

ORIGINAL
MANUAL



INSTALLATION & OWNER'S MANUAL

MH-KIT



IMPORTANT NOTE:

Thank you very much for purchasing our product,
Before using your unit , please read this manual carefully and keep it for future reference.

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1 SAFETY PRECAUTIONS

The precautions listed here are divided into the following types. They are quite important, so be sure to follow them carefully. Read these instructions carefully before installation. Keep this manual in a handy for future reference.

Meanings of DANGER, WARNING, CAUTION and NOTE symbols.

DANGER

Indicates an imminently hazardous situation which if not avoided, will result in serious injury.

WARNING

Indicates a potentially hazardous situation which if not avoided, could result in serious injury.

CAUTION

Indicates a potentially hazardous situation which if not avoided, may result in minor or moderate injury. It is also used to alert against unsafe practices.

NOTE

Indicates situations that could only result in accidental equipment or property damage.

DANGER

- Before touching electric terminal parts, turn off power switch.
- When service panels are removed, live parts can be easily touched by accident.
- Never leave the unit unattended during installation or servicing when the service panel is removed.
- Do not touch any switch with wet fingers. Touching a switch with wet fingers can cause electrical shock.
- Before touching electrical parts, turn off all applicable power to the unit.

WARNING

- Improper installation of equipment or accessories may result in electric shock, short-circuit, leakage, fire or other damage to the equipment. Be sure to only use accessories made by the supplier, which are specifically designed for the equipment and make sure to get installation done by a certified person.
- All the activities described in this manual must be carried out by a licensed technician. Be sure to wear adequate personal protection equipment such as gloves and safety glasses while installing the unit or carrying out maintenance activities.
- Link box is only available for indoor installation. Otherwise, rainproof precaution should be considered. For specific methods please contact the local dealer or technical support engineer.
- Keep Link box away from water and heating source such as a stove.
- Link box should be installed in a place which is not easily accessible to children.

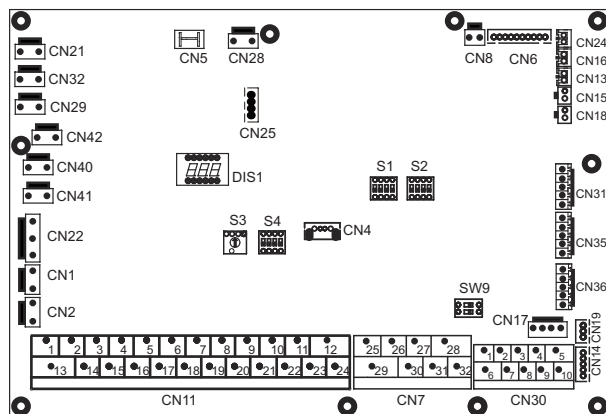
CAUTION

- Before installation, check whether the user's power supply meets the electrical installation requirements of unit (including reliable grounding, leakage, and wire diameter electrical load, etc.). If the electrical installation requirements of the product are not met, the installation of the product is prohibited until the product is rectified.
- Product installation should be fixed firmly, Take reinforcement measures, when necessary.

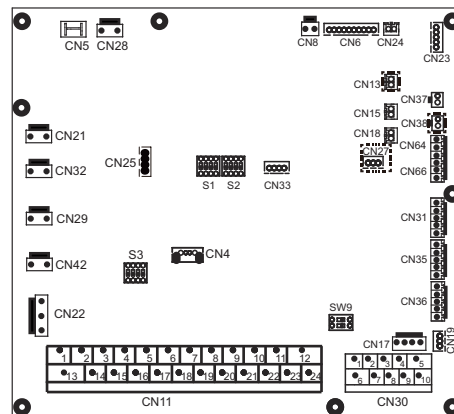
2 GENERAL INTRODUCTION

MH-kit is used to shorten the field connection cable length between hydraulic module PCB and TBH, external electric heater, AHS, SV1, SV2, SV3, PUMP_O, PUMP_D, PUMP_C, PUMP_S, P_X, making the installation more flexible.

Hydraulic module board PCB



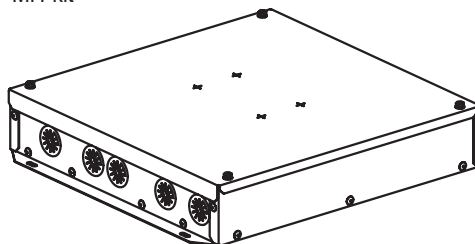
Arctic Series



Power Series

Communication cable $\leq 50\text{m}$

MH-kit



- TBH
- External Backup heater
- AHS
-




2.1 Function description

1. The hydraulic module board and external kit simultaneously output the open/close of port of TBH、IBH2、IBH1、AHS、SV1、SV2、SV3、PUMP_O、PUMP_D、PUMP_C、PUMP_S、P_X.
2. The hydraulic module board and external kit are both tested for AD values of port T5、Tbt、T5_2、Tw2、T1、Tsolar. If neither the hydraulic module board nor the external kit has collected the set active sensor parameters, the hydraulic module board reports a corresponding sensor fault. When the hydraulic module board and the external kit simultaneously collect different parameter values of the same sensor, the hydraulic module board parameter values shall prevail.
3. Disconnect communication with the main control board for more than 1 minute, the hydraulic module will shut down and output an EL fault, and the fault display on the wire controller.
4. Connection for other components see the "INSTALLATION AND OWNER'S MANUAL" of indoor unit.

3 INSTALLATION GUIDELINE

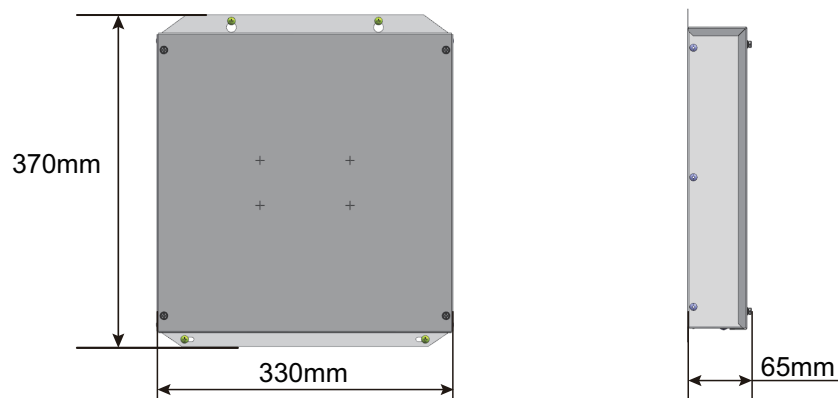
3.1 Accessories

The following accessories are included.

No.	Name	Qty.	Remarks
1	Cross round head tapping screw	5	 ST3.9*25 (4 for actual installation)
2	Plastic expansion pipe	5	 $\Phi 6 \times 31.5\text{mm}$ (4 for actual installation)
3	Installation and owner's manual(this book)	1	

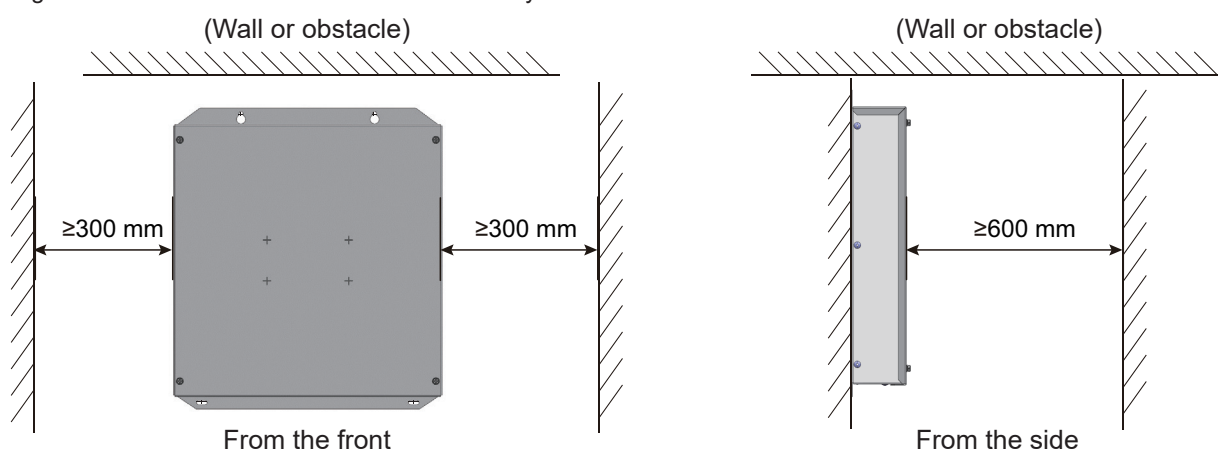
3.2 Installation

3.2.1 Dimension drawing



3.2.2 MH-kit installation and fixed way

Drill four holes where you want to install the MH-kit, with the positions of the holes shown below. Secure the MH-kit using screws. The MH-kit must be installed vertically on the wall.

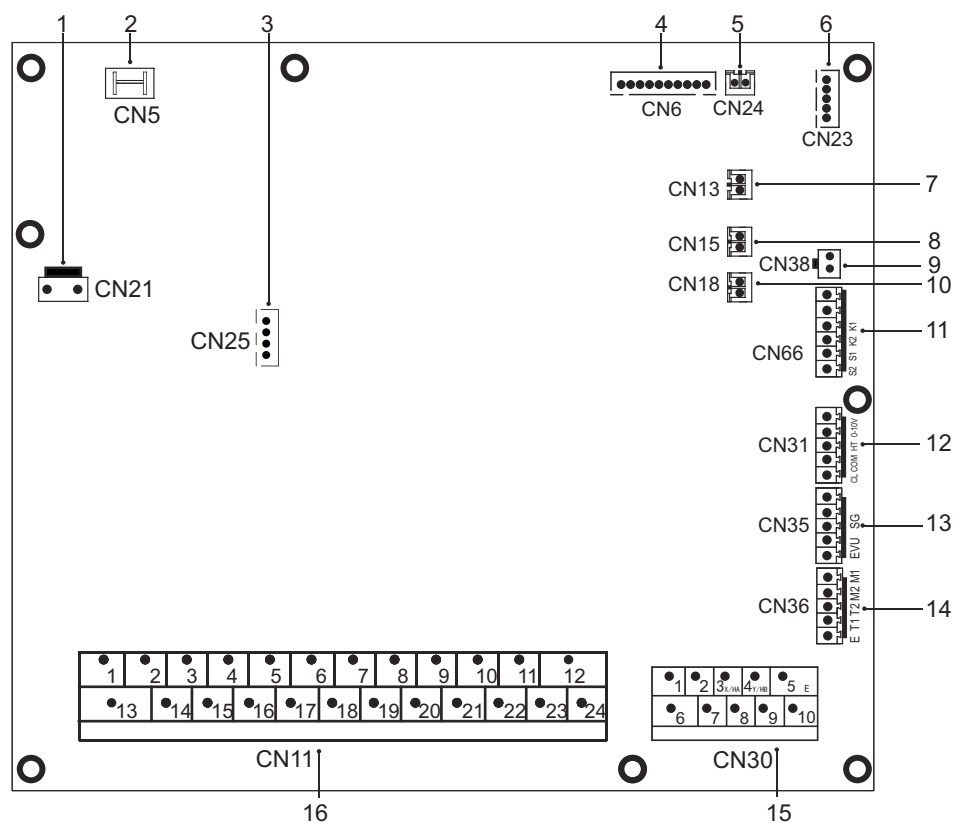


NOTE

All pictures in this manual are for reference only. The actual product may be slightly different from the above pictures.

4 CONTROL BOARD

MH-kit PCB board



Order	Port	Code	Assembly unit	Order	Port	Code	Assembly unit
1	CN21	POWER	Port for power supply			HT	Control port for room thermostat
2	CN5	GND	Port for ground	12	CN31	COM	Power port for room thermostat
3	CN25	DEBUG	Port for IC programming			CL	Control port for room thermostat
4	CN6	T2	Reserved	13	CN35	SG	Port for smart grid (grid signal)
		T2B	Reserved			EVU	Port for smart grid (photovoltaic signal)
		TW_in	Reserved	14	CN36	M1 M2	Port for remote switch
		TW_out	Reserved			T1 T2	Reserved
		T1	Port for temperature sensor of final outlet water temperature	15	CN30	3(X/HA) 4(Y/HB)	Port for communication with hydraulic module board
5	CN24	Tbt	Port for temperature sensor of balance tank			6(P) 7(Q)	Reserved
6	CN23	RH	Port for humidity sensor (Reserved)			9(H1) 10(H2)	Reserved
7	CN13	T5	Port for domestic hot water tank temp. sensor	16	CN11	1(AHS1) 2(AHS2)	Port for additional heat source
8	CN15	Tw2	Port for outlet water for zone 2 temp. sensor			3(1ON) 4(2OFF) 17(C1)	Port for SV1(3-way valve)
9	CN38	T52	Port for temperature sensor (Reserved)			5(2ON) 6(2OFF) 18(C1)	Port for SV2(3-way valve)
10	CN18	Tsolar	Port for solar panel temp sensor			7(3ON) 8(3OFF) 19(C1)	Port for SV3(3-way valve)
11	CN66	K1 K2	Input port (Reserved)			9(P_o) 20(C1)	Port for zone 2 pump
		S1 S2	Input port for solar energy			10(P_o) 21(C1)	Port for outside circulation pump
12	CN31	10V GND	Reserved			11(P_s) 22(C1)	Port for solar energy pump
						12(P_d) 23(C1)	Port for DHW pipe pump
						13(TBH) 16(C1)	Control port for tank booster heater
						14(IBH2) 16(C1)	Control port for internal backup heater 1
						15(IBH1) 17(C1)	Control port for internal backup heater 2
						24(P_X) 23(C1)	Output port for alarm/Defrost run

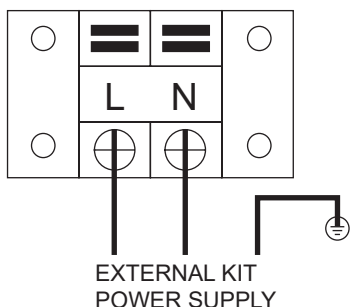
NOTE

If the Tbt and T5 terminals need to be connected, you can unplug the connecting wire from the corresponding position on the Hydraulic module board and plug it into the MH-kit PCB board port.

5 WIRING CONNECTION

5.1 Power supply

5.1.1 MH-KIT Power Supply Wiring



Power Supply Voltage(L/N)	220-240 V AC
Wiring size	1.5 mm ²

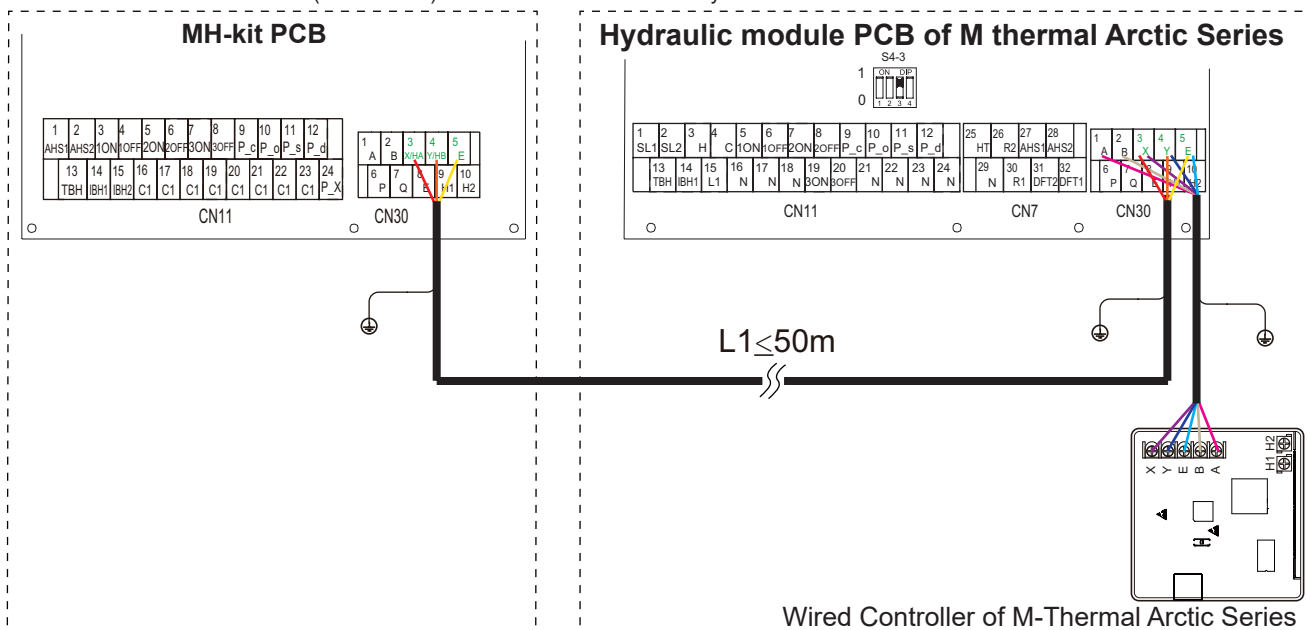
NOTE

Leakage Protection Switch must be installed to the Power Supply of the unit. service panel.

5.2 Communication connection

5.2.1 Connection with M thermal Arctic Series

Connect 3 shielded wires(3*0.75mm²) between MH-kit X Y E and hydraulic module PCB X Y E.

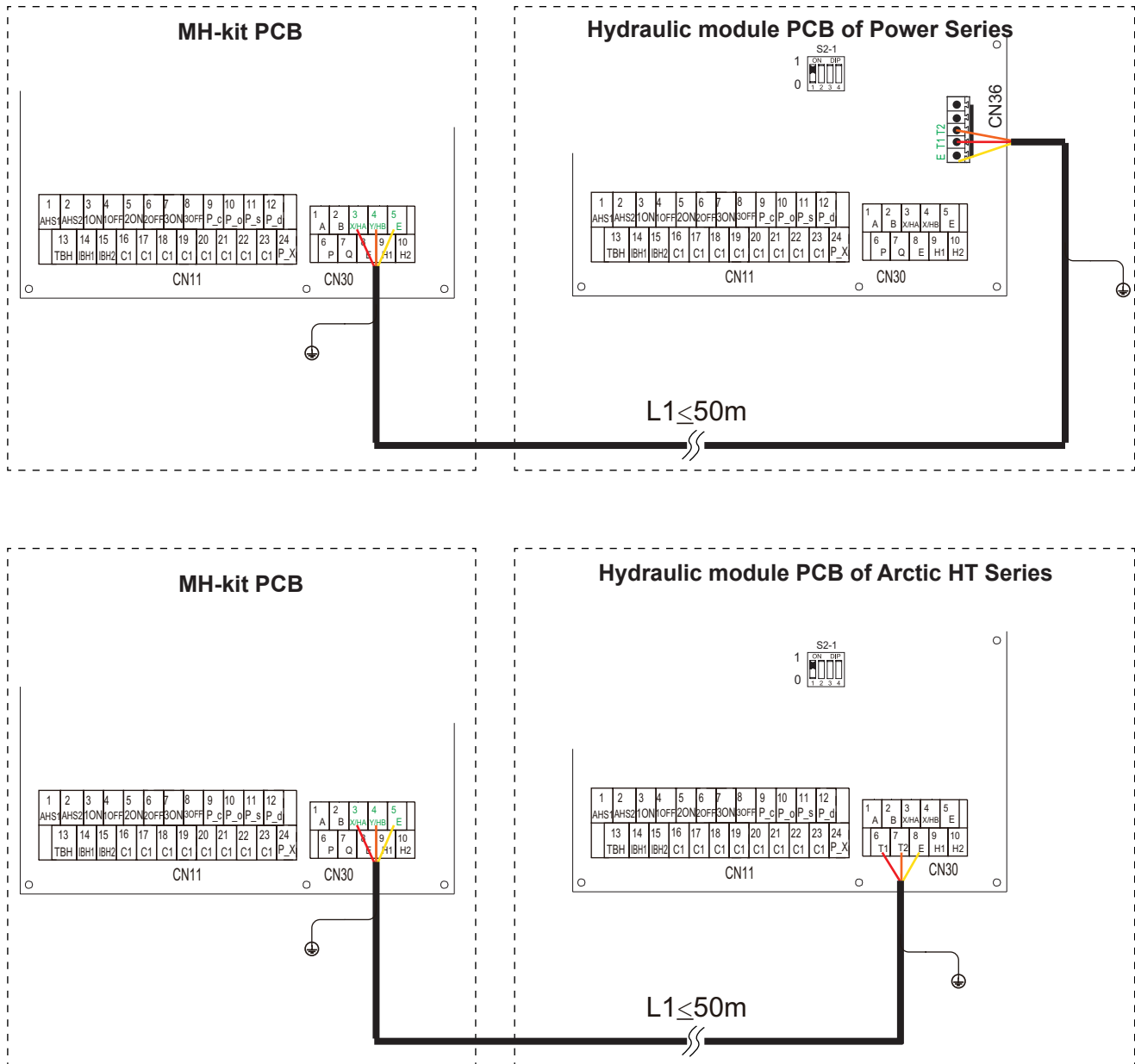


NOTE

The DIP switch S4-3 of hydraulic module PCB of M thermal Arctic Series must set to ON.
If the HMI displays "EL" fault code means communicate problem between the MH-KIT with the hydraulic module board.

5.2.2 Connection with M-Thermal Arctic HT Series

Connect 3 shielded wires($3 \times 0.75 \text{ mm}^2$) between MH-kit X Y E and hydraulic module PCB T1 T2 E($X \rightarrow T1$, $Y \rightarrow T2$, $E \rightarrow E$).



NOTE

The DIP switch S2-1 of hydraulic module PCB of M thermal Power Series/ Arctic HT Series/ Nature Series must set to ON.
If the HMI displays "EL" fault code means communicate problem between the MH-KIT with the hydraulic module PCB.

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