

# TOSHIBA INSTALLATION MANUAL Model:TCB-PCMO4E

## External master ON/OFF control board

### Precautions for Safety

- Read these "Precautions for Safety" carefully before installation work.
- The precautions described below include important items regarding safety. Observe them without fail. Understand the following details (indications and symbols) before reading the body text, and follow the instructions.

The meanings of indications

#### WARNING

Text set off in this manner indicates that failure to adhere to the directions in the warning could result in serious bodily harm or loss of life if the product is handled improperly.

#### CAUTION

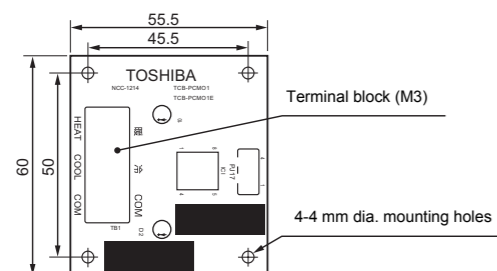
Text set off in this manner indicates that failure to adhere to the directions in the caution could result in serious bodily injury or damage to property if the product is handled improperly.

- After completion of installation, perform trial operation to check for any problems. Explain method of use and maintenance to the customer by following the descriptions in the manual. Ask customer to keep this Manual at accessible place for future reference.

#### WARNING

- Only a qualified installer or qualified service person is allowed to do installation work. If installation is carried out by an unqualified individual, fire or electric shock may result.
- Perform installation work reliably according to this installation manual. Incomplete installation may cause electric shock, fire or abnormal operation.
- Electrical work must be performed by a qualified installer or qualified service person in accordance with this installation manual. The work must satisfy all local, national and international regulations. Inappropriate work may result in electric shock or fire.
- Connect the specified wires firmly and clamp them securely so that external force applied to the wires does not affect the connector pins. Improper wire connection or clamping may result in fire or malfunction.
- Do not disassemble, modify, repair or move the product yourself. Doing so may cause fire, electric shock, injury or water leaks.
- Ask a qualified installer or qualified service person to do any repairs or to move the product.

### 1 External View



### 2 Accessories

| No. | Part Name                | Q'ty |
|-----|--------------------------|------|
| 1   | Connection cable         | 1    |
| 2   | Support to fix the board | 4    |
| 3   | Earth screw              | 2    |
| 4   | Binding band A           | 4    |
| 5   | Clamp filter             | 2    |
| 6   | Binding band B           | 2    |

### 3 Installation

- Before starting installation work, be sure to turn the power supply OFF.
- Install the "optional PCB" at the position on the electrical components box shown in the figure below.
- Install the "optional PCB" at the specified location inside the electrical components box using the fixing support.
- There are four mounting holes for the fixing support (2) at specified locations inside the electrical components box.
- Connect the connector (PJ17) on the "optional PCB" to the connector (CN513) on the "interface PCB" using the connection cable (1). (See figure on right.)
- The cable (provided) is long. Tie it using the binding band A (4).

#### [PCB Installation Position]

#### SMMS-i

MMY-MAP080 to 120    MMY-MAP140, 160

(max. number installed: 4 pcs)

- Tie the input wiring using the binding band A (4) at the position in the figure on the left. (4-a): Tie the input wiring together with other leads. (4-b): Tie the input wiring after passing the upper fixation hole on of the binding band.
- Attach the clamp filter (5) to the input wiring and connection cable (1) as shown in the figure. Use binding band B (6) to fix the clamp filter (5) to the wirings.

\* When more than one optional PC boards are installed, band all the connection cables and attach one clamp filter.

#### SMMS-i Connector Positions

#### SMMS, SHRM

(max. number installed: 4 pcs)

- If the screw of the position shown in the figure is removed and an upper right hook is slipped, an interface board will open.
- Place this P.C. board by using the support of the electric component box. There are four installation holes to place the support of the electric component box.

#### SMMS, SHRM Connector Positions

#### MINI-SMMS

(max. number installed: 2 pcs)

- Install this optional P.C. board to the back side of the Interface P.C. board on outdoor unit.
- If the screw of the position shown in the figure is removed and an upper right hook is slipped, an interface board will open.
- Place this P.C. board by using the support of the electric component box. There are four installation holes to place the support of the electric component box.

#### MINI-SMMS Connector Positions

### 4 Details of Operation, Wiring Diagram

#### External master ON/OFF Control

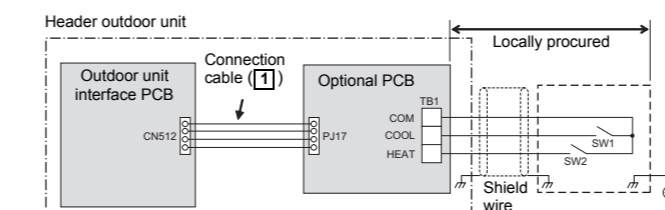
##### ▼ Model : SMMS-i, SMMS, SHRM, MiNi-SMMS

##### ▼ Functions

Indoor units connected to the outdoor unit can be batch-operated or batch-stopped by connecting to the interface PCB of those outdoor units. Batch operation is performed in the previously active mode.

##### ▼ Operation

The outdoor unit connection is for the header unit (U1).



SW1: Operation input switch  
SW2: Stop input switch

| Terminal   | Input Signal | Operation                    |
|------------|--------------|------------------------------|
| COOL (SW1) | ON OFF       | Batch-operates indoor units. |
| HEAT (SW2) | ON OFF       | Batch-stops indoor units.    |

#### CAUTION

Be sure to provide no-voltage pulse contacts for each terminal.  
Hold the ON state for at least 100 msec.  
Do not turn SW1 and SW2 ON simultaneously

#### Night operation (sound reduction) control

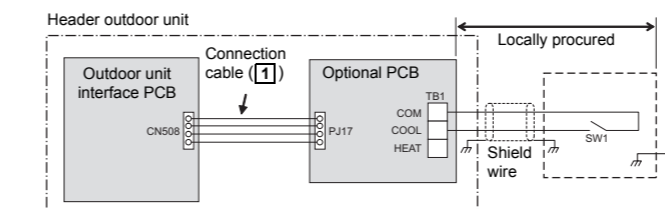
##### ▼ Model : SMMS-i, SMMS, SHRM, MiNi-SMMS

##### ▼ Functions

The rotation speed of the compressor and fan can be restricted during input of the night time signal to reduce noise by connecting to the interface PCB of outdoor units.

##### ▼ Operation

The outdoor unit connection is for the header unit (U1).



SW1: Night time signal switch

| Terminal   | Input Signal | Operation          |
|------------|--------------|--------------------|
| COOL (SW1) | ON OFF       | Night time control |
|            | ON OFF       | Normal operation   |

#### CAUTION

Be sure to provide no-voltage continuous contacts for each terminal.

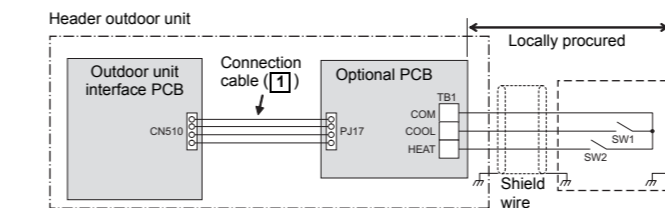
#### Operation mode selection control

##### ▼ Functions

The heating/cooling mode of the system can be selected by connecting to the interface PCB of outdoor units.

##### ▼ Operation

The outdoor unit connection is for the header unit (U1).



SW1: Cooling mode specified input switch  
SW2: Heating mode specified input switch

| Input Signal  |               | Operation: Selected operation mode |
|---------------|---------------|------------------------------------|
| Cooling (SW1) | Heating (SW2) |                                    |
| ON            | OFF           | Cooling operation only allowed     |
| OFF           | ON            | Heating operation only allowed     |
| OFF           | OFF           | Normal operation                   |

#### CAUTION

Be sure to provide no-voltage continuous contacts for each terminal.

##### ▼ Model : SMMS-i

About Switching of Processing of Indoor Unit Operation State [Setting can be changed only on the SMMS-i.]

Processing of the operation state can be switched for indoor units in a mode other than the selected operation mode by setting the jumper lead (J01) of the header outdoor unit interface PCB.

| Jumper lead                     | Details of Processing  |   |  |
|---------------------------------|--|---|--|
| J01 connected (factory default) | Unallowed indoor units in a mode other than the selected operation mode are not treated as priority (thermo OFF state). (Unallowed indoor units) |   |  |
|                                 | Operation Mode   | Operation State                                       | Remote control   |
|                                 | Cooling unit   | Air blow operation at blow rate set on remote control | Indicator is displayed.  |
|                                 | Heating unit   | Air blow operation at super-slow blow rate            |  |
| Air blow unit                   | Regular air blow operation at blow rate set on remote control  |   |  |
| J01 cut                         | Indoor units in a mode other than the selected operation mode are forcibly switched to the selected operation mode.                              |   |  |
|                                 | PC board selection mode  | Remote control operation/display                      |  |
|                                 | Normal   | *, ◊, * or * can be selected                          | When using the remote control, (mode select control) indicator is displayed. |
|                                 | Cool   | Only *, ◊, or * can be selected                       |  |
| Heat                            | Only * or * can be selected  |   |  |

##### ▼ Model : MiNi-SMMS

The jumper lead is not switched.

Unallowed indoor units in a mode other than the selected operation mode are not treated as priority (thermo OFF state). (Unallowed indoor units)

| Operation Mode | Operation State   | Remote control          |
|----------------|---|-------------------------|
| Cooling unit   | Air blow operation at blow rate set on remote control         | Indicator is displayed. |
| Heating unit   | Air blow operation at super-slow blow rate                    |                         |
| Air blow unit  | Regular air blow operation at blow rate set on remote control |                         |

##### ▼ Model : SMMS, SHRM

The jumper lead is not switched.

Indoor units in a mode other than the selected operation mode are forcibly switched to the selected operation mode.

| PC board selection mode | Remote control operation/display |  |
|-------------------------|----------------------------------|--|
| Normal                  | *, ◊, * or * can be selected     | When using the remote control, (mode select control) indicator is displayed. |
| Cool                    | Only *, ◊, or * can be selected  |  |
| Heat                    | Only * or * can be selected      |  |

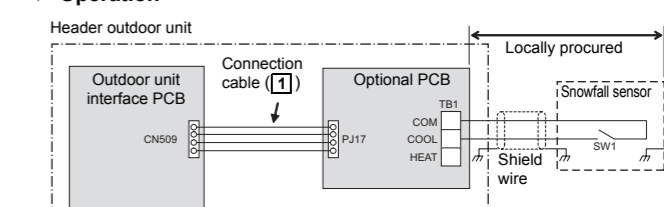
#### Snowfall Fan Control

##### ▼ Model : SMMS-i, SMMS, SHRM

##### ▼ Functions

The outdoor unit fan operates at snowfall by connecting to the outdoor unit interface PCB.

##### ▼ Operation



SW1: Snowfall detection switch (snowfall sensor)

| Terminal      | Input Signal | Operation  |
|---------------|--------------|--|
| Cooling (SW1) | ON OFF       | Snowfall fan control (Fan in outdoor unit operates.) |
|               | ON OFF       | Normal operation                                     |

#### CAUTION

Be sure to provide no-voltage continuous contacts for each terminal.