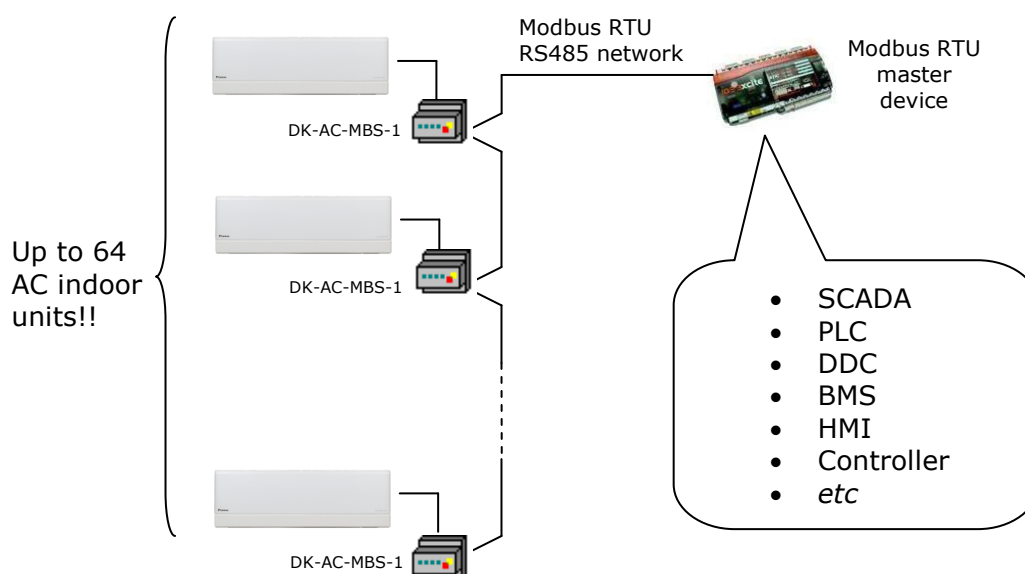# IntesisBox®
DK-AC-MBS-1

Modbus Interface for DAIKIN Air Conditioners
(Domestic Line)

The DK-AC-MBS-1 interface allows a complete and natural integration of **Daikin** air conditioners into Modbus RTU (RS-485) networks. Compatible with Domestic line models commercialized by DAIKIN

- Reduced dimensions. 93 x 53 x 58 mm.

- Quick and easy installation. *Mountable on DIN rail, wall, or even inside the indoor unit in some models of AC.*

- External power not required.

- Direct connection to MODBUS RTU (RS-485) networks. Up to 64 DK-AC-MBS-1 devices can be connected in the same network. DK-AC-MBS-1 is a Modbus slave device.

- Direct connection to the AC indoor unit.

- Configuration from both on-board DIP-switches and MODBUS RTU.

- Total Control and Supervision. Real states of the AC unit's internal variables.

- Allows using simultaneously the IR and wired remote controls and MODBUS RTU.

Intesis software

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1. Modbus Interface

1.1 Modbus Functions

DK-AC-MBS-1 implements the following standard MODBUS functions:

- 3: Read Holding Registers

- 4: Read Input Registers

- 6: Write Single Register

- 16: Write Multiple Registers (Although this function is allowed, the interface does not allow write operations on more than 1 register with the same request, this means that length field should always be 1 when using this function for writes).
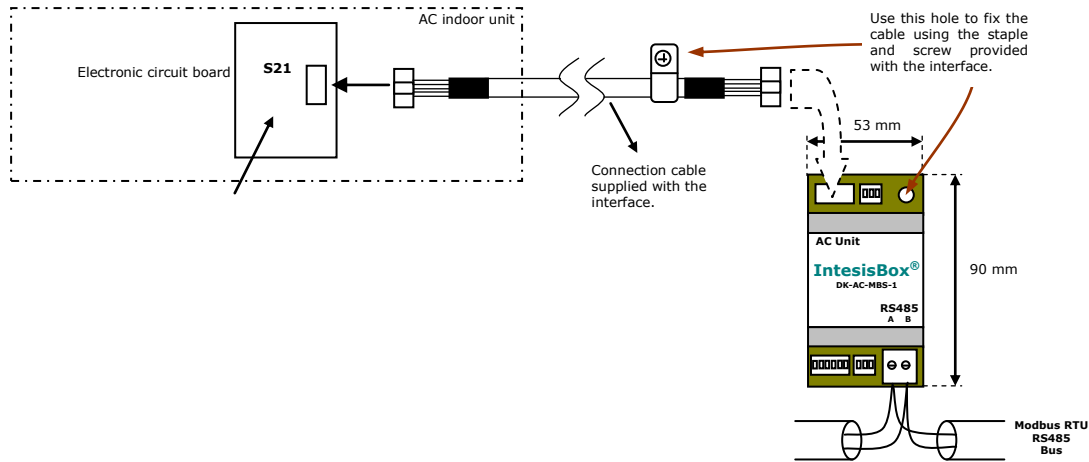
1.2 Modbus Communication parameters

DK-AC-MBS-1 implements a MODBUS RTU (slave) interface, to be connected to an RS-485 line. The communication parameters are:

- 8N1/8N2 communication (8 data bits, no parity and 1 or 2 stop bit)

- Configurable baudrates
  - 2400 bps
  - 4800 bps
  - 9600 bps (default)
  - 19200 bps

2. Connections

DK-AC-MBS-1 connects directly to the indoor unit S21 connector (see picture below). Use the EIA485 connector in the DK-AC-MBS-1 to connect to the Modbus network.

3. List of compatible Daikin AC indoor units.

A list of Daikin indoor unit model references compatible with DK-AC-MBS-1 and their available features can be found at:

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

4. Technical Specifications

Dimensions:	*93 x 53 x 58 mm*
Weight:	*85 g*
Operating Temperature:	*-40 . . . 85ºC*
Stock Temperature:	*-40 . . . 85ºC*
Operating Humidity:	*<95% RH, non-condensing*
Stock Humidity:	*<95% RH, non-condensing*
Isolation voltage:	*1000 VDC*
Isolation resistance:	*1000 MΩ*
Modbus Media:	*Compatible with Modbus RTU - RS485 networks*

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