

RS-232C/422 and RS-485 Isolation Units

Installation Guide
Guide d'Installation
Installationsanleitung
Guida all'installazione
Guía de instalación
《安装指南》

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Safety Instructions

Read these instructions carefully, and look at the equipment to become familiar with the device before trying to install, operate, or maintain it. The following special messages may appear throughout this documentation or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a Danger or Warning safety label indicates that an electrical hazard exists, which will result in personal injury if the instructions are not followed.



This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation, which **will result** in death or serious injury.

WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, can result in death, serious injury, or equipment damage.

CAUTION

CAUTION indicates a potentially hazardous situation, which, if not avoided, can result in personal injury or equipment damage.

DISCLAIMER

Electrical equipment should be serviced only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material. This document is not intended as an instruction manual for untrained persons.

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Essential Safety Precautions

⚠ WARNING

HAZARD OF EXPLOSION

Do not use this unit in an environment where flammable gases are present, since operating this unit may cause an explosion.

Failure to follow this instruction can result in death, serious injury, or equipment damage.

⚠ CAUTION

RISK OF MALFUNCTION OR EQUIPMENT DAMAGE

- Do not allow water, liquids, metal or charged particles to enter inside this unit, since they can cause malfunction.
- Do not use or store this unit in direct sunlight, in excessively dusty or dirty environments or where excessive vibration can occur.
- Do not store or use this unit where strong jolting can occur.

Failure to follow this instruction can result in equipment damage.

RS-232C/422 and RS-485 Isolation Units - Overview

Thank you for purchasing TELEMECANIQUE RS-232C/422 (XBTZGI232) or RS485 (XBTZGI485) Isolation Unit. This unit is designed to utilize TELEMECANIQUE product, XBT GT Series serial interface connector (D-sub9-pin), and electrically separates the serial interface signal from the XBT GT chassis.

Package Contents

Please check that the following items are included in your package.

- **Isolation Unit**
 - XBTZGI232 (RS-232/422 Type) for COM1 SubD9 or
 - XBTZGI485 (RS-485 Type) for COM2 RJ45
- **Installation Guide (this guide)**
- **Attachment Screws (2)**

CE Marking

The XBTZGI232 and XBTZGI485 are CE marked, EMC compliant products. These units conform to EN55011 Class A and EN61000-6-2 directives. For detailed CE marking information, please contact your local distributor.

Compatible Models

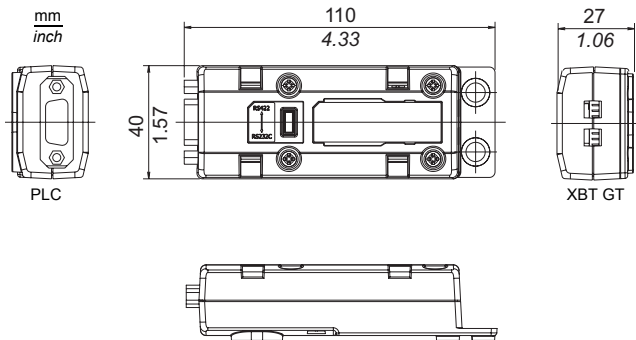
The following XBT GT Series units are compatible with this unit.

- **XBT GT Series**
 - XBT GT2000
 - XBT GT4000
 - XBT GT5000
 - XBT GT6000
 - XBT GT7000

External Drawings and Dimensions

The following diagram shows external drawings and dimensions of this unit.

- XBTZGI232 (RS-232/422 Type) or XBTZGI485 (RS-485 Type)



Electrical

Item	Description
Rated Voltage	DC 5 V (supplied from the XBT GT)
Power Consumption	1.25 W or less
Voltage Endurance	AC 1000 V 20 mA 1 min (When attached to the XBT GT)
Insulation Resistance	DC 500 V 10 M Ω or higher (When attached to the XBT GT)

Environmental

Item	Description
Ambient Operating Temperature	0° C to +50° C (+122 °F)
Storage Temperature	-20° C (-68° F) to +60° C (+140° F)
Ambient Humidity	10% RH to 90% RH (No condensing, wet bulb temperature: +39°C (+102° F) or less)
Storage Humidity	10% RH to 90% RH (No condensing, wet bulb temperature: 39°C or less)
Air Purity (Dust)	0.1 mg/m ³ (non-conductive levels)
Pollution Degree	Pollution Degree 2
Corrosive Gases	Free of corrosive gases
Atmospheric Pressure	800 hpa to 1114 hpa (2000 m above sea level or lower)
Vibration Resistance	IEC61131-2 compliant 5 Hz to 9 Hz single-amplitude 3.5 mm 9 Hz to 150 Hz constant-accelerated velocity 9.8 ms ² X, Y, Z directions for 10 times (100 minutes)
Shock Resistance	IEC61131-2 (147m/s ² , XYZ directions 3times each)
Noise Immunity	Impulse Noise:1000 Vp-p Pulse Duration:1 μ s Rise Time:1 ns (via noise simulator)
Electrostatic Discharge Immunity	6 kV (complies with EN 61000-4-2 level 3)

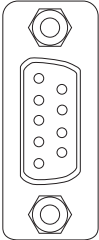
Structural

Item	Description
Cooling Method	Natural air circulation
Weight	170 g (0.4 lb) or less
External Dimensions	W110 mm (4.33 in) x H40 mm (1.57 in) x D27 mm (1.06 in)

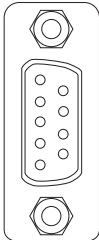
RS-232C Type (For COM1 port)

The RS-232C/RS-422(1) type Dsub 9-pin plug connector pin assignments are as follows.

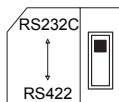
○ RS-232C

Pin Arrangement	Pin #	RS-232C		
		Signal Name	Direction	Meaning
	1	CD	Input	Carrier Detect
	2	RD (RXD)	Input	Receive Data
	3	SD (TXD)	Output	Send Data
	4	ER (DTR)	Output	Data Terminal Ready
	5	SG	-	Signal Ground
	6	DR (DSR)	Input	Data Set Ready
	7	RS (RTS)	Output	Request to Send
	8	CS (CTS)	Input	Clear to Send
	9	NC	-	No connection
	Shell	FG	-	Frame Ground

○ RS-422

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

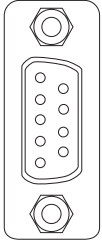
(1) The communication method is switched with a change switch.



RS-485 Type (For COM2 port)

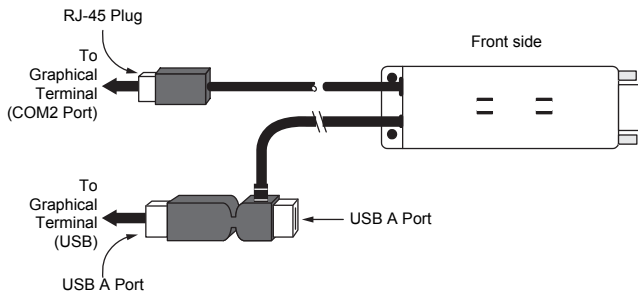
The RS-485 type Dsub 9-pin socket connector pin assignments are as follows.

○ RS-485

Pin Arrangement	Pin #	RS-485		
		Signal Name	Direction	Meaning
	1	TRMRX	-	Termination (Receive side: 100?)
	2	RDA/SDA	-	Receive Data
	3		Input/Output	Receive/Send Data A (+)
	4	NC	-	
	5	SG	-	Signal Ground
	6	VCC	-	+5 V \pm 5 % output 0.05 A (1)
	7	RDB/SDB	-	
	8		Input/Output	Receive/Send Data B (-)
	9	NC	-	Termination (Send side: 100?)
	Shell	FG	-	Frame Ground

(1) The VCC output for Pin #6 is not protected against overcurrent. To prevent damage or unit malfunctions, use only the rated current.

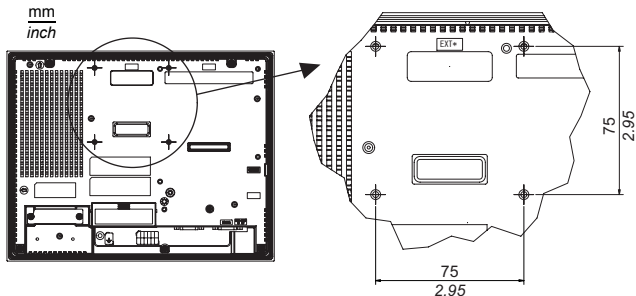
○ Outline View



Attachment Method

○ Attaching the unit directly to the XBT GT

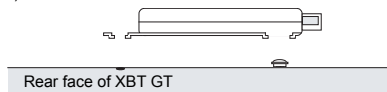
When attaching this unit to the rear side of the XBT GT, place it on the rear side of the XBT GT in the vertical or horizontal direction using two of the four screws as shown below and attach it there. If a different unit is attached to the XBT GT, the attachment direction of this unit might be restricted.



- 1) Attach one screw to the XBT GT rear face. The torque should be 0.5 to 0.6 Nm.



- 2) Attach this unit to the XBT GT.



- 3) Slide the unit in the direction the arrow shows so that the unit gets caught by the attached screw of 1).



- 4) Fix the unit with another screw. The torque should be 0.5 to 0.6 Nm.



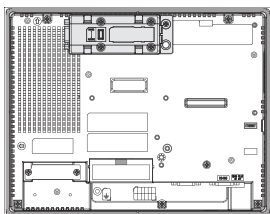
⚠ CAUTION

RISK OF EQUIPMENT DAMAGE OR ELECTROMAGNETIC INTERFERENCE

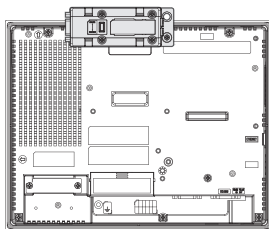
- When attaching this unit to the XBT GT, proceed as directed in this document for correct mounting position (see diagram below).
- Make sure this unit is attached to a stable surface.
- Never let this unit hang by its cord.
- Avoid overlapping of cords while wiring as this may cause noise.

Failure to follow this instruction can result in injury or equipment damage.

correct

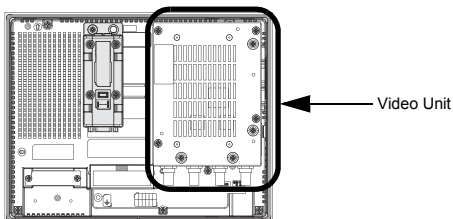


Incorrect



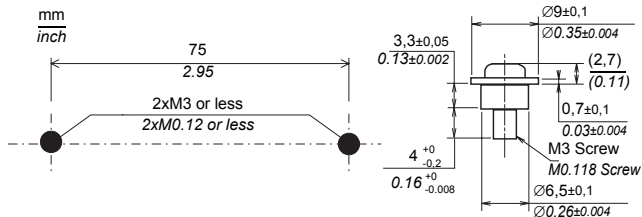
Notes:

- When attaching another unit to the XBT GT, be careful of the place for the attachment.
- If this unit and TELEMECANIQUE product XBTZGVID (Video Unit) are attached to XBT GT5330 at the same time, only when this unit is attached in the position as shown below, it's possible to attach the Video Unit with it at the same time.



○ Attaching the unit to the panel

When attaching the unit to a panel other than the XBT GT main unit, attach it at two points referring to the diagram below. Make holes suitable for the screws referring to the diagram below. For attaching it, refer to the method above.



Software Settings

When connecting the XBTZGI232, change the status of pin "RI/VCC" (pin 9 of the connector) in the XBT GT Offline screen or with the software before use. In the case of the operation in the Offline screen, change it with [Option] of [Offline]. For the software operation, refer to "Property Inspector" of your Target on your Vijeo Designer project and select Enable for "Power Supply for COM1 port" option.

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