

TOSHIBA INSTALLATION MANUAL

DRAIN PUMP KIT

Model name:TCB-DP40DPE

Thank you very much for purchasing Drain pump kit for TOSHIBA Air Conditioner.
Please read this installation manual carefully before using your Air Conditioner

- Be sure to obtain the "Installation manual" from constructor (or dealer).

1. Installable Model

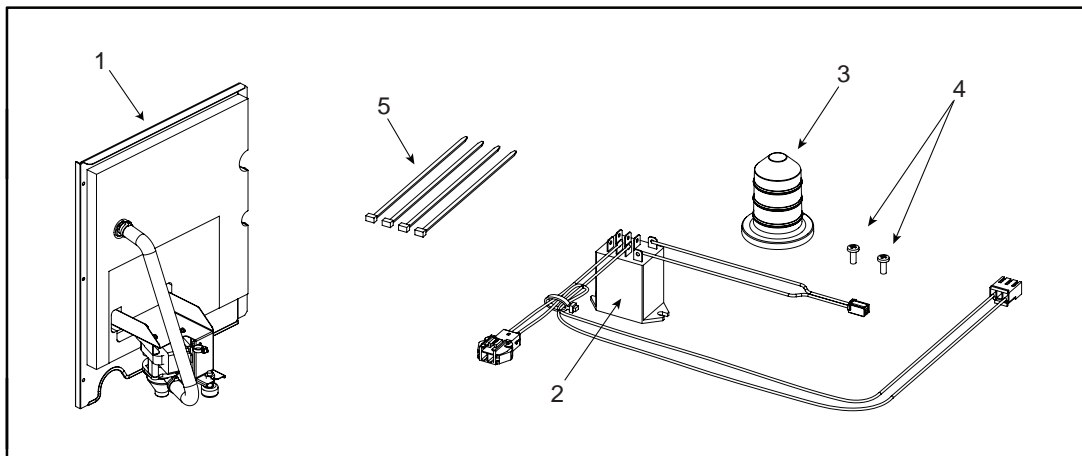
Concealed Duct High Static Pressure Type indoor unit
MMD-AP0726HP*, AP0966HP*, RAV-SM2244DTP*, SM2804DTP*

2. Specifications

Drain pump kit model	TCB-DP40DPE
Drain pump height	500mm or less above the under of the indoor unit

3. Components

No.	Part name	Qty.	No.	Part name	Qty.
1	Drain pump unit	1	4	Screw	2
2	Relay assembly	1	5	Cable tie	4
3	Drain cap	1			



4. Precautions for Safety

- Read this "Precautions for Safety" carefully before Installation.
- The precautions described below include the important items regarding safety observe them without fail.
- After the installation work, perform a test run to check for any problem.
- Turn off the main power supply switch (or breaker) before the unit maintenance.
- Ask the customer to keep this Installation Manual.

WARNING

- Ask the dealer or qualified installer about installation.
 - Install the Drain pump kit securely following this Installation Manual.
 - When reinstalling the Drain pump kit, ask the dealer or qualified installer. Improper installation may result water leakage, electric shock or fire.
 - Turn off the main power supply switch or breaker before attempting any electrical work. Make sure all power switches are off. Failure to do so may cause electric shock.
 - Connect the connecting wire correctly. If the connecting wire is connected in a wrong way, electric parts may be damaged.
 - Do not modify this unit by removing any of the safety interlock switches.
 - To avoid personal injury (with sharp edges), be careful when handling parts.
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REQUIREMENTS

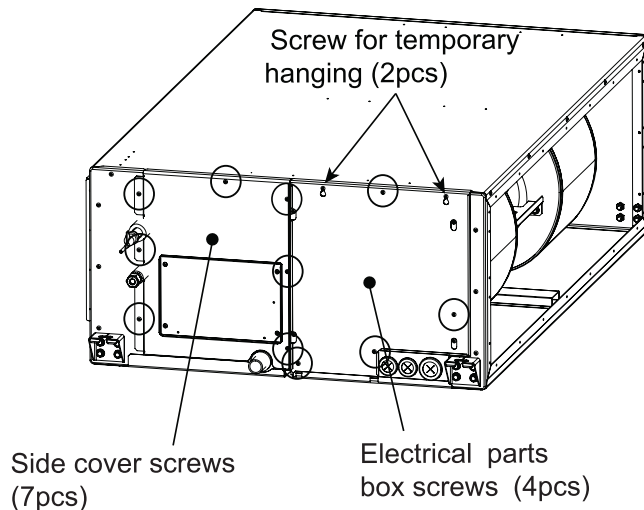
- Check the horizontal level of the air conditioner. It should be horizontal level, or tilted no more than 1 degree (with the drain port side lower).
- Place where a sufficient servicing space can be ensured for safe maintenance.
- Place where drained water will not cause any problem.



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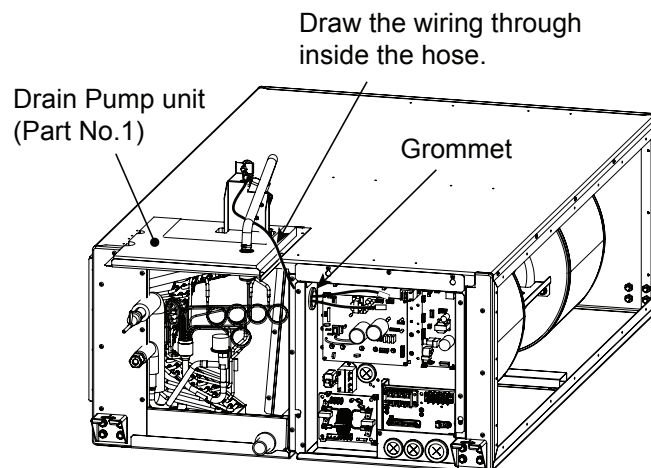
5. Installation

- 1) Remove the electrical parts box cover and the side cover. (See the drawing 1)



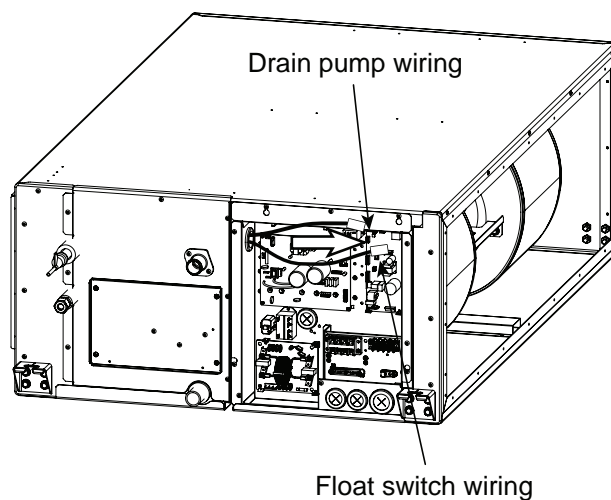
(Drawing 1)

- 2) Temporarily place the drain pump unit in the top board of the indoor unit, and draw the wiring of the drain pump and float switch through inside the electrical parts box from the grommet of the electrical parts box. (See the drawing 2)



(Drawing 2)

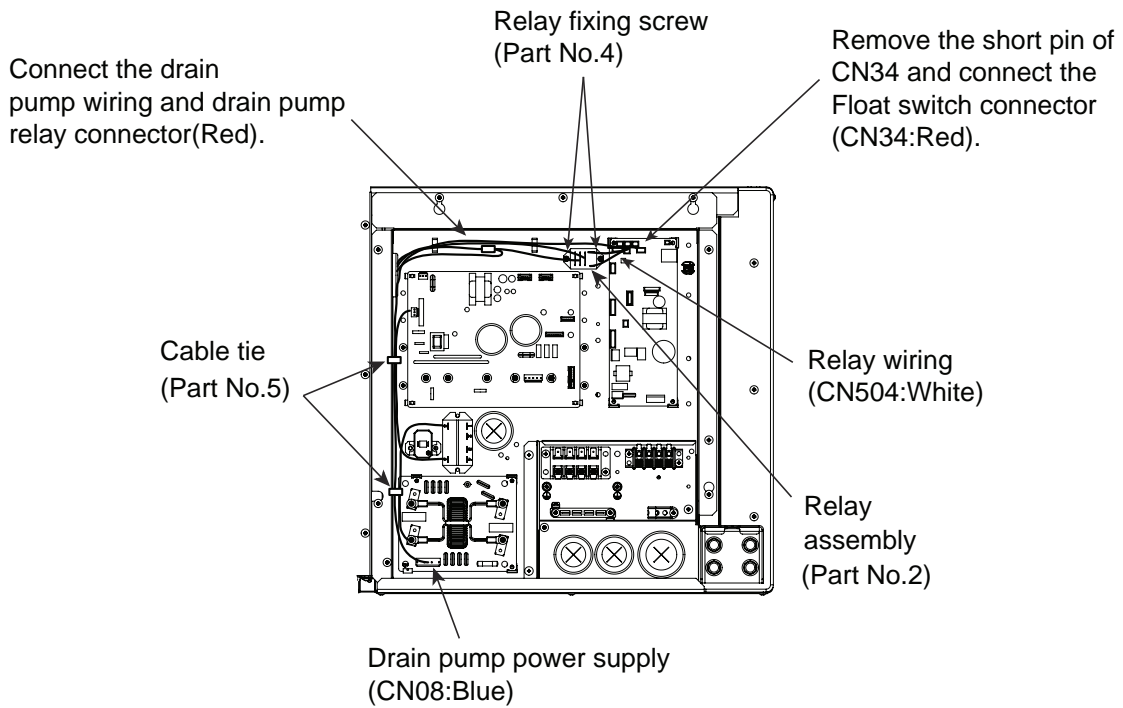
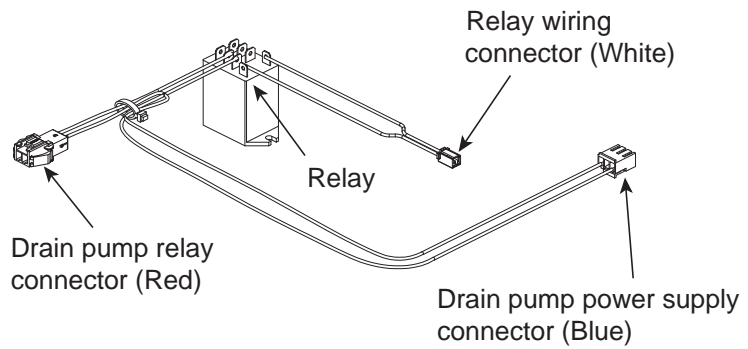
- 3) Attach the drain pump kit to the indoor unit, and draw the wiring of the drain pump and the float switch into the electrical parts box. (See the drawing 3)



(Drawing 3)

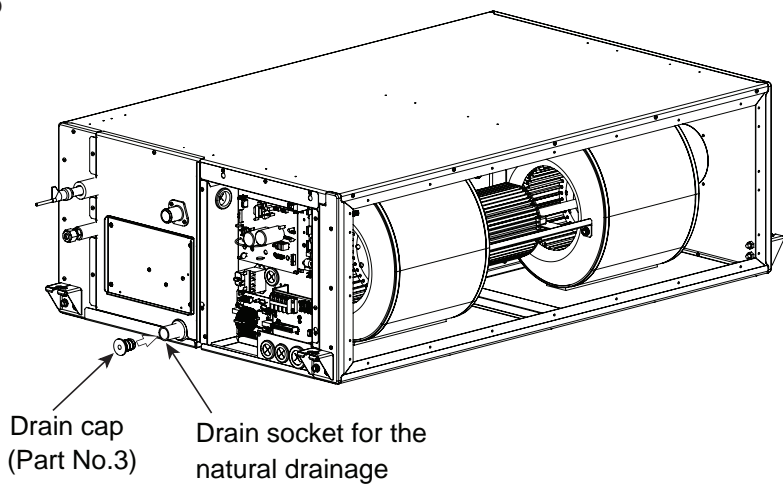
- 4)** Attach the attached relay assembly to the electrical parts box, connect the wiring, and fix the wiring with the cable tie.
(See the drawing 4)

Detail of Relay assembly (Part No.2)



(Drawing 4)

- 5)** Attach the attached drain cap to the drain socket for the natural drainage.
(See the drawing 5)



(Drawing 5)



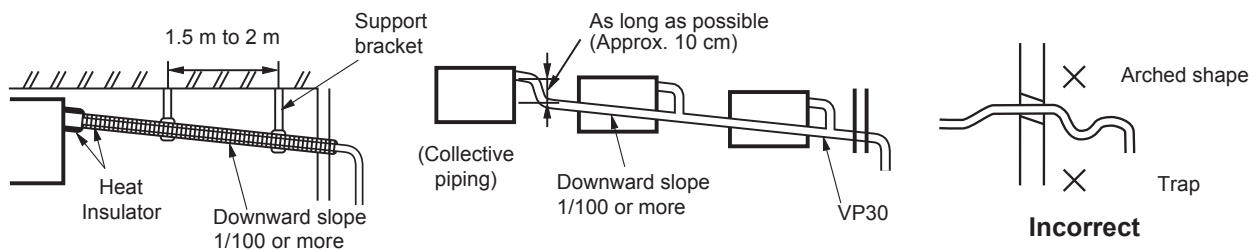
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6. Drain pipe

⚠ CAUTION

Following the Installation Manual, perform the drain piping work so that water is properly drained. Apply a heat insulation so as not to cause a dew condensation. Inappropriate piping work may result in water leakage in the room and wet furniture.

- Provide the indoor drain piping with proper heat insulation.
- Provide the area where the pipe connects to the indoor unit with proper heat insulation. Improper heat insulation will cause condensation to form.
- The drain pipe must be sloping downward (at an angle of 1/100 or more), and do not run the pipe up and down (arched shape) or allow it to form traps. Doing so may cause abnormal sounds.
- Restrict the length of the traversing drain pipe to 20 meters or less. For a long pipe, provide support brackets at intervals of 1.5 to 2 meters to prevent flapping.
- Install the collective piping as shown in the following figure.
- Do not provide any air vents. Otherwise, the drain water will spout, causing water to leak.
- Do not allow any force to be applied to the connection area with the drain pipe.



■ Pipe material, size and insulator

The following materials for piping work and insulating process are locally procured.

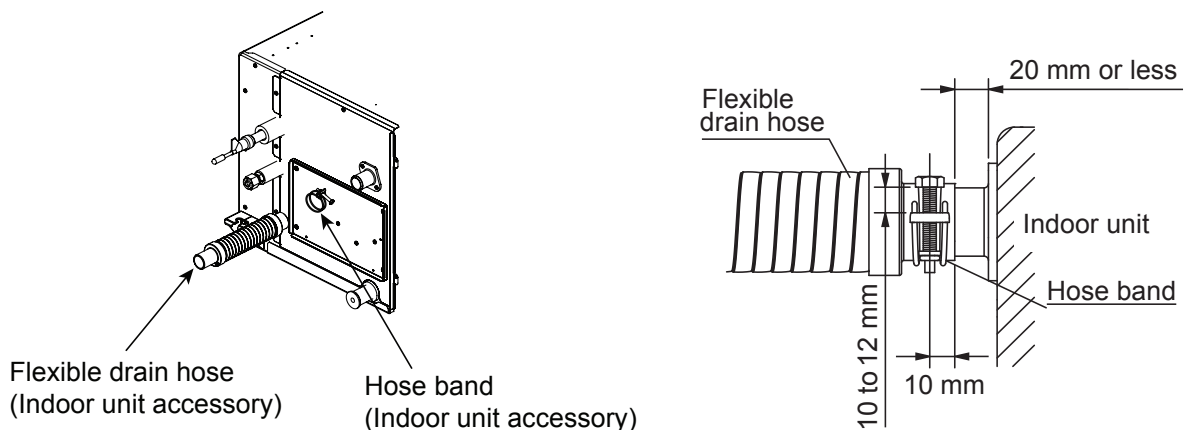
Pipe material	Hard vinyl chloride pipe VP25 (Nominal outer diameter $\varnothing 32$ mm)
Insulator	Foamed polyethylene foam, thickness: 10 mm or more

■ Connecting drain pipe

Insert flexible drain hose into upper drain pipe of main unit as far as it will go. Fix it with hose band.

REQUIREMENT

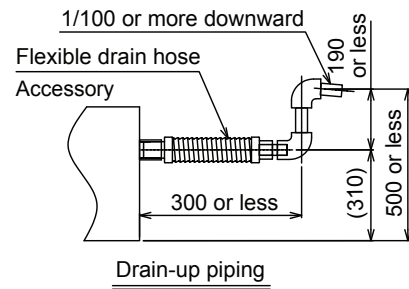
Mount the flexible drain hose using the hose band without using adhesive.



■ Drain up

When a down-gradient cannot be secured for the drain pipe, drain-up piping is possible.

- The height of the drain pipe must be 500 mm or less from the underside of the indoor unit.
- Take the drain pipe out of the drain pipe joint with the indoor unit in 300 mm or less, and bend up the pipe vertically.
- Immediately after the pipe is bent up vertically, lay the pipe making a down-gradient.



7. Test run

■ Check the draining

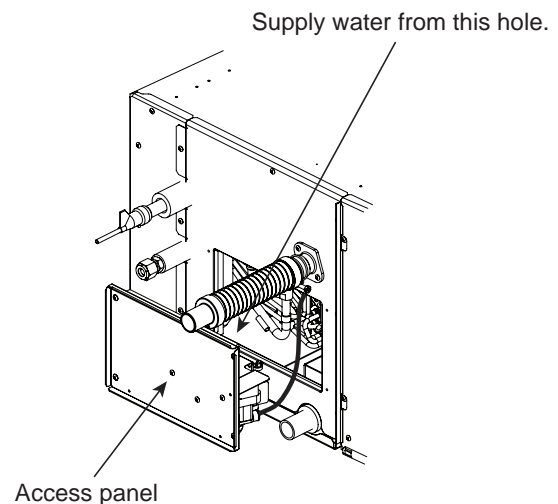
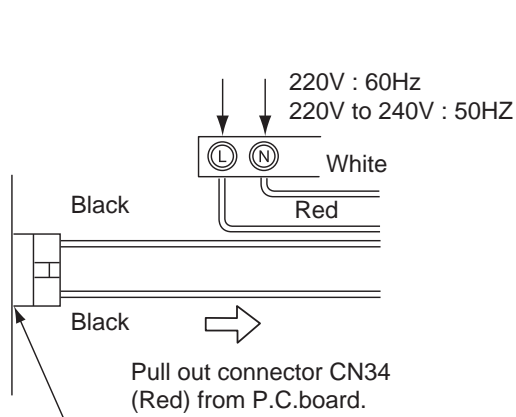
In the test run, check that water drain is properly performed and water does not leak from the connecting part of the pipe. When doing this, also check that no abnormal sounds are heard from the drain pump motor. Check draining also when installed in heating period.

When the electrical and wiring work has been completed

Pour some water by following the method shown in the following figure. Then, while performing a cooling operation, check that the water drains from the drain pipe connecting port (transparent) and that no water is leaking from the drain pipe.

When the electrical and wiring work has not been completed

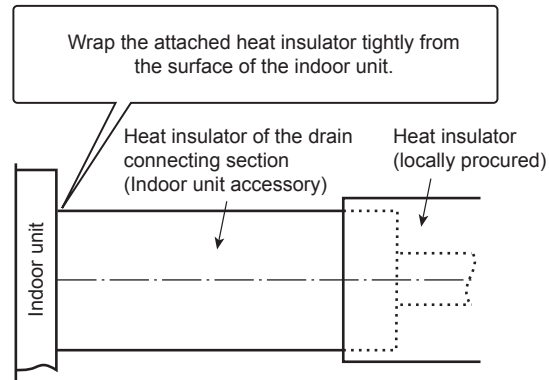
- Disconnect the float switch connector (3P:red) from the connector (CN34:red) on the printed circuit board inside the electrical control box. (Before doing this, the power must be turned off.)
- Connect a 220V to 240V supply voltage to (L) and (N) on the power supply terminal block. (Do not apply a 220V to 240V voltage to (A),(B),(U1),(U2) of the terminal block. Otherwise, the printed circuit board may be damaged.)
- Pour the water by following the method shown in the below figure. (Amount of water poured: 1500 cc to 2000 cc)
- When the power is turned on, the drain pump automatically start running. Check whether the water is draining from the drain pipe connecting port, and check that no water is leaking from the drain pipe.
- After checking that the water drains and there are no water leaks, turn off the power, connect the float switch connector to its original position.



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8.Heat insulating process

- As shown in the figure, cover the flexible hose band with the attached heat insulator up to the bottom of the indoor unit tightly.
- Cover the drain pipe tightly with a heat insulator procured locally so that it overlaps with the attached heat insulator of the drain connecting section.



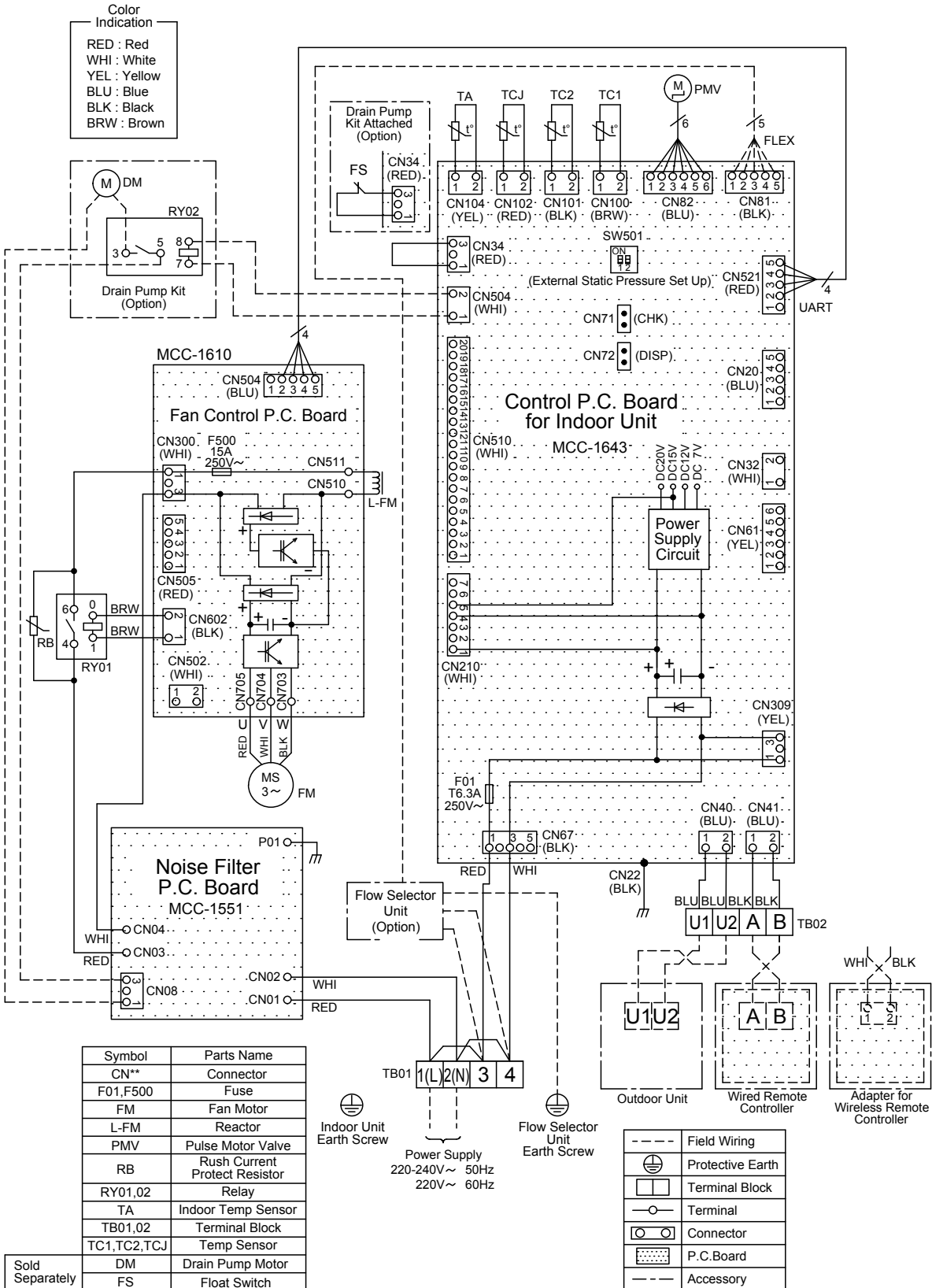
9.Check the Draining

- In order to put the function of the air conditioner and the drain pump kit fully to practical use, the regular maintenance and check are necessary, together with correct usage.
For the air conditioner body and the drain pump kit especially, **check dirt of the drain pan once per year before cooling season and clean them if dirt is heavy.**

10. Wiring diagram

Concealed Duct High Static Pressure Type Wiring Diagram

<Ex. MMD model>



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