

# CONNECTOR CONVERSION BOX GT16H-CNB-42S

User's Manual

Manual Number Date April 2018

This manual describes the part names, dimensions, mounting, and specifications of the product. Before use read this manual and manuals of relevant products fully to acquire proficiency in handling and operating the product. Make sure to learn all the product information safety information and precautions And, store this manual in a safe place so that you can take it out and read it

whenever necessary. Always forward it to the end user. Registration

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### Effective April 2018

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### Safety Precaution (Read these precautions before using.)

Refore using this product please read this manual and the relevant manuals introduced in this manual carefully and pay full attention to safety to handle the product correctly

The precautions given in this manual are concerned with this product In this manual, the safety precautions are ranked as MARNING and ACAUTION

Indicates that incorrect handling may cause hazardous conditions, resulting in death or severe injury.
Indicates that incorrect handling may cause hazardous conditions, resulting in medium or slight personal injury or physical damage.

Depending on circumstances, procedures indicated by ACAUTION may also be linked to serious results

In any case, it is important to follow the directions for usage

### DESIGN PRECAUTIONS **WARNING**

- Some failures of the GOT or cable may keep the outputs on or off. An external monitoring circuit should be provided to check for output signal which may lead to a serious accident
- Not doing so can cause an accident due to false output or malfunction.
- If a communication fault (including cable disconnection) occurs during monitoring on the GOT, communication between the GOT and PLC CPU is suspended and the GOT becomes inoperative A system where the GOT is used should be configured to perform any significant operation to the system by using the switches of a device other than the GOT on the assumption that a GOT communication fault will occur.
- Not doing so can cause an accident due to false output or malfunction. Do not use the GOT as the warning device that may cause a serious accident. An independent and redundant hardware or mechanical interlock is required to configure the device that displays and outputs serious warning. Failure to observe this instruction may result in an accident due to incorrect output or malfunction.

### DESIGN PRECAUTIONS

Do not bundle the control and communication cables with main-circuit, powe or other wiring. Run the above cables separately from such wiring and keep them a minimum of 100mm (3.94in.) apart.Not doing so noise can cause a malfunction.

# MOUNTING PRECAUTIONS A WARNING

Make sure to turn off the Connector Conversion Box's power before attaching or detaching it to/from the COT

Failure to do so may cause unit failure or malfunctions

### MOUNTING PRECAUTIONS **ACAUTION**

Use the Connector Conversion Box within the generic environment specification described in this manual. If the product is used in such conditions, electric shock fire malfunctions deterioration or damage may occur

### WIRING PRECAUTIONS **WARNING**

- Be sure to shut off all phases of the external power supply used by the system before wiring. Failure to do so may result in an electric shock, product damage o malfunctions
- Please make sure to ground EG terminal of the Connector Conversion Box nower supply section by applying 100 or less which is used exclusively for the GOT. Not doing so may cause an electric shock or malfunction.
- Correctly wire the Connector Conversion Box power supply section afte confirming the rated voltage and terminal arrangement of the COT Not doing or can cause a fire or failure
- Exercise care to avoid foreign matter such as chips and wire offcuts entering the COT Not doing so can cause a fire failure or malfunction

### VIRING PRECAUTIONS **CAUTION**

Plug the communication cable into the connector of the connected unit and tighten the mounting and terminal screws in the specified torque range. cause a short circuit or malfunction due to the damage of the screws or unit.

### TEST OPERATION WARNING PRECAUTIONS

Before performing the test operations of the user creation monitor screen (such a turning ON or OFF bit device, changing the word device current value, changing the settings or current values of the timer or counter, and changing the buffe memory current value), read through the manual carefully and make yoursel familiar with the operation method. During test operation, never change the data of the devices which are used to perform significant operation for the system False output or malfunction can cause an accident.

### STARTUP/MAINTENANCE **WARNING** RECAUTIONS

- When power is on, do not touch the terminals. Doing so can cause an electric shock or malfunction.
- Before starting cleaning or terminal screw retightening, always switch off the power externally in all phases. Not switching the power off in all phases can cause a unit failure or malfunction. Undertightening can cause a short circuit or malfunction. Overtightening can cause a short circuit or malfunction due to the damage of the screws or unit

### STARTUP/MAINTENANCE RECAUTIONS

- Do not disassemble or modify the unit.
- Doing so can cause a failure, malfunction, injury or fire. Do not touch the conductive and electronic parts of the unit directly.
- Doing so can cause a unit malfunction or failure.
- The cables connected to the unit must be run in ducts or clamped.
- Not doing so can cause the unit or cable to be damaged due to the dangling, motion or accidental pulling of the cables or can cause a malfunction due to a cable connection fault
- When unplugging the cable connected to the unit, do not hold and pull the cable portion. Doing so can cause the unit or cable to be damaged or can cause a malfunction due to a cable connection fault

### DISPOSAL PRECAUTIONS

When disposing of the product, handle it as industrial waste

### RANSPORTATION PRECAUTIONS

The Connector Conversion Box is a precision instrument. During transportation avoid impacts larger than those specified in this manual. Failure to do so may cause failures in the unit. After transportation, verify the operations of the unit.

### Certification of UL. cUL standards

UL, cUL Standards are recognized in use by the following combination.

- CT2506HS VTBD
- GT2505HS \/TBD
  - GT1665HS-VTBD (Hardware version F or later) GT1455HS-QTBDE (Hardware version B or later)
  - GT1450HS-OMBDE (Hardware version B or later)
  - GT16H-CNB-42S (Hardware version D or later)
  - External cable (GT16H-C30-42P, GT16H-C60-42P, GT16H-C100-42P)
  - External cable (GT14H-C30-42P\_GT14H-C60-42P\_GT14H-C100-42P)\*1

## \*1 Version B or later

# General notes on power supply

This equipment must be supplied by a UL Listed or Recognized 24 V dc rated power supply and UL Listed or Recognized fuse rated not higher than 4A, or a UL Listed Class 2 nower supply

## Compliance with EC directive (CE Marking)

This note does not guarantee that an entire mechanical module produced in accordance with the contents of this note will comply with the following standards. Compliance to EMC directive for the entire mechanical module should be checked by the user/manufacturer. For more details please contact the local Mitsubishi Electric

### Attention

This product is designed for use in industrial applications.

### Requirement for Compliance with EMC directive

The following products have shown compliance through direct testing (to the identified standards) and design analysis (forming a technical construction file) to the European Directive for Electromagnetic Compatibility (2004/108/EC) when used as directed by the appropriate documentation.

Type: Programmable Controller (Open Type Equipment)			
Standard		Remark	
EN61131-2 : 2007 Programmable controllers- Equipment, requirement and tests	EMI	Compliance with all relevant aspects of the standard. (Radiated Emissions)	
	EMS	Compliance with all relevant aspects of the standard. (ESD, RF electromagnetic field, EFTB, Surge, RF conducted disturbances and Power frequency magnetic field)	

For more details please contact the local Mitsubishi Electric sales site.

### Notes for compliance to EMC regulation

### 1) General notes on the control panel

Make sure to combine the GT16 Handy GOT with the Connector Conversion Box to comply with the EMC directive. The Connector Conversion Box is an open type device (device installed to another device) and must be installed in a conductive control panel.

2) General notes on the use of communication cables

 External cable (GT16H-C30-42P, GT16H-C60-42P, GT16H-C100-42P) Direct connection cable

Existing Cables User Made Cables

The cable need to be independently tested by the user to GT01\_C30R4\_8P demonstrate EMC compatibility when they are used with GT11H-C30R2-6P the GOT, the PLC of MELSEC-Q series, MELSEC-L series, MELSEC-QnA, MELSEC-A series and MELSEC-EX series.

### Ethernet connection cable (Shielded twisted pair cable (STP))

- PLC (manufactured by other company), microcomputer, temperature controller, inverter, servo amplifier, CNC, MODBUS(R)/RTU or MODBUS(R)/ TCP connection
- Produce the cable (RS-232 cable, RS-422 / 485 cable) for connecting the GOT to a controller with reference to the following manual
- $\rightarrow$  GOT2000/GOT1000 Series Connection Manual for GT Works3 and a controller used

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Up to 75mm

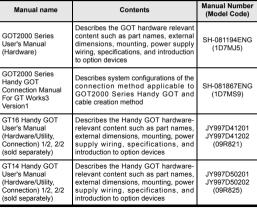
(2.95inch)

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The Connector Conversion Box requires an additional ferrite filter to be attached to the 24V DC nower supply cables. The filter should be attached in a similar manner as shown in the figure opposite, i.e. the power cables are wrapped around the filter. However, as with all EMC situations the more correctly applied precautions the better the systems Electro-magnetic Compatibility. The ferrite recommended is a TDK 7CAT3035-1330 or similar. The ferrite should be placed as near to the 24V DC terminals of the Connector Conversion Box as possible (which should be within 75mm of the GOT terminal)

### Associated Manuals

The following manuals are relevant to this product. When these loose manuals are required, please consult with our local distributor.



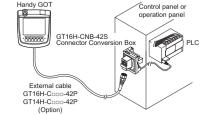
For details of a PLC to be connected, refer to the PLC user's manual respectively. Referenced Standard: GB/T15969.2 (Requirement of Chinese standardized law)

### **Bundled Items**

Bundled item	Quantity
GT16H-CNB-42S Connector conversion box	1
Packing for panel installation	1
Flange for GT10-9PT5S	1
Screws for flange installation (M3×8)	2
CONNECTOR CONVERSION BOX GT16H-CNB-42S User's Manual (This manual)	1

### 1. Features

The Connector Conversion Box relays the GOT's external 42-pin connector to the power supply/switch and the PLC's connector and terminal block, while enabling users to operate the Handy GOT outside the enclosure



### 2. Specifications

General Specifications Other specifications are the same as the Handy GOT main unit.

Item	Specifications				
Operating ambient temperature	0 to 55°C				
Storage ambient temperature	-20 to 70°C				
Vibration	When	Frequency	Acceleration	Half- amplitude	Sweep Count
	installing	5 to 9Hz		1.75mm	10 times
loolotanoo	DIN rail	9 to 150Hz	4.9m/s <sup>2</sup>	-	each in X, Y and Z directions
Operating				ve gas, flamm	

excessive amount of electroconductive dust particles and must be no atmosphere direct sunlight. (Same as for saving)

3) General notes on Power supply

Power Supply Specifications

	Item	Specifications	
Input power supply voltage		24VDC (+10% -15%)	
Power consumption		13.7W or less (570mA/24VDC) (When including the consumption current of Handy GOT)	
	Connector Conversion Box only	2.2W (90mA/24V) (When excluding the consumption current of Handy GOT)	
Inrush current	·	25A or less (at max. load), 2ms	
Permissible instantaneous	power failure time	Within 5ms	
Applicable GOTs			
	Abbreviations	Model name	
GOT 2000 GT25 Handy GOT		GT2506HS-VTBD, GT2505HS-VTBD	

GOT 2000	GT25 Handy GOT	GT2506HS-VTBD, GT2505HS-VTBD
GOT 1000	GT16 Handy GOT	GT1655HS-VTBD
	GT14 Handy GOT	GT145=HS-Q=BDE

### Internal Relay Contact Specifications

Item	Contact rating	Specifications
Operation switch SW1 to SW6	10mA/24VDC (resistance load only)	Each contact coordinates the operation switch status of Pressed (close)/Not pressed (open). When the external cable is not connected, contacts are always open regardless of the switch status.
Emergency stop switch ES1A to ES3A	1A/24VDC (resistance load) 0.3A/24VDC (induction load)	Each contact coordinates the emergency stop switch status of Pushed (open)/Return (close). When the external cable is not connected, contacts are always open regardless of the emergency stop switch status. Causing a short circuit of the ESDB terminal by a short pin (prepared by user) enables to set each contact in the close status even if the external connection cable is not connected. <sup>11</sup> GOT2000 Series User's Manual(Hardware), GT16 Handy GOT User's Manual, GT14 Handy GOT User's Manual When using the short-circuited ESDB terminal which is close to the ESDA terminal were mergency stop switch, the contacts become open. • In the following situations, contacts are closed regardless of the status of the emergency stop switch and the external cable. • When GT16H-CNB-42S is turned OFF. • When GT16H-CNB-42S is to supplied with the power supply (DC24V).
		Each contact coordinates the grip switch status of Pressed (close)/Not pressed (open). When the external cable is not connected, contacts are always open regardless of the grip switch status.
Keylock switch (2-position switch) KSWC, KSW1, KSW2	1A/24VDC (resistance load) 0.3A/24VDC (induction load)	Each contact coordinates the position of the keylock switch.  • When the key is on the left: KSW1 and KSWC are short-circuited.  • When the key is on the right: KSW2 and KSWC are short-circuited. When the external cable is not connected, contacts are always open regardless of the keylock switch.

\*1 The system may not match the safety standards. Before using the system, please check the safety standards which are required.

## 2 Dout Nomes and External Dimensions

Packing attachment chase

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The n	Part Names and Extern ame and the external dimension re described below.	al Dimensions ons of each part of the Connector Conversion
	External connecte	
		5(2.17) 110 (4.34") 110 (4.34") 110 (4.34") 14) 15) 13) 10) 10) 10) 10) 10) 10) 10) 10
No.	Name	Specifications
1)	Connector for Handy GOT (42-pin, female)	Connects a Handy GOT through an external connection cable.
2)	Power switch	Supplies the power to the Handy GOT. When this switch is set to ON, the power is supplied. Turn off the power when attaching or detaching the Handy GOT.
3)	POWER LED	Lit in green: Power is correctly supplied. Not lit: Power is not supplied.
4)	Hole for the panel installation	Used when mounting the panel. For M4

screw, depth 6mm

Used when mounting the panel

No.	Name	Specifications	
		Used for fixing the Connector Conversion	
6)	Hook for DIN rail	Box when mounting DIN rail (35mm).	
7)	Hole for the screw installation	Used for fixing on the board, etc. For M4 screw	
8)	Terminal block 1	Connects the GT16H-CNB-42S, the 24VDC power supply of Handy GOT and the emergency stop switch (ES-1 to 3) with M3 terminal screw and the cover.	
9)	Terminal block 2	Connects the operation switch of the Handy GOT (SW1 to 6), the grip switch (DSW-1, 2) and the keylock switch (KSW-1, 2) with M3 terminal and the cover.	
10)	External connection device communication connector (RS-232: D-Sub, 9-pin, male)	Connects to the external connection device via a GOT2000/GOT1000 series cable. RS-422/485 connector and RS-232	
11)	External connection device communication connector (RS-422/485: D-Sub, 9-pin, female)	connector cannot be used at the same time. These connectors cannot be used ir combination with GT2505HS-VTBD and GT145=HS-Q=BDE.	
12)	External connection device communication connector (Ethernet: RJ-45 module jack)	Connects the external connection device via Ethernet with using a LAN cable.	
13)	Rotary switch (U)	Sets the ID number of GT16-CNB-42S.	
14)	Rotary switch (L)	Sets one ID number with using both rotary switches (U) and (L).	
15)	ID number valid/invalid selection switch	Enables the recognition function of ID number ( $ON=Valid$ , $OFF=Invalid$ ). When connecting the external connection device with using 10) and 11), set OFF (invalid).	
16)	Hole for the flange installation	Used for fixing the flange when using the connector conversion adapter.	

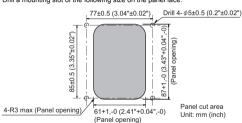
## 4. Installation

The Connector Conversion Box can be installed on the panel face directly or on the DIN rail.

### 4.1 Mounting on the panel face

(When setting the connector for Handy GOT connection and the power supply switch on the panel surface) 2) Installation of the packing

1) Direct mounting on the panel face Drill a mounting slot of the following size on the panel face



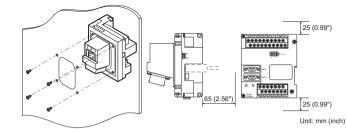


3) Mounting on the panel face

Fit the Connector Conversion Box from the back side of the panel face, and fix it with four M4 screws (prepared by user).

In the Connector Conversion Box, thread of M4, 6mm (0.23") in deeth is cut in each mounting hole. Prepare four M4 mounting screws separately while considering the thickness of the panel face. (Tightening torque: 0.69 to 0.88 N•m)

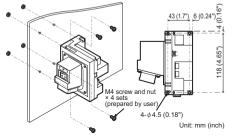
Make sure that interfering objects are not located within 65mm (2.56") from the rear face so that the connector of a PLC cable is not hindered. To wire the terminal block, keep a space of 25mm (0.98") or more on both sides of the Connector Conversion Box.



## 4.2 Mounting on the panel face (When installing the Connector Conversion Box on the panel surface)

1) Mounting on the nanel face

Install the Connector Conversion Box on the panel face (mounting surface). Drill screw holes on the panel face as follows. Tighten the mounting screw with the specified torque. Tightening screws too much may cause damage. (Tightening torque: 0.69 to 0.88 N·m)



### 4.3 Installed on the DIN rail

DIN rail

Install the Connector Conversion Box on the DIN rail DIN rail denth with using its DIN rail hook. more than 10mm (0.4"inch) (Applicable DIN rail DIN46277 (width: 35mm (1.37")) The clearance between screws for install the DIN rail should be 150mm (5.9") or less.

1) Pull out the hook for 2) Adapt the upper side of 3) Lock the hook for DIN rail the DIN rail installation while forcing the product on slot to the DIN rail the DIN rail When installing the DIN rail, please fix the cables Otherwise, the hook for DIN



This manual confers no industrial property rights or any rights of any other kind, nor does it confer any patent licenses. Mitsubishi Electric Corporation cannot be held responsible for any problems involving industrial property rights which may occur as a result of using the contents noted in this manual. Warranty

Exclusion of loss in opportunity and secondary loss from warranty liability Regardless of the gratis warranty term, Mitsubishi shall not be liable for compensation to:

- (1) Damages caused by any cause found not to be the responsibility of Mitsuhishi
- (2) Loss in opportunity, lost profits incurred to the user by Failures of Mitsubishi products.
- Special damages and secondary damages whether foreseeable or not, compensation for accidents, and compensation for damages to products other than Mitsubishi products.
- (4) Replacement by the user, maintenance of on-site equipment, start-up test run and other tasks

# For safe use

• This product has been manufactured as a general-purpose part for general industries, and has not been designed or manufactured to be incorporated in a device or system used in purposes related to human life.

- Before using the product for special purposes such as nuclear power, electric power, aerospace, medicine or passenger movement vehicles, consult with Mitsubishi Electric
- This product has been manufactured under strict quality control. However when installing the product where major accidents or losses could occur if the product fails, install appropriate backup or failsafe functions in the system.

# MITSUBISHI ELECTRIC CORPORATION

HEAD OFFICE : TOKYO BUILDING, 2-7-3 MARUNOUCHI, CHIYODA-KU, TOKYO 100-8310, JAPAN



Side A JAPANESE

B ENGLISH

# CONNECTOR CONVERSION BOX GT16H-CNB-42S

# **User's Manual**

Manual Number JY997D40401H April 2018 Date

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MOUNTING PRECAUTIONS AWARNING

MOUNTING PRECAUTIONS /CAUTION

Make sure to turn off the Connector Conversion Box's power before attaching or detaching it to/from the GOT. Failure to do so may cause unit failure or malfunctions.

# DISPOSAL PRECAUTIONS

When disposing of the product, handle it as industrial waste

### RANSPORTATION RECAUTIONS

The Connector Conversion Box is a precision instrument. During transportation avoid impacts larger than those specified in this manual. Failure to do so ma cause failures in the unit. After transportation, verify the operations of the unit.

### Power Supply Specifications Specifications Input power supply voltage 24VDC (+10% -15%) Power consumption 13.7W or less (570mA/24VDC) (When including the consumption current of Handy GOT) Connector Conversion Box only 2.2W (90mA/24V) (When excluding the consumption current of Handy GOT Inrush current 25A or less (at max. load), 2ms Permissible instantaneous power failure time Within 5ms Applicable GOTs Model name Abbreviations GOT 2000 GT25 Handy GOT GT2506HS-VTBD, GT2505HS-VTBD GT1655HS-VTBD GT16 Handy GOT GOT 1000 GT14 Handy GO GT145 HS-Q BDE Internal Relay Contact Specifications Contact rating Specifications Item Operation switch 10mA/24VDC Each contact coordinates the operation switch status of Pressed (close)/Not pressed (open).

SW1 to SW6	(resistance load only)	When the external cable is not connected, contacts are always open regardless of the switch status.
Emergency stop switch ES1A to ES3A	1A/24VDC (resistance load) 0.3A/24VDC (induction load)	Each contact coordinates the emergency stop switch status of Pushed (open)/Return (close). When the external cable is not connected, contacts are always open regardless of the emergency stop switch status. Causing a short circuit of the ES⊡B terminal which is close to the ES⊡A terminal by a short pin (prepared by user) enables to set each contact in the close status even if the external connection cable is not connected. <sup>*1</sup> —GOT2000 Series User's Manual(Hardware), GT16 Handy GOT User's Manual, GT14 Handy GOT User's Manual When using the short-circuited ES⊡B terminal which is close to the ES⊡A terminal • Contacts are normally operated in the close status. When pushing the emergency stop switch, the contacts become open. • In the following situations, contacts are closed regardless of the status of the emergency stop switch and the external cable. • When GT16H-CNB-42S is turned OFF. • When GT16H-CNB-42S is not supplied with the power supply (DC24V).
Grip switch DSW1, DSW2	1A/24VDC (resistance load) 0.3A/24VDC (induction load)	Each contact coordinates the grip switch status of Pressed (close)/Not pressed (open). When the external cable is not connected, contacts are always open regardless of the grip switch status.
Keylock switch (2-position switch) KSWC, KSW1, KSW2	1A/24VDC (resistance load) 0.3A/24VDC (induction load)	Each contact coordinates the position of the keylock switch.  • When the key is on the left: KSW1 and KSWC are short-circuited.  • When the key is on the right: KSW2 and KSWC are short-circuited. When the external cable is not connected, contacts are always open regardless of the keylock switch.

No.

Nam

# Certification of UL, cUL standards

UL, cUL Standards are ized in use by the following combination

- GT2506HS-VTBD GT2505HS-VTBD
- GT1665HS-VTBD (Hardware version F or later)
- GT1455HS-QTBDE (Hardware version B or later)
- GT1450HS-QMBDE (Hardware version B or later)
  GT16H-CNB-42S (Hardware version D or later)
  External cable (GT16H-C30-42P, GT16H-C60-42P, GT16H-C100-42P)
- External cable (GT14H-C30-42P, GT14H-C60-42P, GT14H-C100-42P)<sup>\*1</sup> \*1 Version B or later

General notes on power supply This equipment must be supplied by a UL Listed or Recognized 24 V dc rated power supply and UL Listed or Recognized fuse rated not higher than 4A, or a UL Listed Class 2 power supply.

## Compliance with EC directive (CE Marking)

This note does not guarantee that an entire mechanical module produced in accordance with the contents of this note will comply with the following standards. Compliance to EMC directive for the entire mechanical module should be checked by the user/manufacturer. For more details please contact the local Mitsubishi Electric sales site.

Attention This product is designed for use in industrial applications Requirement for Compliance with EMC directive

The following products have shown compliance through direct testing (to the identified standards) and design analysis (forming a technical construction file) to the European Directive for Electromagnetic Compatibility (2004/108/EC) when used as directed by the appropriate documentation. Type: Programmable Controller (Open Trove Equipment)

Type: Programmable Controller (Open Type Equipment)						
Standard		Remark				
EN61131-2 : 2007	EMI	Compliance with all relevant aspects of the standard. (Radiated Emissions)				
Programmable		Compliance with all relevant aspects of the				

Programmable controllers- Equipment, requirement and tests	EMS	Compliance with all relevant aspects of the standard. (ESD, RF electromagnetic field, EFTB, Surge, RF conducted disturbances and Power frequency magnetic field)		
For more details please contact the local Mitsubishi Electric sales site.				

## Notes for compliance to EMC regulation

General notes on the control panel Make sure to combine the GT16 Handy GOT with the Connector Conversion Box to comply with the EMC directive. The Connector Conversion Box is an open type device (device installed to another device) and must be installed in a conductive control panel.

2) General notes on the use of communication cables • External cable (GT16H-C30-42P, GT16H-C60-42P, GT16H-C100-42P)

### · Direct connection cable

User Made Cables Existing Cables The cable need to be independently tested by the user to GT01-C30R4-8P GT11H-C30R2-6P the GOT, the PLC of MELSEC-Q series, MELSEC-L series, MELSEC-QnA, MELSEC-A series and MELSEC-FX series.

- Ethernet connection cable (Shielded twisted pair cable (STP))
   PLC (manufactured by other company), microcomputer, temperature controller, inverter, servo amplifier, CNC, MODBUS(R)/RTU or MODBUS(R)/TCP connection
- Produce the cable (RS-232 cable, RS-422 / 485 cable) for connecting the GOT to a controller with reference to the following manual.  $\rightarrow$  GOT2000/GOT1000 Series Connection Manual for GT Works3 and a
- controller used

TDK

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<u>\*\*\*\*</u>

Up to 75mi

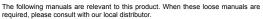
(2.95inch)

⊕

# 3) General notes on Power supply The Connector Conversion Box requires an

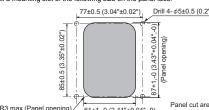
additional ferrite filter to be attached to the 24V DC power supply cables. The filter should be attached in a similar manner as should be attached in a similar manner as shown in the figure opposite, i.e. the power cables are wrapped around the filter. However, as with all EMC situations the more correctly applied precautions the better the systems Electro-magnetic Compatibility. The ferrite recommended is a TDK ZCAT3035-1330 or similar. The ferrite should be placed as near to the 24V DC terminals of the Connector Conversion Box as possible (which should be within 75mm of the GOT terminal). Secon at Manuals

# Associated Manuals



(When setting the connector for Handy GOT connection and the power supply switch on the panel surface)

### 1) Direct mounting on the panel face Drill a mounting slot of the following size on the panel face. Install the accessory packing to the packing attachment chase of the

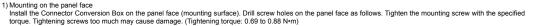


4-R3 max (Panel opening) 61+1,-0 (2.41"+0.04",-0) (Panel opening)

3) Mounting on the panel face Fit the Connector Conversion Box from the back side of the panel face, and fix it with four M4 screws (prepared by user). In the Connector Conversion Box, thread of M4, 6mm (0.23°) in depth is cut in each mounting hole. Prepare four M4 mounting screws separately while considering the thickness of the panel face. (Tightening torque: 0.69 to 0.88 N·m) Make sure that interfering objects are not located within 65mm (2.56°) from the rear face so that the connector of a PLC cable is not hindered. To wire the terminal block, keep a space of 25mm (0.98°) or more on both sides of the Connector Conversion Box.

25 (0.99") \*\*\*\*\*\*\*\*\*\*\* \*\*\*\*\*\* 65 (2.56") 25 (0.99") Unit: mm (inch)

4.2 Mounting on the panel face (When installing the Connector Conversion Box on the panel surface)



Manual Numbe Manual name Contents (Model Code) Describes the GOT hardware relevan content such as part names, externa dimensions, mounting, power supply wiring, specifications, and introduction o option devices GOT2000 Series SH-081194ENG User's Manual (Hardware) (1D7MJ5) GOT2000 Series Describes system configurations of the Handy GOT onnection method applicable to SH-081867ENG Connection Manual GOT2000 Series Handy GOT and (1D7MS9) For GT Works3 cable creation method Version1 Describes the Handy GOT hardware relevant content such as part names external dimensions, mounting, powe supply wiring, specifications, and introduction to option devices GT16 Handy GOT User's Manual JY997D41201 JY997D41202 (09R821) User's Manuai (Hardware/Utility, Connection) 1/2, 2/2 (sold separately) GT14 Handy GOT User's Manual Describes the Handy GOT hardware JY997D50201 elevant content such as part names (Hardware/Utility, external dimensions, mounting, powe JY997D50202 Connection) 1/2, 2/2 upply wiring, specifications, an (09R825) (sold separately) oduction to option devices

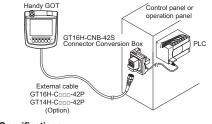
For details of a PLC to be connected, refer to the PLC user's manual respective Referenced Standard: GB/T15969.2 (Requirement of Chinese standardized law)

### **Bundled Items**

Bundled item	Quantity
GT16H-CNB-42S Connector conversion box	1
Packing for panel installation	1
Flange for GT10-9PT5S	1
Screws for flange installation (M3×8)	2
CONNECTOR CONVERSION BOX GT16H-CNB-42S User's Manual (This manual)	1

### 1. Features

The Connector Conversion Box relays the GOT's external 42-pin connector to the power supply/switch and the PLC's connector and terminal block, while enabling users to operate the Handy GOT outside the enclosure.



# 2. Specifications

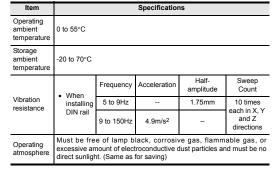
General Specifications Other specifications are the same as the Handy GOT main unit.

Connector Conversion Box. Be sure to install the packing.

Elevation view

01

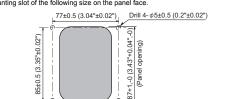
Packing attachment chase

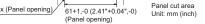


4. Installation The Connector Conversion Box can be installed on the panel face directly or on the DIN rail.

Mounting on the panel face 4.1

2) Installation of the packing





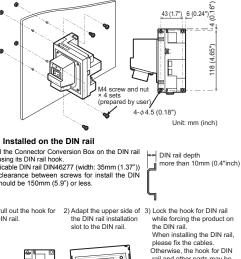
not match the safety darde Before using the system pla ase check the safety standards which are required

## 3. Part Names and External Dimensions

sions of each part of the Connector Conversion a and the external dime

DUX al	re described below. • External	cable · Terminal block	6)	Hook for DIN rail	Used for fixing t Box when mount
2	connecte () 3) 4) <u>56 (2.21") 5</u>		7)	Hole for the screw installation	Used for fixing screw
	8) 15) 13) 15) 13) 15) 13) 10) 10) 10) 10) 10) 10) 10) 10	8)	Terminal block 1	Connects the GT power supply emergency stop terminal screw an	
		11) 11) 11) 11) 11) 11) 11) 11)	9)	Terminal block 2	Connects the op GOT (SW1 to 6) and the keylock terminal and the
5)		6) 7) 16) 1 9) about 130 (5.12")*	10)	External connection device communication connector (RS-232: D-Sub, 9-pin, male)	Connects to the via a GOT2000/0 RS-422/485 c
	12)//	*Space required for connecting the cable - Unit: mm (inch) Weight: about 0.5kg	11)	External connection device communication connector (RS-422/485: D-Sub, 9-pin, female)	connector canno These connec combination wi GT145□HS-Q□B
No.	Name	Specifications	12)	External connection device communication connector	Connects the ext
1)	Connector for Handy GOT	Connects a Handy GOT through an external		(Ethernet: RJ-45 module jack)	Ethernet with usi
				····,··,··,	
	(42-pin, female)	connection cable.	13)	Rotary switch (U)	Sets the ID numb
2)	Power switch	Supplies the power to the Handy GOT. When this switch is set to ON, the power is	13) 14)		Sets the ID numb Sets one ID num switches (U) and
2)		Supplies the power to the Handy GOT.		Rotary switch (U) Rotary switch (L)	Sets one ID nun switches (U) and Enables the re
2)		Supplies the power to the Handy GOT. When this switch is set to ON, the power is supplied. Turn off the power when attaching or detaching the Handy GOT. Lit in green: Power is correctly supplied. Not lit: Power is not supplied.		Rotary switch (U)	Sets one ID nun switches (U) and Enables the re number (ON=Val When connectin device with usi
	Power switch	Supplies the power to the Handy GOT. When this switch is set to ON, the power is supplied. Turn off the power when attaching or detaching the Handy GOT. Lit in green: Power is correctly supplied. Not	14)	Rotary switch (U) Rotary switch (L) ID number valid/invalid selection switch	Sets one ID nun switches (U) and Enables the re number (ON=Val When connectin device with usi (invalid).
3)	Power switch POWER LED	Supplies the power to the Handy GOT. When this switch is set to ON, the power is supplied. Turn off the power when attaching or detaching the Handy GOT. Lit in green: Power is correctly supplied. Not lit: Power is not supplied. Used when mounting the panel. For M4	14)	Rotary switch (U) Rotary switch (L) ID number valid/invalid	Sets one ID nun switches (U) and Enables the re number (ON=Val When connectin device with usi

I       Used for fixing the Connector Conversion Box when mounting DIN rail (35mm).         III       Used for fixing on the board, etc. For M4 screw         III       Used for fixing on the board, etc. For M4 screw         IIII       Connects the GT16H-CNB-42S, the 24VDC power supply of Handy GOT and the emergency stop switch (ES-1 to 3) with M3 terminal screw and the cover.         IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII			
Box when mounting DIN rail (35mm).         aw installation         Used for fixing on the board, etc. For M4 screw         Connects the GT16H-CNB-42S, the 24VDC power supply of Handy GOT and the emergency stop switch (ES-1 to 3) with M3 terminal screw and the cover.         Connects the operation switch of the Handy GOT (SW1 to 6), the grip switch (DSW-1, 2) and the keylock switch (KSW-1, 2) with M3 terminal and the cover.         Connects the operation switch of the Handy GOT (SW1 to 6), the grip switch (DSW-1, 2) and the keylock switch (KSW-1, 2) with M3 terminal and the cover.         ection device n connector and the same time. These connectors cannot be used in connector These connectors cannot be used in connector and GT145ch-R-Q::BDE.         ection device n connector Ethe external connection device via GT145ch-R-Q::BDE.         ection device n connects the external connection device via GT145ch-R-Q::BDE.         extion device n connects the external connection device via Bithewith using a LAN cable.         (b)       Sets the ID number of GT16-CNB-42S. Sets on ID number (ON-Vaid), OFF=Invaid).         (c)       Sets the ID number of GT16-CNB-42S. Sets on ID number (ON-Vaidi, OFF=Invaid).         (a)       Bables the recognition function of ID number (ON-Vaidi, OFF=Invaid).         (b)       Sets the ID number of GT16-CNB-42S. Sets on ID number (ON-Vaidi, OFF=Invaid).         (c)       Bables the recognition function of ID number (ON-Vaidi, OFF=Invaid).         (c)       When connecting the external connection device via the same to the s	ne	Specifications	
www.installation       screw         Connects the GT16H-CNB-42S, the 24VDC power supply of Handy GOT and the emergency stop switch (ES-1 to 3) with M3 terminal screw and the cover.         Connects the operation switch of the Handy GOT (SW1 to 6), the grip switch (DSW-1, 2) and the keylock switch (KSW-1, 2) with M3 terminal and the cover.         exction device n connector n connector on connector on connector D-Sub, 9-pin, -Sub, 9-pin, -Sub, 9-pin,       Connects to the external connection device onnector connot be used at the same time. These connector cannot be used in combination with GT2505HS-VTBD and GT145aHS-Q::BDE.       Handle Connects in the external connection device with using a LAN cable.         Sets the ID number of GT16-CNB-42S. Sets on ID number with using both rotary switches (U) and (L).       Sets the ID number of GT16-CNB-42S. Sets one ID number with using both rotary switches (U) and (L).       1) Pull out the hook for 2 DIN rail.         alid/invalid       Enables the recognition function of ID number (Nor-Valid, OFT=Invalid).       1) Sets the ID number of GT16-CNB-42S. Sets one ID number with using 10) and 11), set OFF (invalid).         mainstallation       Used for fixing the flange when using the	il		10. 10.
power supply of Handy GOT and the emergency stop switch (ES-1 to 3) with M3 terminal screw and the cover.           Connects the operation switch of the Handy GOT (SW1 to 6), the grip switch (DSW-1, 2) and the keylock switch (KSW-1, 2) with M3 terminal and the cover.           ection device n connector on connector p-spin, male)         Connects to the external connection device via a GOT2000/GOT1000 series cable. RS-422/485 connector and RS-232 connector cannot be used at the same time. These connectors cannot be used in combination with GT2505HS-VTBD and GT145=HS-Q=BDE.         LA3 Installed on the ID Install the Connector Conver- with using its DIN rail DIN4627 the clearance between so rail should be 150mm (5.97)           action device n connector S module jack)         Connects the external connection device via Ethernet with using a LAN cable.         1) Pull out the hook for 2 DIN rail.           0)         Sets the ID number of GT16-CNE-42S. Sets one I	w installation		
GOT (SW1 to 6), the grip switch (DSW-1, 2) and the keylock switch (KSW-1, 2) with M3 terminal and the cover.     Connects to the external connection device n connector n connector n connector n connector D-Sub, 9-pin, male)     Connects the external connection device n connector D-Sub, 9-pin, Connects the external connection device via GT145±HS-Q=BDE.     Connects the external connection device via Ethernet with using a LAN cable.     Sets the ID number of GT16-CNB-42S. Sets on ID number of GT16-		power supply of Handy GOT and the emergency stop switch (ES-1 to 3) with M3	
action device (s) = ppin, male) (s)	2	GOT (SW1 to 6), the grip switch (DSW-1, 2) and the keylock switch (KSW-1, 2) with M3	
Production of the seconnectors cannot be used in cometor of combination with GT2505HS-VTBD and GT145HS-Q::BDE.       rail should be 150mm (5.9")         Production device n connector noncets the external connection device via Ethernet with using a LAN cable.       1) Pull out the hook for 2 DIN rail.         (i)       Sets the ID number of GT16-CNB-42S.         (ii)       Sets the ID number of GT16-CNB-42S.         (iii)       Sets the ID number of GT16-CNB-42S.         (iii)       Dimber (CNP-Valid, OFF=Invalid).         (iiii)       Enables the recognition function of ID number (ON-Valid, OFF=Invalid).         When connecting the external connection device with using 10) and 11), set OFF (invalid).         (iii)       Used for fixing the flange when using the set of	n connector	via a GOT2000/GOT1000 series cable.	Install the Connector Conver with using its DIN rail hook. (Applicable DIN rail DIN462)
Approximation       Connects the external connection device via Ethernet with using a LAN cable.       DIN rail.         D)       Sets the ID number of GT16-CNB-42S. Sets one ID number with using both rotary switches (U) and (L).       DIN rail.         Brables the recognition function of ID number (ON=Valid, OFF=Invalid).       DIN rail.         When connecting the external connection device with using 10) and 11), set OFF (invalid).       DIN rail.         Discrete with using 10 and 11), set OFF (invalid).       DIN rail.	n connector	These connectors cannot be used in combination with GT2505HS-VTBD and	rail should be 150mm (5.9")
y       Sets one ID number with using both rotary switches (U) and (L).         alid/invalid       Enables the recognition function of ID number (ON=Valid, OFF=Invalid).         When connecting the external connection device with using 10) and 11), set OFF (invalid).         ge installation       Used for fixing the flange when using the	n connector		
) switches (U) and (L). Enables the recognition function of ID number (ON=Valid, OFF=Invalid). When connecting the external connection device with using 10) and 11), set OFF (invalid). Used for fixing the flange when using the	J)		6 K. 0
alid/invalid alid/invalid unumber (Onv-Valid, OFF-Invalid). When connecting the external connection device with using 10) and 11), set OFF (invalid). Used for fixing the flange when using the	.)		
	alid/invalid	number (ON=Valid, OFF=Invalid). When connecting the external connection device with using 10) and 11), set OFF	
	ge installation		+



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rail and other parts may be damaged by the cable load

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