

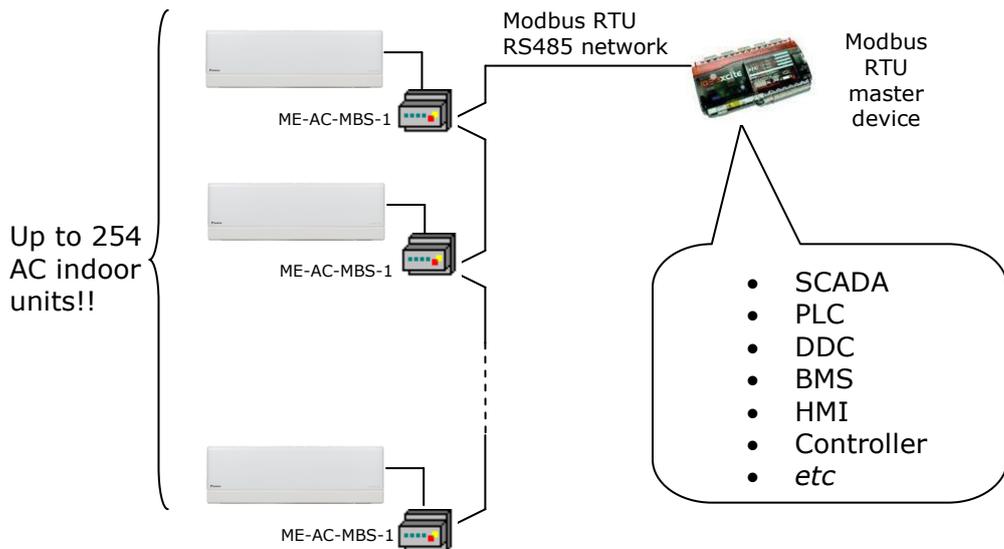


IntesisBox®

ME-AC-MBS-1

ME-AC-MBS-1_2I10

Modbus Interface for MITSUBISHI ELECTRIC Air Conditioners (Domestic Line)



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

- 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 254 ME-AC-MBS-1 devices can be connected in the same network. ME-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.
- 2 digital inputs plus 1 relay output available through Modbus registers¹.

¹ In the ME-AC-MBS-1_2I10 version

1. Modbus Interface

1.1 Modbus Functions

ME-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

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

- 8N1 communication (8 data bits, no parity and 1 stop bit)
- Configurable baudrates
 - 2400 bps
 - 4800 bps
 - 9600 bps (default)
 - 19200 bps

2. List of compatible Mitsubishi Electric AC indoor units.

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

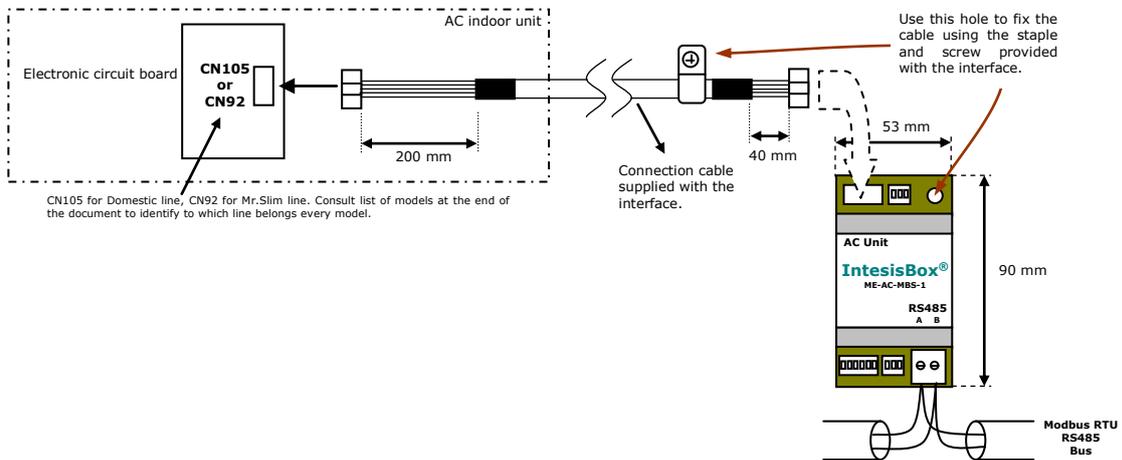
http://www.intesis.com/pdf/IntesisBox_ME-AC-xxx-1_AC_Compatibility.pdf

3. Technical Specifications

Dimensions:	93 x 53 x 58 mm
Weight:	85 g
Operating Temperature:	-40 . . . 85°C
Stock Temperature:	-40 . . . 85°C
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

4. Connections

ME-AC-MBS-1 connects directly to the indoor unit connector (**CN92** in Mr.Slim models, or **CN105** in the domestic line. See picture below). Use the EIA485 connector in the ME-AC-MBS-1 to connect to the Modbus network.



The ME-AC-MBS-1_2I10 has 2 digital inputs and 1 digital output that are connected as follows:

