

TOSHIBA Carrier Power peak-cut control board

Model:TCB-PCDM4UL

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 are shown as follows.

 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 test run 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 both Instruction and Installation Manuals 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

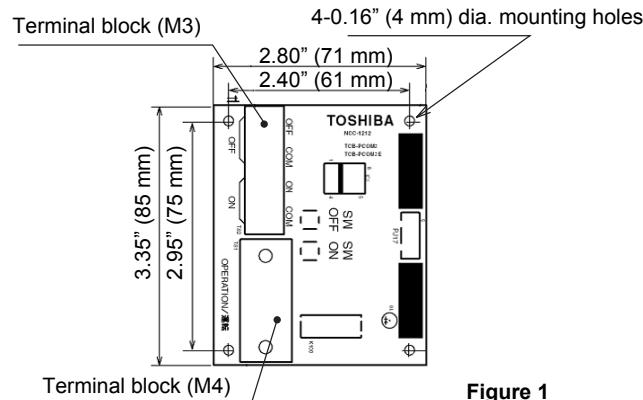


Figure 1

2 Accessories

Table 1

No.	Part Name		Qty
1	Connection cable		1
2	Support to fix the board		4
3	Earth screw		2
4	Binding band A		4

3 Installation procedures

- Before proceed an installation work, please make sure the power supply is OFF.
- Insert four fixing supports (2) into the holes on the “Optional PCB”. (See Figure 1)
- Attach the “Optional PCB” on the designated location in the electrical component box of the header outdoor unit. (See Figure 2)
- Use the attached connection cable (1) and connect the connector (PJ17) on the “Optional PCB” to the connector (CN513) on the “Interface PCB”. (See Figure 3)
- Use the binding band (4) to tie and adjust a cable length.

[PCB Installation Position]

SMMS-i, SMMS-e

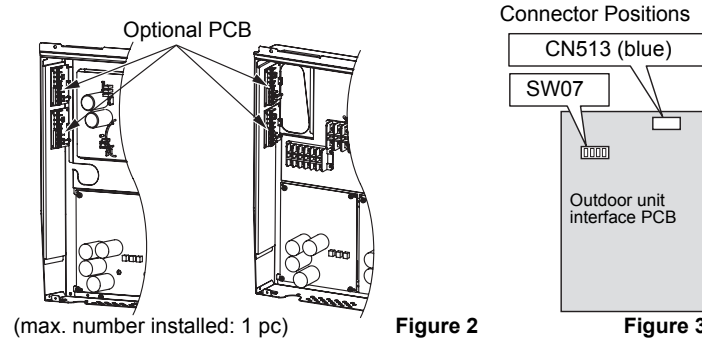
MMY-MAP072

MMY-MAP096 and 114, 120, 144, 168

SHRM-i, SHRM-e

MMY-MAP072

MMY-MAP096 and 120, 144, 168

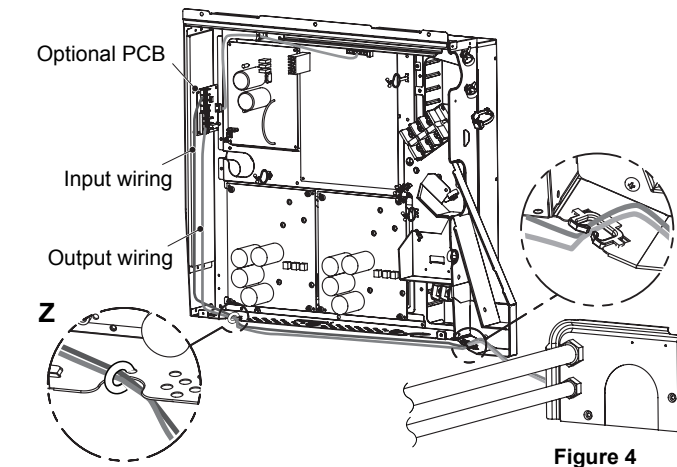


4 Wiring

NOTE

Use copper supply wires.

SMMS-i, SHRM-i, SMMS-e, SHRM-e



[PCB Installation Position]

NOTE

Distance input wiring from high voltage parts.

- Tie both output and input wirings together with the binding band (4) at the position Z shown in the Figure 4.
- Route the connection cable as shown in the Figure 4. Also, use lower conduit hole for wiring.

5 Details of operation

By switching SW07 (bit 2) on the outdoor unit interface PCB, super module multi (MMY-) supports both standard specifications (2-stage switching) and enhanced specifications (4-stage switching).

CAUTION

Specifications of display relay contact

- The terminal for display output ([Operation] terminal) must satisfy the following electrical rating.

<Electrical Rating>

24 V or less (AC/DC), 10 mA or more, 1 A or less (non-conductive load)

When connecting a conductive load (e.g. relay coil) to the display relay load, insert a surge killer CR (for an AC power supply) or a diode for preventing back electromotive force (for a DC power supply) on the bypass circuit.

■ Electrical wiring diagram

Standard Specifications

(Wiring example)

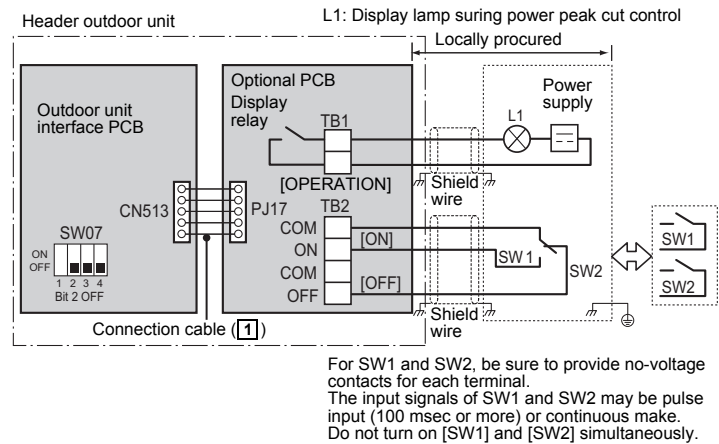


Figure 5

<SW07 (bit 2) OFF [2-stage switching]>

Table 2

Input		SW07 (bit 1)		Display relay (L1)
SW1	SW2	Bit 1 OFF	Bit 1 ON	
OFF	ON	100 % (normal operation)	100 % (normal operation)	OFF
ON	OFF	0 % (forced stop)	Approx. 60 % (upper limit regulated)	ON

For one input function

Power peak-cut ON-OFF control is made possible on the [ON] terminal input (SW1) by cutting the jumper lead (J16) of the center outdoor unit interface PCB.

(Wiring example)

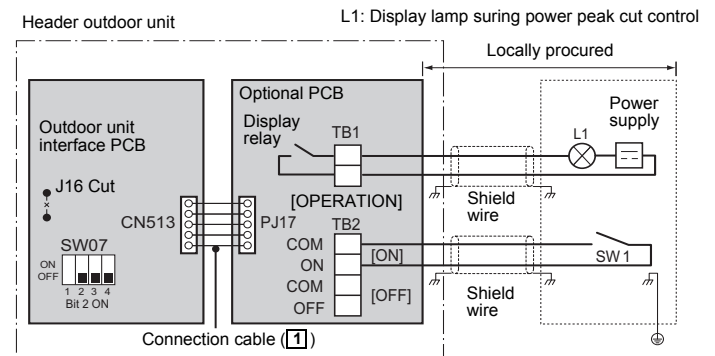


Figure 6

<SW07 (bit 2) OFF [2-stage switching]>

Power peak-cut control turns ON when SW1 in the wiring example is ON (continuous make).

Table 3

Jumper lead J16	Input SW1	SW07 (bit 1)		Display relay (L1)
		Bit 1 OFF	Bit 1 ON	
Cut	OFF	100 % (normal operation)	100 % (normal operation)	OFF
	ON	0 % (forced stop)	Approx. 60 % (upper limit regulated)	ON

Enhanced Specifications

(Wiring example)

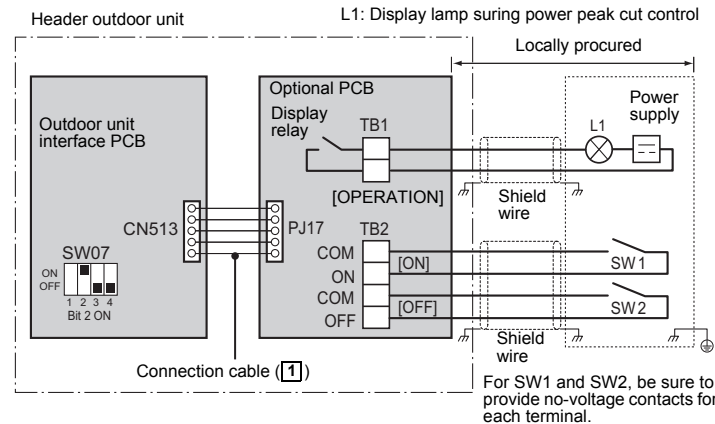


Figure 7

<SW07 (bit 2) ON [4-stage switching]>

Table 4

Input		SW07 (bit 1)		Display relay (L1)
SW1	SW2	Bit 1 OFF	Bit 1 ON	
OFF	OFF	100 % (normal operation)	100 % (normal operation)	OFF
ON	OFF	Approx. 80 % (upper limit regulated)	Approx. 85 % (upper limit regulated)	ON
OFF	ON	Approx. 60 % (upper limit regulated)	Approx. 75 % (upper limit regulated)	ON
ON	ON	0 % (forced stop)	Approx. 60 % (upper limit regulated)	ON