

# USB/RS-422/485 Conversion Adapter Installation Guide

This product, hereafter referred to as the “Conversion Adapter”, converts the USB port on the Display (for models listed in the “Corresponding Units” section in this guide) into a RS-422/485 serial interface.

## IMPORTANT

- When using this product with a Display unit, the external devices you can connect to this product’s serial interface (RS-422/485) are limited. For more information, please refer to the following manuals:
  - Reference Manual
  - Device/PLC Connection Manual
  - Pro-face Home Page  
“Otasuke Pro!” support site  
URL: <http://www.pro-face.com/otasuke/>

## Safety Precautions

### WARNING

#### HAZARD OF ELECTRIC SHOCK OR EXPLOSION

- Do not disassemble or remodel the Conversion Adapter in any way. Doing so may cause an electric shock or fire.
- Do not use the Conversion Adapter in areas where flammable gases are present. Doing so may cause an explosion.
- Do not allow water to enter the connector. Do not touch the connector with wet hands. Doing so may cause an electric shock.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

### WARNING

#### UNINTENDED EQUIPMENT OPERATION OR LOSS OF CONTROL

- Do not use the USB/RS-422/485 Conversion Adapter at temperatures outside the range specified in this guide.
- Do not use or store the Conversion Adapter at very high temperatures.
- Do not use or store the Conversion Adapter in direct sunlight or excessively dusty or dirty environments.
- Do not use or store the Conversion Adapter in an environment where it may be exposed to chemical vapors or fumes.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

### NOTICE

#### LOSS OF COMMUNICATION

- Do not connect or disconnect the USB/RS-422/485 Conversion Adapter during communication. Doing so may cause a communication error.

**Failure to follow these instructions can result in equipment damage.**

## IMPORTANT

- When disposing of this product, follow your country’s regulations for similar types of industrial waste.

## Package Contents

- (1) USB/RS-422/485 Conversion Adapter  
(1) (PFXZCBCBCVUSR41)
- (2) Attachment Screws (2)
- (3) Installation Guide <this document>

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

## Corresponding Units

Model	Conditions	Remarks
GP4000 Series (except GP-4100 Series or GP-4*01TM)	Project file from GP-Pro EX Ver3.00 or later (same version as the Transfer Tool) is transferred to the Display.	For information on supported models including types and specifications, refer to the corresponding hardware manual for your Display or refer to the Pro-face Home Page. URL <a href="http://www.pro-face.com/">http://www.pro-face.com/</a>

## General Specifications

### ■ General Specifications

Connector Type	Serial I/F	D-Sub 9 pin (plug)
	USB I/F	Type A (plug), USB 2.0 Full Speed

### ■ Electrical Specifications

Power Supply	Rated Input Voltage	5 Vdc (Powered from USB bus)
	Input Voltage Limits	4.75...5.25 Vdc
	Power Consumption	0.75 W or less

### ■ Environmental Specifications

Physical Environment	Surrounding Air Operating Temperature	0...55 °C (32...131 °F)
	Storage Temperature	-20...60 °C (-4...140 °F)
	Surrounding Air and Storage Humidity	10...90 % RH (Non condensing, wet bulb temperature 39 °C [102.2 °F] or less)
	Dust	0.1 mg/m <sup>3</sup> (10 <sup>-7</sup> oz/ft <sup>3</sup> ) or less (non-conductive levels)
	Pollution Degree	For use in Pollution Degree 2 environment
	Atmospheric Pressure (Operating Altitude)	800...1114 hPa (2000 m [6561 ft] or lower)
Mechanical Environment	Vibration Resistance	IEC/EN 61131-2 compliant 5...9 Hz Single amplitude 3.5 mm (0.14 in.) 9...150 Hz Fixed acceleration: 9.8 m/s <sup>2</sup> X, Y, Z directions for 10 cycles (100 min.)
	Concussion Resistance	IEC/EN 61131-2 compliant (147 m/s <sup>2</sup> , X, Y, Z directions for 3 times)

Electrical Environment	Noise immunity	Noise Voltage: 1000 Vp-p Pulse Width: 1 $\mu$ s Rise Time: 1 ns
	Electrostatic Discharge Immunity	Contact Discharge Method: 6 kV (IEC/EN61000-4-2 Level 3)

#### ■ External Specifications

External Dimensions	W110 x H40 X D27 mm (W4.33 x H1.57 x D1.06 in.)
Cable length	0.5m (1.64 ft) (include connection parts)
Weight	150 g (0.33 lb) or less

#### **IMPORTANT**

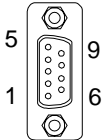
- Extending the length of the cable for the USB/RS-422/485 Conversion Adapter can degrade (weaken) signals, causing the potential for errors. Do not extend the cable.

## Interface

### ■ RS-422/RS-485

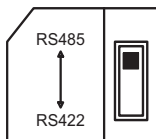
<External Device Connection (Serial interface (RS-422/485)) >

Interfit Bracket	#4-40 inch screws
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Pin Arrangement	Pin #	RS-422/RS-485	
		Signal Name	Meaning
	1	RDA	Receive Data A(+)
	2	RDB	Receive Data B(-)
	3	SDA	Send Data A(+)
	4	ERA	Data Terminal Ready A(+)
	5	SG	Signal Ground
	6	CSB	Send Possible B(-)
	7	SDB	Send Data B(-)
	8	CSA	Send Possible A(+)
	9	ERB	Data Terminal Ready B(-)
	Shell	FG	Frame Ground

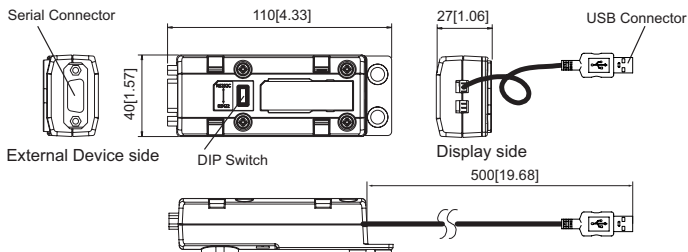
#### NOTE

- Use the DIP switch on the Conversion Adapter to change communication methods.



## Dimensions

Units: mm [in.]



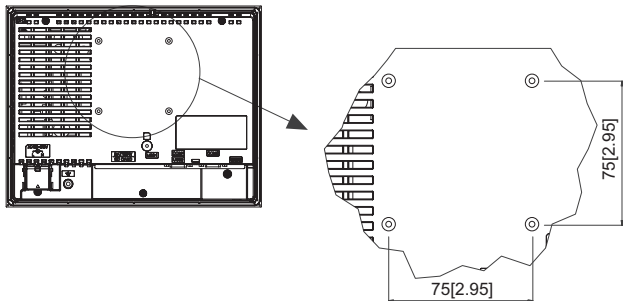
## Attachment Method

### NOTE

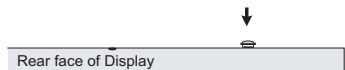
• For the GP-4200 series, attach the Conversion Adapter to the panel.

### ■ Attaching the Conversion Adapter directly to the Display

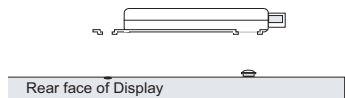
When attaching the Conversion Adapter on the rear side of the Display, among the 4 screws shown in the diagram below, use 2 horizontally positioned or 2 vertically positioned screws to attach the adapter. If the Display already has an attachment, it may restrict the direction in which you can place the Conversion Adapter.



1) Attach one screw to the Display's rear side. Use a torque of  $0.5 \text{ N}\cdot\text{m}$  to  $0.6 \text{ N}\cdot\text{m}$  (4.4 lb-in to 5.3 lb-in).



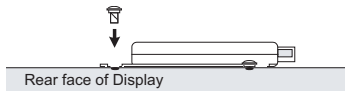
2) Attach the Conversion Adapter to the Display.



3) Slide the Conversion Adapter in the direction of the arrow so the Conversion Adapter is hooked by the screw from step 1.

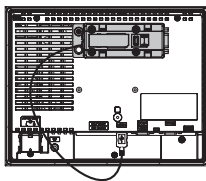


4) Fix the Conversion Adapter in place with another screw. Use a torque of  $0.5 \text{ N}\cdot\text{m}$  to  $0.6 \text{ N}\cdot\text{m}$  (4.4 lb-in to 5.3 lb-in).

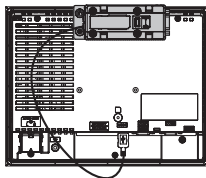


- Make sure the Conversion Adapter is placed inside the edges of the Display.

Correct

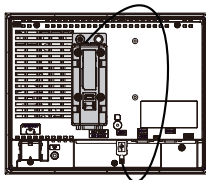


Incorrect

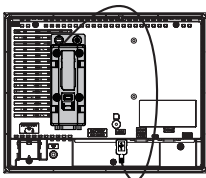


- Do not place the Conversion Adapter over the slits.

Correct



Incorrect



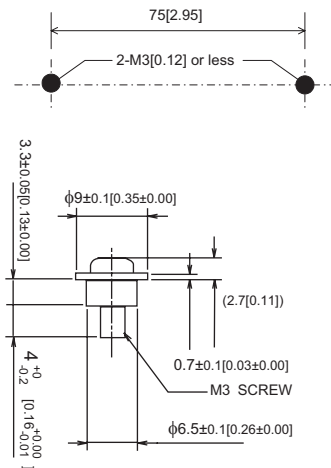
#### IMPORTANT

- When attaching the Conversion Adapter to the Display, be careful with the attachment position.
- Attach the Conversion Adapter to a stable surface. Do not leave the Conversion Adapter hanging by its cord.
- Be careful with wire placement. Overlapping cords may cause noise.

## ■ Attaching the Conversion Adapter to a Panel

When attaching the Conversion Adapter to a panel other than the Display's main unit, attach it at the two points identified in the diagram below. Drill holes suitable for screws as shown in the diagram. For attachment information, refer to "Attaching the Conversion Adapter directly to the Display".

Unit mm:[in.]



## CE Marking

- This product is a CE marked, EMC compliant product. This product also conforms to EN61000-6-4, EN61000-6-2 directives.

## Inquiry

If you experience difficulties or have questions about this product, please contact us any time.

You can access our support site "Otasuke Pro!" whenever you need help with a solution.

<http://www.pro-face.com/otasuke/>

## 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.

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**SCIGATE AUTOMATION (S) PTE LTD**

No.1 Bukit Batok Street 22 #01-01 Singapore 659592

Tel: (65) 6561 0488

Fax: (65) 6562 0588

Email: [sales@scigate.com.sg](mailto:sales@scigate.com.sg)

Web: [www.scigate.com.sg](http://www.scigate.com.sg)

Business Hours: Monday - Friday 8.30am - 6.15pm

Digital Electronics Corporation

8-2-52 Nanko-higashi

Suminoe-ku, Osaka 559-0031

JAPAN

TEL: +81-(0)6-6613-3116

FAX: +81-(0)6-6613-5888

<http://www.pro-face.com/>

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