TOSHIBA
Leading Innovation ⋙

Model name:

BMS-IFMB0TLR-E

Safety instructions

⚠ WARNING

Follow carefully these safety and installation instructions. Improper work may lead to serious harmful for your health and also may damage seriously the interface and/or the Air-conditioning unit.

- This interface must be installed by accredited technical personnel (electrician, installer, or technical personnel) and following all the safety instructions.
- Before manipulating the Air-conditioning unit, be sure it is completely disconnected from Mains power.
- Do not modify the unit. (A fire or an electric shock may occur)
- This interface must only be installed in a restricted access location by user.
- Do not install the unit in any of the following places.
  - Humid or wet place
  - Dusty place
  - Place exposed to direct sunlight
  - Place where there is a TV set or radio within one meter
  - Place exposed to rain (outdoors, under eaves, etc.)
- Use predefined cable and connect them certainly. Keep the connecting terminal free from external force.
  It may cause an exothermic or a fire.
- Strip the insulation from the cable that connects to the connector (RS-485 and A B bus) following the dimensions shown in the diagram below.
- When connecting the cable to the connector (RS-485 and A B bus), ensure the core wires do not protrude from the connector.
- Use two-core cabtyre cable.

Installation instructions

- Disconnect the Air-conditioning from Mains Power.
- Fix the interface beside the Air-conditioning (wall mounting) following the instructions in the diagram below or install it inside the Air-conditioning (respect the safety instructions given above).

- Connect the interface to A B bus in any point of the bus. The A B bus is the bus that connects the Air-conditioning unit, and the wired remote controller, is a two-wire bus connecting terminals A B of both, this A B connection has no specific polarity.
- Connect the RS-485 bus to the connector RS-485 of the interface.
- Close the Air-conditioning unit and reconnect it to Mains Power.

- Follow the instructions on the user manual for configuring and commissioning the interface.
- Follow the instructions of the next page to configure the interface through on-board DIP-switches.
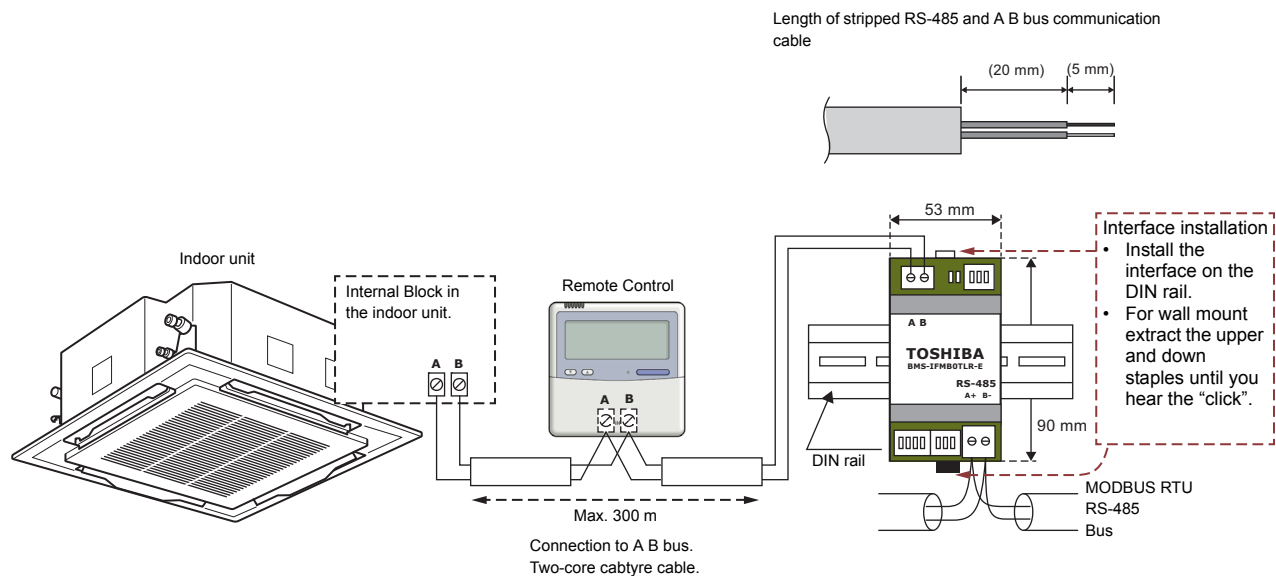
NOTE

The cable used for connection of BMS-IFMB0TLR-E to A B bus can be any two-core cabtyre cable, the maximum distance for bus A B is 300 meters, consult the manual of the Air-conditioning for more details.
Respect the maximum distance of 500 meters for the bus, no loop or star topologies are allowed for RS-485 bus, a terminator resistor of 120 Ω must be present at each end of the bus to avoid signal reflections and also a fail-safe biasing mechanism.
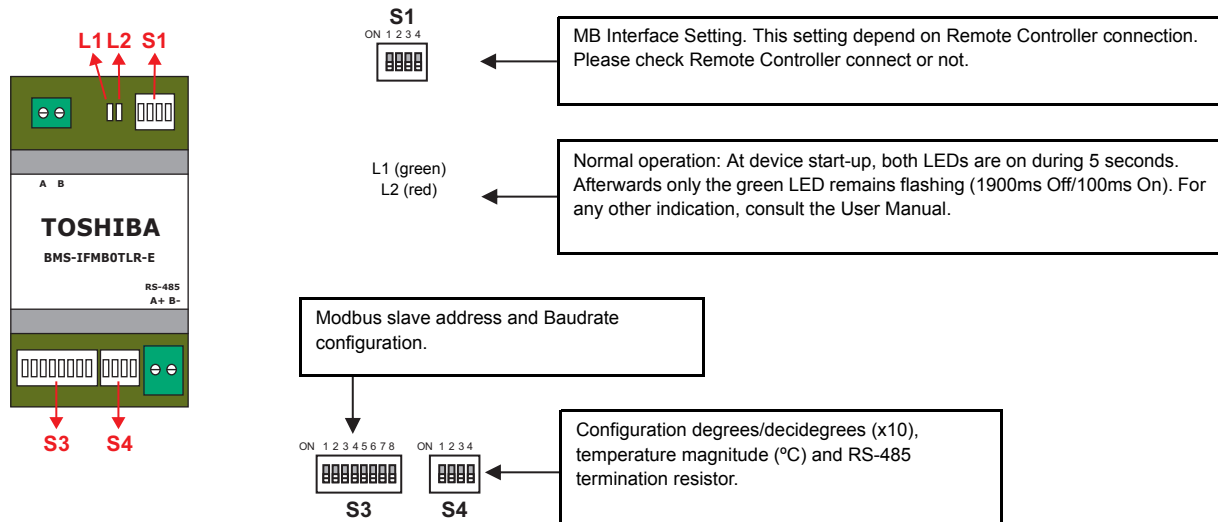
IMPORTANT:

- Use only one remote controller. A sub-remote controller cannot be connected when connecting this interface.

NOTE

In its place there is a pair of cables to connect the Remote Controller. Use these cables to connect the AB bus. Check your Air-Conditioning user or service manual for more information.

Configuration through micro switches

L1 L2 S1

S1

ON 1 2 3 4

MB Interface Setting. This setting depend on Remote Controller connection. Please check Remote Controller connect or not.

A B

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BMS-IFMB0TLR-E

RS-485
A+ B-

L1 (green)
L2 (red)

Normal operation: At device start-up, both LEDs are on during 5 seconds. Afterwards only the green LED remains flashing (1900ms Off/100ms On). For any other indication, consult the User Manual.

Modbus slave address and Baudrate configuration.

S3   **S4**

ON 1 2 3 4 5 6 7 8   ON 1 2 3 4

S3   **S4**

Configuration degrees/decidegrees (x10), temperature magnitude (ºC) and RS-485 termination resistor.

S1 - MB Interface Setting

Switches 1 2 3 4	Description
↓ x x x	Connet Wired Remote Controller and/or Wireless Remote Controller (default setting)
↑ x x x	Not Connet Wired Remote Controller and Wireless Remote Controller.
x ↑ x x	Reserve.
x x ↑ x	Reserve.
x x x ↑	Reserve.

S3 - Modbus slave address and baudrate

Add	Switches 1 2 3 4 5 6	Add	Switches 1 2 3 4 5 6	Add	Switches 1 2 3 4 5 6	Add	Switches 1 2 3 4 5 6	Add	Switches 1 2 3 4 5 6	Add	Switches 1 2 3 4 5 6	Add	Switches 1 2 3 4 5 6	Add	Switches 1 2 3 4 5 6
0	↓↓↓↓↓↓	8	↓↓↓↑↓↓	16	↓↓↓↓↑↓	24	↓↓↓↑↑↓	32	↓↓↓↓↓↑	40	↓↓↓↑↓↑	48	↓↓↓↓↑↑	56	↓↓↓↑↑↑
1*	↑↓↓↓↓↓	9	↑↓↓↑↓↓	17	↑↓↓↓↑↓	25	↑↓↓↑↑↓	33	↑↓↓↓↓↑	41	↑↓↓↑↓↑	49	↑↓↓↓↑↑	57	↑↓↓↑↑↑
2	↓↑↓↓↓↓	10	↓↑↓↑↓↓	18	↓↑↓↓↑↓	26	↓↑↓↑↑↓	34	↓↑↓↓↓↑	42	↓↑↓↑↓↑	50	↓↑↓↓↑↑	58	↓↑↓↑↑↑
3	↑↑↓↓↓↓	11	↑↑↓↑↓↓	19	↑↑↓↓↑↓	27	↑↑↓↑↑↓	35	↑↑↓↓↓↑	43	↑↑↓↑↓↑	51	↑↑↓↓↑↑	59	↑↑↓↑↑↑
4	↓↓↑↓↓↓	12	↓↓↑↑↓↓	20	↓↓↑↓↑↓	28	↓↓↑↑↑↓	36	↓↓↑↓↓↑	44	↓↓↑↑↓↑	52	↓↓↑↓↑↑	60	↓↓↑↑↑↑
5	↑↓↑↓↓↓	13	↑↓↑↑↓↓	21	↑↓↑↓↑↓	29	↑↓↑↑↑↓	37	↑↓↑↓↓↑	45	↑↓↑↑↓↑	53	↑↓↑↓↑↑	61	↑↓↑↑↑↑
6	↓↑↑↓↓↓	14	↓↑↑↑↓↓	22	↓↑↑↓↑↓	30	↓↑↑↑↑↓	38	↓↑↑↓↓↑	46	↓↑↑↑↓↑	54	↓↑↑↓↑↑	62	↓↑↑↑↑↑
7	↑↑↑↓↓↓	15	↑↑↑↑↓↓	23	↑↑↑↓↑↓	31	↑↑↑↑↑↓	39	↑↑↑↓↓↑	47	↑↑↑↑↓↑	55	↑↑↑↓↑↑	63	↑↑↑↑↑↑

* Default value

Switches 7 8	Description
↓ ↓	2400bps
↑ ↓	4800bps
↓ ↑	9600bps (default value)
↑ ↑	19200bps

S4 - Degrees/Decidegrees (x10), temperature magnitude (ºC) and RS-485 termination resistor

Switches 1 2 3 4	Description
↓ x x x	Temperature values in Modbus register are represented in degrees (x1) (default value)
↑ x x x	Temperature values in Modbus register are represented in decidegrees (x10)
x x x ↓	RS-485 bus without termination resistor (default value)
x x x ↑	Internal termination resistor of 120Ω connected to RS-485 bus *

* Only in the interfaces conected at both ends of the bus must be activated the termination resistor, not in the rest. The RS-485 bus can be biased through internal jumpers JP2 and JP3. Consult the user manual for details.

WEEE Document and e-waste document for India
http://www.toshiba-carrier.co.jp/global/products/network/index.htm

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