

UTY-VKSX

INSTALLATION MANUAL

KNX CONVERTOR FOR INDOOR UNIT
For authorized service personnel only.

English

INSTALLATIONSANLEITUNG

KNX-KONVERTER FÜR INNENGERÄT
Nur für autorisiertes Fachpersonal.

Deutsch

MANUEL D'INSTALLATION

CONVERTISSEUR KNX POUR UNITÉ INTÉRIEURE
Pour le personnel agréé uniquement.

Français

MANUAL DE INSTALACIÓN

CONVERTIDOR KNX PARA LA UNIDAD INTERIOR
Únicamente para personal de servicio autorizado.

Español

MANUALE DI INSTALLAZIONE

CONVERTITORE KNX PER UNITÀ INTERNE
A uso esclusivo del personale tecnico autorizzato.

Italiano

ΕΓΧΕΙΡΙΔΙΟ ΕΓΚΑΤΑΣΤΑΣΗΣ

ΜΕΤΑΤΡΟΠΕΑΣ KNX ΓΙΑ ΕΣΩΤΕΡΙΚΗ ΜΟΝΑΔΑ
Μόνο για εξουσιοδοτημένο τεχνικό προσωπικό.

Ελληνικά

MANUAL DE INSTALAÇÃO

CONVERSOR KNX PARA UNIDADE INTERIOR
Apenas para técnicos autorizados.

Português

РУКОВОДСТВО ПО УСТАНОВКЕ

КОНВЕРТОР KNX ДЛЯ ВНУТРЕННЕГО МОДУЛЯ
Только для авторизованного обслуживающего персонала.

Русский

MONTAJ KILAVUZU

İÇ ÜNİTE İÇİN KNX DÖNÜŞTÜRÜCÜ
Yalnızca yetkili servis personeli için.

Türkçe

安装说明书

室内机用 KNX 信号转换器
仅针对授权的专业维修人员。

中文

富士通将军有限公司
FUJITSU GENERAL LIMITED



[Original instructions]
PART NO. 9374707171-02

INSTALLATION MANUAL


PART NO. 9374707171-02
KNX CONVERTOR for Indoor unit

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1. SAFETY PRECAUTIONS

- The "SAFETY PRECAUTIONS" indicated in this manual contain important information pertaining to your safety. Be sure to observe them.
- Request the user to keep this manual on hand for future use, such as for relocating or repairing the unit.

 WARNING	This mark indicates procedures which, if improperly performed, might lead to the death or serious injury of the user.
Perform electrical work by an authorized service personnel in accordance with this manual and the electrical wiring regulations or implementation regulations of the country. Also do not install this unit by yourself. Improper electric work will cause electric shock or a fire.	
Perform installation work in accordance with this manual. Request an authorized service personnel to perform installation work. Do not install this unit by yourself. Improper installation will cause injury, electric shock, fire, etc.	
In the event of a malfunction (burning smell, etc.), immediately stop operation, turn off the electrical breaker, and consult authorized service personnel.	
Use a power source exclusively for this unit. Never share the power source with other electrical equipment. Doing so will cause fire and electric shock.	
Do not install the unit in the following areas: <ul style="list-style-type: none"> Do not install the unit near a source of heat, steam, or flammable gas. Area filled with mineral oil or containing a large amount of splashed oil or steam, such as a kitchen. It will deteriorate plastic parts, causing the parts to fail or the unit to leak water. Area that generates substances that adversely affect the equipment, such as sulfuric gas, chlorine gas, acid, or alkali. It will cause the copper pipes and brazed joints to corrode, which can cause refrigerant leakage. Area containing equipment that generates electromagnetic interference. It will cause the control system to malfunction, preventing the unit from operating normally. Area that can cause combustible gas to leak, contains suspended carbon fibers or flammable dust, or volatile inflammables such as paint thinner or gasoline. If gas leaks and settles around the unit, it can cause a fire. Do not use the unit for special purposes, such as storing food, raising animals, growing plants, or preserving precision devices or art objects. It can degrade the quality of the preserved or stored objects. Install the unit in a well-ventilated place avoiding rains and direct sunlight. 	
Do not operate this unit when your hands are wet. Touching the unit with wet hands will cause an electric shock.	
If children may approach the unit, take preventive measures so that they cannot reach the unit.	

CAUTION

This mark indicates procedures which, if improperly performed, might possibly result in personal harm to the user or damage to property.






Pay abundant care when transporting this unit because it is a precision device. Improper transportation will cause trouble.
Do not touch the switches with sharp objects. Doing so will cause injury, trouble, or electric shock.
Do not expose this unit directly to water. Doing so will cause trouble, electric shock, or heating.
Do not set vessels containing a liquid on this unit. Doing so will cause heating, fire, or electric shock.
Dispose of the packing materials safely. Tear and dispose of the plastic packing bags so that children cannot play with them. There is the danger of suffocation if children play with the original plastic bags.
Do not insert articles into the slit parts of this unit. Doing so will cause trouble, heating, or electric shock.

2. MAIN UNIT AND ACCESSORIES

Important: Download the interface specifications from the website before starting installation work.

<http://www.fujitsu-general.com/global/support/>

The following installation parts are supplied. Use them as required.

Name and Shape	Q'ty	Application
This product 	1	Main unit
Installation manual 	1	This manual
Cable tie 	4	For mounting the transmission cable.
Screw (M4 x 16 mm) 	3	For mounting this product
Connector cable 	1	For connecting to indoor unit (1.5m)

3. ELECTRICAL REQUIREMENT

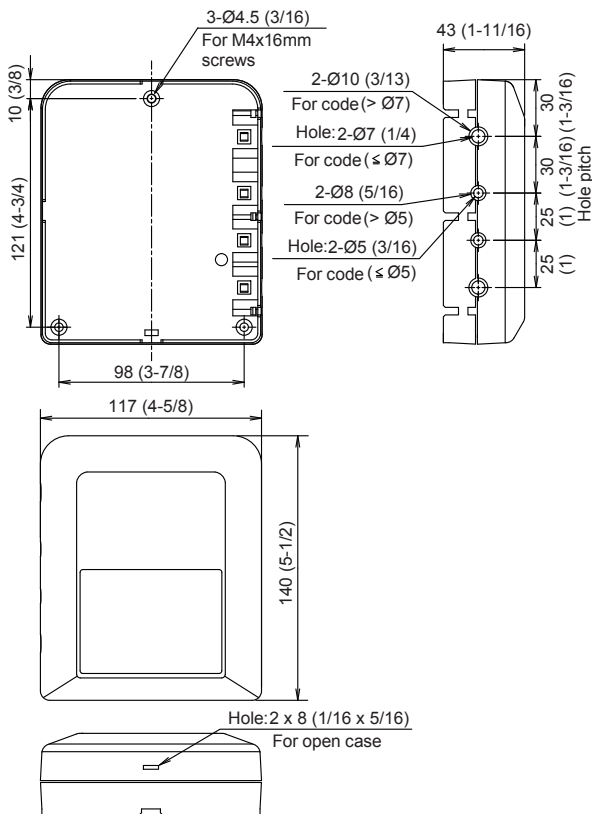
Use	Size		Wire type	Remarks
KNX cable	Maximum	0.8 mm ² (18AWG)	AWG18-20 2Wire twisted pair	KNX TP1 (Twister Pair 1) cable
	Minimum	0.5 mm ² (20AWG)		

4. SELECTING AN INSTALLATION LOCATION

4.1. Dimensions

This product is comprised of a body and cover.

Unit : mm (in.)



5. WIRING

⚠ WARNING

Before starting installation work, turn off the power of this unit and the connection destination. Do not turn on the power again until installation is completed. Otherwise, it will cause electric shock or fire.

Use specified cables or accessory cables to connect to this unit. Do not modify the cables to connect this unit other than those specified, do not use extension cables, and do not use independent branch wiring. It may cause electric shock or fire.

Install the transmission cables securely to the terminal block. Confirm that external force is not applied to the cable. Use transmission cables made of the specified cable. If intermediate connection or insertion fixing are imperfect, it will cause electric shock, fire, etc.

When connecting the cables to this unit, route the cables so that the cover of this unit is securely fixed. If the cover is imperfectly fixed, it may cause fire or overheating of the terminals.

Perform earth (ground) work positively. Do not connect the earth (ground) cable to a telephone cable, water pipe, or conductor rod.

Always fasten the outside covering of the transmission cables with the cable clamp. (If the insulator is chafed, electric leakage may occur.)

Perform all wiring works so that the user does not touch the wiring. Otherwise, injury or electric shock could result.

If any cable is damaged, do not repair or modify it yourself. Improper work will cause electric shock or fire.

⚠ CAUTION

Do not bind the remote controller cable and the transmission cable together with or parallel to the power supply cable of the indoor and outdoor units. It may cause erroneous operation.

When performing wiring work, be careful not to damage the cable or injure yourself. Also, connect the connectors securely. Loose connectors will cause trouble, heating, fire, or electric shock.

Install the indoor and outdoor units, power supply cable, transmission cable and remote control cable 1 m (40 in.) away from television and radio to avoid distorted images and noise. Otherwise, a malfunction could result.

Perform wiring so that water does not enter this unit along the external wiring. Always install a trap to the wiring or take other countermeasures. Otherwise it will cause trouble or electric shock or fire.

Confirm the name of each unit and name of each terminal block of the unit and connect the wiring in accordance with the directions given in the manual so that there is no incorrect wiring. Incorrect wiring will damage the electric parts and cause smoke and fire.

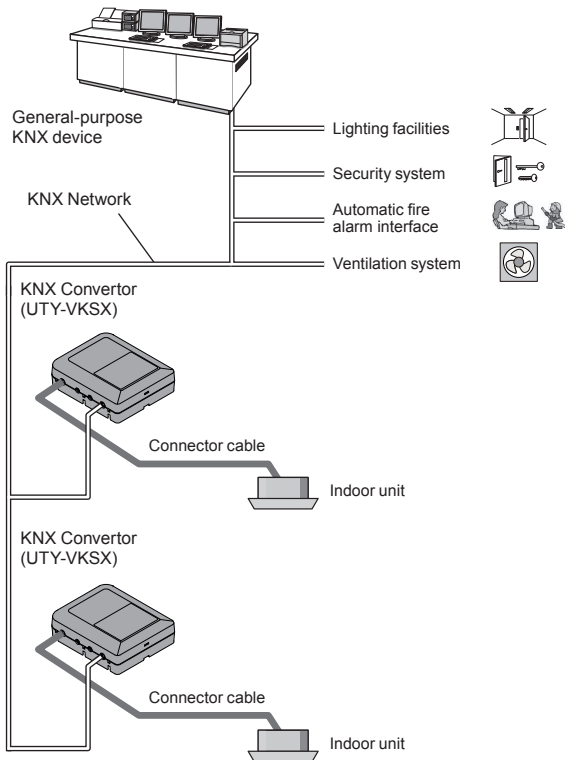
When installing the connection cables near a source of electromagnetic waves, use shielded cable. Otherwise, a breakdown or malfunction could result.

4.2. Specifications

Power consumption (W)		0.6
Temperature °C(°F)	Operating	0-46 (32-114)
	Packaged	-10-60 (14-140)
Humidity (%)	Packaged	0-95 (RH); No condensation
Dimensions H x W x D mm(in.)		43 x 117 x 140 (1-11/16 x 4-5/8 x 5-1/2)
Weight g (oz.)		215 (8)

5.1. Wiring method

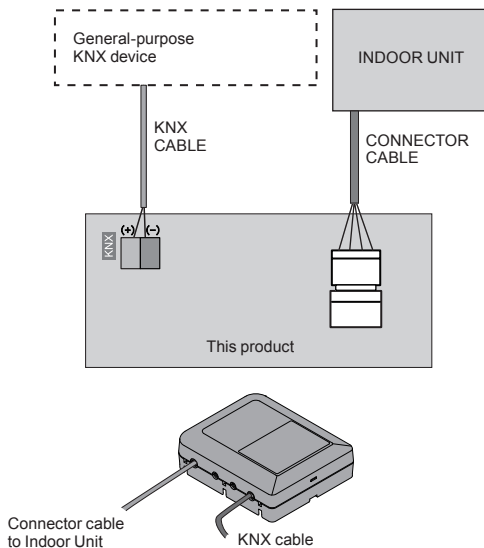
PROPER SYSTEM DIAGRAM



Maximum connectable indoor unit number per 1 KNX Converter

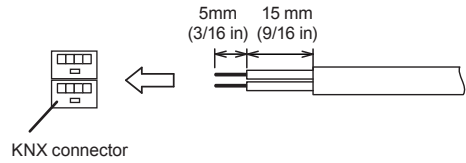
1

ELECTRICAL WIRING



5.2. Unit wiring

5.2.1. KNX cable



6. INSTALLING THE KNX CONVERTOR

⚠ WARNING

Always use the accessories and specified installation work parts. Check the state of the installation parts. Not using the specified parts will cause units to fall off, electric shock, fire, etc.

Install at a place that can withstand the weight of the unit and install positively so that the unit will not topple or fall.

When installing this unit, make sure that there are no children nearby. Otherwise, injury or electric shock could result.

⚠ CAUTION

Do not set the DIP switch or rotary switch of this unit except as specified in this installation manual or the instruction manual supplied with the air conditioner. Setting the switches other than specified will cause an accident or trouble.

Use an insulated screwdriver to set the DIP switches.

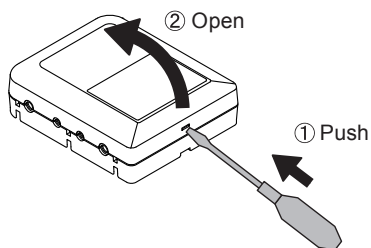
Before opening the cover of this unit, completely discharge static electricity charged on your body. Otherwise, failure or malfunction could result.

Do not touch the circuit board and circuit board parts directly with your hands. Otherwise, injury or electric shock could result.

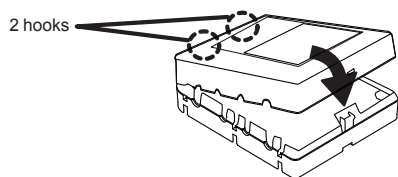
Tightening the mounting screws too tight will damage the body of this unit.

6.1. Connecting the transmission cables

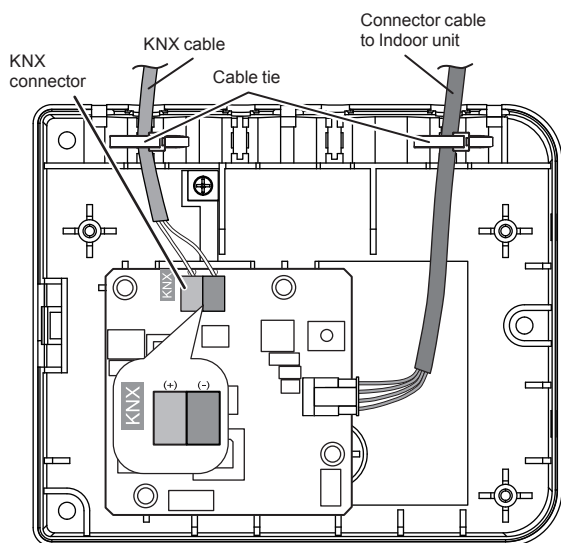
- Turn off the power of the connecting unit.
- Insert the driver, etc. into the hole (For open case) and open the top cover.



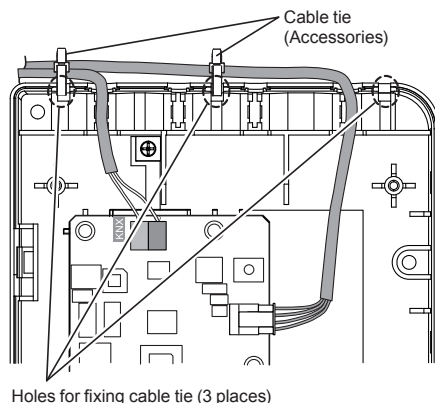
- Connect the transmission cable to accessory KNX connector to connect to KNX network.
- Connect the KNX cables to (+) and (-) according to the polarity of the master unit.
- Connect the connector cable for indoor unit to the specified connector firmly.
- Securely tighten the cable tie and then confirm that the cable will not come out.
- Use the 3 screws (M4 × 16 mm) provided to mount this product to the behind ceiling, wall, floor or other suitable location.
- Once the wiring of the cables has been completed, fit the 2 hooks of top cover and close the cover.



* The hole for a cable can be widened as necessary. When passing the thick cable through the hole, widen it.



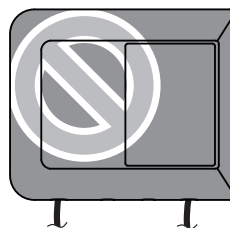
Fix the connector cable even outside the main unit as necessary. Fix the cable with cable tie using 3 fixing holes.



Holes for fixing cable tie (3 places)

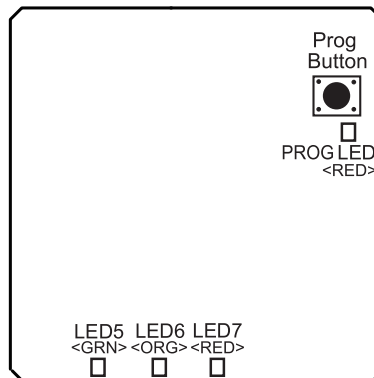
6.2. Installation method

Do not install the main unit with the cables downward.



7. CIRCUIT BOARD SETTING

Set this product Prog Button.



- Programming Button (Prog Button)
Used for communication with the ETS.

Push to toggle between the modes.
Runtime mode (Default) ↔ Programming mode
[PROG LED off] ↔ [PROG LED on]

Tightening strength	
Cable tie	0.3 to 0.5 N (2.7 to 4.4 lbf) (3 to 5 kgf)

8. TURNING ON THE POWER

⚠ CAUTION

Recheck the wiring. Incorrect wiring will cause trouble.

- (1) Check the wiring of this product.
- (2) Check the wiring and switches of units connected to convertor before tuning on the power.
- (3) Check that the switches of this product are correct.
- (4) Refer to the indoor unit operating manual and turn on the power of indoor unit.

- This product is initialized for a period of approximately a few seconds after the power is turned on.
LED5 (green) and LED6 (orange) flash.
- After initial setting is completed, operation will be restarted automatically. LED5 (green) lights.

* This product does not operate during initialization.
If an error occurs, the LED5, LED6, LED7, Prog LED lights or flashes.
Please refer to the "Error code" below.

9. LED DISPLAY

9.1. Normal code

Normal indications				Normal contents
LED5 (green)	LED6 (orange)	LED7 (red)	Prog LED (red)	
■	□	□	★	Normal starting
▲ (Flashes alternately)		□	★	Start sequence or address rewriting
★	★	★	■	Programming mode display

Display mode ■ : On
 □ : Off
 ▲ : 1.0s ON / 1.0s OFF
 ★ : State unconcerned

9.2. Error code

For the error indications of devices connected to the convertor, refer to each manual.

Error indications				Error contents
LED5 (green)	LED6 (orange)	LED7 (red)	Prog LED (red)	
● (11)	● (1)	◇	★	Peripheral unit main PCB error
★	★	★	◆	KNX bus error

Display mode ● : 0.5s ON / 0.5s OFF
 ◇ : 0.1s ON / 0.1s OFF
 () : Number of flashing
 ★ : State unconcerned
 ◆ : Blinking (continuously)