TOSHIBA
Leading Innovation

Installation Manual

MB Interface

Model name:

BMS-IFMB0AWR-E

English

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 Hydro unit.

- This interface must be installed by accredited technical personnel (electrician, installer, or technical personnel) and following all the safety instructions.
- Before manipulating the Hydro 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 Hydro unit from Mains Power.
- Fix the interface beside the Hydro unit (wall mounting) following the instructions in the diagram below or install it inside the Hydro unit (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 Hydro 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 Hydro unit and reconnect it to Mains Power.

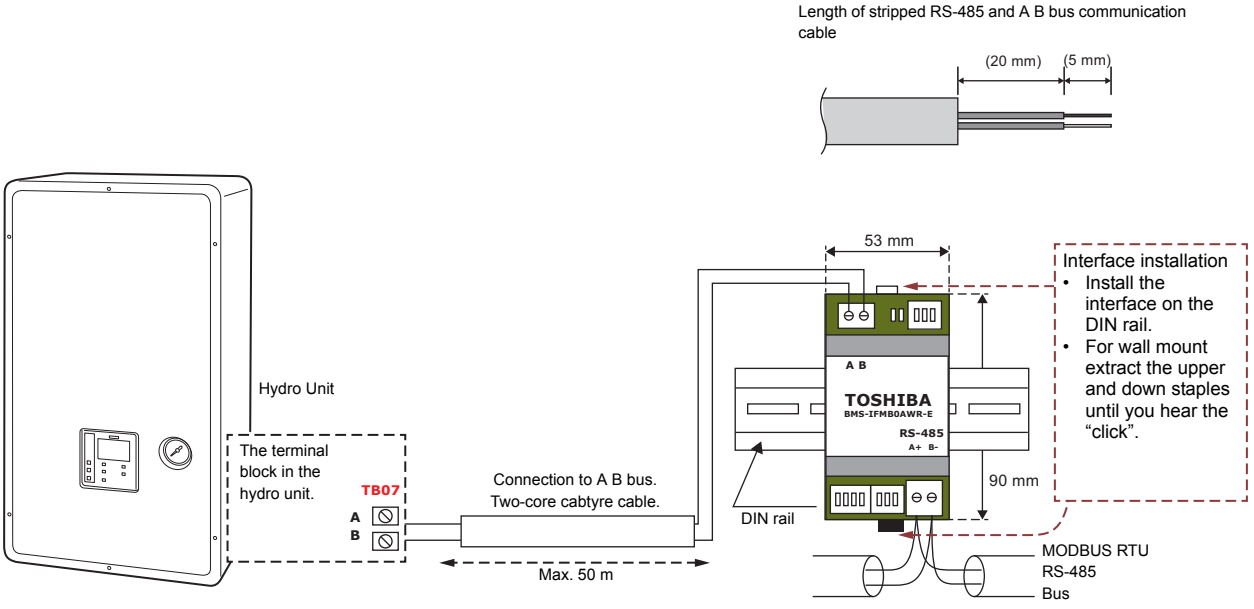
- Follow the instructions on the user manual for configuring and commissioning the interface.
- Follow the instructions of the next page to configure the interface through on-board DIP-switches.

NOTE

The cable used for connection of BMS-IFMB0AWR-E to A B bus can be any two-core cabtyre cable, the maximum distance for bus A B is 50 meters, consult the manual of the Hydro unit 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:

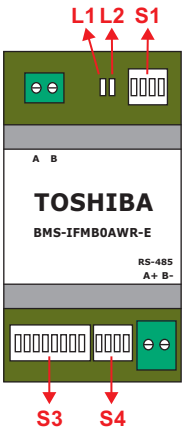
- Use only one remote controller. A sub-remote controller cannot be connected when connecting this interface.
- It is not possible to mix and connect Hydro unit 4 series and 5 series.



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 Hydro unit user or service manual for more information.

Configuration through micro switches

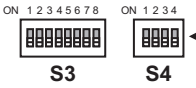


Hydro unit type selection. It is recommended not to change the default value unless you are sure about the Hydro unit type you own.

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.



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

S1 - Hydro unit type selection

Switches 1 2 3 4	Description
↓ x x x	Hydro unit type. Advanced functionalities for Estia Hydro unit 5 series units. Please, check the user manual for more information. (default and recommended value)
↓ ↑ x x	Hydro unit type. Advanced functionalities for Estia Hydro unit 4 series units. Please, check the user manual for more information.
↑ ↓ x x	Reserve.
↑ ↑ 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
http://www.toshiba-carrier.co.jp/global/products/network/index.htm

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