

# Bus Conversion Unit Installation Guide

Thank you for purchasing Digital's Bus Conversion Unit (GLC300-BCB41). This Bus Conversion Unit allows the attachment of GLC100 Series expansion units to GLC 300 Series units.

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

The GLC300 Series unit mentioned in this manual, hereafter referred to as the "GLC", refer to the following model.

GLC300 Series

GLC300-TC41-24V

# UL/c-UL (CSA) Application Notes

The GLC300-BCB41 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

## **GLC300-BCB41 (UL Registration Model: 2880010-03)**

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 GLC300-BCB41 is a CE marked <sup>\*1</sup> <sup>\*2</sup> product that conforms to EMC directives EN50081-2 and EN50082-2.

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

*\*2 Be aware that this standard does not apply to the combined use of the GLC300-BCB41 and GLC-ST41.*



# 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 manual and any related manuals to thoroughly understand the correct operation and functions of both the Bus Conversion Unit and the GLC.

## ■ Usage of Safety Icons

Throughout this manual the following icons indicate procedures requiring special attention to safety.

The following examples explain the meaning of each safety icon:

|  |   |
|--|---|
|  <b>WARNING</b> | Indicates situations where severe bodily injury, death or major machine damage can occur. |
|  <b>CAUTION</b> | Indicates situations where slight bodily injury or machine damage can occur.              |

## **WARNINGS**

- **When attaching this unit to the GLC, make sure that the GLC's power cord is not plugged in to the main power (constant), to prevent an electric shock.**
- **Do not modify this unit in any way, since it may lead to an electric shock or fire.**
- **Do not use this unit in areas where flammable gas is present, since it may cause an explosion.**

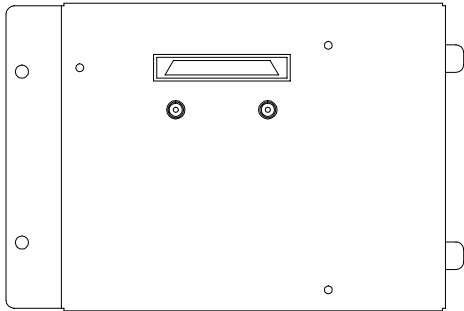
## ■ To prevent this unit from malfunctioning :

- Do not operate the Bus Conversion Unit in an environment that exceeds the unit's designated temperature range.
- Do not allow water, liquid or metallic objects to enter the unit, since they can cause the unit to either malfunction or to create an electric shock.
- 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.

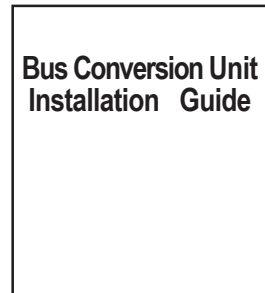
# Package Contents

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

■ **Bus Conversion Unit  
(GLC300-BCB41 )**



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



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

# 1

## Unit Dimensions

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

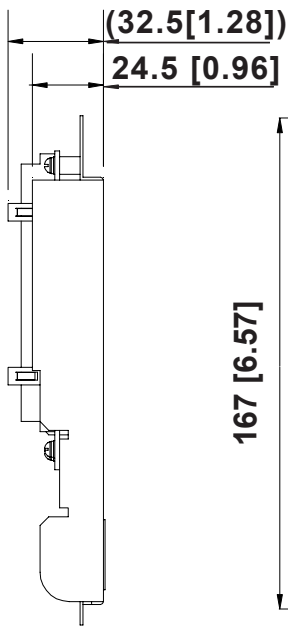
**Note:** For detailed dimension information, please contact your local GLC distributor.

Unit: mm [in.]

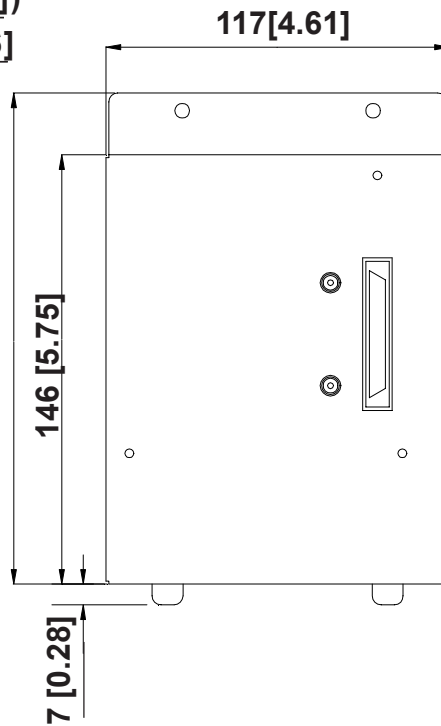
Top



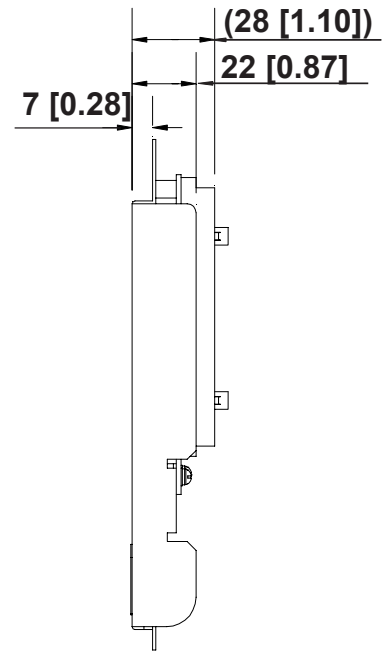
Left Side



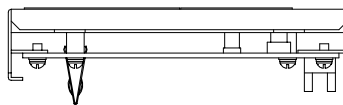
Front



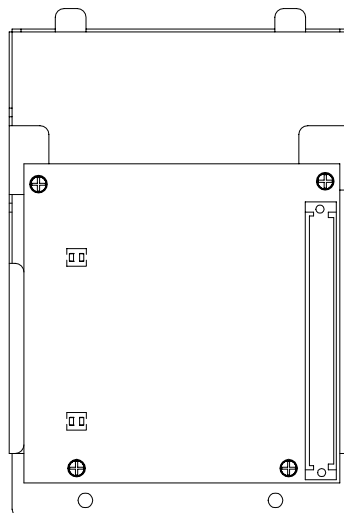
Right Side



Bottom



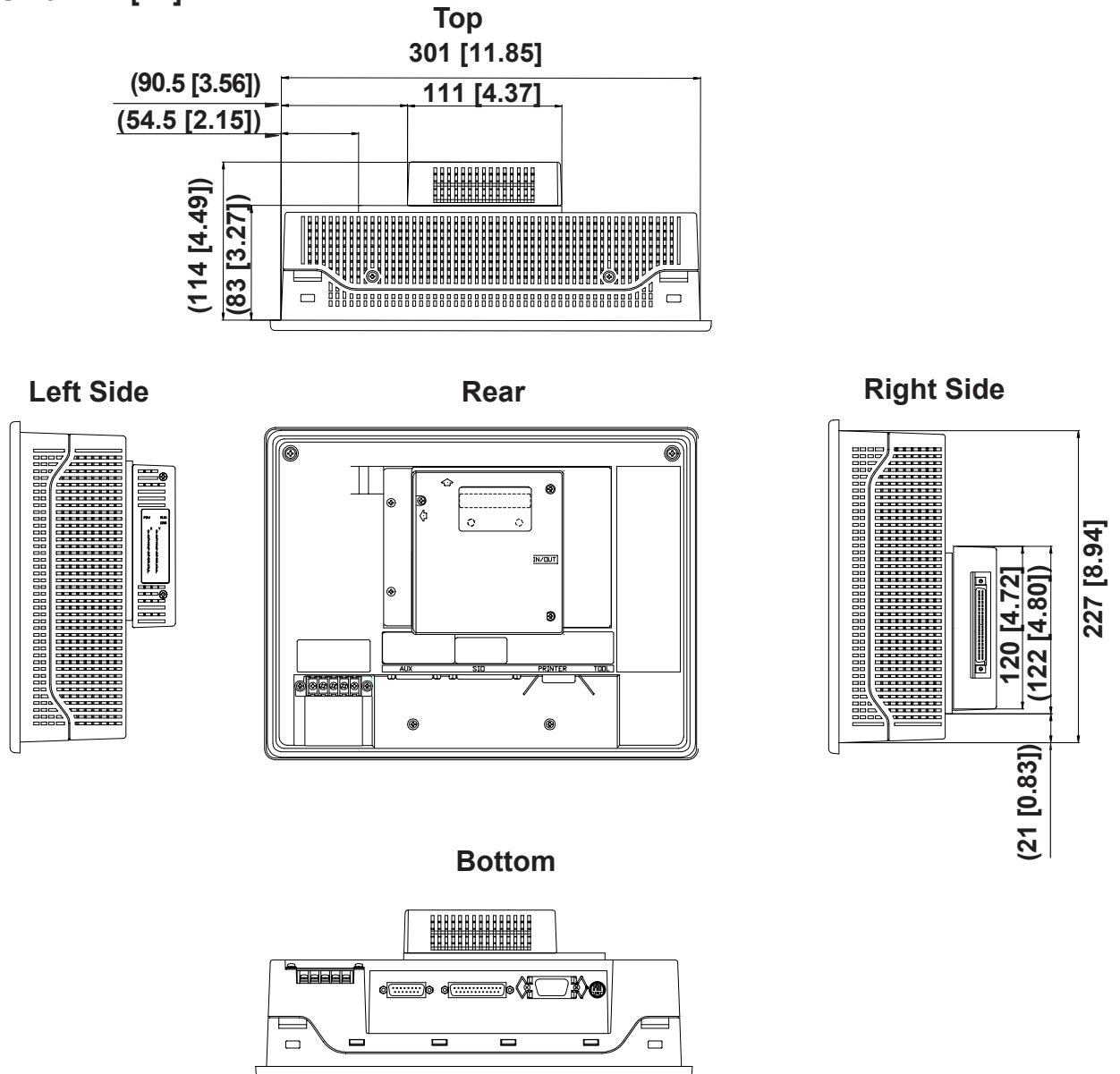
Rear



The figures below show the GLC with both the Bus Conversion Unit and an expansion unit (here the DIO unit is used) attached.

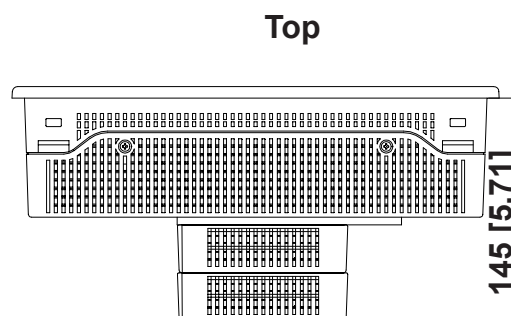
**Note:** For detailed dimension information, please contact your local GLC distributor.

Unit: mm [in.]



The figure below shows the Bus Conversion Unit and two expansion units (here the DIO unit is used) attached to the GLC300.

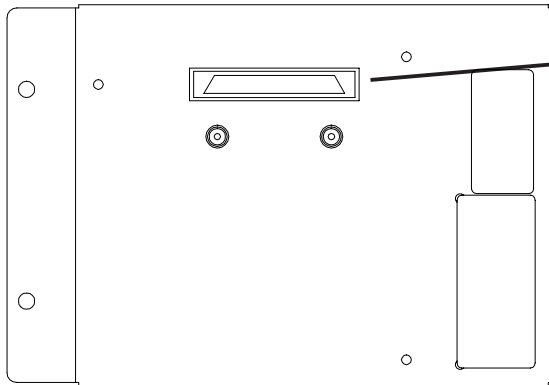
Unit: mm [in.]



## 2

# Part Names and Functions

The Bus Conversion Unit's part name and its function is explained below.



### Expansion Bus Connector

Used to connect GLC100 series expansion units.

## 3

# General Specifications

### ■ Environmental Specifications

|                              |  |
|------------------------------|--|
| <b>Operating Temperature</b> | 0 to 50 *1   |
| <b>Storage Temperature</b>   | -10 to 60 *1   |
| <b>Humidity</b>              | 20 %RH to 85 %RH *1 (no condensation)                              |
| <b>Vibration Resistance</b>  | 10 Hz to 25 Hz (2 G in X, Y, and Z directions for 30 minutes each) |
| <b>Operating Atmosphere</b>  | Free of corrosive gas  |

*\*1 This specification is applicable only for the GLC300-BCB41. When the GLC300-BCB41 is installed in the GLC unit however, the GLC unit's specification should be applied instead of the specification shown here.*

### ■ Structural Specifications

|                            |  |
|----------------------------|--|
| <b>External Dimensions</b> | 167mm (6.57in.) <W> x 117mm (4.61in.) <H> x 24.5mm (0.96in.) <D><br>(Main unit only - excluding projections) |
| <b>Weight</b>              | approx. 350g (0.771lb.)  |
| <b>Cooling system</b>      | Natural air circulation  |

# 4

## Installation

Use the following procedures to attach the Bus Conversion Unit to the GLC.



### WARNINGS

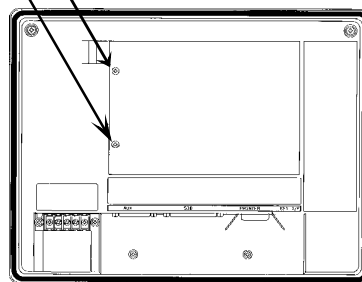
**Prior to installing this unit:**

- **When attaching this unit to the GLC, confirm that the GLC's power cord is not plugged in to the main power (constant) to prevent an electric shock.**

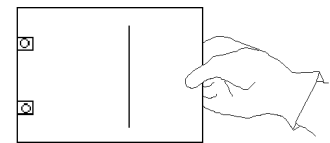
1. Turn OFF the GLC.

2. Unscrew the two Expansion unit cover attachment screws on the rear of the GLC, and remove the cover.

Attachment Screws



Rear of GLC



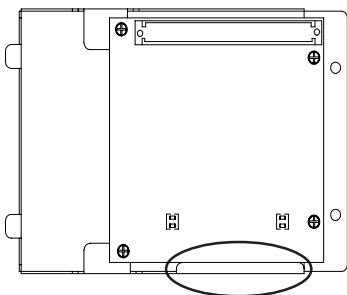
Expansion Unit Cover



### CAUTIONS

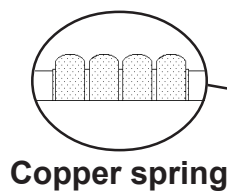
- Do not touch the GLC's "copper spring" or the copper spring's contact. Be sure to wear cotton gloves when installing this unit.

Rear of Bus Conversion Unit

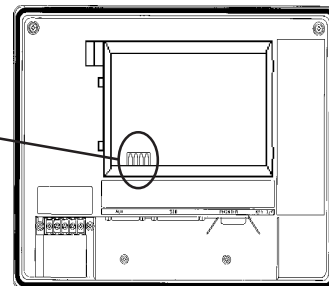


Copper spring contact location

Rear of GLC



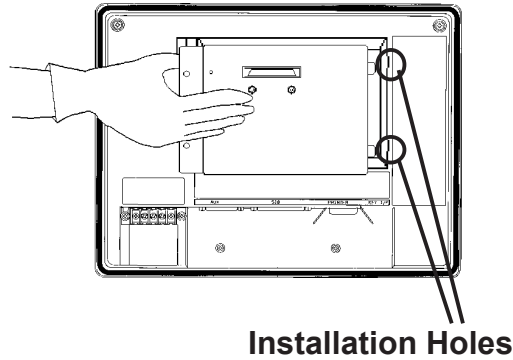
Copper spring



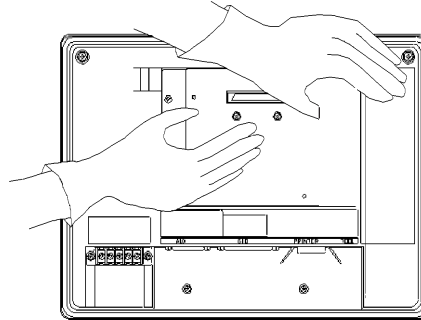
- Do not remove this unit from the GLC unless absolutely necessary. Excessive attachment and removal can lead to the unit's premature breakdown or to a malfunction.



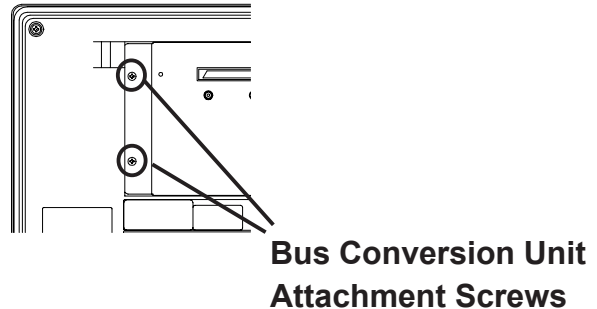
3. Insert the protruding tabs of the Bus Conversion unit into the installation holes. Be sure to install the unit so that the smooth metal face of the Bus Conversion unit faces outward.



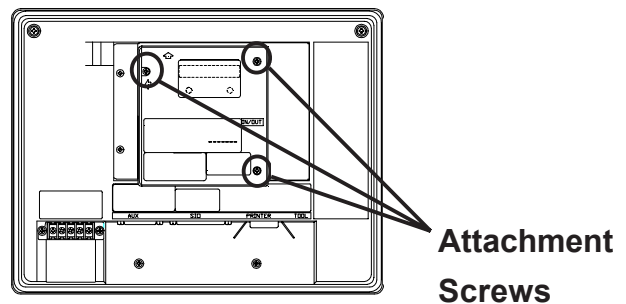
4. Hold the GLC with your left hand and press the Bus Conversion unit into its slot with your right hand. Be sure that the unit is seated correctly in place, so that no gaps remain between the GLC and the Bus Conversion unit.



5. Reattach the conversion unit's attachment screws and secure it to the GLC.



6. Attach an expansion unit to the Bus Conversion unit and tighten the three (3) expansion unit attachment screws (included with this unit).



### 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 use of this product.

