

BACnet™ SOFTWARE

Model:

BMS-STBN□□E

(for Intelligent Server model BMS-LSV4E only)

- Thank you very much for purchasing this TOSHIBA BACnet Software.
- Please read this manual carefully beforehand for proper installation of the software.

CONTENTS

Precautions for Safety	1
Before Installation	1
Elements of the Intelligent Server	2
1 CF (Compact Flash) card Installation	3
2 Setting	3
3 Installation.....	4
4 Cable Connection	6

Precautions for Safety

- Read these “Precautions for Safety” carefully before installation.
- The precautions described below include important items regarding safety. Observe them without fail.
- After the installation work, perform a trial operation to check for any problem.

⚠ CAUTION

- **Ask an authorized dealer or qualified installation professional to install or reinstall the software.**
- **Perform installation work properly according to this Installation Manual.**
- **Do not modify the unit.**
- **Perform wiring correctly in accordance with specified the current capacity.**
Failure to do so may result in short-circuiting, overheating, or fire.
- **Connect the specified cables for the terminals securely to prevent external forces from affecting them.**
Failure to do so may result in disconnection, overheating, or fire.

Before Installation

NOTE

This CF (Compact Flash) card is the software for the Intelligent Server (Model: BMS-LSV4E) only. Prepare the Intelligent Server to use this card. This card is not applicable to BMS-LSV2E.

Check the following package contents.

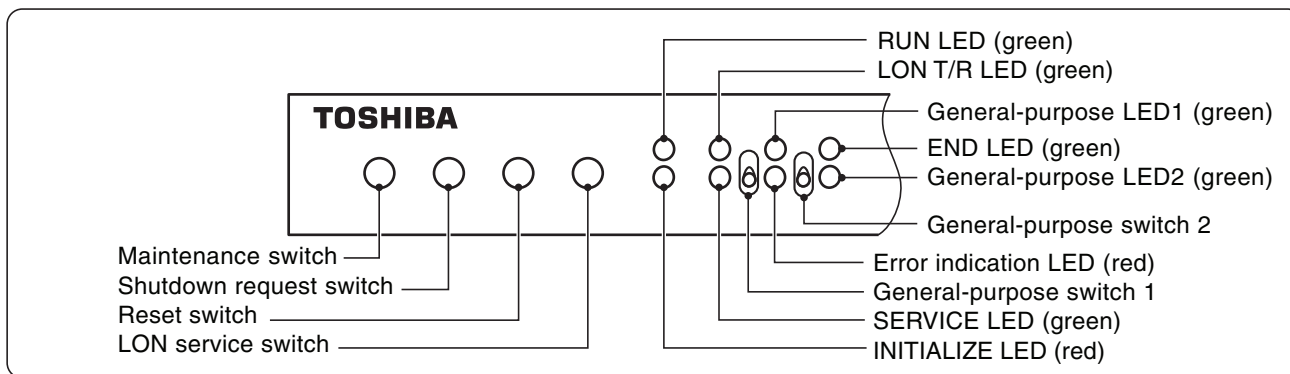
No.	Item	Quantity	Remarks
1	Intelligent Server Software	1	Compact Flash card
2	Cable	1	RS-485 cable for Intelligent Server
3	Closed end wire joint	2	
4	Installation Manual	1	

Use the following wiring materials to connect signal lines. (Procured on site)

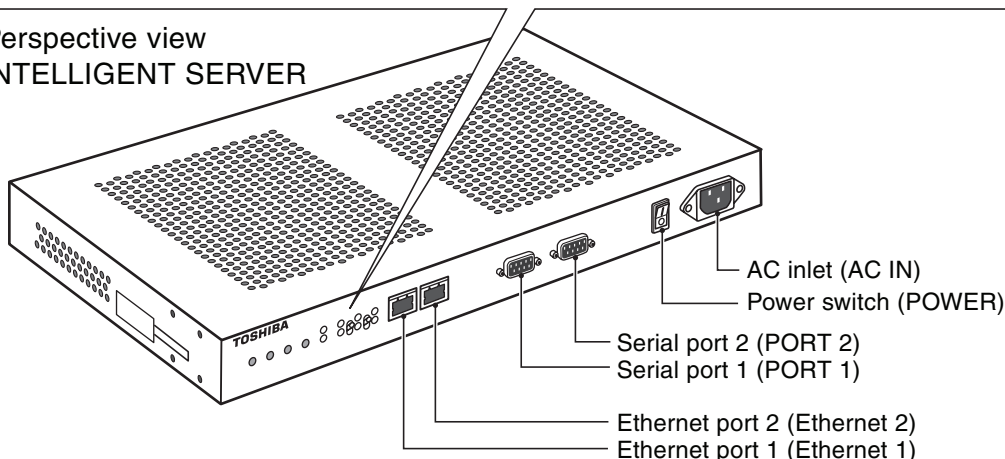
No.	Signal line	Description	
1	For RS-485	Type	2-core shield wire
		Wire size	1.25 mm ² , 500m max. (total length)
		Length	

Elements of the Intelligent Server

Front view INTELLIGENT SERVER



Perspective view INTELLIGENT SERVER



Specification of Installation Environment

(1) Ambient Conditions

The specification of ambient conditions is shown below.

■ Ambient Specification

Item	Operation	Storage
Temperature	0 to 40 °C	-20 to +60 °C
Temperature Change	15 °C/H	15 °C/H
Humidity	10 to 90 %RH (without condensation)	10 to 90 %RH (without condensation)
Vibration	2.45 m/s ² or the less	4.91 m/s ² or the less
Shock	24.5 m/s ² or the less	49.0 m/s ² or the less

(2) Power Supply Conditions

The specification of power supply conditions is shown below.

■ Power Supply Specification

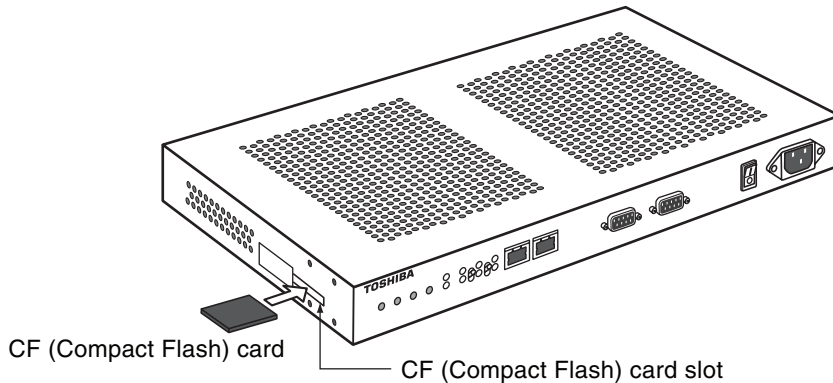
Item		Specification
Power Supply	Rated Voltage	100/240 V, AC Single phase with grounding
	Tolerable Range	85 - 132 V, AC / 180 - 264 V, AC
	Frequency	50/60 Hz ± 3 Hz, or the less
	Power Consumption	40 VA
	Tolerable Power Interruption	20 ms, or the less
Grounding		Exclusive grounding (Grounding resistance: 100 ohms, or the less)

1 CF (Compact Flash) card Installation

REQUIREMENT

- Do not insert or remove the CF (Compact Flash) card during power on of the Intelligent Server. Doing so may cause a failure.
- If the CF (Compact Flash) card is not inserted properly, the Intelligent Server will not work.

Insert the attached CF (Compact Flash) card fully into the CF (Compact Flash) card slot on the side of the Intelligent Server.

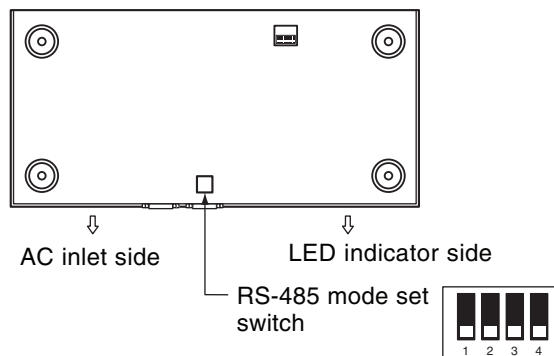
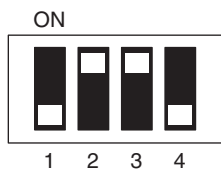


2 Setting

RS-485 operation mode setting

The RS-485 mode set switch is provided on the bottom board of the Intelligent Server. Set the switch as follows:

1	2	3	4
OFF	ON	ON	OFF



NOTE

If the RS-485 mode set switch is set incorrectly, the Intelligent Server will not work.

1	ON	A terminator resistor is connected between TX(+) and TX(-).
	OFF	No terminator resistor is connected between TX(+) and TX(-).
2	ON	A terminator resistor is connected between RX(+) and RX(-).
	OFF	No terminator resistor is connected between RX(+) and RX(-).
3	ON	Half-duplex mode (Note 1)
	OFF	Full-duplex mode (Note 2)
4	Not used	

(Note 1) Transmit data sent from the Intelligent Server is not received by the same server during transmission.

(Note 2) Transmit data sent from the Intelligent Server is also received by the same server during transmission.

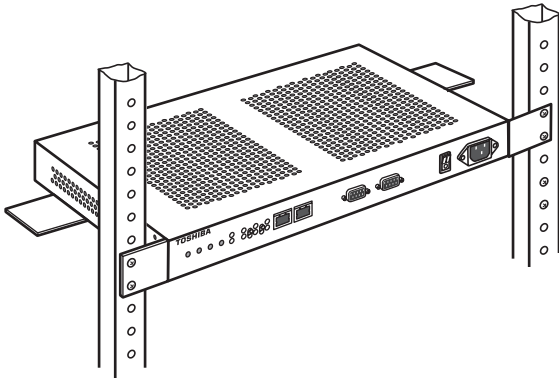
3 Installation

Intelligent Server Installation Method and Orientation

There are two ways to install the Intelligent Server as shown below: (1) rack mount (2) surface mount. The rack mount installation requires a support bracket for a 19-inch rack. Please contact us if you need the support bracket.

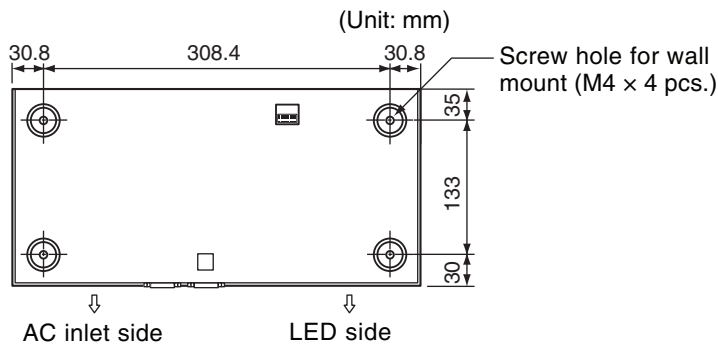
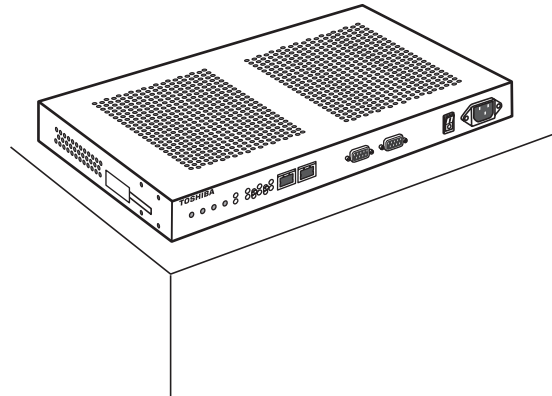
(1) Rack mount

A support bracket is required to be fixed to the bottom (rear side) of the unit.



(2) Surface mount

Standard installation



REQUIREMENT

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.)

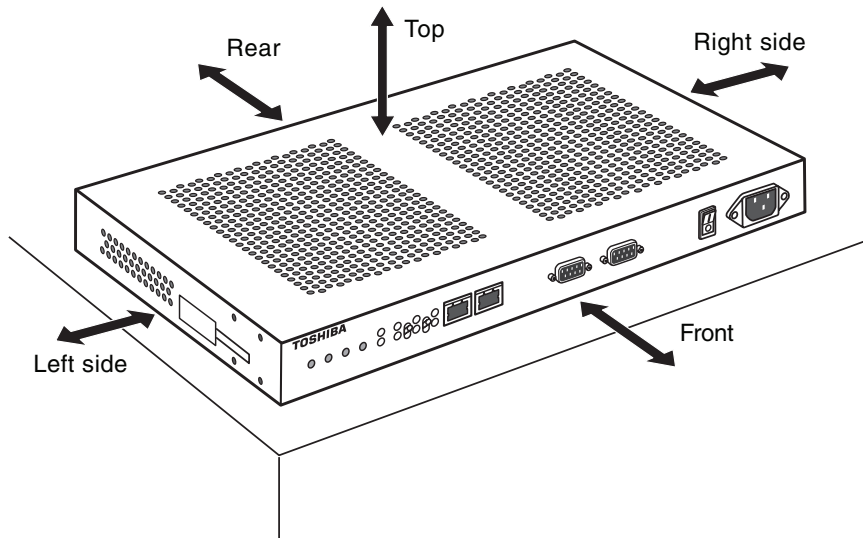
3 Installation (continued)

Installation Space and Maintenance Space

The installation space and the maintenance space must be determined before installation. These spaces depend on installation method.

Installation Space

The values in the following table are required for installation space in each direction. Select an installation place that allows good air ventilation.



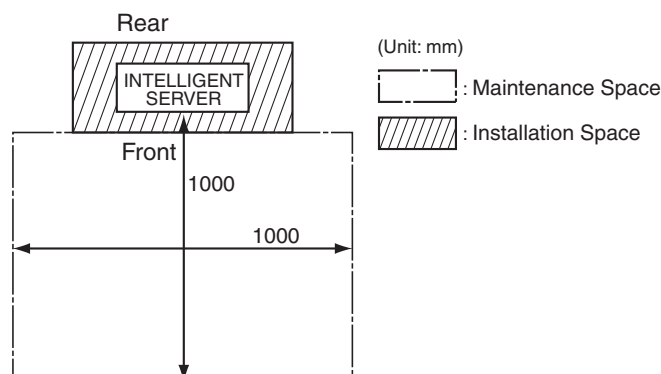
(Unit: mm)

Item	Direction	Rack mount	Surface mount
Installation space	Top	50	100
	Bottom	50	0
	Front	100	100
	Rear	100	Location adjacent to wall permitted (*1)
	Right side	Location adjacent to wall permitted (*1)	100
	Left side	Location adjacent to wall permitted (*1)	100

(*1) "Location adjacent to wall permitted" means that the unit can be installed close to the wall on that side.

Maintenance Space

Maintenance space is required for installation and maintenance of the unit.



4 Cable Connection

AC Power Cable Connection

REQUIREMENT

Power cable is not supplied for the Intelligent Server. Prepare a 3-core power cable conforming to applicable safety standards. Be sure to connect the earth line of the power cable securely.

- Insert an AC power cable into the AC inlet of the unit.
- Connect the power cord plug to an outlet (100V - 240 V, AC).

REQUIREMENT

- Install a breaker on the primary side of the outlet.
- Make sure that the outlet is earthed.

Ethernet wire Connection

NOTE

The Ethernet wires should be connected by professional service personnel.

Serial Port (RS-485) Connection

- Check that the power switch of the Intelligent Server is turned off.
- Connect the attached RS-485 wire to the serial port 1 (PORT 1). Secure the wire to the Intelligent Server using the two screws (right and left) attached to the RS-485 wire connector.

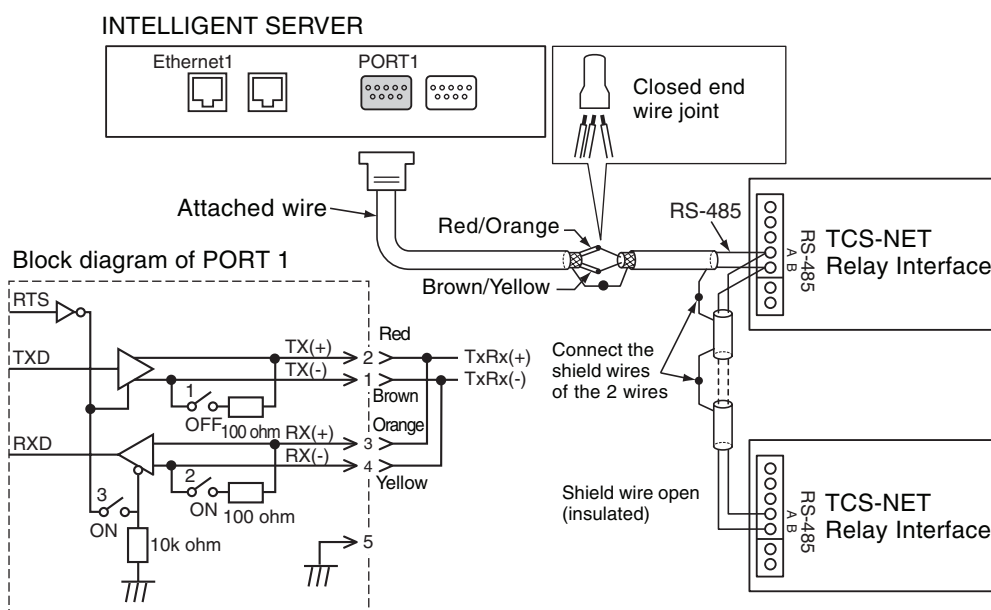
Connection to the TCS-NET Relay Interface

TxRx(+) Connection

Connect three of the four wires of RS-485 wire (red wire/orange wire/wire from the terminal board RS-485 A of the TCS-NET Relay Interface) together with the attached closed end wire joint. The red and orange wires can be connected directly to the terminal board RS-485 A of the Relay Interface.

TxRx(-) Connection

Connect three of the four wires of RS-485 wire (brown wire/yellow wire/wire from the terminal board RS-485 B of the TCS-NET Relay Interface) together with the attached closed end wire joint. The brown and yellow wires can be connected directly to the terminal board RS-485 B of the Relay Interface.

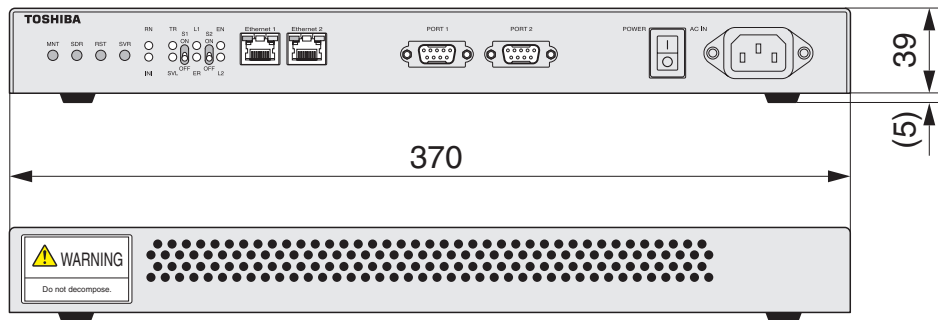
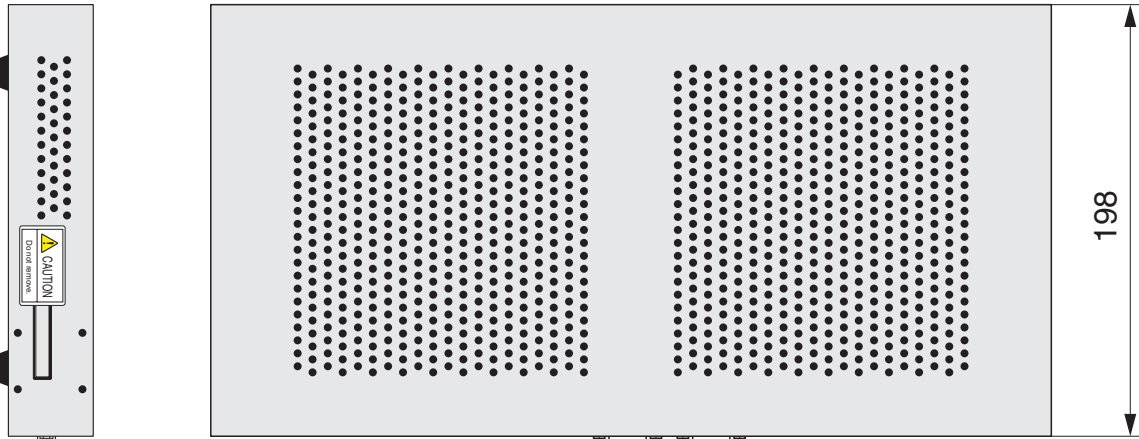


NOTE

The RS-485 signal wire has polarity. If connected with incorrect polarity, the unit will not work.

Do not connect or disconnect the wire during control operation. Doing so may cause a malfunction.

Appearance and Size



Unit in mm

NOTE

Trial operation should be checked by professional service personnel.

- ... Trademarks:
- BACnet is a registered trademark of ASHRAE(American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc.).
 - Compact Flash and CF are trademarks of SanDisk Corporation.
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