

# **Bus Conversion Unit (PSM-CONV00) Installation Guide**

Thank you for purchasing Digital's Bus Conversion Unit (PSM-CONV00), hereafter referred to as the "Unit". This Unit is designed to be attached to the rear face of a GP2000 Series, GLC2000 Series or PS Series unit (hereafter collectively referred to as the "GP"). Then, either a GP77R Series or a GLC100 Series middle-sized expansion unit is attached to the outside face of this converter.

This manual provides an overview of this Unit, as well as procedures to follow when installing it in the User's system. Be sure to read all this important information carefully prior to using this Unit.

This product is CE marked and UL/c-UL(CSA) compliant. Therefore, be aware that when it is used in combination with a product that is not CE marked and UL/c-UL(CSA) compliant, this product will lose its conformance with these standards.

# Safety Precautions

This guide includes information that must be followed to ensure the correct and safe use of this product. Be sure to read both this guide and any related manuals to thoroughly understand the correct operation and functions of both the Bus Conversion Unit and the GP units.

## ■ Usage of Safety Icons

Throughout this manual the following icons are shown near procedures requiring special attention to safety. The information given below these icons contains essential safety information.

The following examples explain the meaning of each safety icon:



Indicates situations where severe bodily injury, death or major machine damage can occur.



Indicates situations where slight bodily injury or machine damage can occur.

## WARNINGS

- When attaching this unit to a GP unit, make sure that the GP's power cord is not connected to the main power (constant), to prevent an electric shock.
- Do not modify this Unit in any way, since an electric shock or fire may occur.
- Do not use this Unit in areas where flammable gas is present, since an explosion may occur.
- Do not allow water, liquid or metallic objects to enter into the Unit, since they can cause either a malfunction or an electric shock.

### To prevent this unit from malfunctioning :

- Be sure the Unit is operated in an environment that is within the unit's designated temperature range.
- Do not operate or store this unit in an environment where it will be exposed to high temperatures.
- Do not operate or store this unit in an environment where it will be exposed to direct sunlight or excessive amounts of dust.
- Since this unit is a precision instrument, do not install it where strong impacts or vibration will occur.
- Do not operate or store this unit in an environment where it may be exposed to chemical vapors or fumes.

# UL/c-UL (CSA) Application Notes

The PSM-CONV00 is a UL/c-UL listed product. (UL file No.E182139)

This unit conforms as a product to the following standards:

- **UL508**

Industrial Control Equipment

- **UL1604**

Electrical Equipment for use in Class I and II, Division 2, and Class III Hazardous (Classified) Locations.

- **CAN/CSA-C22.2, Nos. 142, and 213-M1987**

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

## **PSM-CONV00 (UL Registration Model: 2980020-03)**

UL1604 Conditions of Acceptability and Handling Cautions:

1. Power, input and output (I/O) wiring must be in accordance with Class I, Division 2 wiring methods - Article 501- 4(b) of the National Electrical Code, NFPA 70 within the United States, and in accordance with Section 18-152 of the Canadian Electrical Code for units installed within Canada.
2. Suitable for use in Class I, Division 2, Groups A, B, C and D, Hazardous Locations.
3. **WARNING:** Explosion hazard - substitution of components may impair suitability for Class I, Division 2.
4. **WARNING:** Explosion hazard - when in hazardous locations, turn power OFF before replacing or wiring modules.
5. **WARNING:** Explosion hazard - do not disconnect equipment unless power has been switched OFF, or the area is known to be non-hazardous.

# CE Marking Notes

The PSM-CONV00 is a CE marked <sup>\*1</sup> product that conforms to EMC directives EN55011 Class A and EN61000-6-2.

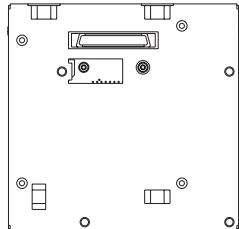
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*\*1 For detailed CE marking information, please contact your local GP distributor.*

# Package Contents

The following items are included in the Unit's package. Prior to using the Unit, be sure to confirm that all the items shown below are present.

■ **Bus Conversion Unit ( 1 )**  
**( PSM-CONV00 )**



■ **Bus Conversion Unit**  
**Installation Guide ( 1 )**  
**( this document )**

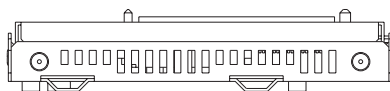
■ **Attachment Screws ( 4 )**

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

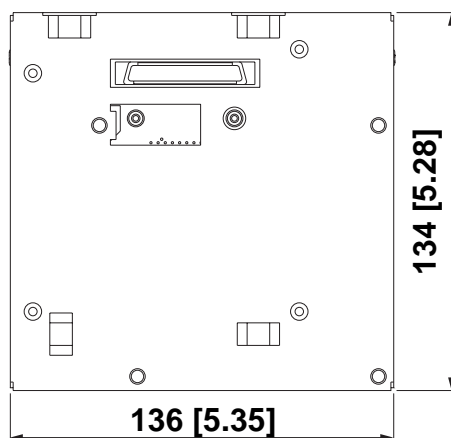
## 1 External Drawings and Dimensions

The Bus Conversion Unit's external drawings and dimensions are given below.

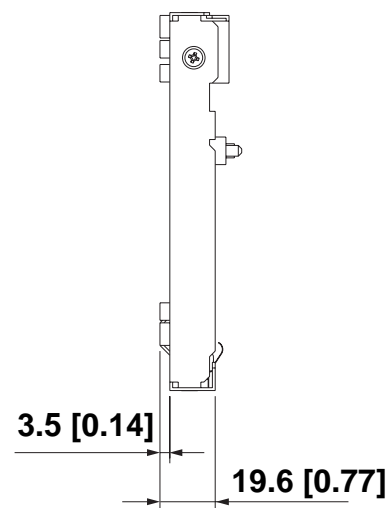
**Unit: mm [in.]**



**Top**



**Front**



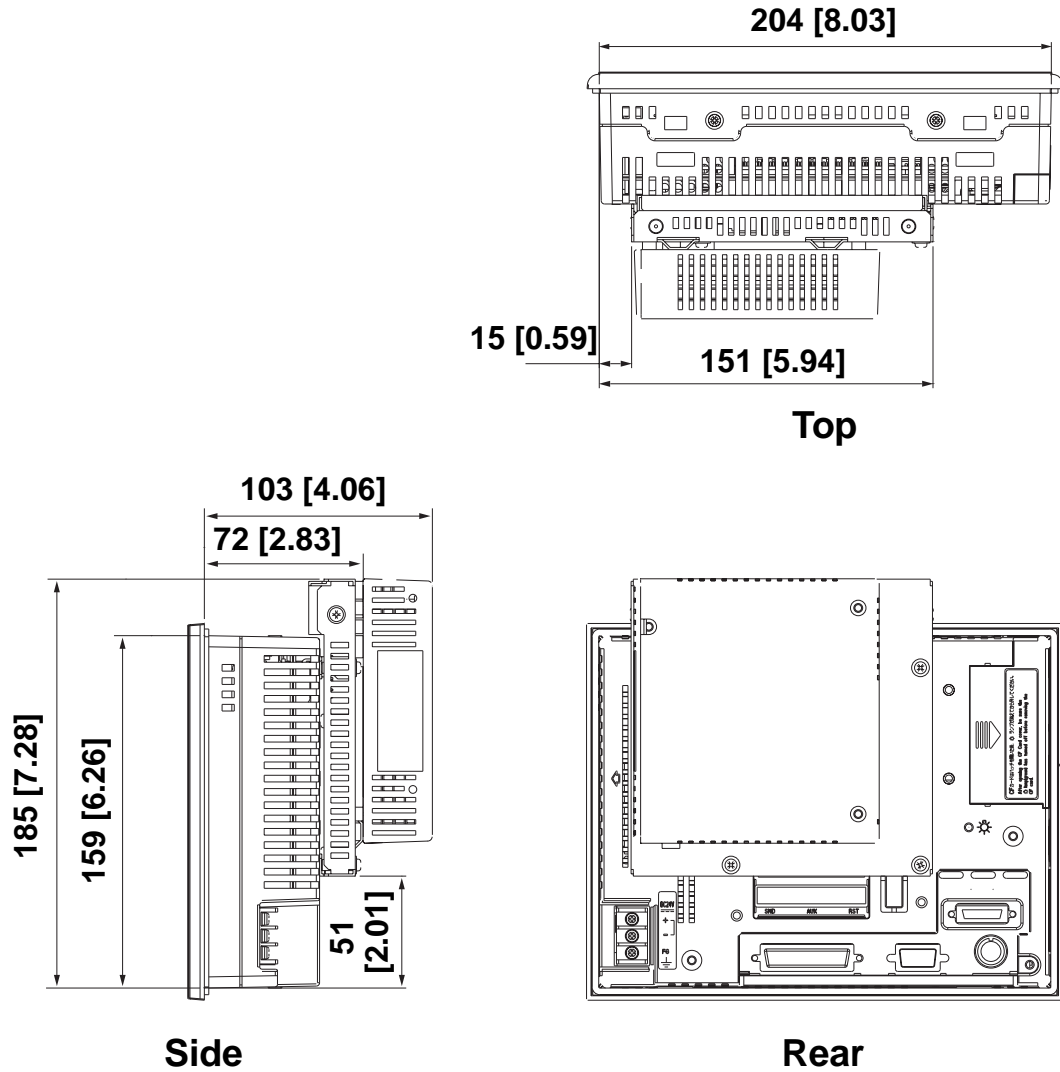
**Side**

## ■ Expansion Unit Installation Drawings

The following drawings show a Bus Conversion Unit and an Expansion Unit attached to the GP.

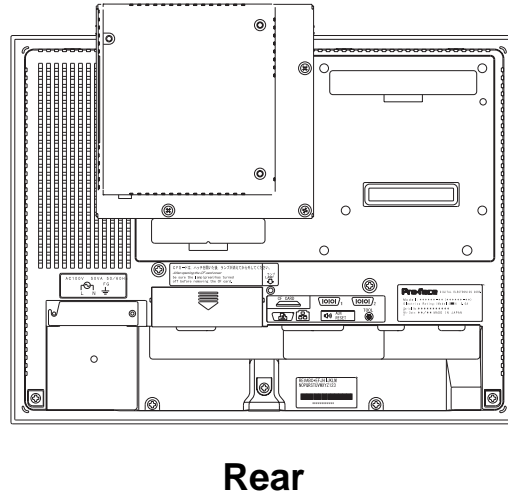
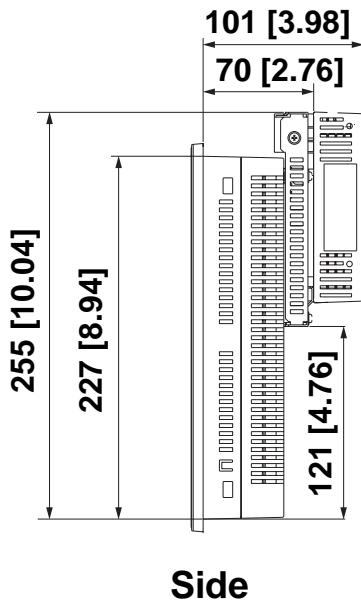
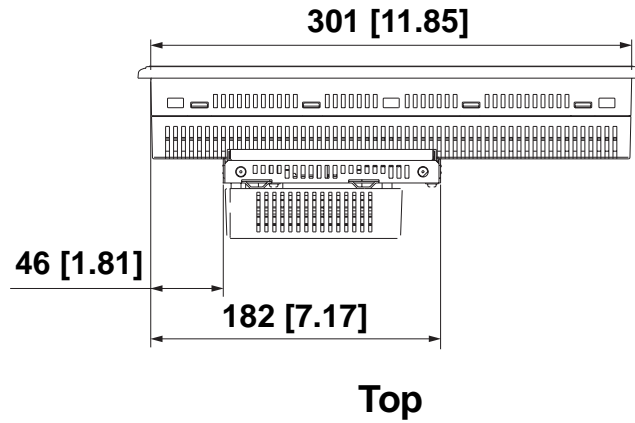
### ◆ GP-2400 with Bus Conversion Unit and CC-Link I/F Unit Attached.

Unit: mm [in.]



◆GP-2500 with Bus Conversion Unit and CC-Link I/F Unit Attached.

Unit: mm [in.]



### 3 General Specifications

#### ■ Environmental

<b>Operating Temperature</b>	0 °C to 50 °C
<b>Storage Temperature</b>	-20 °C to + 60 °C
<b>Humidity</b>	10%RH to 90%RH (no condensation)
<b>Vibration Resistance</b>	based on JIS B 3501, IEC61131-2 (intermittent vibration) 10Hz to 57Hz 0.075mm 57Hz to 150Hz 9.8m/s <sup>2</sup> (continuous vibration) 10Hz to 57Hz 0.035mm 57Hz to 150Hz 4.9m/s <sup>2</sup> X, Y, and Z directions for 10 times each (80min.)
<b>Corrosive Gas</b>	Free of corrosive gas

#### ■ Structural

<b>External Dimensions</b>	W136 [5.35] x H134 [5.28] x D19.6 [0.77] mm [in.] (Main unit only - excluding projections)
<b>Weight</b>	approx. 500g (1.10lb.)

# 4 Installation

Use the following procedures to install the Bus Conversion Unit in a GP unit.

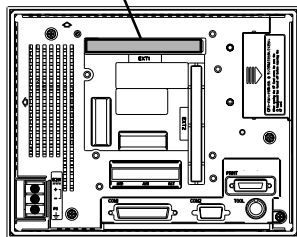
## WARNINGS

Prior to installing this Unit:

- When attaching this unit to the GP units, make sure that the GP's power cord is not plugged in to the main power (constant), to prevent an electric shock.
- Be careful not to touch the surface of this unit's printed circuit board and be sure to wear cotton gloves.

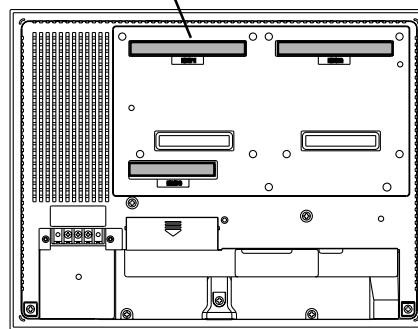
1. Disconnect the GP power cord from the power supply.
2. Remove the plastic Expansion Unit I/F 1 Connector Cover.

**Expansion Unit I/F 1  
Connector cover**



**GP-2400**

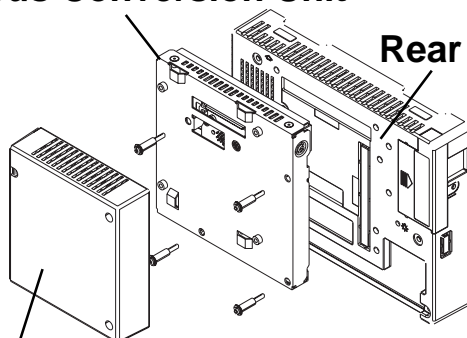
**Expansion Unit I/F 1  
Connector cover**



**GP-2500**

3. Attach the Bus Conversion Unit to the Expansion Unit I/F 1.
4. Insert the four (4) attachment screws (included with Bus Conversion Unit) into the GP unit's screw holes and secure the Bus Conversion Unit to the GP (See below).

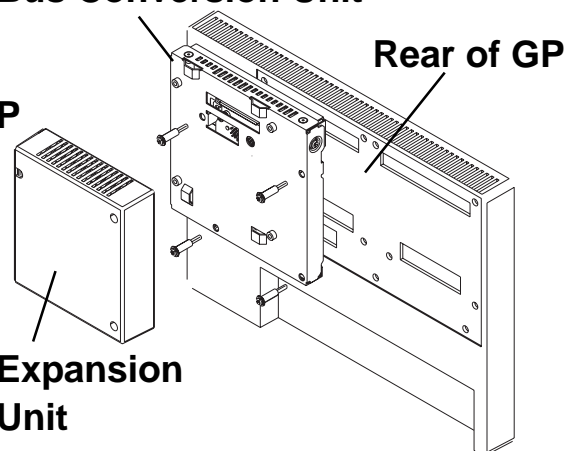
**Bus Conversion Unit**



**Expansion  
Unit**

**GP-2400**

**Bus Conversion Unit**



**Expansion  
Unit**

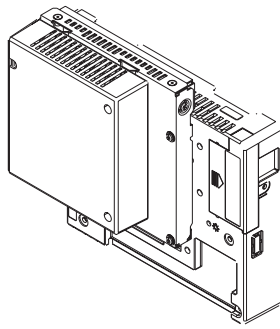
**GP-2500**



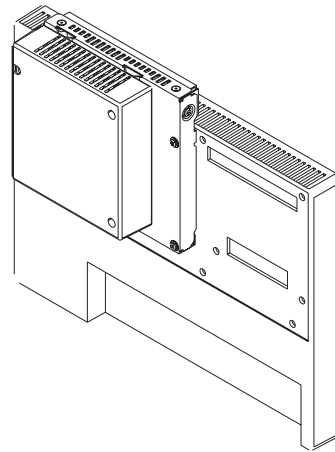
*A torque of only 0.5 to 0.6 N•m is required to tighten an attachment screw. Be careful not to use too much force, since it may damage the GP unit.*



5. Attach the Expansion Unit to the rear of the Bus Conversion Unit and secure it in place with the Expansion Unit's four (4) Attachment Screws (See below).



**GP-2400**



**GP-2500**



**Note:** For detailed Expansion Unit attachment instructions, refer to that unit's Installation Guide.

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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