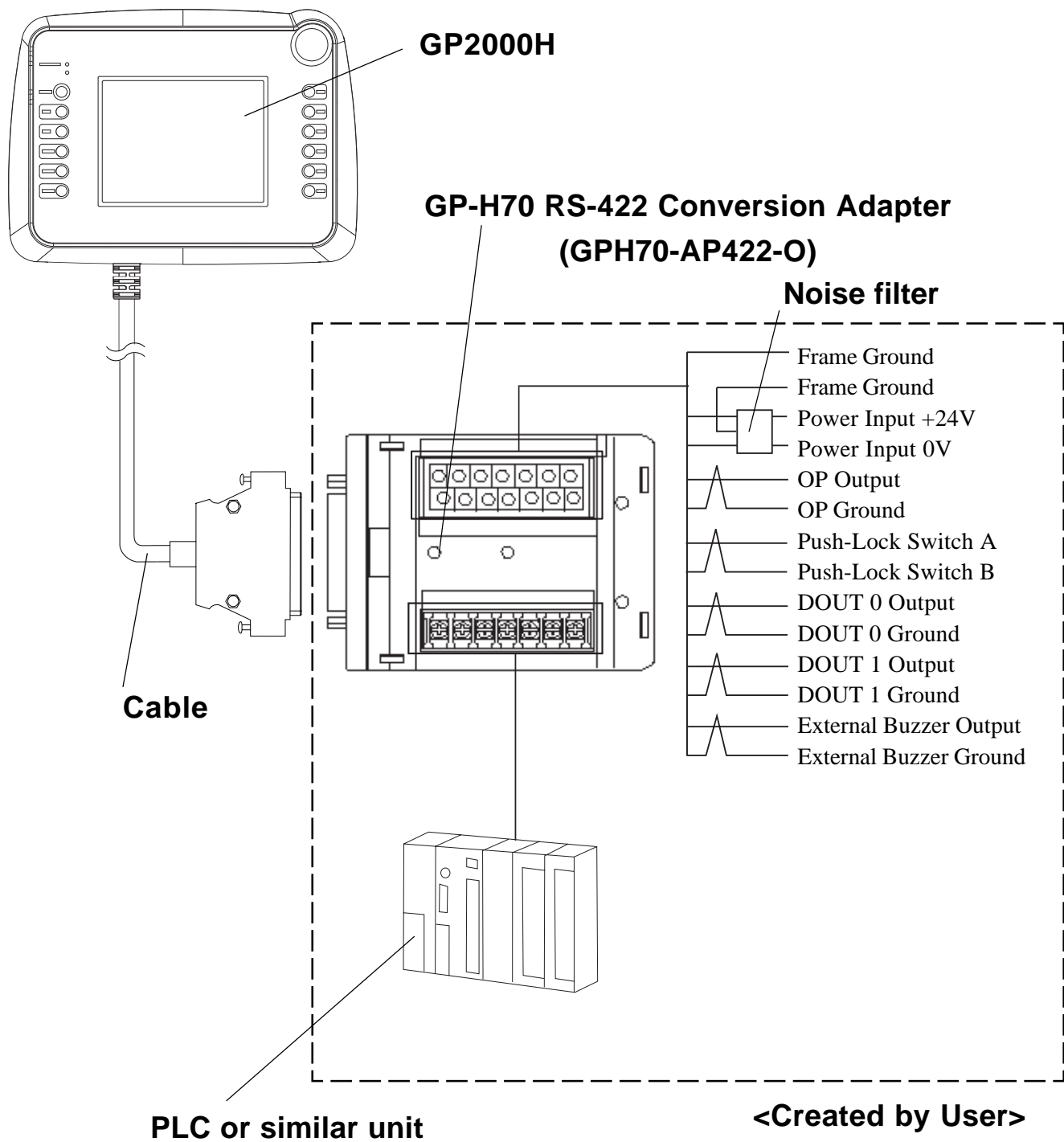
- 4) Bend the cable to fit the GP2000H unit's cable channel, and adjust the cord guard so that it fits securely into the GP2000H plastic case's notch. (see above)
- 5) Replace the Cable Cover and secure all seven (7) attachment screws in place. Recommended screw torque is 0.5 to 0.6N•m.

Be sure the Installation Gasket is fitted securely around the cable, as shown below.



**Be sure the Installation Gasket and the Cable Cover are both securely attached. If they are not, the unit's specified protection level cannot be guaranteed.**

# <Cable Connection Example>



## <Cable Connector Information>

### Dsub 25-pin Connector Data

Pin No.	Signal Name	Description
1	FG	Frame Ground
2	SDB	Send Data B
3	RDB	Receive Data B
4	TRMX	Termination
5	CSA	Clear to Send A
6	ERA	Enable to Receive A
7	DOUT0.GND	DOUT 0 Ground
8	DOUT1.GND	DOUT 1 Ground
9	OP.GND	OP Ground
10	BUZZ GND	External Buzzer Ground
11	EMG B	Push-Lock Switch B
12	0V	Power Input 0V (to GP2000H)
13	NC	Not Connected
14	SG	Signal Ground
15	SDA	Send Data A
16	RDA	Receive Data A
17	CSB	Clear to Send B
18	ERB	Enable to Receive B
19	+5V	DC +5V Output (from GP2000H) <sup>*1</sup>
20	DOUT0.C	DOUT 0 Output
21	DOUT1.C	DOUT 1 Output
22	OP.C	OP Output
23	BUZZ OUT	External Buzzer Output
24	EMG A	Push-Lock Switch A
25	+24V	Power Input +24V (to GP2000H)

\*1 When connected to the GP2000H, the power used should be a maximum of 0.25A. Be sure to not exceed this level.

ConnectorType : Dsub 25-pin plug XM2A-2501 <made by OMRON Corp.>

CoverType : Dsub 25-pin cover XM2S-2511 <made by OMRON Corp.>



- **Pin #19 DC+5V Output is not protected. To prevent damage or unit malfunction, use only the designated level of current.**  
**When this pin is not used, be sure that it does not contact any other wires or metal. If touched, a short could occur that could cause the GP2000H to break down or malfunction.**
- **Be sure to connect Pin #14 (SG) to the SG terminal of your Host (External Device/PLC). If this is not done, the GP2000H circuit may be damaged.**



- **The GP-H70 series RS-422 conversion adapter (GPH70-AP422-O) can be connected to this cable.**
- **When this cable is connected to a GP2000H series unit, pin #7 (DOUT0.GND) and pin #8 (DOUT1.GND) are shorted together.**

### **Note**

Please be aware that Digital Electronics Corporation shall not be held liable by the user for any damages, losses, or third party claims arising from the uses of this product.

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