



## WARNINGS

- When connecting the GP37W2-BG41-24V(hereafter referred to as the "GP")'s power cord terminals to the power terminal block, check first that the GP power supply is completely turned OFF, via a breaker, or similar unit.
- Do not use power beyond the GP's specified voltage range. Doing so may cause a fire or an electric shock.
- Do not modify the GP's design, since it may lead to a fire or an electric shock.
- Do not use the GP in an environment where flammable gases are present, since operating the GP may cause an explosion.
- If the GP's lithium battery\*1 is incorrectly replaced (i.e. its + and – sides are reversed), it may explode. Therefore, please contact your local GP distributor prior to changing the battery.
- Do not use GP touch panel switches in life-threatening or important disaster prevention situations. For safety related switches, such as an emergency stop switch, be sure to use a separate mechanical switch.
- To prevent operator injury or machine damage, be sure to design your system so that machinery will not malfunction due to a communication fault between the GP and its host controller.
- The GP 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 the GP with transportation vehicles (trains, cars and ships), disaster and crime prevention devices, various types of safety equipment, non-life support re-lated medical devices, etc. redundant and/or failsafe system designs should be used to ensure the proper degree of reliability and safety.

### GP Usage Cautions

- *To prevent touch panel damage, do not strike the panel face with a hard or heavy object, or push hard on the panel face.*
- *Do not install the GP where the temperature will exceed its specified range.*
- *Do not allow water, liquids or metal particles to enter the GP. Any of these can lead to a malfunction or short circuit.*
- *Avoid installing the GP where sudden, large changes in temperature may occur. These changes may cause condensation to form inside the unit, possibly causing the GP to malfunction.*
- *Do not install the GP where its ventilation holes may be blocked. If these holes are blocked, excessive heat will build up inside the GP.*
- *Do not install or store the GP :*
  - *Where high levels of dust exist or in direct sunlight.*
  - *Where either strong shocks or excessive vibration may occur.*
  - *Where chemicals or chemical fumes are present.*
  - *Near high temperature equipment.*
- *Do not use paint thinner or organic solvents to clean the GP's case or screen.*
- *Be sure to back up all GP data regularly.*
- *After turning the GP OFF, be sure to wait a few seconds before turning it ON again. If the GP is re-started too quickly, it may not start up correctly.*

# UL/c-UL (CSA) Application Notes

The GP37W2-BG41-24V is a UL/c-UL (CSA) recognized product. (UL File No. E177793.)

**This unit conforms as a component to the following standards:**

■ **UL 1950, Third Edition, dated July 26,1995**

(Standard for Safety of Information Technology Equipment, including Electrical Business Equipment)

◆ **CAN/CSA-C22.2, No.950-95**

(Standard for Safety of Information Technology Equipment, including Electrical Business Equipment)

**GP37W2-BG41-24V (UL Registration Model: 2880052-01)**

- The GP-37W2B must be used as a built-in component of an end-use product.
- Machinery which has a GP-37W2B installed in it requires UL/c-UL inspection for the combination of this unit and the machinery.
- If the GP-37W2B is mounted so as to cool itself naturally, be sure to install it in a vertical panel. Also, be sure the unit is installed so that it is at least 100mm (3.94 in.) away from any adjacent structures or devices. If these requirements are not met, the heat generated by the GP's internal components may cause the unit to fail to meet UL/c-UL standard requirements.

## CE Marking

The GP37W2-BG41-24V is CE marked products that conform to EMC directives EN55011 class A and EN50082-2.

For detailed CE marking information, please contact your local GP distributor.

# CNS Application Notes

The GP37W2-BG41-24V complies with the following CNS recognized standard.

■ CNS 13438 (Class A device)

警告使用者：

這是甲類的資訊產品、在居住的環境中使用時、可能會造成射頻干擾、在這種情況下、使用者會被要求採取某些適當的對策。

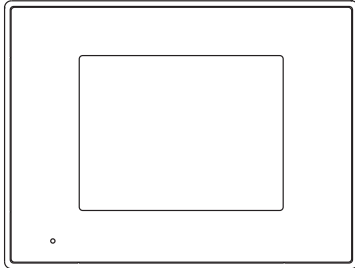
The GP is an Industrial Device (Class A Device). Use of this device in a home may cause radio wave interference with nearby devices. If interference does occur, please try a variety of countermeasures to solve the problem.

# Package Contents

The following items are included in the GP's package. Before using the GP, please confirm that all items shown here are present.

■ GP Unit (1)

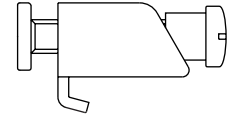
(GP37W2-BG41-24V)



■ Installation Guide (1)



■ Installation Fasteners (4)

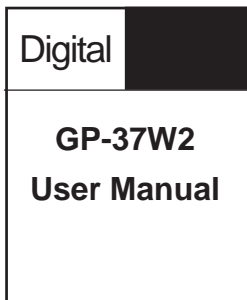


This unit has been carefully packed, with special attention to quality. However, should you find anything damaged or missing, please contact your local GP distributor immediately.

# GP Options (Made by Digital)

■ GP-37W2 User Manual

(sold separately)



■ Cables

■ Adapters

■ Screen editor software, etc.

GP37W2-MM01-ENG (English)

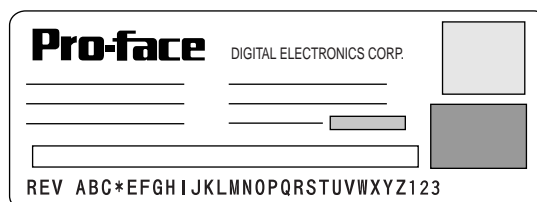
GP37W2-MM01 (Japanese)

For more information about these optional items, please refer to individual GP catalogues.

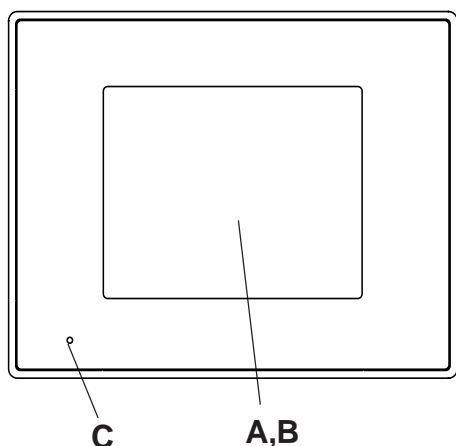
# Revision Information

Revision information can be found on your GP unit's rear-face Pro-face label. The bottom-most [REV] row's asterisk (\*) mark indicates the Revision character.

In the example shown below, the asterisk indicates that this unit's Revision character is "D".



# 1 Parts Names and Functions



## A: Display

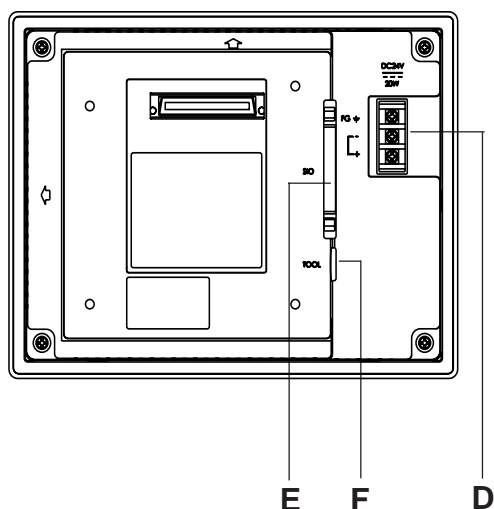
Displays User-created screens and host (PLC) data. GP37W2-BG41-24V Blue mode LCD

## B: Touch Panel

Performs screen change operations and sends data to the host (PLC).

## C: Power Lamp

Lights when the power cord is connected. (Green LED)



## D: Power Input Terminal Block

Connects the GP power cable's input and ground wires to the GP.

## E. Serial Interface

Connects an RS-232C or RS-422 (Serial) cable (from the host/PLC) to the GP.

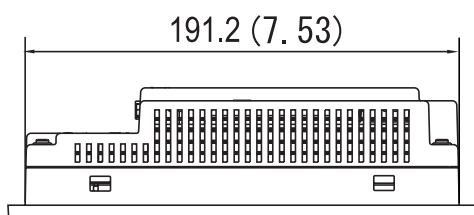
## F: Tool Connector

Connects the Data Transfer Cable, or a Bar Code Reader to the GP.

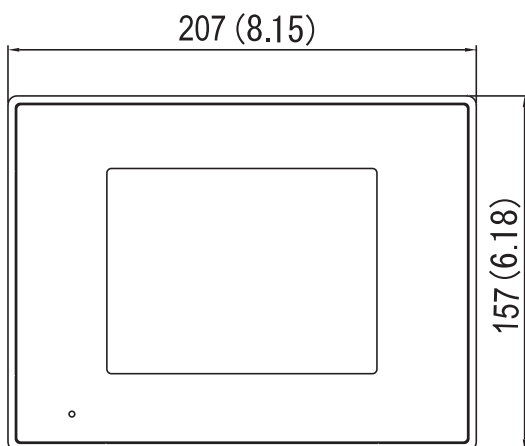
# 2 Dimensions

Unit: mm (in.)

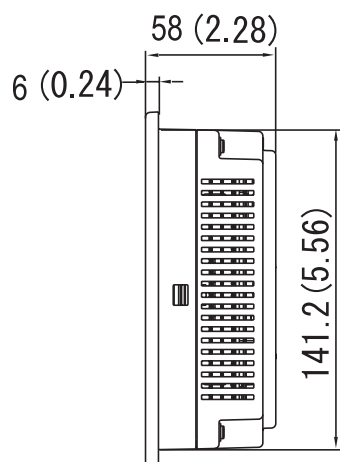
## Top View



## Front View



## Side View



### 3 Serial Interface

This interface is used to connect the GP to the host (PLC), via either an RS-232C or RS-422 cable.

	Pin #	Signal Name	Meaning
	1	FG	Frame Ground
	2	SD	Send Data (RS-232C)
	3	RD	Receive Data (RS-232C)
	4	RS	Request to Send (RS-232C)
	5	CS	Clear to Send (RS-232C)
	6	NC	No Connection
	7	SG	Signal Ground
	8	CD	Carrier Detect (RS-232C)
	9	TRMX	Termination (RS-422)
	10	RDA	Receive Data A (RS-422)
	11	SDA	Send Data A (RS-422)
	12	NC	No Connection
	13	NC	No Connection
	14	VCC	5V Output 0.25A
	15	SDB	Send Data B (RS-422)
	16	RDB	Receive Data B (RS-422)
	17	NC	No Connection
	18	CSB	Clear to Send B (RS-422)
	19	ERB	Enable Receive B (RS-422)
	20	ER	Enable Receive (RS-232C)
	21	CSA	Clear to Send A (RS-422)
	22	ERA	Enable Receive A (RS-422)
	23	BUZZ GND	External Buzzer Ground
	24	NC	No Connection
	25	BUZZ OUT	External Buzzer Output

Recommended Connector: Dsub 25 pin plug

XM2A-2501 <made by OMRON Corp.>

Recommended Cover: Dsub 25 pin Cover

XM2S-2511 <made by OMRON Corp.>

Jack Screw

XM2Z-0071 <made by OMRON Corp.>



**Note:** Use rough metric type M2.6 x 0.45p threads to hold the cable's set (fastening) screws in place.

**Recommended Cable:** CO-MA-VV-SB5P x 28AWG <made by HITACHI Cable>



- **The GP's RS-485(RS-422) port is not isolated, therefore, be sure to connect pin #7 (SG terminal) to the other unit's signal ground terminal. If this is not done, the RS-485(RS-422) circuit may be damaged.**
- **Since pin #14 (VCC) is not protected, be sure to use it only within its rated range.**



When making a cable, please be aware of the following:

<For RS-232C >

- Do not connect #9 (TRMX), #10 (RDA), #11 (SDA), #15 (SDB), #16 (RDB), #18(CSB), #19 (ERB), #21 (CSA), and #22 (ERA).

<For RS-422 >

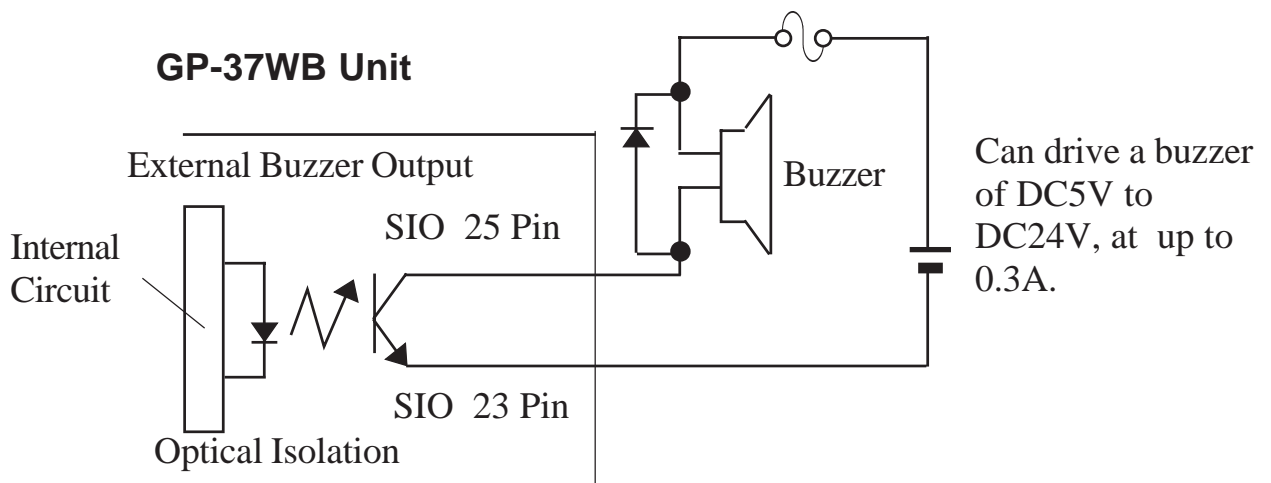
- The following pairs of pin numbers must be connected (shorted):
  - #18(CSB) <-> #19 (ERB)
  - #21(CSA) <-> #22 (ERA)
- Connecting the #9 (TRMX) and #10 (RDA) wires adds a termination resistance of 100Ω between RDA and RDB.
- Use a 4-wire cable when the PLC type is Memory Link and the cable is RS-422.

<External Buzzer Output>

- Use pins 23(BUZZ GND) and 25(BUZZ OUT) when producing external output for an alarm.

This output circuit does not contain fuses. If used, Pro-face recommends the design of an external safety circuit. (GP units Revision P or later)

**Reference** To confirm your GP unit's Revision, refer to "Revision Information".



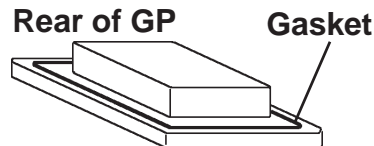
## 4 Installation

### ■ Confirm the Installation Gasket's Positioning

It is strongly recommended that you use the gasket since it absorbs vibration in addition to repelling water.

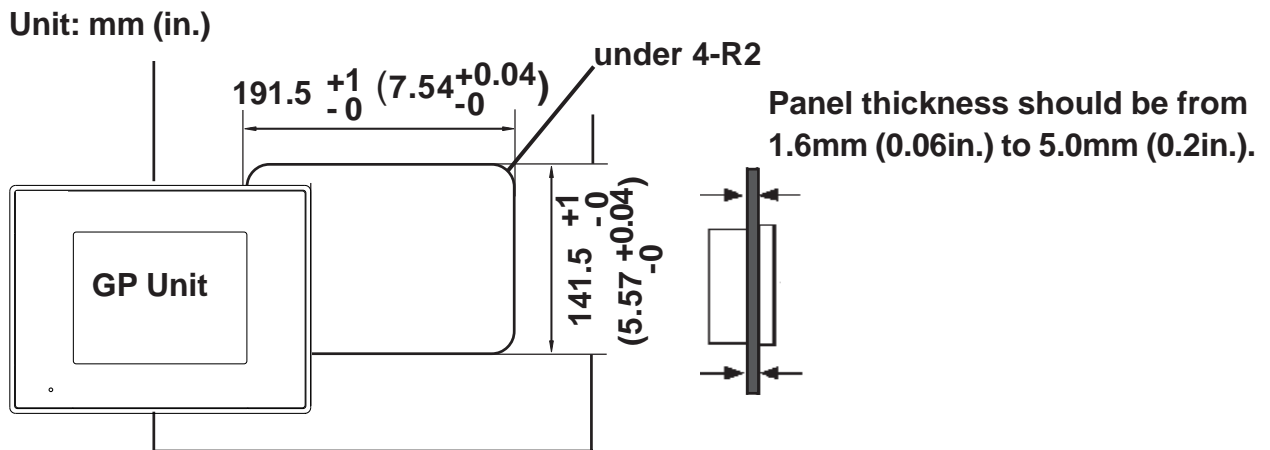


**Prior to installing the GP in its metal panel, place the unit on a level surface with the display panel facing downward and check that the installation gasket is securely attached to the back of the unit.**



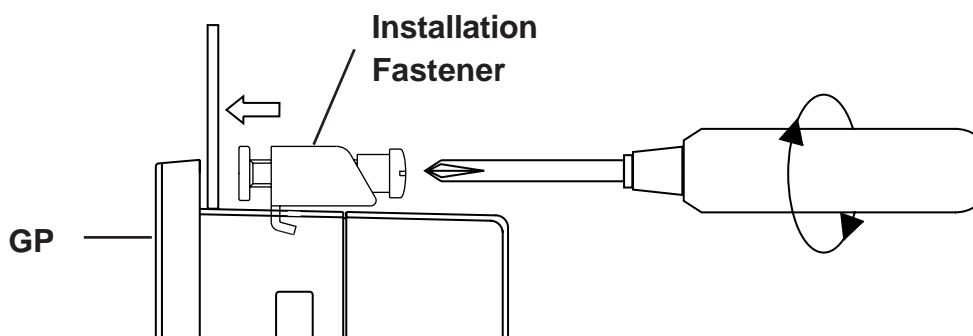
### ■ Cut a hole in the metal panel according to the dimensions given below

Insert the GP into the panel from the front of the panel.



### ■ Attach the GP's Installation Fasteners from inside the panel

The following figures show the four (4) insertion slot locations of the fasteners. Insert each fastener's hook into the slot and tighten it with a screwdriver.



**Tightening the fastener screws with too much force can damage the GP's case. The torque necessary to ensure a sufficient seal is 0.5 to 0.6N•m.**



## 5 Wiring

### WARNINGS

- **To avoid an electric shock, check first that the GP's power supply is completely turned OFF, via a breaker, or similar unit when connecting the GP power cord terminals to the power terminal block.**
- GP-37W2B Series units are designed to use only DC24V input. Any other power level can damage both the GP and the power supply.
- The GP-37W2B is not equipped with a power switch, therefore, you need to use a breaker switch.



- *When connecting a wire to the GP's FG terminal, be sure the wire is grounded. Not grounding the wire will result in excessive noise.*



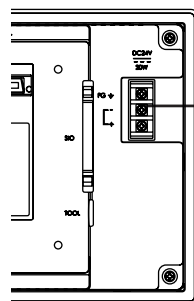
- *To avoid a short caused by loose ring terminals, be sure to use ring terminals with an insulating sleeve.*
- *Wherever possible, use thick wires (max. 2 mm<sup>2</sup>) for power terminals, and twist the wire ends before attaching the ring terminals.*
- *Be sure to use the following size ring terminals.\*1*

Under  
6.0mm (0.24in.)

Over  $\phi$  3.2mm (0.13in.)

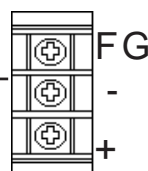


Rear of GP

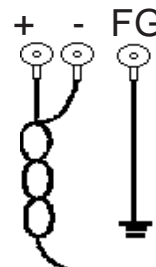


Power Input

Terminal Block



Ring Terminals\*1



\*1 Suggested Ring Terminal: V2-MS3 (made by JST Co.)

## ■ Connecting the GP's Power Cord

When connecting the power cord, be sure to follow the procedures given below.

1. Confirm that the GP's Power Cord is unplugged from the power supply.
2. Use a screwdriver to remove the Power Input Terminal Block's clear plastic cover.
3. Unscrew the screws from the middle three (3) terminals, align the Ring Terminals and reattach the screws.
4. Confirm that the wires are connected correctly.
5. Replace the Power Input Terminal Block's clear plastic cover.



The torque required for fastening the screws is 0.5 to 0.6N•m.

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## 6 Grounding Precaution

When attaching a wire to the GP's rear face FG terminal, (on the Power Input Terminal Block), be sure to create an exclusive ground.\*<sup>1</sup>

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## 7 Input/Output Signal Line Precautions

- All GP Input and Output signal lines must be separated from all operating circuit (power) cables.
- If this is not possible, use a shielded cable and ground the shield.

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## 8 Maintenance and Inspection

When the surface or the frame of the display gets dirty, soak a soft cloth in water with a neutral detergent, wring the cloth tightly, and wipe the display.



- Do not use paint thinner, organic solvents, or strong acid compound to clean the unit.
- Do not use hard or pointed objects to operate the touch-screen panel, since it can damage the panel surface.

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\*<sup>1</sup> Use a grounding resistance of 100Ω, a wire of 2mm<sup>2</sup> or thicker, or your country's applicable standard.