Procon KNX / EIB Interface

Procon KNX-EIB-A-01

FOR INSTALLERS

INSTALLATION MANUAL
Version 1.01

For safe and correct use, please read this installation manual thoroughly before installing the KNX-EIB-A-01.

MITSUBISHI ELECTRIC

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1. Safety precautions

- **Before installing the unit, make sure you read all the "Safety precautions"**
- **The "Safety precautions" provide very important points regarding safety. Make sure you follow them**

Symbols used in the text

⚠ Warning:
Describes precautions that should be observed to prevent danger of injury or death to the user.

⚠ Caution:
Describes precautions that should be observed to prevent damage to the unit.

⚠ Warning:
Carefully read the labels affixed to the main unit

⚠ Warning:

- **Ask the dealer or an authorised technician to install the unit**
  - Improper installation by the user may result in water leakage, electric shock, or fire
- **Use the specified cables for wiring. Make the connections securely so that any outside forces acting on the cables are not applied to the terminals**
  - Inadequate connection and fastening may generate heat and cause a fire
- **Never repair the unit. If the controller must be repaired, consult the dealer**
  - If the unit is repaired improperly, electric shock, or fire may result
- **When handling this product, always wear protective equipment. EG: Gloves, full arm protection and safety glasses**
  - Improper handling may result in injury
- **Have all electric work done by a licensed electrician according to "Electric Facility Engineering Standard", "Interior Wire Regulations" and the instructions given in this manual and always use a special circuit**
  - If the power source capacity is inadequate or electric work is performed improperly, electric shock and fire may result
- **Keep the electric parts away from any water - washing water etc…**
  - Contact may result in electric shock, fire or smoke
- **Do not reconstruct or change the settings of the protection devices**
  - If the protection device is shorted or operated forcibly, or parts other than those specified by Mitsubishi Electric are used, fire or explosion may result
- **To dispose of this product, consult your dealer**

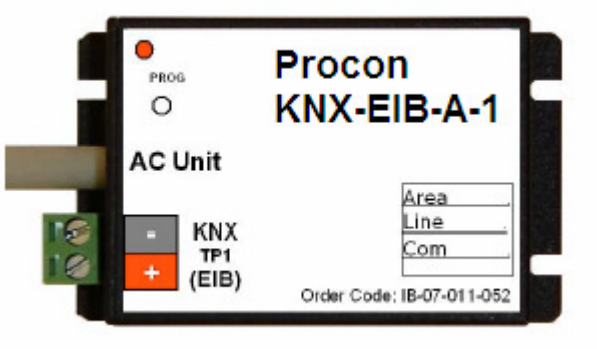
⚠ Caution:

- **Ground the unit**
  - Do not connect the ground wire to gas or water pipes, lightning rods, or telephone ground lines. Improper grounding may result in electric shock
- **Be careful that the installation base is not damaged**
  - If the damage is left uncorrected, the unit may fall and cause personal injury or property damage
- **Be very careful regarding product transportation**
  - Two people should be used to carry products of 20kg or more
  - Some products use PP bands for packaging. Do not use any PP bands for a means of transportation
- **Safely dispose of the packing materials**
  - Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries
  - Tear apart and throw away plastic packaging bags so that children will not play with them - If children play with a plastic bag which has not been torn apart, they face the risk of suffocation

2. Overview

The KNX-EIB-A-01 is a splits interface to EIB and KNX protocol.

The interface can only monitor and control one indoor unit.



3. Size

The interface details are:

- Height 48mm
- Width 60mm
- Depth 25mm

4. Selecting an installation site

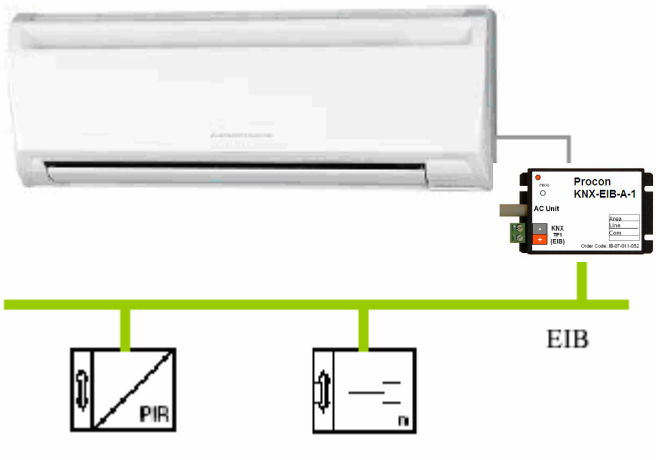
- Avoid locations in direct sunlight
- Avoid locations exposed to steam or oil vapour
- Avoid locations where combustible gas may leak, settle or be generated
- Avoid installation near machines emitting high-frequency waves
- Avoid places where acidic solutions are frequently handled
- Avoid places where sulphur-based or other sprays are frequently used
- Avoid areas of high humidity (when cooling operation is required)
- Install inside the building

5. Installation

The interface comes with the cable and the connector to connect directly to the Air Conditioning unit.

Disconnect mains power from the AC unit. Open the front cover of the indoor unit in order to have access to the printed circuit board. On the PCB, locate the connector marked as **CN105 or CN92**.

Insert the connector of the KNX-EIB-A-01 cable into the socket **CN105 or CN92**. You can install the KNX-EIB-A-01 inside or outside the AC indoor unit depending on your needs, remember that KNX-EIB-A-01 must also be connected to the EIB bus. Close the AC indoor unit's front cover again.



6. KNX communication objects

6.1. Main objects

Object #	0
Name	**On/Off [1bit]**
Function	0-On,1-Off
Description	Start / Stop of the AC unit

Object #	1
Name	**Mode [1byte]**
Function	0=Aut,1=Warm,2=Dry,3=Fan,4=Cold
Description	Mode of the AC unit

Object #	2
Name	**Fan [1byte]**
Function	0=Aut,1=Low,2=Md1,3=Md2,4=High
Description	Fan speed of the AC unit

Object #	3
Name	**Vane [1byte]**
Function	0=Aut,1=Hor,...,5-Ver,6-Swing
Description	Vane Position of the AC unit

Object #	4
Name	**Temperature Set Point [2bytes]**
Function	17..30ºC
Description	Temperature Set Point of the AC unit

Object #	5
Name	**Ambient Temperature [2bytes]**
Function	10..38ºC
Description	Ambient Temperature supplied by the AC unit's sensor

Object #	6
Name	**Error [1bit]**
Function	1=Functioning Error
Description	1 indicates the AC unit is in error state

Object #	7
Name	**Error [1byte]**
Function	Functioning Error Code
Description	Error Code of the AC unit: 0 indicates no error. Consult error codes list.

6.2. Accessory objects

Object #	8
Name	**Window Sensor [1bit]**
Function	0=Closed,1=Window Opened
Description	Indicates to the AC unit the status of the window. If opened, after the minutes indicated in the parameter "Minutes Window" the AC unit will be switched off automatically. The AC unit will remain OFF while the window sensor signal is active. If "Minutes Window" is 0, the AC unit will be switched off immediately.

Object #	9
Name	**Device Enable/Disable [1bit]**
Function	0=Enabled,1=Disabled
Description	Indicates to the device if it can be operated from KNX. If disabled, the only command accepted from KNX will be "enable". (Device refers to ME-AC-KNX)

Object #	10
Name	**Enable/Disable IR remote control [1bit]**
Function	0=Enabled,1=Disabled
Description	Indicates if the IR remote control can be used. Actually, this functionality is done overwriting the last command received from KNX whenever a change is detected coming from the IR remote control. (Soft blocking).

6.3. Bit objects

6.3.1. Operation mode

Only one from the five objects will be active in any moment. If 1 is written in any of them, the rest will be forced to 0. If the AC unit changes of Operation Mode, the corresponding object will be activated (1) and the rest will be forced to zero.

Object #	11
Name	**Auto Mode [1bit]**
Function	1=Mode Auto Activated
Description	Indicates or activates with 1 this Operation Mode.

Object #	12
Name	**Heat Mode [1bit]**
Function	1=Mode Heat Activated
Description	Indicates or activates with 1 this Operation Mode.

Object #	13
Name	**Dry Mode [1bit]**
Function	1=Modo Dry Activated
Description	Indicates or activates with 1 this Operation Mode.

Object #	14
Name	**Ventilation Mode [1bit]**
Function	1=Mode Ventilation Activated
Description	Indicates or activates with 1 this Operation Mode.

Object #	15
Name	**Cold Mode [1bit]**
Function	1=Mode Cold Activated
Description	Indicates or activates with 1 this Operation Mode.

6.3.2. Fan speed

Object #	16
Name	**Fan [+/-][1bit]**
Function	0=Decrease, 1=Increase
Description	With every write of 1, the fan speed increases in one position, when the maximum speed is reached, it changes to automatic. Writing 0 decreases the speed.

Only one from the five objects will be active in any moment. If 1 is written in any of them, the rest will be forced to 0. If the AC unit changes of Fan Speed, the corresponding object will be activated (1) and the rest will be forced to zero.

Object #	17
Name	**Fan Auto [1bit]**
Function	1=Fan in Auto
Description	Indicates or activates with 1 this Fan Speed.

Object #	18
Name	**Fan Low [1bit]**
Function	1=Fan Low
Description	Indicates or activates with 1 this Fan Speed.

Object #	19
Name	**Fan Md1 [1bit]**
Function	1=Fan Middle1
Description	Indicates or activates with 1 this Fan Speed.

Object #	20
Name	**Fan Md2 [1bit]**
Function	1=Fan Middle2
Description	Indicates or activates with 1 this Fan Speed.

Object #	21
Name	**Fan High [1bit]**
Function	1=Fan High
Description	Indicates or activates with 1 this Fan Speed.

6.3.3. Louver position

Object #	22
Name	**Vane [+/-][1bit]**
Function	0=To Horizontal, 1=To Vertical
Description	With every write of 1, the vane position increases, when Swing is reached, it changes to automatic. Writing 0 decreases.

Only one from the seven objects will be active in any moment. If 1 is written in any of them, the rest will be forced to 0. If the AC unit changes of Vane Position, the corresponding object will be activated (1) and the rest will be forced to zero.

Object #	23
Name	**Vane Horizontal [1bit]**
Function	1=Vane Horizontal
Description	Indicates or activates with 1 this Vane Position.

Object #	24
Name	**Vane Pos1 [1bit]**
Function	1=Vane in Pos1
Description	Indicates or activates with 1 this Vane Position.

Object #	25
Name	**Vane Pos2 [1bit]**
Function	1=Vane in Pos2
Description	Indicates or activates with 1 this Vane Position.

Object #	26
Name	**Vane Pos3 [1bit]**
Function	1=Vane in Pos3
Description	Indicates or activates with 1 this Vane Position.

Object #	27
Name	**Vane Vertical [1bit]**
Function	1=Vane Vertical
Description	Indicates or activates with 1 this Vane Position.

Object #	28
Name	**Vane Swing [1bit]**
Function	1=Vane in Swing
Description	Indicates or activates with 1 this Vane Position.

Object #	29
Name	**Vane Auto [1bit]**
Function	1=Vane en Auto
Description	Indicates or activates with 1 this Vane Position.

6.4. Parameters

Parameter #	0
Name	**Type**
Description	Indicates the type of AC unit. Consult table of types. (0..255)

Parameter #	1
Name	**Minutes Window**
Description	Minutes to wait before switching AC unit OFF after receiving the indication of window open. If 0 the AC unit will be switched off immediately. (0..30 minutes)

6.5. Error codes

Code	Description
0	No error active
1	Ambient temperature prove error
2	Communication with outdoor unit error

6.6. AC unit type

Type	Description
0	NO Mr.Slim
1	Mr.Slim

6.7. Overview using EIB tree

7. Applicable Air Conditioning models

Below is a list of Air Conditioning models compatible with this interface:

- Mr Slim product range
- M Series **Inverter** product range

This product is designed and intended for use in the residential, commercial and light-industrial environment.

The product at hand is based on the following EU regulations:

• Low Voltage Directive 73/23/EEC

• Electromagnetic Compatibility Directive 89/336/EEC

Please be sure to put the contact address/telephone number on this manual before handing it to the customer.

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