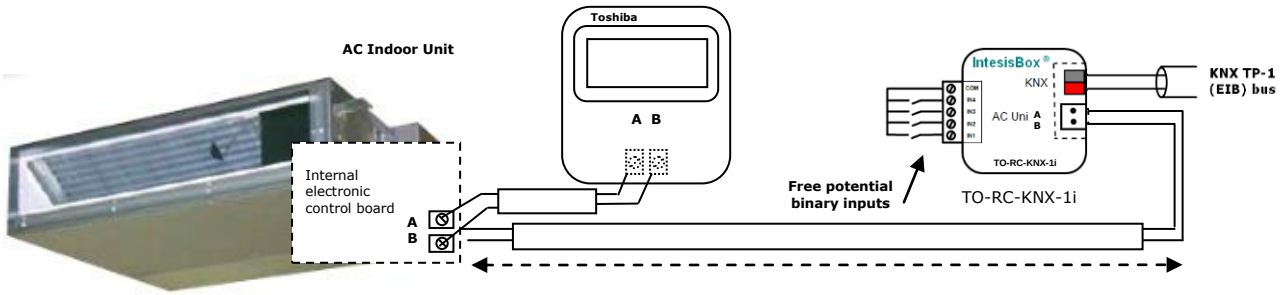
IntesisBox®
TO-RC-KNX-1i

Interface KNX for Toshiba Air Conditioners
Digital Inverter & VRF lines



IntesisBox® TO-RC-KNX-1i allows monitoring and control, fully bi-directionally, all the functioning parameters of Toshiba Air Conditioners from KNX installations. Compatible with Digital Inverter & VRF models commercialized by Toshiba (see link to compatible models at the end of this document).

Small dimensions and easy installation. It can be connected directly to the AB bus from the AC indoor unit or in parallel with the wired Remote Controller, and in the other side it connects directly to the KNX TP-1 (EIB) bus. The maximum bus distance between the AC Indoor Unit, the Remote Controller and the Interface is 500 meters (see *Connections* section).

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 communication objects as for example save and execute scenes. Also allows the use of a KNX temperature sensor for the air conditioning control.

Four binary inputs for potential-free contacts 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.

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

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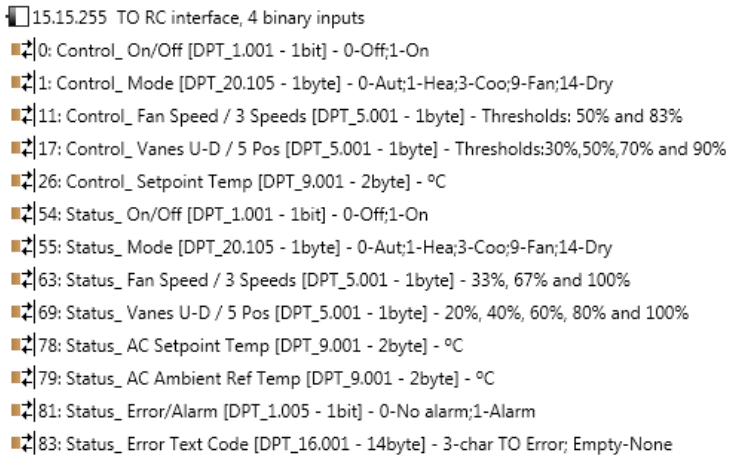
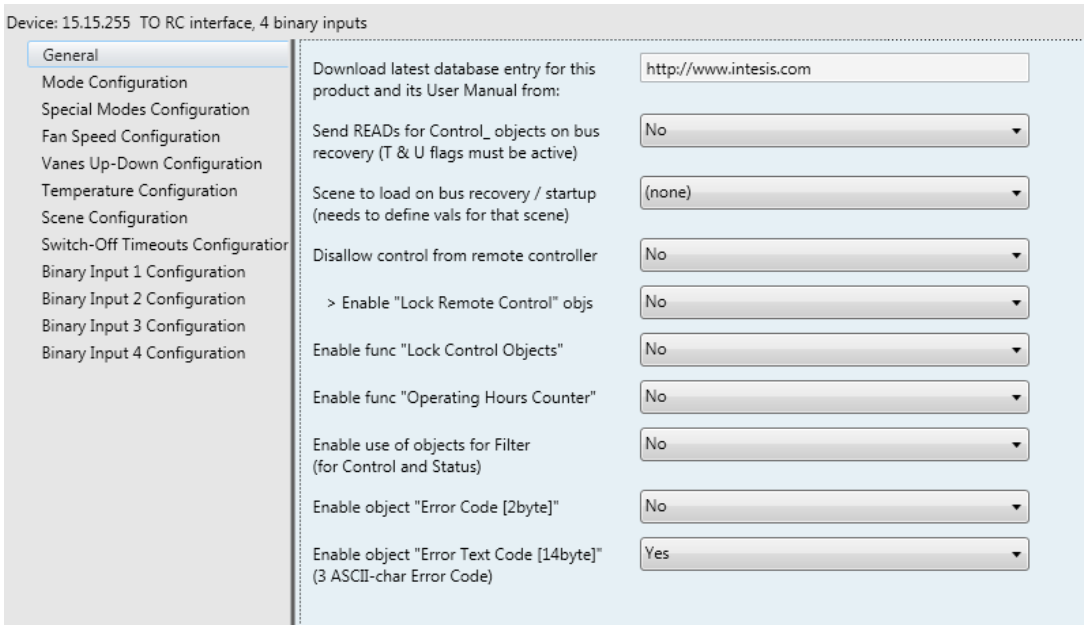
1. Communication objects

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



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.



3. Connections

Connection of the TO-RC-KNX-1i to the AC indoor unit

The TO-RC-KNX-1i can be connected directly to the AB bus of the indoor unit (no remote controller -RC from now on- connected in the AB bus) or with the RC. See connection diagram below.

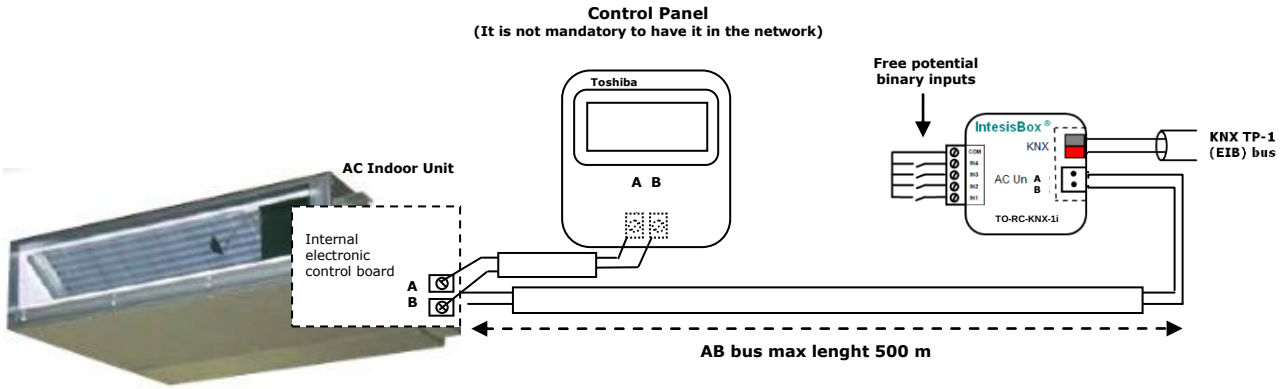


Figure 2.1 TO-RC-KNX-1i connection diagrams

3.1 TO-RC-KNX-1i with Remote Controller

Connection of the TO-RC-KNX-1i to the KNX bus:

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

Reconnect power of the KNX bus, and mains power of the AC unit.

NOTE: In some indoor unit models the AB is not available. In its place there is a pair of cables to connect the Remote Controller. Use these cables to connect the AB bus. Check your indoor unit user or service manual for more information.

4. List of compatible AC indoor units.

A list of Toshiba indoor unit model references compatible with TO-RC-KNX-1i and their available features can be found in:

http://www.intesis.com/pdf/IntesisBox_TO-RC-xxx-1_Compatibility.pdf

5. Technical Specifications

Envelope	ABS (UL 94 HB). 2,5 mm thickness
Dimensions	70 x 45 x 28 mm
Weight	70g
Colour	Ivory white
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 binary inputs for potential-free contacts. Signal cable length: 5m uschielded, 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 -25ºC to 85ºC
Storage Temperature	From -40ºC to 85ºC
Isolation Voltage	2500V
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