

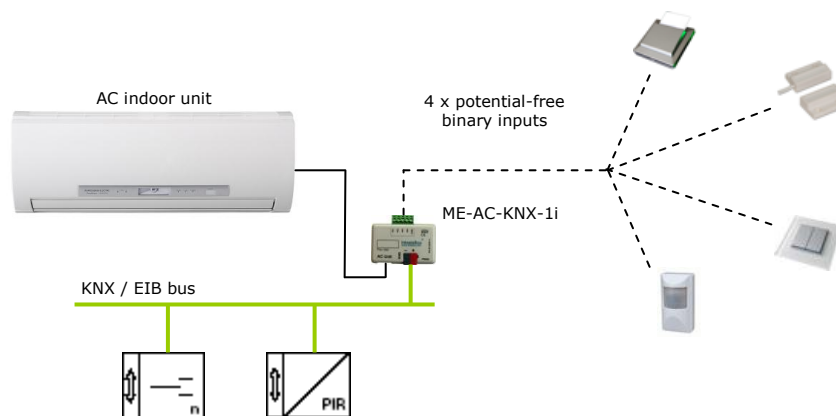


IntesisBox®

ME-AC-KNX-1i



Interface KNX for Mitsubishi Electric Air Conditioners (Domestic and Mr. Slim line)



IntesisBox® ME-AC-KNX-1i allows monitoring and control, fully bi-directionally, all the functioning parameters of Mitsubishi Electric Air Conditioners from KNX installations. Compatible with all the models of the Domestic and Mr. Slim line commercialised by Mitsubishi Electric.

Simple installation. Can be installed inside the own AC indoor unit, it connects one side directly to the electronic circuit of the AC indoor unit (cable supplied), and in the other side directly to the KNX TP-1 (EIB) bus.

Great flexibility of integration into your KNX projects. Configuration is made directly from ETS, the database of the device comes with a complete set of communication objects allowing, from a simple and quick integration using the basic objects, to the most advanced integration with monitoring and control all the AC unit's parameters. Also available specific device's communication objects as for example save and execute scenes.

Four potential-free binary inputs provide the possibility to integrate many types of external devices. Also configurable from ETS, they can be used for switching, dimming, shutter/blind control, and more.

Allows the use of a KNX temperature sensor for the air conditioning control.

IntesisBox® ME-AC-KNX-1i will allow you offering a full integration of the air conditioning in your KNX projects at a very affordable cost.

1. Communication objects

The ETS database of the device comes with multiple communication objects allowing great flexibility of integration.

- 1.1.1 ME AC Interface
 - 0: Control_On/Off [DPT_1.001 - 1bit] - 0-Off;1-On
 - 1: Control_Mode [DPT_20.105 - 1byte] - 0-Aut;1-Hea;3-Coo;9-Fan;14-Dry
 - 2: Control_Mode Cool/Heat [DPT_1.100 - 1bit] - 0-Cool;1-Heat
 - 3: Control_Mode Cool & On [DPT_5.001 - 1byte] - 0%-Off;0.1%-100%-On+Cool
 - 4: Control_Mode Heat & On [DPT_5.001 - 1byte] - 0%-Off;0.1%-100%-On+Heat
 - 5: Control_Mode Auto [DPT_1.002 - 1bit] - 1-Set AUTO mode
 - 6: Control_Mode Heat [DPT_1.002 - 1bit] - 1-Set HEAT mode
 - 7: Control_Mode Cool [DPT_1.002 - 1bit] - 1-Set COOL mode
 - 8: Control_Mode Fan [DPT_1.002 - 1bit] - 1-Set FAN mode
 - 9: Control_Mode Dry [DPT_1.002 - 1bit] - 1-Set DRY mode
 - 10: Control_Mode +/- [DPT_1.007 - 1bit] - 0-Decrease;1-Increase
 - 11: Control_Fan Speed / 4 Speeds [DPT_5.010 - 1byte] - Speed values: 1,2,3,4
 - 17: Control_Fan Speed +/- [DPT_1.007 - 1bit] - 0-Decrease;1-Increase
 - 18: Control_Vanes U-D / 5 Pos [DPT_5.001 - 1byte] - Thresholds:30%,50%,70% and 90%
 - 27: Control_Setpoint Temperature [DPT_9.001 - 2byte] - (°C)
 - 28: Control_Setpoint Temp +/- [DPT_1.007 - 1bit] - 0-Decrease;1-Increase
 - 81: Status_Error/Alarm [DPT_1.005 - 1bit] - 0-No alarm;1-Alarm
 - 82: Status_Error Code [2byte] - 0-No error /Any other see man.
 - 83: Status_Error Text Code [DPT_16.001 - 14byte] - 4 char ME Error;Empty-None
 - 85: Status_Econo Mode [DPT_1.001 - 1bit] - 0-Off;1-On
 - 86: Status_Additional Heat [DPT_1.001 - 1bit] - 0-Off;1-On
 - 87: Status_Additional Cool [DPT_1.001 - 1bit] - 0-Off;1-On
 - 88: Status_Operation Hour Counter [DPT_7.001 - 2byte] - Number of operating hours
 - 89: Status_Current Scene [DPT_17.001 - 1byte] - 0.4-Scene X+1;63-No Scene
 - 90: Status_In1 - Switching [DPT_1.001 - 1bit] - 0-Off;1-On
 - 98: Legacy_Mode [Enumerated - 1byte] - 0-Aut;1-Hea;2-Dry;3-Fan;4-Coo

2. Parameters

Multiple parameters can be configured to ensure the maximum flexibility for the integration, not only in functionality of the device but in visibility of objects in ETS for a more comfortable integrator's work.

Device: 1.1.1 ME AC Interface

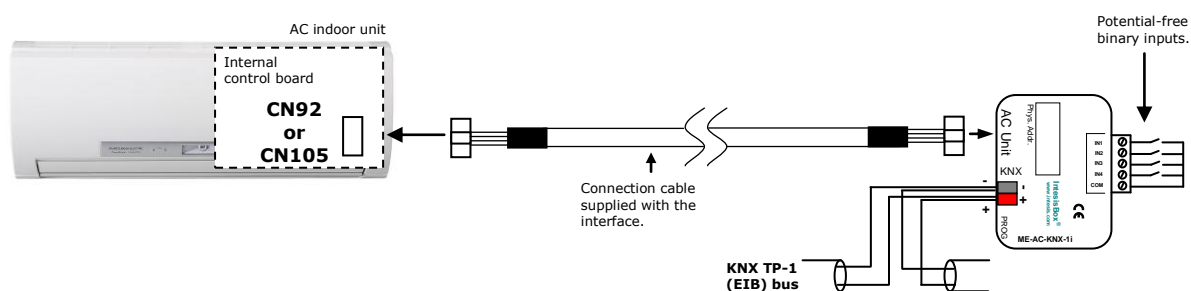
<ul style="list-style-type: none"> General Mode Configuration Special Modes Configuration Fan Speed Configuration Vanes Up-Down Configuration Temperature Configuration Scene Configuration Switch-Off Timeouts Configuration Binary Input 1 Configuration Binary Input 2 Configuration Binary Input 3 Configuration Binary Input 4 Configuration 	<p>Download latest database entry for this product and its User Manual from: <input type="text" value="http://www.intesis.com"/></p> <p>Send READs for Control_objects on bus recovery (T & U flags must be active) <input type="text" value="No"/></p> <p>Scene to load on bus recovery / startup (needs to define vals for that scene) <input type="text" value="(none)"/></p> <p>Disallow control from remote controller <input type="text" value="No"/></p> <p>> Enable comm obj "Ctrl_Remote Lock" <input type="text" value="Yes"/></p> <p>Enable func "Control_Lock Control Obj" <input type="text" value="Yes"/></p> <p>Enable func "Operating Hours Counter" <input type="text" value="Yes"/></p> <p>Enable object "Error Code [2byte]" <input type="text" value="Yes"/></p> <p>Enable object "Error Text Code [14byte]" (4 ASCII-char Error Code) <input type="text" value="Yes"/></p>
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3. Connections

Connection of the interface to the AC indoor unit is by means of the cable supplied with the interface which must be connected to the interface in one side (connector AC unit), and to the internal electronic board of the Air Conditioner in the other side (connector **CN92** in Mr. Slim models or **CN105** in the rest of the models).

Connection of the interface to the KNX bus is by means of the standard KNX bus connector also supplied with the interface.

Connections diagram:



4. AC Unit Types compatibility.

A list of Mitsubishi Electric indoor unit model references compatible with ME-AC-KNX-1i and their available features can be found in:

http://www.intesis.com/pdf/IntesisBox_ME-AC-xxx-1_AC_Compatibility.pdf

5. Technical Specifications

Envelope	ABS (UL 94 HB). 2,5 mm thickness
Dimensions	59 x 45 x 21 mm
Weight	35g
Colour	Light Grey
Power supply	29V DC, 7mA Supplied through KNX bus.
LED indicators	1 x KNX programming.
Push buttons	1 x KNX programming.
Binary inputs	4 x Potential-free binary inputs. Signal cable length: 5m unshielded, may be extended up to 20m with twisted. Compliant with the following standards: IEC61000-4-2 : level 4 - 15kV (air discharge) - 8kV (contact discharge) MIL STD 883E-Method 3015-7 : class3B
Configuration	Configuration with ETS.
Operating Temperature	From -25°C to 85°C
Storage Temperature	From -40°C to 85°C
Isolation Voltage	4000V
RoHS conformity	Compliant with RoHS directive (2002/95/CE).
Certifications	CE conformity to EMC directive (2004/108/EC) and Low-voltage directive (2006/95/EC) EN 61000-6-2; EN 61000-6-3; EN 60950-1; EN 50491-3; EN 50090-2-2; EN 50428; EN 60669-1; EN 60669-2-1

