MULTI V™ 5
Heat Recovery

HR Unit

1. Nomenclature

Model Name	PRHR	04	3
No.	1	2	3

No.	Signification
1	**HR Unit connecting to Multi V Heat Recovery System Outdoor Unit using R410A** PRHR : Global line-up
2	**The No. of connected branches** 02 : For 2 branches 03 : For 3 branches 04 : For 4 branches 06 : For 6 branches 08 : For 8 branches
3	**Serial Number**

2. Specifications

Model			PRHR023	PRHR033	PRHR043
Max. Connectable No. of Indoor Units			16	24	32
Max. Connectable No. of Indoor Units of a branch			8	8	8
Nominal Input	Cooling(W)		39.8	39.8	39.8
	Heating(W)		37.2	37.2	37.2
Net. Weight	kg		14.9	16.7	18.2
	lbs		32.8	36.8	40.1
Dimensions (WxHxD)	mm		786 x 218 x 657		
	Inch		30-15/16 × 8-19/32 × 25-7/8		
Casing			Galvanized steel plate		
Connecting Pipes	Indoor side	Liquid Pipe [mm/inch]	Ø9.52[3/8] ~ Ø6.35[1/4]		
		Gas Pipe [mm/inch]	Ø15.88[5/8] ~ Ø12.7[1/2]		
	Outdoor side	Liquid [mm/inch]	Ø9.52[3/8]	Ø12.7[1/2]	Ø15.88[5/8]
		Low Pressure [mm/inch]	Ø22.2[7/8]	Ø28.58[1-1/8]	Ø28.58[1-1/8]
		High Pressure [mm/inch]	Ø19.05[3/4]	Ø22.2[7/8]	Ø22.2[7/8]
Sound Absorbing Insulation Material			Polyethylene Foam		
Current	Minimum circuit Amps(MCA)		0.17		
Power Supply			1Ø, 220-240V, 50Hz / 1Ø, 220V, 60Hz		

Note

1. Voltage range : Voltage supplied to the unit terminals should be within the minimum and maximum range.
2. Maximum allowable voltage unbalance between phases is 2%.
3. MCA/MFA
   MCA=1.25 x FLA
   MFA = 1.1 x MCA
   (If MFA is smaller than minimum standard value, Use minimum standard value in region for selecting circuit breaker.)
4. Select wire size based on the MCA.
5. MFA is used to select the circuit breaker and ground fault circuit interrupter, and all installation site must require attachment of an earth leakage breaker. [circuit breaker type is ELCB(Earth Leakage Circuit Breaker)].

2. Specifications

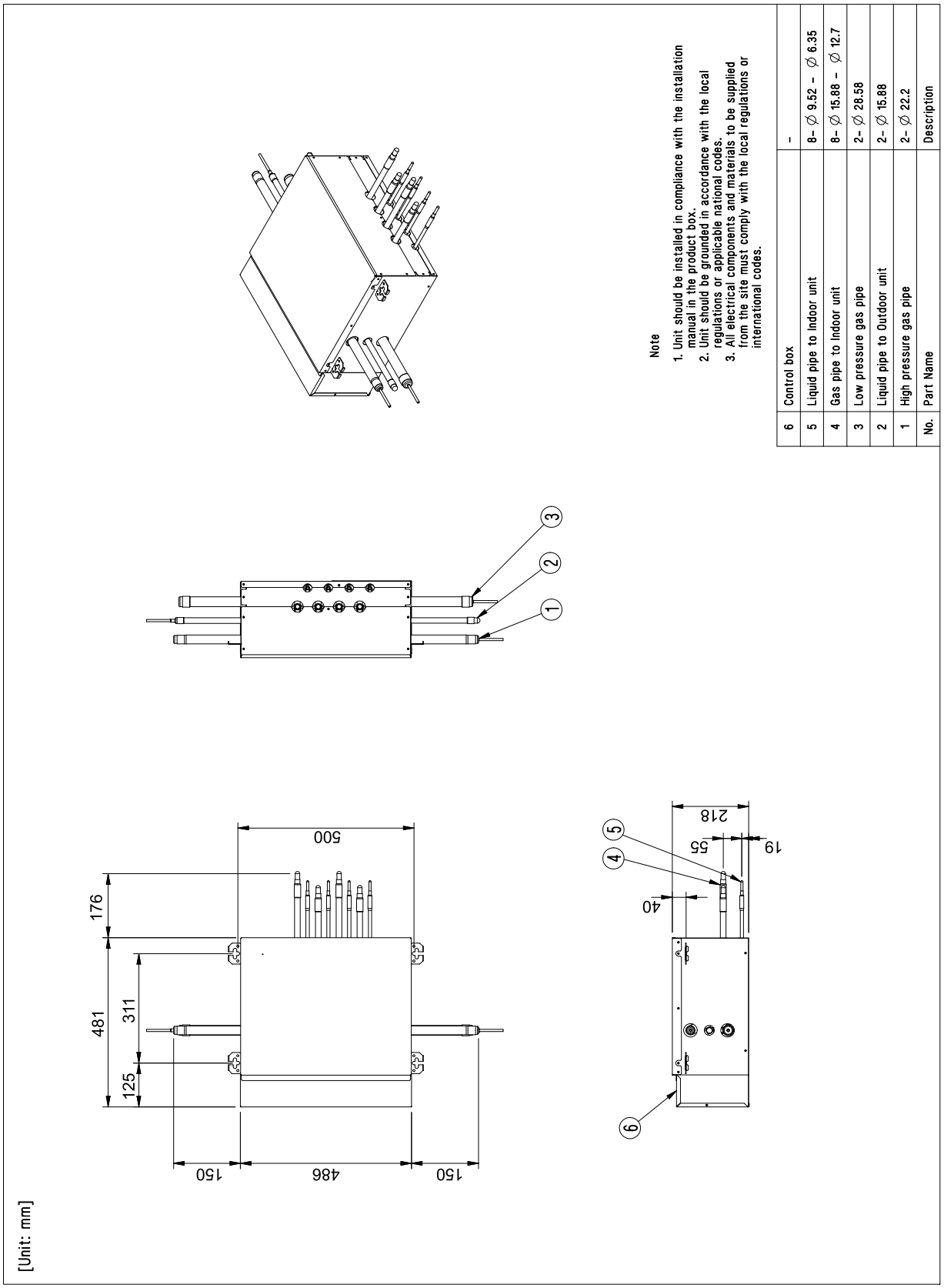
Model			PRHR063	PRHR083
Max. Connectable No. of Indoor Units			48	64
Max. Connectable No. of Indoor Units of a branch			8	8
Nominal Input	Cooling(W)		75.9	75.9
	Heating(W)		72.1	72.1
Net. Weight	kg		27.2	30.7
	lbs		60.0	67.7
Dimensions (WxHxD)	mm		1,113 x 218 x 657	
	Inch		43-13/16 × 8-19/32 × 25-7/8	
Casing			Galvanized steel plate	
Connecting Pipes	Indoor side	Liquid Pipe [mm/inch]	Ø9.52[3/8] ~ Ø6.35[1/4]	
		Gas Pipe [mm/inch]	Ø15.88[5/8] ~ Ø12.7[1/2]	
	Outdoor side	Liquid [mm/inch]	Ø15.88[5/8]	Ø15.88[5/8]
		Low Pressure [mm/inch]	Ø28.58[1-1/8]	Ø28.58[1-1/8]
		High Pressure [mm/inch]	Ø22.2[7/8]	Ø22.2[7/8]
Sound Absorbing Insulation Material			Polyethylene Foam	
Current	Minimum circuit Amps(MCA)		0.27	
Power Supply			1Ø, 220-240V, 50Hz / 1Ø, 220V, 60Hz	

Note

1. Voltage range : Voltage supplied to the unit terminals should be within the minimum and maximum range.
2. Maximum allowable voltage unbalance between phases is 2%.
3. MCA/MFA
   MCA=1.25 x FLA
   MFA = 1.1 x MCA
   (If MFA is smaller than minimum standard value, Use minimum standard value in region for selecting circuit breaker.)
4. Select wire size based on the MCA.
5. MFA is used to select the circuit breaker and ground fault circuit interrupter, and all installation site must require attachment of an earth leakage breaker. [circuit breaker type is ELCB(Earth Leakage Circuit Breaker)].

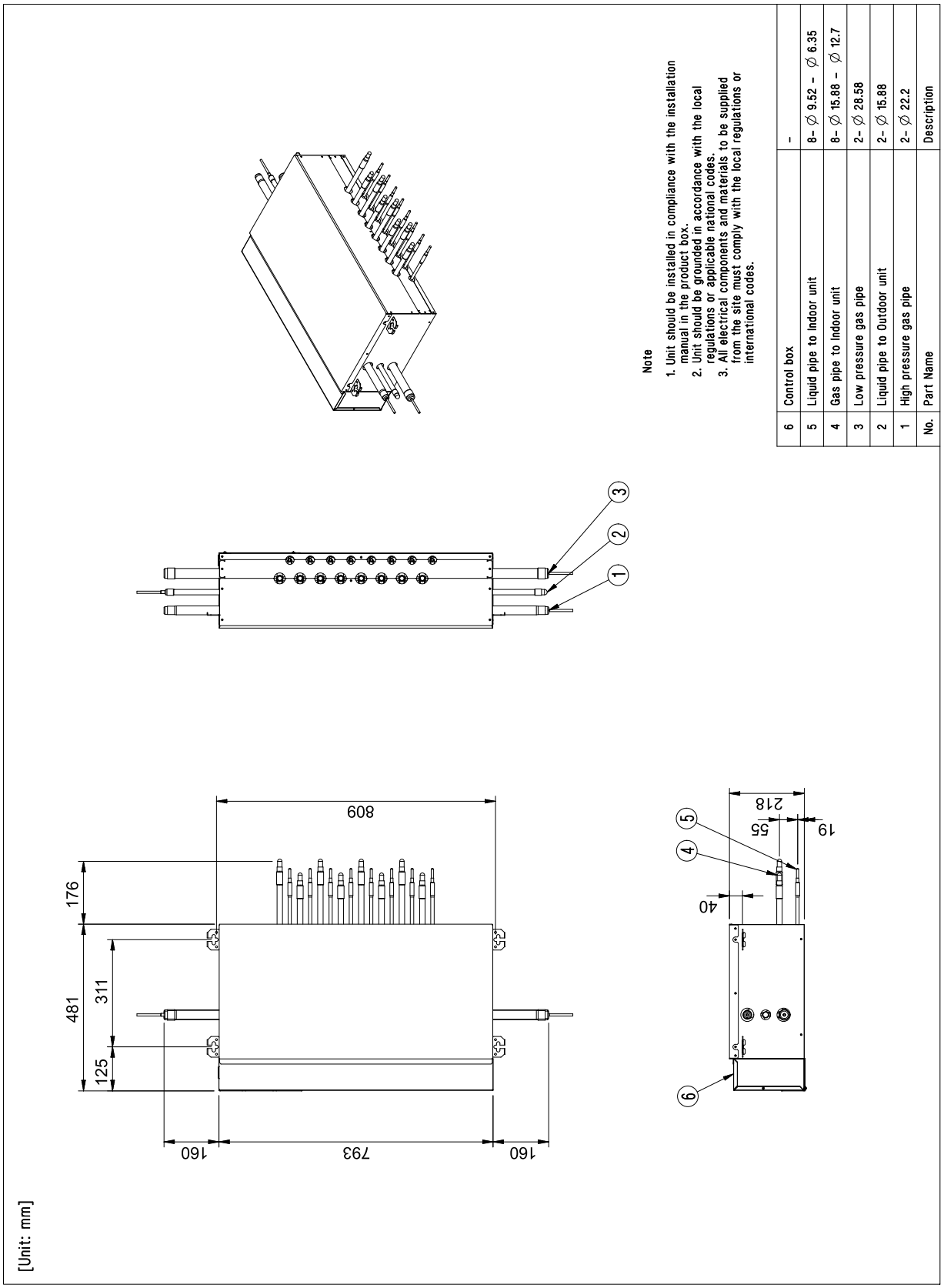
3. Dimensions

PRHR023 / PRHR033 / PRHR043



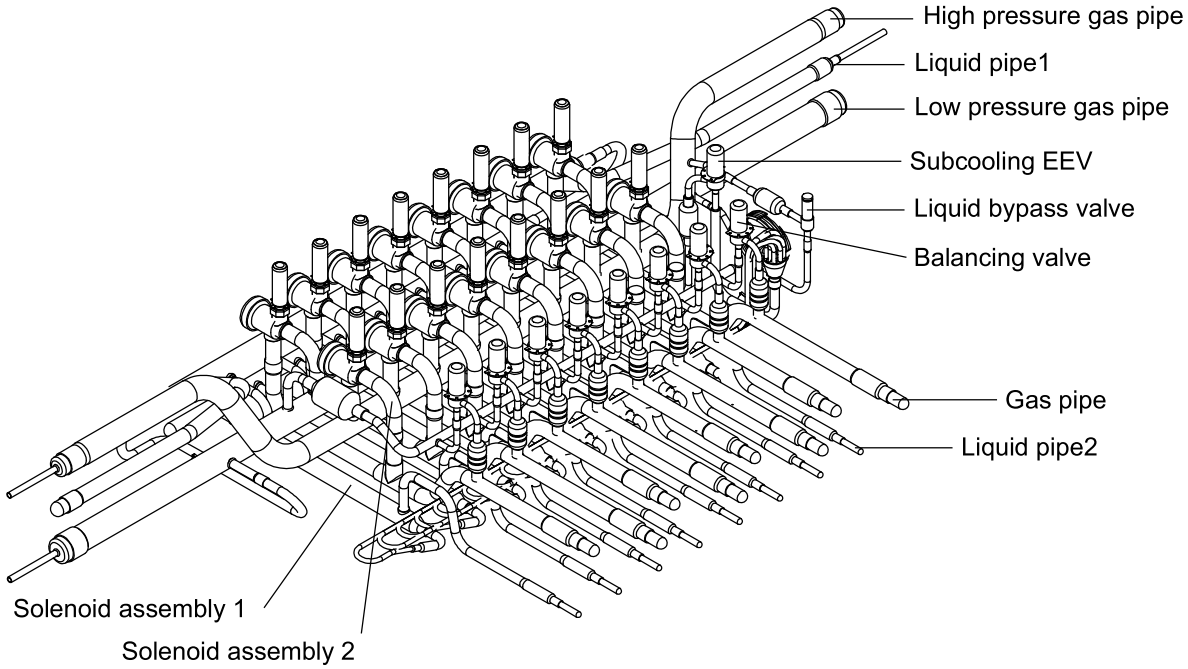
3. Dimensions

PRHR063 / PRHR083

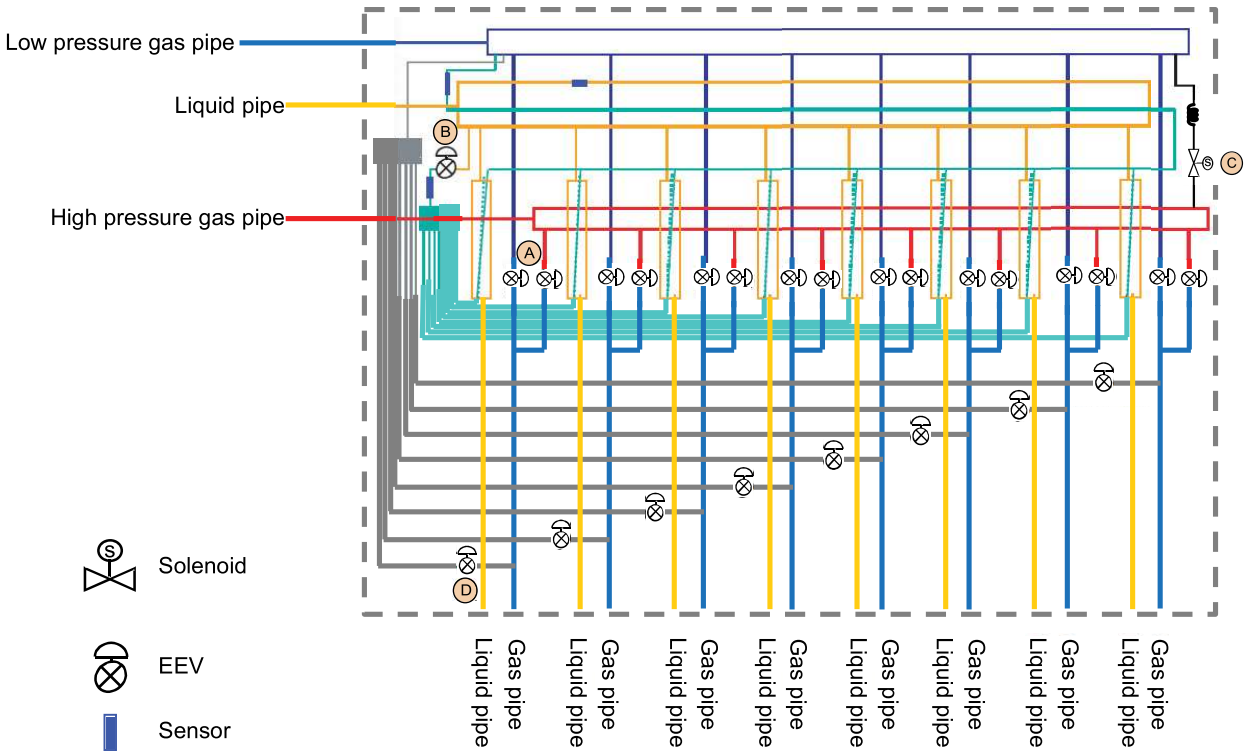


4. Parts Function

Parts Name	Symbol	Major Function
Low pressure gas pipe	LPGV	Pipe for Low pressure gas
High pressure gas pipe	HPGV	Pipe for High pressure gas
Liquid pipe 1	LP1	Liquid pipe connected with outdoor unit
Liquid bypass valve	LBV	Prevent Liquid charging
Solenoid Assembly 1, 2	SOL1, 2	Control the path for heating or cooling
Liquid pipe 2	LP2	Liquid pipe connected with indoor unit
Gas pipe	GSP	Gas pipe connected with indoor unit
Balancing valve	BLV	Control the pressure between High and Low pressure pipe during operation switching
Subcooling EEV	SCEEV	Control the subcooling



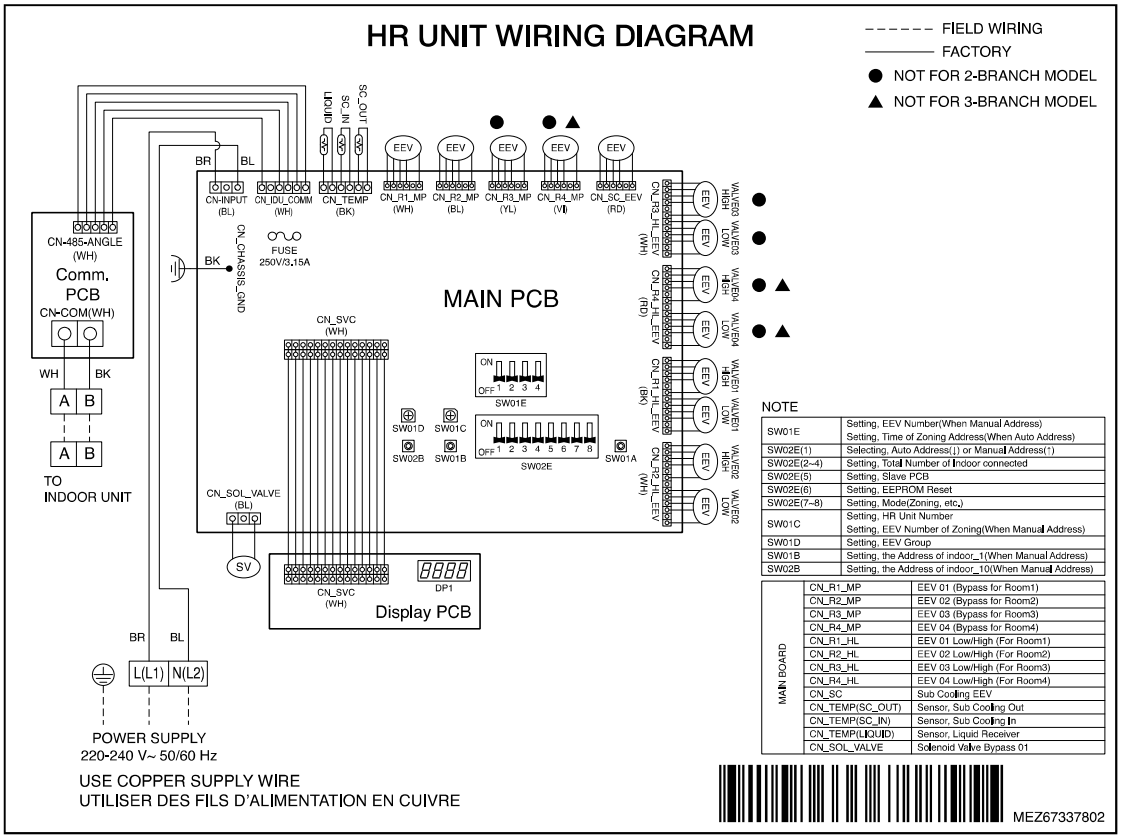
5. Piping Diagrams



- A : To be switched operation between cooling and heating by two valves
- B : To be used decreasing noise according to sub-cooling of inlet of indoor unit and outlet of indoor unit (Simultaneous operation)
- C : To prevent liquid charging between H/P gas valve and HR unit at cooling mode
- D : To be controlled the pressure between High and Low pressure pipe during operation switching

6. Wiring Diagrams

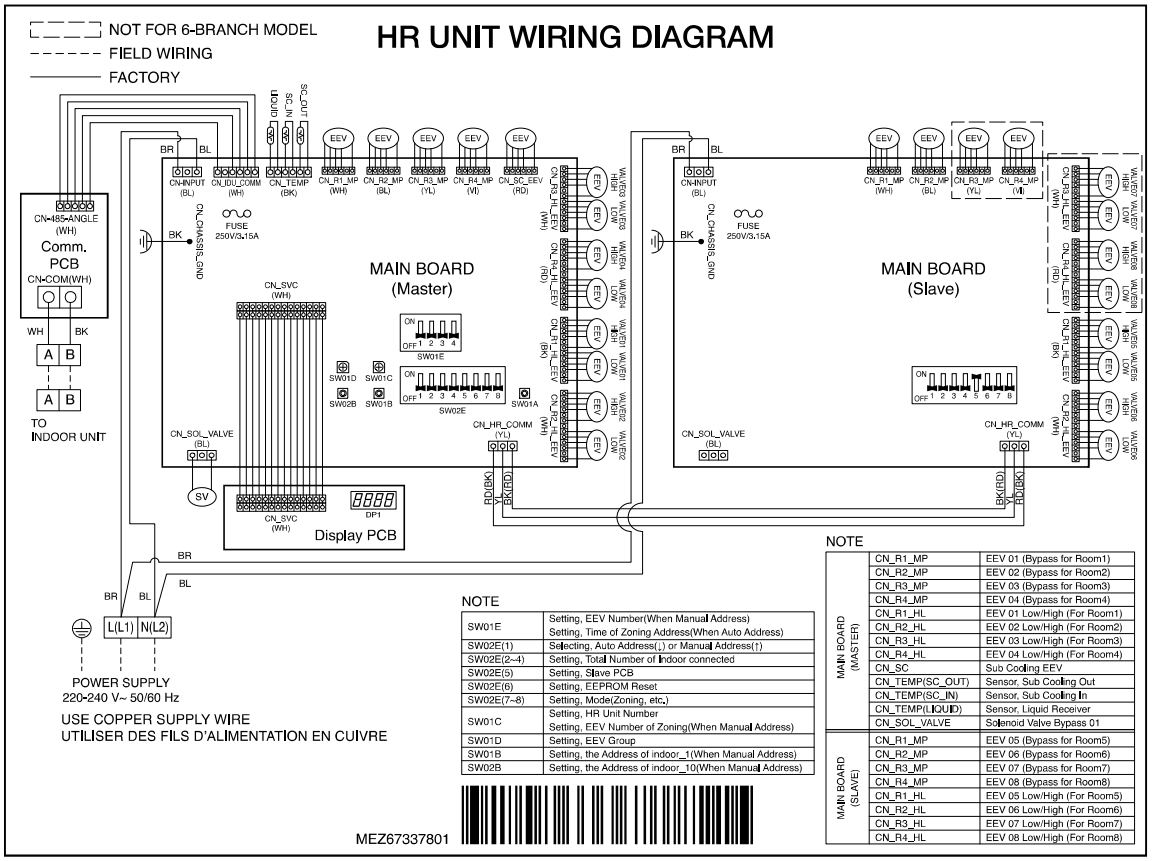
■ PRHR023, PRHR033, PRHR043



CONNECTOR NUMBER	FUNCTION
CN_R1_MP	EEV 01 (Bypass for Room1)
CN_R2_MP	EEV 02 (Bypass for Room2)
CN_R3_MP	EEV 03 (Bypass for Room3)
CN_R4_MP	EEV 04 (Bypass for Room4)
CN_R1_HL	EEV 01 Low/High (For Room1)
CN_R2_HL	EEV 02 Low/High (For Room2)
CN_R3_HL	EEV 03 Low/High (For Room3)
CN_R4_HL	EEV 04 Low/High (For Room4)
CN_SC	Sub Cooling LEV
CN_TEMP(SC_OUT)	Sensor, Sub Cooling Out
CN_TEMP(SC_IN)	Sensor, Sub Cooling In
CN_TEMP(LIQUID)	Sensor, Liquid Receiver
CN_SOL_VALVE	Solenoid Valve Bypass 01
SW01E	Setting, EEV Number (When Manual Address) Setting, Time of Zoning Address (When Auto Address)
SW02E(1)	Selecting, Auto Address (↓) or manual Address (↑)
SW02E(2~4)	Setting, Total Number of Indoor connected
SW02E(5)	Setting, Slave PCB
SW02E(6)	Setting, EEPROM Reset
SW02E(7~8)	Setting, Mode (Zoning, etc.)
SW01C	Setting, HR Unit Number Setting, EEV Number of Zoning (When Manual Address)
SW01D	Setting, EEV Group
SW01B	Setting, the Address of indoor_1 (When Manual Address)
SW02B	Setting, the Address of indoor_10 (When manual Address)

6. Wiring Diagrams

■ PRHR063, PRHR083



CONNECTOR NUMBER		FUNCTION
MAIN BOARD (MASTER)	CN_R1_MP	EEV 01 (Bypass for Room1)
	CN_R2_MP	EEV 02 (Bypass for Room2)
	CN_R3_MP	EEV 03 (Bypass for Room3)
	CN_R4_MP	EEV 04 (Bypass for Room4)
	CN_R1_HL	EEV 01 Low/High (For Room1)
	CN_R2_HL	EEV 02 Low/High (For Room2)
	CN_R3_HL	EEV 03 Low/High (For Room3)
	CN_R4_HL	EEV 04 Low/High (For Room4)
	CN_SC	Sub Cooling EEV
	CN_TEMP(SC_OUT)	Sensor, Sub Cooling Out
	CN_TEMP(SC_IN)	Sensor, Sub Cooling In
	CN_TEMP(LIQUID)	Sensor, Sub Cooling Out
	CN_SEN_02 (SC_IN)	Sensor, Sub Cooling In
	CN_SEN_02 (LIQUID)	Sensor, Liquid Receiver
	CN_SOL_VALVE	Solenoid Valve Bypass 01
MAIN BOARD (SLAVE)	CN_R1_MP	EEV 05 (Bypass for Room5)
	CN_R2_MP	EEV 06 (Bypass for Room6)
	CN_R3_MP	EEV 07 (Bypass for Room7)
	CN_R4_MP	EEV 08 (Bypass for Room8)
	CN_R1_HL	EEV 05 Low/High (For Room5)
	CN_R2_HL	EEV 06 Low/High (For Room6)
	CN_R3_HL	EEV 07 Low/High (For Room7)
	CN_R4_HL	EEV 08 Low/High (For Room8)

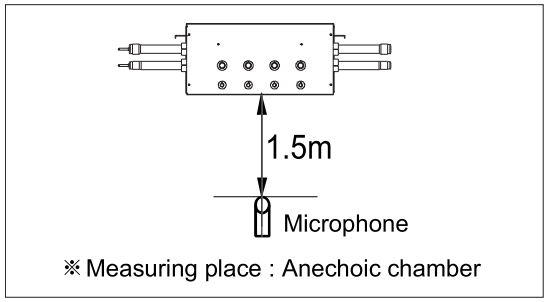
6. Wiring Diagrams

CONNECTOR NUMBER	FUNCTION
SW01E	Setting, EEV Number(When Manual Address)
	Setting, Time of Zoning Address(When Auto Address)
SW02E(1)	Selecting, Auto Address(↓) or Manual Address(↑)
SW02E(2~4)	Setting, Total Number of Indoor connected
SW02E(5)	Setting, Slave PCB
SW02E(6)	Setting, EEPROM Reset
SW02E(7~8)	Setting, Mode(Zoning, etc.)
SW01C	Setting, HR Unit Number
	Setting, EEV Number of Zoning(When Manual Address)
SW01D	Setting, EEV Group
SW01B	Setting, the Address of indoor_1(When Manual Address)
SW02B	Setting, the Address of indoor_10(When Manual Address)

7. Sound Levels

7.1 Sound pressure level

■ Overall

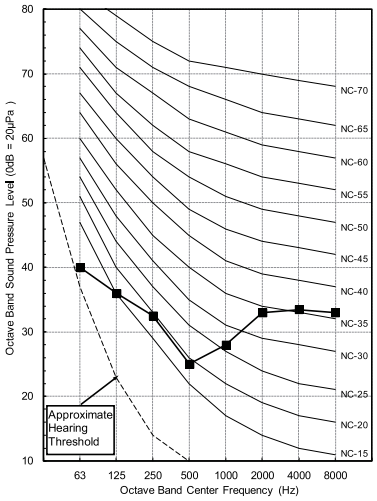


Note

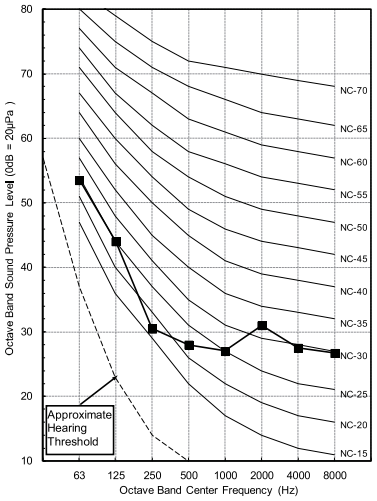
- Sound measured at 1.5m away from the center of the unit.
- Operating condition|
  - Power source : 220-240V 50Hz / 220V 60Hz
  - Cooling : Indoor temperature (27°C DB, 19°C WB), Outdoor temperature (35°C DB, 24°C WB)
  - Heating : Indoor temperature (20°C DB, 15°C WB), Outdoor temperature (7°C DB, 6°C WB)
- Reference accoustic pressure 0dB=20μPa.
- Sound level will vary depending on a range of factors such as the construction(acoustic absorption coefficient) of particular room in which the equipment is installed.
- The changeover sound was measured by switching the mode of one indoor unit.
  It could vary depending on the number of indoor units in operation, piping length and installation environment.

Operation Mode	50Hz, 220-240V
	Sound pressure Levels [dB(A)]
Cooling	30
Heating	30
Changeover : Cooling → Heating	33
Changeover : Heating → Cooling	38

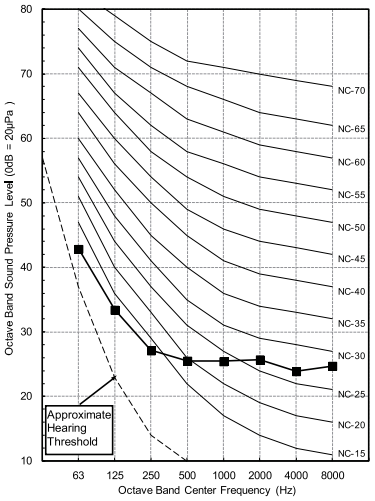
Cooling



Heating



Changeover : Cooling → Heating



7. Sound Levels

Changeover : Heating → Cooling