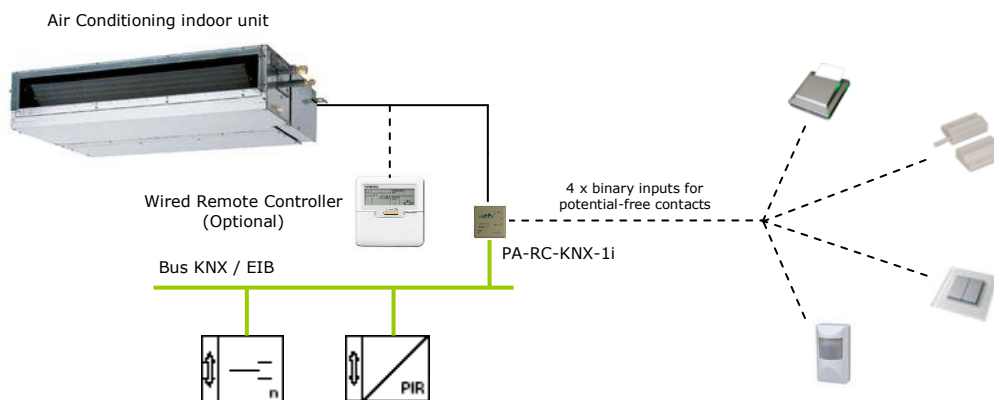




## IntesisBox® PA-RC-KNX-1i

### Interface KNX for PANASONIC Air Conditioners (FS / FSM)



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

Small dimensions and easy installation. It can be connected directly to the A/B 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 200 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® PA-RC-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.

- 15.15.255 PA RC 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
  - 10: Control\_ Mode +/- [DPT\_1.007 - 1bit] - 0-Decrease;1-Increase
  - 11: Control\_ Fan Speed / 3 Speeds [DPT\_5.010 - 1byte] - Speed values: 1,2,3
  - 17: Control\_ Vanes U-D / 4 Pos [DPT\_5.010 - 1byte] - Position values: 1,2,3,4
  - 26: Control\_ Setpoint Temperature [DPT\_9.001 - 2byte] - (°C)
  - 35: Control\_ Power Mode [DPT\_1.010 - 1bit] - 0-Stop;1-Start
  - 38: Control\_ Additional Cool [DPT\_1.010 - 1bit] - 0-Stop;1-Start
  - 39: Control\_ Execute Scene [DPT\_18.001 - 1byte] - 0..4-Execute Scene 1-5
  - 54: Status\_ On/Off [DPT\_1.001 - 1bit] - 0-Off;1-On
  - 55: Status\_ Mode [DPT\_20.105 - 1byte] - 0-Aut;1-Hea;3-Coo;9-Fan;14-Dry
  - 56: Status\_ Mode Cool/Heat [DPT\_1.100 - 1bit] - 0-Cool;1-Heat
  - 62: Status\_ Mode Text [DPT\_16.001 - 14byte] - ASCII String
  - 63: Status\_ Fan Speed / 3 Speeds [DPT\_5.010 - 1byte] - Speed Values: 1,2,3
  - 69: Status\_ Vanes U-D / 4 Pos [DPT\_5.010 - 1byte] - Position values: 1,2,3,4
  - 78: Status\_ AC Setpoint Temp [DPT\_9.001 - 2byte] - (°C)
  - 80: Status\_ Error/Alarm [DPT\_1.005 - 1bit] - 0-No alarm;1-Alarm
  - 83: Status\_ Power Mode [DPT\_1.001 - 1bit] - 0-Off;1-On
  - 86: Status\_ Additional Cool [DPT\_1.001 - 1bit] - 0-Off;1-On
  - 88: Status\_ Current Scene [DPT\_17.001 - 1byte] - 0..4-Scene X+1;63-No Scene
  - 89: Status\_ In1 - Switching [DPT\_1.001 - 1bit] - 0-Off;1-On

## 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.

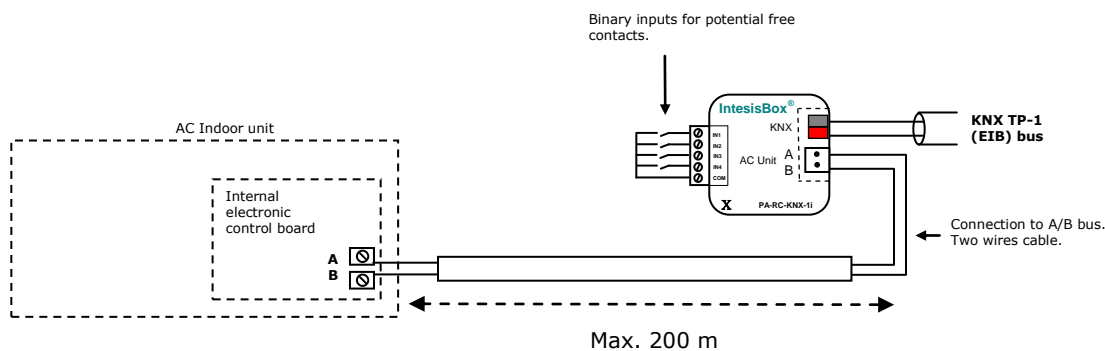
Device: 15.15.255 PA RC Interface

<ul style="list-style-type: none"> <li>General</li> <li>Mode Configuration</li> <li>Special Modes Configuration</li> <li>Fan Speed Configuration</li> <li>Vanes Up-Down Configuration</li> <li>Temperature Configuration</li> <li>Scene Configuration</li> <li>Switch-Off Timeouts Configuration</li> <li>Binary Input 1 Configuration</li> <li>Binary Input 2 Configuration</li> <li>Binary Input 3 Configuration</li> <li>Binary Input 4 Configuration</li> </ul>	<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 &amp; U flags must be active) <input type="text" value="Yes"/></p> <p>&gt; Delay before sending READs (sec) <input type="text" value="10"/></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>&gt; Enable comm obj "Ctrl_ Remote Lock" <input type="text" value="No"/></p> <p>Enable func "Control_ Lock Control Obj" <input type="text" value="No"/></p> <p>Enable func "Operating Hours Counter" <input type="text" value="No"/></p> <p>Enable use of objects for Filter (for Control and Status) <input type="text" value="No"/></p> <p>Enable object "Error Code [2byte]" <input type="text" value="No"/></p> <p>Enable object "Error Text Code [14byte]" (3 ASCII-char Error Code) <input type="text" value="No"/></p>
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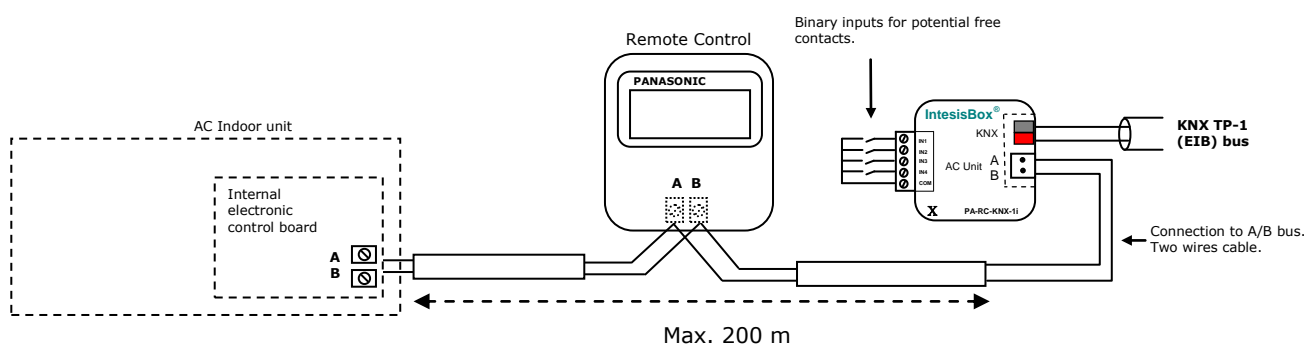
### 3. Connections

PA-RC-KNX-1i can be used with Panasonic Remote Controllers or without them.

- PA-RC-KNX-1i without PANASONIC Remote Controller



- PA-RC-KNX-1i with PANASONIC Remote Controller



### 4. List of compatible Panasonic AC indoor units.

A list of Panasonic indoor unit model references compatible with PA-RC-KNX-1i and their available features can be found at:

[http://www.intesis.com/pdf/IntesisBox\\_PA-RC-xxx-1\\_AC\\_Compatibility.pdf](http://www.intesis.com/pdf/IntesisBox_PA-RC-xxx-1_AC_Compatibility.pdf)

## 5. Technical Specifications

<b>Envelope</b>	ABS (UL 94 HB). 2,5 mm thickness
<b>Dimensions</b>	70 x 45 x 28 mm
<b>Weight</b>	70g
<b>Colour</b>	Ivory white
<b>Power supply</b>	29V DC, 7mA Supplied through KNX bus.
<b>LED indicators</b>	1 x KNX programming.
<b>Push buttons</b>	1 x KNX programming.
<b>Binary inputs</b>	4 x binary inputs for potential-free contacts. 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
<b>Configuration</b>	Configuration with ETS.
<b>Operating Temperature</b>	From -25°C to 85°C
<b>Storage Temperature</b>	From -40°C to 85°C
<b>Isolation Voltage</b>	2500V
<b>RoHS conformity</b>	Compliant with RoHS directive (2002/95/CE).
<b>Certifications</b>	CE conformity to EMC directive (2004/108/EC) and Low-voltage directive (2006/95/EC) EN 61000-6-1; EN 61000-6-3; EN 60950-1; EN 50491-3; EN 50090-2-2; EN 50428; EN 60669-1; EN 60669-2-1

