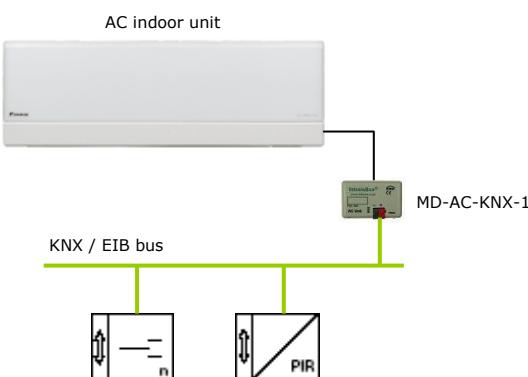




IntesisBox®

MD-AC-KNX-1

Interface KNX for Midea Air Conditioners (VRF Line)



IntesisBox® MD-AC-KNX-1 allows monitoring and control, fully bi-directionally, all the functioning parameters of Midea Air Conditioners from KNX installations.

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

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

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

1. KNX interface

1.1 Communication objects

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

- ◀ 1.1.1 MD 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
 - 11: Control_Fan Speed / 3 Speeds [DPT_5.001 - 1byte] - Thresholds: 50% and 83%
 - 16: Control_Vanes U-D Swing [DPT_1.002 - 1bit] - 0-Off;1-Swing
 - 17: Control_Setpoint Temperature [DPT_9.001 - 2byte] - °C
 - 40: Status_On/Off [DPT_1.001 - 1bit] - 0-Off;1-On
 - 41: Status_Mode [DPT_20.105 - 1byte] - 0-Aut;1-Hea;3-Coo;9-Fan;14-Dry
 - 49: Status_Fan Speed / 3 Speeds [DPT_5.001 - 1byte] - 33%, 66% and 100%
 - 54: Status_Vanes U-D Swing [DPT_1.002 - 1bit] - 0-Off;1-Swing
 - 55: Status_AC Setpoint Temp [DPT_9.001 - 2byte] - °C
 - 56: Status_AC Ambient Ref Temp [DPT_9.001 - 2byte] - °C
 - 57: Status_Error/Alarm [DPT_1.005 - 1bit] - 0-No alarm;1-Alarm
 - 59: Status_Error Text Code [DPT_16.001 - 14byte] - 2 char MD Error;Empty=None

1.2 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: 15.15.255 MD AC interface

| | |
|--|--|
| <input checked="" type="checkbox"/> General <input type="checkbox"/> Mode Configuration <input type="checkbox"/> Fan Speed Configuration <input type="checkbox"/> Temperature Configuration | Download latest database entry for this product and its User Manual from: <input type="text" value="http://www.intesis.com"/> |
| | Send READs for Control_objects on bus recovery (T & U flags must be active) <input type="text" value="No"/> |
| | Enable object "Error Code [2byte]" <input type="text" value="No"/> |
| | Enable object "Error Text Code [14byte]" (2 ASCII-char Error Code) <input type="text" value="Yes"/> |

2. Connection

The interface comes with a cable (1,9 meters long) for direct connection to the internal control board of the AC indoor unit.

Connection of the interface to the AC indoor unit:

Disconnect mains power from the AC unit. Open the front cover of the indoor unit in order to have access to the internal control board. In the control board locate the socket connector marked as CN9 and remove the connector from the socket. In the control board too, locate the socket connector marked as CN20 and remove the jumper placed in the socket connector. Please keep the jumper in safe place for future use.

Using the cable that comes with the interface, insert its smaller connector into the socket of marked as **CN9**, and the other connector, the biggest one, into the socket marked as **CN20** of the AC unit's control board. Connect the other end of the cable into the MD-AC-KNX-1 socket marked as **AC Unit**.

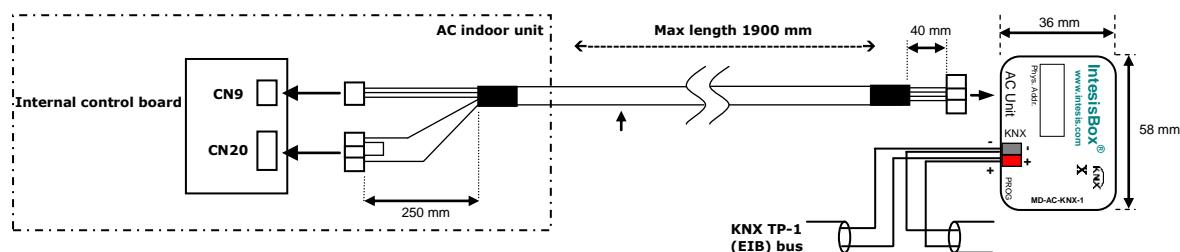
Fix the MD-AC-KNX-1 inside or outside the AC indoor unit depending on your needs – remember that MD-AC-KNX-1 must be also connected to the KNX bus. Close the AC indoor unit's front cover again.

IMPORTANT: Do not modify the length of the cable supplied with the interface, it may affect to the correct operation of the interface.

Connection of the interface to the KNX bus:

Disconnect power of the KNX bus. Connect the interface to the KNX TP-1 (EIB) bus using the KNX standard connector (red/grey) of the interface, respect polarity. Reconnect power of the KNX bus.

Connections diagram:



3. AC Unit Type compatibility list.

A list of Midea indoor unit model references compatible with MD-AC-KNX-1 and their available features can be found in:

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

4. Technical Specifications

| | |
|------------------------------|---|
| Envelope | ABS (UL 94 HB). 2,5 mm thickness |
| Dimensions | 59 x 36 x 21 mm |
| Weight | 42g |
| Colour | Light grey |
| Power supply | 29V DC, 7mA Supplied through KNX bus. |
| LED indicators | 1 x KNX programming/bus. |
| Push buttons | 1 x KNX programming. |
| Configuration | Configuration with ETS. |
| Operating Temperature | From 0°C to 40°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 |

