TECHNICAL DATA & SERVICE MANUAL

SANYO

FILE NO.

XH2672R / CH2672R, C2672R
XH3672R / CH3672R, C3672R
XH4272R / CH4272R, C4272R

TH2672R / CH2672R, C2672R
TH3672R / CH3672R, C3672R
TH4272R / CH4272R, C4272R
THH2672R / CH2672R
THH3672R / CH3672R

KH2672R / CH2672R, C2672R
KH3072R / CH3072R, C3072R
KH3672R / CH3672R, C3672R
KHH2672R / CH2672R

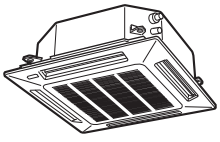
UH2672R / CH2672R, C2672R
UH3672R / CH3672R, C3672R

SPLIT SYSTEM AIR CONDITIONER

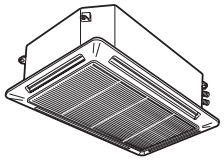
INDOOR MODEL No.	PRODUCT CODE No.
XH2672R	854 028 32
XH3672R	854 028 33
XH4272R	854 031 89
TH2672R	854 028 35
TH3672R	854 028 36
TH4272R	854 031 90
THH2672R	854 028 38
THH3672R	854 028 39
KH2672R	854 028 28
KH3072R	854 028 29
KH3672R	854 028 30
KHH2672R	854 028 31
UH2672R	854 028 40
UH3672R	854 028 41

OUTDOOR MODEL No.	PRODUCT CODE No.
CH2672R	854 028 20
CH3072R	854 028 21
CH3672R	854 028 22
CH4272R	854 031 87
C2672R	854 028 24
C3072R	854 028 25
C3672R	854 028 26
C4272R	854 031 88

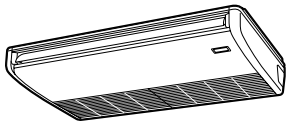
Indoor Unit



XH2672R

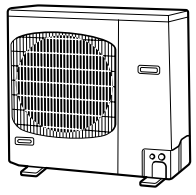


XH3672R
XH4272R



TH2672R, THH2672R
TH3672R, THH3672R
TH4272R

Outdoor Unit



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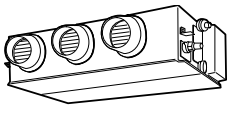
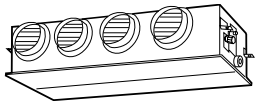
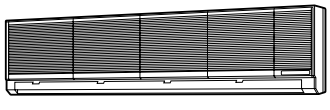
CH3072R, C3072R
CH3672R, C3672R



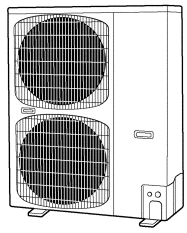
UH2672R



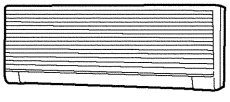
UH3672R



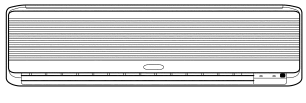
KH3072R
KH3672R



CH4272R, C4272R



KHH2672R



KH2672R

Important

Please Read Before Starting

This air conditioning system meets strict safety and operating standards. As the installer or service person, it is an important part of your job to install or service the system so it operates safely and efficiently.

For safe installation and trouble-free operation, you must :

- Carefully read this instruction booklet before beginning.
- Follow each installation or repair step exactly as shown.
- Observe all local, state, and national electrical codes.
- Pay close attention to all warning and caution notices given in this manual.

WARNING

This symbol refers to a hazard or unsafe practice which can result in severe personal injury or death.

CAUTION

This symbol refers to a hazard or unsafe practice which can result in personal injury or product or property damage.

If Necessary, Get Help

These instructions are all you need for most installation sites and maintenance conditions. If you require help for a special problem, contact our sales/service outlet or your certified dealer for additional instructions.

In Case of Improper Installation

The manufacturer shall in no way be responsible for improper installation or maintenance service, including failure to follow the instructions in this document.

SPECIAL PRECAUTIONS

When Wiring

ELECTRICAL SHOCK CAN CAUSE SEVERE PERSONAL INJURY OR DEATH. ONLY A QUALIFIED, EXPERIENCED ELECTRICIAN SHOULD ATTEMPT TO WIRE THIS SYSTEM.

- Do not supply power to the unit until all wiring and tubing are completed or reconnected and checked.
- Highly dangerous electrical voltages are used in this system. Carefully refer to the wiring diagram and these instructions when wiring. Improper connections and inadequate grounding can cause **accidentaly injury or death**.
- **Ground the unit** following local electrical codes.
- Connect all wiring tightly. Loose wiring may cause overheating at connection points and a possible fire hazard.

When Transporting

Be careful when picking up and moving the indoor and outdoor units. Get a partner to help, and bend your knees when lifting to reduce strain on your back. Sharp edges or thin aluminum fins on the air conditioner can cut your fingers.

When Installing

…In a Room
Properly insulate any tubing run inside a room to prevent "sweating" that can cause dripping and water damage to walls and floors.

…In Moist or Uneven Locations
Use a raised concrete pad or concrete blocks to provide a solid, level foundation for the outdoor unit. This prevents water damage and abnormal vibration.

…In an area with High Winds
Securely anchor the outdoor unit down with bolts and a metal frame. Provide a suitable air baffle.

…In a Snowy Area (for Heat Pump-type Sys-tems)
Install the outdoor unit on a raised platform that is higher than drifting snow. Provide snow vents.

When Connecting Refrigerant Tubing

- Ventilate the room well, in the event that refrigerant gas leaks during the installation. Be careful not to allow contact of the refrigerant gas with a flame as this will cause the generation of poisonous gas.
- Keep all tubing runs as short as possible.
- Use the flare method for connecting tubing.
- Apply refrigerant lubricant to the matching surfaces of the flare and union tubes before connecting them, then tighten the nut with a torque wrench for a leak-free connection.
- Check carefully for leaks before starting the test run.

NOTE

Depending on the system type, liquid and gas lines may be either narrow or wide. Therefore, to avoid confusion the refrigerant tubing for your particular model is specified as either "narrow" or "wide" rather than as "liquid" or "gas".

When Servicing

- Turn the power OFF at the main power box (mains) before opening the unit to check or repair electrical parts and wiring.
- Keep your fingers and clothing away from any moving parts.
- Clean up the site when installation is finished. Check that no metal scraps or bits of wiring have been left inside the unit.

CAUTION

- Ventilate any enclosed areas when installing or testing the refrigeration system. Contact of refrigerant gas with fire or heat can produce poisonous gas.
- Confirm after installation that no refrigerant gas is leaking. If the gas comes in contact with a burning stove, gas water heater, electric room heater or other heat source, it can cause the generation of poisonous gas.

Contents

1. SPECIFICATIONS

1-1 Unit Specifications

Wall-Mounted Type

MODEL No.	Indoor Unit		KHH2672R			
	Outdoor Unit		CH2672R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	23,000 [9,500~23,000]		27,600 [8,000~27,600]	
(17˚F)**		BTU / h	—		18,500	
Moisture removal (High)		Pints / h	7.4		—	
Air circulation (H / M / L) 230 V		CFM	540 / 460 / 380			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	15.9		10.3	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes* (Without Back-up Heater)		A	14.0	15.5	14.6	16.1
Power input		W	2,610	2,610	2,720	2,720
(17˚F)**		W	—		2,160	2,160
Back-up Heater		kW	—		1.8	1.47
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 30			
FEATURES						
Controls			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH1UA / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable			
Drain pump (Drain connection)			— (20A , OD26mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	45 / 42 / 40			
	Outdoor - Hi	dB - A	49			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	4.19 (1.9) - R410A			
DIMENSIONS & WEIGHT			Indoor unit		Outdoor unit	
Unit dimensions	Height	in. (mm)	14- 9/16 (370)		30- 23/32 (780)	
	Width	in. (mm)	49- 7/32 (1,250)		37 (940)	
	Depth	in. (mm)	8- 9/32 (210)		13- 3/8 (340)	
Package dimensions			Indoor unit		Outdoor unit	
	Height	in. (mm)	18- 7/16 (468)		34- 31/32 (888)	
	Width	in. (mm)	52- 23/32 (1,339)		39- 31/32 (1,015)	
	Depth	in. (mm)	11- 3/8 (289)		16- 3/32 (409)	
Net weight		lbs. (kg)	44.1 (20)		128 (58)	
Shipping weight		lbs. (kg)	59.5 (27)		148 (67)	
Shipping volume		cu.ft. (m 3)	6.4 (0.181)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Wall-Mounted Type

MODEL No.	Indoor Unit		KH2672R			
	Outdoor Unit		CH2672R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	25,200 [9,500~25,200]		29,200 [8,000~29,200]	
(17˚F)**		BTU / h	—		17,200	
Moisture removal (High)		Pints / h	8.1		—	
Air circulation (H / M / L) 230 V		CFM	559 / 475 / 390			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.9		10.2	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*		A	15.3	16.9	14.0	15.5
Power input		W	2,840	2,840	2,620	2,620
(17˚F)**		W	—		2,030	2,030
Back-up Heater		kW	—			
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 30			
FEATURES						
Controls			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH1UA / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable			
Drain pump (Drain connection)			— (20A , OD26mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	48 / 42 / 38			
	Outdoor - Hi	dB - A	49			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	4.19 (1.9) - R410A			
DIMENSIONS & WEIGHT			Indoor unit		Outdoor unit	
Unit dimensions	Height	in. (mm)	12- 63/64 (330)		30- 23/32 (780)	
	Width	in. (mm)	44- 7/8 (1,140)		37 (940)	
	Depth	in. (mm)	8- 31/32 (228)		13- 3/8 (340)	
Package dimensions			Indoor unit		Outdoor unit	
	Height	in. (mm)	15- 11/32 (390)		34- 31/32 (888)	
	Width	in. (mm)	47- 27/32 (1,215)		39- 31/32 (1,015)	
	Depth	in. (mm)	11- 17/32 (293)		16- 3/32 (409)	
Net weight		lbs. (kg)	40 (18)		128 (58)	
Shipping weight		lbs. (kg)	44 (20)		148 (67)	
Shipping volume		cu.ft. (m 3)	4.9 (0.139)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Wall-Mounted Type

MODEL No.	Indoor Unit		KH3072R			
	Outdoor Unit		CH3072R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	29,800 [9,500~29,800]		34,800 [8,000~34,800]	
(17˚F)**		BTU / h	—		20,000	
Moisture removal (High)		Pints / h	9.7		—	
Air circulation (H / M / L) 230 V		CFM	840 / 740 / 620			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	15.0		9.0	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*		A	17.7	19.6	16.2	17.9
Power input		W	3,690	3,690	3,390	3,390
(17˚F)**		W	—		2,460	2,460
Back-up Heater		kW	—			
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 35			
FEATURES						
Controls			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH1UA / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable			
Drain pump (Drain connection)			— (20A , OD26mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	46 / 42 / 38			
	Outdoor - Hi	dB - A	52			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	5.73 (2.6) - R410A			
DIMENSIONS & WEIGHT			Indoor unit		Outdoor unit	
Unit dimensions	Height	in. (mm)	14- 9/16 (370)		30- 23/32 (780)	
	Width	in. (mm)	59- 1/16 (1,500)		37 (940)	
	Depth	in. (mm)	9- 7/16 (240)		13- 3/8 (340)	
Package dimensions			Indoor unit		Outdoor unit	
	Height	in. (mm)	18- 7/16 (468)		34- 31/32 (888)	
	Width	in. (mm)	62- 9/16 (1,589)		39- 31/32 (1,015)	
	Depth	in. (mm)	12- 9/16 (319)		16- 3/32 (409)	
Net weight		lbs. (kg)	63.9 (29)		143 (65)	
Shipping weight		lbs. (kg)	81.6 (37)		161 (73)	
Shipping volume		cu.ft. (m 3)	8.4 (0.237)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Wall-Mounted Type

MODEL No.	Indoor Unit		KH3672R			
	Outdoor Unit		CH3672R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	31,400 [9,500~31,400]		36,400 [8,000~36,400]	
(17˚F)**		BTU / h	—		20,200	
Moisture removal (High)		Pints / h	10.0		—	
Air circulation (H / M / L) 230 V		CFM	830 / 710 / 590			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	15.9		9.0	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*		A	17.9	19.8	15.9	17.6
Power input		W	3,750	3,750	3,320	3,320
(17˚F)**		W	—		2,450	2,450
Back-up Heater		kW	—			
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 35			
FEATURES						
Controls			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH1UA / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable			
Drain pump (Drain connection)			— (20A , OD26mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	48 / 44 / 40			
	Outdoor - Hi	dB - A	52			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	6.17 (2.8) - R410A			
DIMENSIONS & WEIGHT			Indoor unit		Outdoor unit	
Unit dimensions	Height	in. (mm)	14- 9/16 (370)		30- 23/32 (780)	
	Width	in. (mm)	59- 1/16 (1,500)		37 (940)	
	Depth	in. (mm)	9- 7/16 (240)		13- 3/8 (340)	
Package dimensions			Indoor unit		Outdoor unit	
	Height	in. (mm)	18- 7/16 (468)		34- 31/32 (888)	
	Width	in. (mm)	62- 9/16 (1,589)		39- 31/32 (1,015)	
	Depth	in. (mm)	12- 9/16 (319)		16- 3/32 (409)	
Net weight		lbs. (kg)	72.8 (33)		143 (65)	
Shipping weight		lbs. (kg)	90.4 (41)		161 (73)	
Shipping volume		cu.ft. (m 3)	8.4 (0.237)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

SM831148

1-1 Unit Specifications

Wall-Mounted Type

MODEL No.	Indoor Unit		KH2672R	
	Outdoor Unit		C2672R	
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz	
PERFORMANCE			Cooling	
Capacity * [minimum~muximum]		BTU / h	25,200 [9,500~25,200]	
(17˚F)**		BTU / h	—	
Moisture removal (High)		Pints / h	8.1	
Air circulation (H / M / L) 230 V		CFM	559 / 475 / 390	
External Static Pressure		in. WG	—	
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.9	
ELECTRICAL RATINGS				
Voltage rating		V	230	208
Available voltage range		V	VAC 187 - 253	
Max. Running amperes*		A	15.3	16.9
Power input		W	2,840	2,840
(17˚F)**		W	—	
Back-up Heater		kW	—	
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 30	
FEATURES				
Controls			Microprocessor	
Low ambient control			Built-in 0˚F	
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable	
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG	
Optional Wireless Remote Controller			RCS-SH1UA / RCS-BH80UA. WL	
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)	
Air filter			Washable	
Drain pump (Drain connection)			— (20A , OD26mm)	
Compressor			Rotary(SANYO)	
Operation sound	Indoor - Hi/Me/Lo	dB - A	48 / 42 / 38	
	Outdoor - Hi	dB - A	49	
Refrigerant control			Electronic Expansion Valve (MOV)	
REFRIGERANT TUBING				
Limit of tubing length		ft. (m)	165 (50)	
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)	
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)	
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)	
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)	
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)	
Refrigerant amount at shipment		lbs. (kg)	4.19 (1.9) - R410A	
DIMENSIONS & WEIGHT			Indoor unit	Outdoor unit
Unit dimensions	Height	in. (mm)	12- 63/64 (330)	30- 23/32 (780)
	Width	in. (mm)	44- 7/8 (1,140)	37 (940)
	Depth	in. (mm)	8- 31/32 (228)	13- 3/8 (340)
Package dimensions			Indoor unit	Outdoor unit
	Height	in. (mm)	15- 11/32 (390)	34- 31/32 (888)
	Width	in. (mm)	47- 27/32 (1,215)	39- 31/32 (1,015)
	Depth	in. (mm)	11- 17/32 (293)	16- 3/32 (409)
Net weight		lbs. (kg)	40 (18)	128 (58)
Shipping weight		lbs. (kg)	44 (20)	148 (67)
Shipping volume		cu.ft. (m 3)	4.9 (0.139)	13.0 (0.369)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Wall-Mounted Type

MODEL No.	Indoor Unit		KH3072R	
	Outdoor Unit		C3072R	
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz	
PERFORMANCE			Cooling	
Capacity * [minimum~muximum]		BTU / h	29,800 [9,500~29,800]	
(17˚F)**		BTU / h	—	
Moisture removal (High)		Pints / h	9.7	
Air circulation (H / M / L) 230 V		CFM	840 / 740 / 620	
External Static Pressure		in. WG	—	
S.E.E.R.		BTU / Wh	15.0	
ELECTRICAL RATINGS				
Voltage rating		V	230	208
Available voltage range		V	VAC 187 - 253	
Max. Running amperes*		A	17.7	19.6
Power input		W	3,690	3,690
(17˚F)**		W	—	
Back-up Heater		kW	—	
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 35	
FEATURES				
Controls			Microprocessor	
Low ambient control			Built-in 0˚F	
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable	
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG	
Optional Wireless Remote Controller			RCS-SH1UA / RCS-BH80UA. WL	
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)	
Air filter			Washable	
Drain pump (Drain connection)			— (20A , OD26mm)	
Compressor			Rotary(SANYO)	
Operation sound	Indoor - Hi/Me/Lo	dB - A	46 / 42 / 38	
	Outdoor - Hi	dB - A	52	
Refrigerant control			Electronic Expansion Valve (MOV)	
REFRIGERANT TUBING				
Limit of tubing length		ft. (m)	165 (50)	
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)	
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)	
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)	
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)	
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)	
Refrigerant amount at shipment		lbs. (kg)	5.73 (2.6) - R410A	
DIMENSIONS & WEIGHT			Indoor unit	Outdoor unit
Unit dimensions	Height	in. (mm)	14- 9/16 (370)	30- 23/32 (780)
	Width	in. (mm)	59- 1/16 (1,500)	37 (940)
	Depth	in. (mm)	9- 7/16 (240)	13- 3/8 (340)
Package dimensions			Indoor unit	Outdoor unit
	Height	in. (mm)	18- 7/16 (468)	34- 31/32 (888)
	Width	in. (mm)	62- 9/16 (1,589)	39- 31/32 (1,015)
	Depth	in. (mm)	12- 9/16 (319)	16- 3/32 (409)
Net weight		lbs. (kg)	63.9 (29)	143 (65)
Shipping weight		lbs. (kg)	81.6 (37)	161 (73)
Shipping volume		cu.ft. (m 3)	8.4 (0.237)	13.0 (0.369)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

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1-1 Unit Specifications

Wall-Mounted Type

MODEL No.	Indoor Unit		KH3672R	
	Outdoor Unit		C3672R	
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz	
PERFORMANCE			Cooling	
Capacity * [minimum~muximum]		BTU / h	31,400 [9,500~31,400]	
(17˚F)**		BTU / h	—	
Moisture removal (High)		Pints / h	10.0	
Air circulation (H / M / L) 230 V		CFM	830 / 710 / 590	
External Static Pressure		in. WG	—	
S.E.E.R.		BTU / Wh	15.9	
ELECTRICAL RATINGS				
Voltage rating		V	230	208
Available voltage range		V	VAC 187 - 253	
Max. Running amperes*		A	17.9	19.8
Power input		W	3,750	3,750
(17˚F)**		W	—	
Back-up Heater		kW	—	
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 35	
FEATURES				
Controls			Microprocessor	
Low ambient control			Built-in 0˚F	
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable	
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG	
Optional Wireless Remote Controller			RCS-SH1UA / RCS-BH80UA. WL	
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)	
Air filter			Washable	
Drain pump (Drain connection)			— (20A , OD26mm)	
Compressor			Rotary(SANYO)	
Operation sound	Indoor - Hi/Me/Lo	dB - A	48 / 44 / 40	
	Outdoor - Hi	dB - A	52	
Refrigerant control			Electronic Expansion Valve (MOV)	
REFRIGERANT TUBING				
Limit of tubing length		ft. (m)	165 (50)	
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)	
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)	
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)	
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)	
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)	
Refrigerant amount at shipment		lbs. (kg)	6.17 (2.8) - R410A	
DIMENSIONS & WEIGHT			Indoor unit	Outdoor unit
Unit dimensions	Height	in. (mm)	14- 9/16 (370)	30- 23/32 (780)
	Width	in. (mm)	59- 1/16 (1,500)	37 (940)
	Depth	in. (mm)	9- 7/16 (240)	13- 3/8 (340)
Package dimensions			Indoor unit	Outdoor unit
	Height	in. (mm)	18- 7/16 (468)	34- 31/32 (888)
	Width	in. (mm)	62- 9/16 (1,589)	39- 31/32 (1,015)
	Depth	in. (mm)	12- 9/16 (319)	16- 3/32 (409)
Net weight		lbs. (kg)	72.8 (33)	143 (65)
Shipping weight		lbs. (kg)	90.4 (41)	161 (73)
Shipping volume		cu.ft. (m 3)	8.4 (0.237)	13.0 (0.369)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

4-Way Air Discharge Semi-Concealed Type

MODEL No.	Indoor Unit		XH2672R			
	Outdoor Unit		CH2672R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	24,800 [9,500~24,800]		29,800 [8,000~29,800]	
(17˚F)**		BTU / h	—		18,300	
Moisture removal (High)		Pints / h	8.1		—	
Air circulation (H / M / L) 230 V		CFM	710 / 530 / 450			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.1		10.5	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*		A	15.6	17.3	14.8	16.4
Power input		W	2,920	2,920	2,790	2,790
(17˚F)**		W	—		2,200	2,200
Back-up Heater		kW	—			
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 30			
FEATURES						
Controls			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH80UA.WL / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable, long life (2,500 hr)			
Drain pump (Drain connection)			Max.head 2-33/64 in. above drain connection (25A , OD32mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	38 / 35 / 31			
	Outdoor - Hi	dB - A	49			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	4.19 (1.9) - R410A			
DIMENSIONS & WEIGHT			Indoor unit (Include panel)		Outdoor unit	
Unit dimensions	Height	in. (mm)	13-5/16 (338)		30- 23/32 (780)	
	Width	in. (mm)	33-55/64 (860)		37 (940)	
	Depth	in. (mm)	33-55/64 (860)		13- 3/8 (340)	
Package dimensions			Body	Panel	Outdoor unit	
	Height	in. (mm)	11-9/64 (283)	4-3/32 (104)	34- 31/32 (888)	
	Width	in. (mm)	32-7/8 (835)	37-61/64 (964)	39- 31/32 (1,015)	
	Depth	in. (mm)	33-9/32 (845)	39-21/64 (999)	16- 3/32 (409)	
Net weight		lbs. (kg)	49 (22)	11 (5)	128 (58)	
Shipping weight		lbs. (kg)	57 (26)	18 (8)	148 (67)	
Shipping volume		cu.ft. (m 3)	7.1 (0.200)	3.6 (0.100)	13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

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1-1 Unit Specifications

4-Way Air Discharge Semi-Concealed Type

MODEL No.		Indoor Unit		XH3672R			
		Outdoor Unit		CH3672R			
POWER SOURCE				230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE				Cooling		Heating	
Capacity * [minimum~muximum]			BTU / h	32,600 [9,500~32,600]		37,600 [8,000~37,600]	
(17˚F)**			BTU / h	—		20,000	
Moisture removal (High)			Pints / h	10.6		—	
Air circulation (H / M / L) 230 V			CFM	1050 / 840 / 720			
External Static Pressure			in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)			BTU / Wh	14.6		9.1	
ELECTRICAL RATINGS							
Voltage rating			V	230	208	230	208
Available voltage range			V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*			A	18.7	20.7	15.9	17.6
Power input			W	3,950	3,950	3,350	3,350
(17˚F)**			W	—		2,450	2,450
Back-up Heater			kW	—			
Maximum overcurrent protection (Indoor/Outdoor)			A	15 / 35			
FEATURES							
Controls				Microprocessor			
Low ambient control				Built-in 0˚F			
Fan speeds Indoor / Outdoor				3 and Automatic control / Variable			
Optional Wired Remote Controller				RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller				RCS-SH80UA. WL / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)				— / Automatic (Vertical)			
Air filter				Washable, long life (2,500 hr)			
Drain pump (Drain connection)				Max.head 2-33/64 in. above drain connection (25A , OD32mm)			
Compressor				Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo		dB - A	44 / 37 / 33			
	Outdoor - Hi		dB - A	52			
Refrigerant control				Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING							
Limit of tubing length			ft. (m)	165 (50)			
Limit of tubing length at shipment			ft. (m)	10~100 (3~30)			
Limit of elevation difference			ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units			ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube		in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube		in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment			lbs. (kg)	6.17 (2.8) - R410A			
DIMENSIONS & WEIGHT				Indoor unit (Include panel)		Outdoor unit	
Unit dimensions	Height		in. (mm)	14-31/64 (368)		30- 23/32 (780)	
	Width		in. (mm)	45-9/32 (1,150)		37 (940)	
	Depth		in. (mm)	33-55/64 (860)		13- 3/8 (340)	
Package dimensions				Body	Panel	Outdoor unit	
	Height		in. (mm)	12-13/32 (315)	4-3/32 (104)	34- 31/32 (888)	
	Width		in. (mm)	44-19/64 (1,125)	49-31/64 (1,257)	39- 31/32 (1,015)	
	Depth		in. (mm)	33-9/32 (845)	39-21/64 (999)	16- 3/32 (409)	
Net weight			lbs. (kg)	60 (27)	16 (7)	143 (65)	
Shipping weight			lbs. (kg)	71 (32)	22 (10)	161 (73)	
Shipping volume			cu.ft. (m 3)	10.6 (0.299)	4.6 (0.131)	13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

4-Way Air Discharge Semi-Concealed Type

MODEL No.		Indoor Unit		XH4272R			
		Outdoor Unit		CH4272R			
POWER SOURCE				230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE				Cooling		Heating	
Capacity * [minimum~muximum]			BTU / h	39,500 [9,500~39,500]		48,000 [8,000~48,000]	
(17˚F)**			BTU / h	—		31,800	
Moisture removal (High)			Pints / h	12.6		—	
Air circulation (H / M / L) 230 V			CFM	1050 / 840 / 720			
External Static Pressure			in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)			BTU / Wh	14.6		10.4	
ELECTRICAL RATINGS							
Voltage rating			V	230	208	230	208
Available voltage range			V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*			A	23.0	25.4	22.4	24.8
Power input			W	4,520	4,520	4,360	4,360
(17˚F)**			W	—		3,540	3,540
Back-up Heater			kW	—			
Maximum overcurrent protection (Indoor/Outdoor)			A	15 / 40			
FEATURES							
Controls				Microprocessor			
Low ambient control				Built-in 0˚F			
Fan speeds Indoor / Outdoor				3 and Automatic control / Variable			
Optional Wired Remote Controller				RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller				RCS-SH80UA. WL / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)				— / Automatic (Vertical)			
Air filter				Washable, long life (2,500 hr)			
Drain pump (Drain connection)				Max.head 2-33/64 in. above drain connection (25A , OD32mm)			
Compressor				Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo		dB - A	45 / 38 / 34			
	Outdoor - Hi		dB - A	53			
Refrigerant control				Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING							
Limit of tubing length			ft. (m)	165 (50)			
Limit of tubing length at shipment			ft. (m)	10~100 (3~30)			
Limit of elevation difference			ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units			ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube		in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube		in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment			lbs. (kg)	7.94 (3.6) - R410A			
DIMENSIONS & WEIGHT				Indoor unit (Include panel)		Outdoor unit	
Unit dimensions	Height		in. (mm)	14-31/64 (368)		48-7/16 (1,230)	
	Width		in. (mm)	45-9/32 (1,150)		37 (940)	
	Depth		in. (mm)	33-55/64 (860)		13- 3/8 (340)	
Package dimensions				Body	Panel	Outdoor unit	
	Height		in. (mm)	12-13/32 (315)	4-3/32 (104)	52-3/8 (1,330)	
	Width		in. (mm)	44-19/64 (1,125)	49-31/64 (1,257)	39- 31/32 (1,015)	
	Depth		in. (mm)	33-9/32 (845)	39-21/64 (999)	16- 3/32 (409)	
Net weight			lbs. (kg)	60 (27)	16 (7)	220 (100)	
Shipping weight			lbs. (kg)	71 (32)	22 (10)	240 (109)	
Shipping volume			cu.ft. (m 3)	10.6 (0.299)	4.6 (0.131)	19.5 (0.552)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

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1-1 Unit Specifications

4-Way Air Discharge Semi-Concealed Type

MODEL No.	Indoor Unit		XH2672R		
	Outdoor Unit		C2672R		
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz		
PERFORMANCE			Cooling		
Capacity * [minimum~muximum]		BTU / h	24,800 [9,500~24,800]		
(17˚F)**		BTU / h	—		
Moisture removal (High)		Pints / h	8.1		
Air circulation (H / M / L) 230 V		CFM	710 / 530 / 450		
External Static Pressure		in. WG	—		
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.1		
ELECTRICAL RATINGS					
Voltage rating		V	230	208	
Available voltage range		V	VAC 187 - 253		
Max. Running amperes*		A	15.6	17.3	
Power input		W	2,920	2,920	
(17˚F)**		W	—		
Back-up Heater		kW	—		
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 30		
FEATURES					
Controls			Microprocessor		
Low ambient control			Built-in 0˚F		
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable		
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG		
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL		
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)		
Air filter			Washable, long life (2,500 hr)		
Drain pump (Drain connection)			Max.head 2-33/64 in. above drain connection (25A , OD32mm)		
Compressor			Rotary(SANYO)		
Operation sound	Indoor - Hi/Me/Lo	dB - A	38 / 35 / 31		
	Outdoor - Hi	dB - A	49		
Refrigerant control			Electronic Expansion Valve (MOV)		
REFRIGERANT TUBING					
Limit of tubing length		ft. (m)	165 (50)		
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)		
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)		
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)		
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)		
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)		
Refrigerant amount at shipment		lbs. (kg)	4.19 (1.9) - R410A		
DIMENSIONS & WEIGHT			Indoor unit (Include panel)		Outdoor unit
Unit dimensions	Height	in. (mm)	13-5/16 (338)		30- 23/32 (780)
	Width	in. (mm)	33-55/64 (860)		37 (940)
	Depth	in. (mm)	33-55/64 (860)		13- 3/8 (340)
Package dimensions			Body	Panel	Outdoor unit
	Height	in. (mm)	11-9/64 (283)	4-3/32 (104)	34- 31/32 (888)
	Width	in. (mm)	32-7/8 (835)	37-61/64 (964)	39- 31/32 (1,015)
	Depth	in. (mm)	33-9/32 (845)	39-21/64 (999)	16- 3/32 (409)
Net weight		lbs. (kg)	49 (22)	11 (5)	128 (58)
Shipping weight		lbs. (kg)	57 (26)	18 (8)	148 (67)
Shipping volume		cu.ft. (m 3)	7.1 (0.200)	3.6 (0.100)	13.0 (0.369)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

4-Way Air Discharge Semi-Concealed Type

MODEL No.	Indoor Unit		XH3672R		
	Outdoor Unit		C3672R		
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz		
PERFORMANCE			Cooling		
Capacity * [minimum~muximum]		BTU / h	32,600 [9,500~32,600]		
(17˚F)**		BTU / h	—		
Moisture removal (High)		Pints / h	10.6		
Air circulation (H / M / L) 230 V		CFM	1050 / 840 / 720		
External Static Pressure		in. WG	—		
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.6		
ELECTRICAL RATINGS					
Voltage rating		V	230	208	
Available voltage range		V	VAC 187 - 253		
Max. Running amperes*		A	18.7	20.7	
Power input		W	3,950	3,950	
(17˚F)**		W	—		
Back-up Heater		kW	—		
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 35		
FEATURES					
Controls			Microprocessor		
Low ambient control			Built-in 0˚F		
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable		
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG		
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL		
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)		
Air filter			Washable, long life (2,500 hr)		
Drain pump (Drain connection)			Max.head 2-33/64 in. above drain connection (25A , OD32mm)		
Compressor			Rotary(SANYO)		
Operation sound	Indoor - Hi/Me/Lo	dB - A	44 / 37 / 33		
	Outdoor - Hi	dB - A	52		
Refrigerant control			Electronic Expansion Valve (MOV)		
REFRIGERANT TUBING					
Limit of tubing length		ft. (m)	165 (50)		
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)		
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)		
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)		
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)		
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)		
Refrigerant amount at shipment		lbs. (kg)	6.17 (2.8) - R410A		
DIMENSIONS & WEIGHT			Indoor unit (Include panel)		Outdoor unit
Unit dimensions	Height	in. (mm)	14-31/64 (368)		30- 23/32 (780)
	Width	in. (mm)	45-9/32 (1,150)		37 (940)
	Depth	in. (mm)	33-55/64 (860)		13- 3/8 (340)
Package dimensions			Body	Panel	Outdoor unit
	Height	in. (mm)	12-13/32 (315)	4-3/32 (104)	34- 31/32 (888)
	Width	in. (mm)	44-19/64 (1,125)	49-31/64 (1,257)	39- 31/32 (1,015)
	Depth	in. (mm)	33-9/32 (845)	39-21/64 (999)	16- 3/32 (409)
Net weight		lbs. (kg)	60 (27)	16 (7)	143 (65)
Shipping weight		lbs. (kg)	71 (32)	22 (10)	161 (73)
Shipping volume		cu.ft. (m 3)	10.6 (0.299)	4.6 (0.131)	13.0 (0.369)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

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1-1 Unit Specifications

4-Way Air Discharge Semi-Concealed Type

MODEL No.	Indoor Unit		XH4272R	
	Outdoor Unit		C4272R	
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz	
PERFORMANCE			Cooling	
Capacity * [minimum~muximum]		BTU / h	39,500 [9,500~39,500]	
(17˚F)**		BTU / h	—	
Moisture removal (High)		Pints / h	12.6	
Air circulation (H / M / L) 230 V		CFM	1050 / 840 / 720	
External Static Pressure		in. WG	—	
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.6	
ELECTRICAL RATINGS				
Voltage rating		V	230	208
Available voltage range		V	VAC 187 - 253	
Max. Running amperes*		A	23.0	25.4
Power input		W	4,520	4,520
(17˚F)**		W	—	
Back-up Heater		kW	—	
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 40	
FEATURES				
Controls			Microprocessor	
Low ambient control			Built-in 0˚F	
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable	
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG	
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL	
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)	
Air filter			Washable, long life (2,500 hr)	
Drain pump (Drain connection)			Max.head 2-33/64 in. above drain connection (25A , OD32mm)	
Compressor			Rotary(SANYO)	
Operation sound	Indoor - Hi/Me/Lo	dB - A	45 / 38 / 34	
	Outdoor - Hi	dB - A	53	
Refrigerant control			Electronic Expansion Valve (MOV)	
REFRIGERANT TUBING				
Limit of tubing length		ft. (m)	165 (50)	
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)	
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)	
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)	
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)	
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)	
Refrigerant amount at shipment		lbs. (kg)	7.94 (3.6) - R410A	
DIMENSIONS & WEIGHT			Indoor unit (Include panel)	Outdoor unit
Unit dimensions	Height	in. (mm)	14-31/64 (368)	48-7/16 (1,230)
	Width	in. (mm)	45-9/32 (1,150)	37 (940)
	Depth	in. (mm)	33-55/64 (860)	13- 3/8 (340)
Package dimensions			Body	Panel / Outdoor unit
	Height	in. (mm)	12-13/32 (315)	4-3/32 (104) / 52-3/8 (1,330)
	Width	in. (mm)	44-19/64 (1,125)	49-31/64 (1,257) / 39- 31/32 (1,015)
	Depth	in. (mm)	33-9/32 (845)	39-21/64 (999) / 16- 3/32 (409)
Net weight		lbs. (kg)	60 (27)	16 (7) / 220 (100)
Shipping weight		lbs. (kg)	71 (32)	22 (10) / 240 (109)
Shipping volume		cu.ft. (m 3)	10.6 (0.299)	4.6 (0.131) / 19.5 (0.552)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Concealed-Duct Type

MODEL No.		Indoor Unit		UH2672R			
		Outdoor Unit		CH2672R			
POWER SOURCE				230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE				Cooling		Heating	
Capacity * [minimum~muximum]			BTU / h	24,000 [9,500~24,000]		28,600 [8,000~28,600]	
(17˚F)**			BTU / h	—		17,100	
Moisture removal (High)			Pints / h	7.7		—	
Air circulation (H / M / L) 230 V			CFM	670 / 530 / 460			
External Static Pressure			in.WG	0.2:at shipment / 0.4:using jumper cable			
S.E.E.R. / H.S.P.F. (Region 4)			BTU / Wh	14.0		9.7	
ELECTRICAL RATINGS							
Voltage rating			V	230	208	230	208
Available voltage range			V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*			A	13.6	15.0	12.5	13.8
Power input			W	2,600	2,600	2,400	2,400
(17˚F)**			W	—		1,980	1,980
Back-up Heater			kW	—			
Maximum overcurrent protection (Indoor/Outdoor)			A	15 / 30			
FEATURES							
Controls				Microprocessor			
Low ambient control				Built-in 0˚F			
Fan speeds Indoor / Outdoor				3 and Automatic control / Variable			
Optional Wired Remote Controller				RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller				RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)				—			
Air filter				—			
Drain pump (Drain connection)				Max.head 2-33/64 in. above drain connection (25A , OD32mm)			
Compressor				Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo		dB - A	34 / 30 / 27			
	Outdoor - Hi		dB - A	49			
Refrigerant control				Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING							
Limit of tubing length			ft. (m)	165 (50)			
Limit of tubing length at shipment			ft. (m)	10~100 (3~30)			
Limit of elevation difference			ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units			ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube		in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube		in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment			lbs. (kg)	4.19 (1.9) - R410A			
DIMENSIONS & WEIGHT				Indoor unit		Outdoor unit	
Unit dimensions	Height		in. (mm)	12-7/32 (310)		30- 23/32 (780)	
	Width		in. (mm)	39-3/8 (1,000)		37 (940)	
	Depth		in. (mm)	24-13/16 (630)		13- 3/8 (340)	
Package dimensions				Indoor unit		Outdoor unit	
	Height		in. (mm)	14-3/32 (358)		34- 31/32 (888)	
	Width		in. (mm)	46-7/8 (1,191)		39- 31/32 (1,015)	
	Depth		in. (mm)	30-13/16 (783)		16- 3/32 (409)	
Net weight			lbs. (kg)	71 (32)		128 (58)	
Shipping weight			lbs. (kg)	82 (37)		148 (67)	
Shipping volume			cu.ft. (m 3)	11.8 (0.334)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

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1-1 Unit Specifications

Concealed-Duct Type

MODEL No.		Indoor Unit		UH3672R			
		Outdoor Unit		CH3672R			
POWER SOURCE				230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE				Cooling		Heating	
Capacity * [minimum~muximum]			BTU / h	31,200 [9,500~31,200]		36,200 [8,000~36,200]	
(17˚F)**			BTU / h	—		20,200	
Moisture removal (High)			Pints / h	10.0		—	
Air circulation (H / M / L) 230 V			CFM	670 / 530 / 460			
External Static Pressure			in. WG	0.24:at shipment / 0.4:using jumper cable			
S.E.E.R. / H.S.P.F. (Region 4)			BTU / Wh	13.9		8.7	
ELECTRICAL RATINGS							
Voltage rating			V	230	208	230	208
Available voltage range			V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*			A	18.6	20.6	15.9	17.6
Power input			W	3,920	3,920	3,340	3,340
(17˚F)**			W	—		2,570	2,570
Back-up Heater			kW	—			
Maximum overcurrent protection (Indoor/Outdoor)			A	15 / 35			
FEATURES							
Controls				Microprocessor			
Low ambient control				Built-in 0˚F			
Fan speeds Indoor / Outdoor				3 and Automatic control / Variable			
Optional Wired Remote Controller				RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller				RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)				—			
Air filter				—			
Drain pump (Drain connection)				Max.head 2-33/64 in. above drain connection (25A , OD32mm)			
Compressor				Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo		dB - A	38 / 33 / 31			
	Outdoor - Hi		dB - A	52			
Refrigerant control				Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING							
Limit of tubing length			ft. (m)	165 (50)			
Limit of tubing length at shipment			ft. (m)	10~100 (3~30)			
Limit of elevation difference			ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units			ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube		in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube		in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment			lbs. (kg)	6.17 (2.8) - R410A			
DIMENSIONS & WEIGHT				Indoor unit		Outdoor unit	
Unit dimensions	Height		in. (mm)	12-7/32 (310)		30- 23/32 (780)	
	Width		in. (mm)	58-9/32 (1,480)		37 (940)	
	Depth		in. (mm)	24-13/16 (630)		13- 3/8 (340)	
Package dimensions				Indoor unit		Outdoor unit	
	Height		in. (mm)	14-3/32 (358)		34- 31/32 (888)	
	Width		in. (mm)	65-25/32 (1,671)		39- 31/32 (1,015)	
	Depth		in. (mm)	30-13/16 (783)		16- 3/32 (409)	
Net weight			lbs. (kg)	104 (47)		143 (65)	
Shipping weight			lbs. (kg)	115 (52)		161 (73)	
Shipping volume			cu.ft. (m 3)	16.5 0.468)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Concealed-Duct Type

MODEL No.	Indoor Unit		UH2672R	
	Outdoor Unit		C2672R	
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz	
PERFORMANCE			Cooling	
Capacity * [minimum~muximum]		BTU / h	24,000 [9,500~24,000]	
(17˚F)**		BTU / h	—	
Moisture removal (High)		Pints / h	7.7	
Air circulation (H / M / L) 230 V		CFM	670 / 530 / 460	
External Static Pressure		in. WG	0.2:at shipment / 0.4:using jumper cable	
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.0	
ELECTRICAL RATINGS				
Voltage rating		V	230	208
Available voltage range		V	VAC 187 - 253	
Max. Running amperes*		A	13.6	15.0
Power input		W	2,600	2,600
(17˚F)**		W	—	
Back-up Heater		kW	—	
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 30	
FEATURES				
Controls			Microprocessor	
Low ambient control			Built-in 0˚F	
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable	
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG	
Optional Wireless Remote Controller			RCS-BH80UA. WL	
Air deflection (Horizontal / Vertical)			—	
Air filter			—	
Drain pump (Drain connection)			Max.head 2-33/64 in. above drain connection (25A , OD32mm)	
Compressor			Rotary(SANYO)	
Operation sound	Indoor - Hi/Me/Lo	dB - A	34 / 30 / 27	
	Outdoor - Hi	dB - A	49	
Refrigerant control			Electronic Expansion Valve (MOV)	
REFRIGERANT TUBING				
Limit of tubing length		ft. (m)	165 (50)	
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)	
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)	
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)	
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)	
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)	
Refrigerant amount at shipment		lbs. (kg)	4.19 (1.9) - R410A	
DIMENSIONS & WEIGHT			Indoor unit	Outdoor unit
Unit dimensions	Height	in. (mm)	12-7/32 (310)	30- 23/32 (780)
	Width	in. (mm)	39-3/8 (1,000)	37 (940)
	Depth	in. (mm)	24-13/16 (630)	13- 3/8 (340)
Package dimensions			Indoor unit	Outdoor unit
	Height	in. (mm)	14-3/32 (358)	34- 31/32 (888)
	Width	in. (mm)	46-7/8 (1,191)	39- 31/32 (1,015)
	Depth	in. (mm)	30-13/16 (783)	16- 3/32 (409)
Net weight		lbs. (kg)	71 (32)	128 (58)
Shipping weight		lbs. (kg)	82 (37)	148 (67)
Shipping volume		cu.ft. (m 3)	11.8 (0.334)	13.0 (0.369)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Concealed-Duct Type

MODEL No.	Indoor Unit		UH3672R	
	Outdoor Unit		C3672R	
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz	
PERFORMANCE			Cooling	
Capacity * [minimum~muximum]		BTU / h	31,200 [9,500~31,200]	
(17˚F)**		BTU / h	—	
Moisture removal (High)		Pints / h	10.0	
Air circulation (H / M / L) 230 V		CFM	670 / 530 / 460	
External Static Pressure		in. WG	0.24:at shipment / 0.4:using jumper cable	
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	13.9	
ELECTRICAL RATINGS				
Voltage rating		V	230	208
Available voltage range		V	VAC 187 - 253	
Max. Running amperes*		A	18.6	20.6
Power input		W	3,920	3,920
(17˚F)**		W	—	
Back-up Heater		kW	—	
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 35	
FEATURES				
Controls Microprocessor			Microprocessor	
Low ambient control			Built-in 0˚F	
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable	
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG	
Optional Wireless Remote Controller			RCS-SH1UA / RCS-BH80UA. WL	
Air deflection (Horizontal / Vertical)			—	
Air filter			—	
Drain pump (Drain connection)			Max.head 2-33/64 in. above drain connection (25A , OD32mm)	
Compressor			Rotary(SANYO)	
Operation sound	Indoor - Hi/Me/Lo	dB - A	38 / 33 / 31	
	Outdoor - Hi	dB - A	52	
Refrigerant control			Electronic Expansion Valve (MOV)	
REFRIGERANT TUBING				
Limit of tubing length		ft. (m)	165 (50)	
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)	
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)	
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)	
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)	
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)	
Refrigerant amount at shipment		lbs. (kg)	6.17 (2.8) - R410A	
DIMENSIONS & WEIGHT			Indoor unit	Outdoor unit
Unit dimensions	Height	in. (mm)	12-7/32 (310)	30- 23/32 (780)
	Width	in. (mm)	58-9/32 (1,480)	37 (940)
	Depth	in. (mm)	24-13/16 (630)	13- 3/8 (340)
Package dimensions			Indoor unit	Outdoor unit
	Height	in. (mm)	14-3/32 (358)	34- 31/32 (888)
	Width	in. (mm)	65-25/32 (1,671)	39- 31/32 (1,015)
	Depth	in. (mm)	30-13/16 (783)	16- 3/32 (409)
Net weight		lbs. (kg)	104 (47)	143 (65)
Shipping weight		lbs. (kg)	115 (52)	161 (73)
Shipping volume		cu.ft. (m 3)	16.5 0.468)	13.0 (0.369)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB
Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Ceiling-Mounted Type

MODEL No.	Indoor Unit		THH2672R			
	Outdoor Unit		CH2672R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	24,400 [9,500~24,400]		30,800 [8,000~30,800]	
(17˚F)**		BTU / h	—		17,900	
Moisture removal (High)		Pints / h	7.7		—	
Air circulation (H / M / L) 230 V		CFM	550 / 490 / 460			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.5		10.3	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes* (Without Back-up Heater)		A	15.6	17.3	16.4	18.1
Power input		W	2,880	2,880	3,000	3,000
(17˚F)**		W	—		2,190	2,190
Back-up Heater		kW	—		1.8	1.47
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 30			
FEATURES						
Controls			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable, long life (2,500 hr)			
Drain pump (Drain connection)			— (20A , OD26mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	39 / 37 / 33			
	Outdoor - Hi	dB - A	49			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	4.19 (1.9) - R410A			
DIMENSIONS & WEIGHT			Indoor unit		Outdoor unit	
Unit dimensions	Height	in. (mm)	7-17/32 (190)		30- 23/32 (780)	
	Width	in. (mm)	51-3/16 (1,300)		37 (940)	
	Depth	in. (mm)	26-3/8 (670)		13- 3/8 (340)	
Package dimensions			Indoor unit		Outdoor unit	
	Height	in. (mm)	9-7/16 (240)		34- 31/32 (888)	
	Width	in. (mm)	54-19/32 (1,387)		39- 31/32 (1,015)	
	Depth	in. (mm)	31-1/16 (789)		16- 3/32 (409)	
Net weight		lbs. (kg)	64 (29)		128 (58)	
Shipping weight		lbs. (kg)	75 (34)		148 (67)	
Shipping volume		cu.ft. (m 3)	8.9 (0.253)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

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1-1 Unit Specifications

Ceiling-Mounted Type

MODEL No.	Indoor Unit		TH2672R			
	Outdoor Unit		CH2672R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	24,400 [9,500~24,400]		30,800 [8,000~30,800]	
(17˚F)**		BTU / h	—		17,900	
Moisture removal (High)		Pints / h	7.7		—	
Air circulation (H / M / L) 230 V		CFM	550 / 490 / 460			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.5		10.3	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes* (Without Back-up Heater)		A	15.6	17.3	16.4	18.1
Power input		W	2,880	2,880	3,000	3,000
(17˚F)**		W	—		2,190	2,190
Back-up Heater		kW	—			
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 30			
FEATURES						
Controls Microprocessor			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable, long life (2,500 hr)			
Drain pump (Drain connection)			— (20A , OD26mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	39 / 37 / 33			
	Outdoor - Hi	dB - A	49			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	4.19 (1.9) - R410A			
DIMENSIONS & WEIGHT			Indoor unit		Outdoor unit	
Unit dimensions	Height	in. (mm)	7-17/32 (190)		30- 23/32 (780)	
	Width	in. (mm)	51-3/16 (1,300)		37 (940)	
	Depth	in. (mm)	26-3/8 (670)		13- 3/8 (340)	
Package dimensions			Indoor unit		Outdoor unit	
	Height	in. (mm)	9-7/16 (240)		34- 31/32 (888)	
	Width	in. (mm)	54-19/32 (1,387)		39- 31/32 (1,015)	
	Depth	in. (mm)	31-1/16 (789)		16- 3/32 (409)	
Net weight		lbs. (kg)	57 (26)		128 (58)	
Shipping weight		lbs. (kg)	68 (31)		148 (67)	
Shipping volume		cu.ft. (m 3)	8.9 (0.253)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Ceiling-Mounted Type

MODEL No.	Indoor Unit		THH3672R			
	Outdoor Unit		CH3672R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	31,200 [9,500~31,200]		37,400 [8,000~37,400]	
(17˚F)**		BTU / h	—		21,000	
Moisture removal (High)		Pints / h	10.0		—	
Air circulation (H / M / L) 230 V		CFM	1100 / 930 / 750			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	15.1		9.6	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*		A	18.2	20.1	15.6	17.3
Power input		W	3,840	3,840	3,250	3,250
(17˚F)**		W	—		2,470	2,470
Back-up Heater		kW	—		2.4	1.95
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 35			
FEATURES						
Controls Microprocessor			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable, long life (2,500 hr)			
Drain pump (Drain connection)			— (20A , OD26mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	42 / 40 / 35			
	Outdoor - Hi	dB - A	52			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	6.17 (2.8) - R410A			
DIMENSIONS & WEIGHT			Indoor unit		Outdoor unit	
Unit dimensions	Height	in. (mm)	9-7/16 (240)		30- 23/32 (780)	
	Width	in. (mm)	62-1/32 (1,575)		37 (940)	
	Depth	in. (mm)	26-3/8 (670)		13- 3/8 (340)	
Package dimensions			Indoor unit		Outdoor unit	
	Height	in. (mm)	12-15/32 (317)		34- 31/32 (888)	
	Width	in. (mm)	66-1/16 (1,678)		39- 31/32 (1,015)	
	Depth	in. (mm)	31-1/16 (789)		16- 3/32 (409)	
Net weight		lbs. (kg)	90 (41)		143 (65)	
Shipping weight		lbs. (kg)	104 (47)		161 (73)	
Shipping volume		cu.ft. (m 3)	14.8 (0.420)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

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1-1 Unit Specifications

Ceiling-Mounted Type

MODEL No.	Indoor Unit		TH3672R			
	Outdoor Unit		CH3672R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	31,200 [9,500~31,200]		37,400 [8,000~37,400]	
(17˚F)**		BTU / h	—		21,000	
Moisture removal (High)		Pints / h	10.0		—	
Air circulation (H / M / L) 230 V		CFM	1100 / 930 / 750			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	15.1		9.6	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*		A	18.2	20.1	15.6	17.3
Power input		W	3,840	3,840	3,250	3,250
(17˚F)**		W	—		2,470	2,470
Back-up Heater		kW	—			
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 35			
FEATURES						
Controls			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable, long life (2,500 hr)			
Drain pump (Drain connection)			— (20A , OD26mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	42 / 40 / 35			
	Outdoor - Hi	dB - A	52			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	6.17 (2.8) - R410A			
DIMENSIONS & WEIGHT			Indoor unit		Outdoor unit	
Unit dimensions	Height	in. (mm)	9-7/16 (240)		30- 23/32 (780)	
	Width	in. (mm)	62-1/32 (1,575)		37 (940)	
	Depth	in. (mm)	26-3/8 (670)		13- 3/8 (340)	
Package dimensions			Indoor unit		Outdoor unit	
	Height	in. (mm)	12-15/32 (317)		34- 31/32 (888)	
	Width	in. (mm)	66-1/16 (1,678)		39- 31/32 (1,015)	
	Depth	in. (mm)	31-1/16 (789)		16- 3/32 (409)	
Net weight		lbs. (kg)	84 (38)		143 (65)	
Shipping weight		lbs. (kg)	97 (44)		161 (73)	
Shipping volume		cu.ft. (m 3)	14.8 (0.420)		13.0 (0.369)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Ceiling-Mounted Type

MODEL No.	Indoor Unit		TH4272R			
	Outdoor Unit		CH4272R			
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz			
PERFORMANCE			Cooling		Heating	
Capacity * [minimum~muximum]		BTU / h	39,000 [9,500~39,000]		44,500 [8,000~44,500]	
(17˚F)**		BTU / h	—		28,800	
Moisture removal (High)		Pints / h	12.6		—	
Air circulation (H / M / L) 230 V		CFM	1100 / 930 / 750			
External Static Pressure		in. WG	—			
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	15.6		10.2	
ELECTRICAL RATINGS						
Voltage rating		V	230	208	230	208
Available voltage range		V	VAC 187 - 253		VAC 187 - 253	
Max. Running amperes*		A	21.1	23.3	18.6	20.6
Power input		W	4,140	4,140	3,630	3,630
(17˚F)**		W	—		3,110	3,110
Back-up Heater		kW	—			
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 40			
FEATURES						
Controls			Microprocessor			
Low ambient control			Built-in 0˚F			
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable			
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG			
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL			
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)			
Air filter			Washable, long life (2,500 hr)			
Drain pump (Drain connection)			— (20A , OD26mm)			
Compressor			Rotary(SANYO)			
Operation sound	Indoor - Hi/Me/Lo	dB - A	44 / 41 / 37			
	Outdoor - Hi	dB - A	53			
Refrigerant control			Electronic Expansion Valve (MOV)			
REFRIGERANT TUBING						
Limit of tubing length		ft. (m)	165 (50)			
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)			
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)			
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)			
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)			
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)			
Refrigerant amount at shipment		lbs. (kg)	7.94 (3.6) - R410A			
DIMENSIONS & WEIGHT			Indoor unit		Outdoor unit	
Unit dimensions	Height	in. (mm)	9-7/16 (240)		48-7/16 (1,230)	
	Width	in. (mm)	62-1/32 (1,575)		37 (940)	
	Depth	in. (mm)	26-3/8 (670)		13- 3/8 (340)	
Package dimensions			Indoor unit		Outdoor unit	
	Height	in. (mm)	12-15/32 (317)		52-3/8 (1,330)	
	Width	in. (mm)	66-1/16 (1,678)		39- 31/32 (1,015)	
	Depth	in. (mm)	31-1/16 (789)		16- 3/32 (409)	
Net weight		lbs. (kg)	84 (38)		220 (100)	
Shipping weight		lbs. (kg)	97 (44)		240 (109)	
Shipping volume		cu.ft. (m 3)	14.8 (0.420)		19.5 (0.552)	

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

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1-1 Unit Specifications

Ceiling-Mounted Type

MODEL No.	Indoor Unit		TH2672R	
	Outdoor Unit		C2672R	
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz	
PERFORMANCE			Cooling	
Capacity * [minimum~muximum]		BTU / h	24,400 [9,500~24,400]	
(17˚F)**		BTU / h	—	
Moisture removal (High)		Pints / h	7.7	
Air circulation (H / M / L) 230 V		CFM	550 / 490 / 460	
External Static Pressure		in. WG	—	
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	14.5	
ELECTRICAL RATINGS				
Voltage rating		V	230	208
Available voltage range		V	VAC 187 - 253	
Max. Running amperes* (Without Back-up Heater)		A	15.6	17.3
Power input		W	2,880	2,880
(17˚F)**		W	—	
Back-up Heater		kW	—	
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 30	
FEATURES				
Controls			Microprocessor	
Low ambient control			Built-in 0˚F	
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable	
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG	
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL	
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)	
Air filter			Washable, long life (2,500 hr)	
Drain pump (Drain connection)			— (20A , OD26mm)	
Compressor			Rotary(SANYO)	
Operation sound	Indoor - Hi/Me/Lo	dB - A	39 / 37 / 33	
	Outdoor - Hi	dB - A	49	
Refrigerant control			Electronic Expansion Valve (MOV)	
REFRIGERANT TUBING				
Limit of tubing length		ft. (m)	165 (50)	
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)	
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)	
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)	
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)	
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)	
Refrigerant amount at shipment		lbs. (kg)	4.19 (1.9) - R410A	
DIMENSIONS & WEIGHT			Indoor unit	Outdoor unit
Unit dimensions	Height	in. (mm)	7-17/32 (190)	30- 23/32 (780)
	Width	in. (mm)	51-3/16 (1,300)	37 (940)
	Depth	in. (mm)	26-3/8 (670)	13- 3/8 (340)
Package dimensions			Indoor unit	Outdoor unit
	Height	in. (mm)	9-7/16 (240)	34- 31/32 (888)
	Width	in. (mm)	54-19/32 (1,387)	39- 31/32 (1,015)
	Depth	in. (mm)	31-1/16 (789)	16- 3/32 (409)
Net weight		lbs. (kg)	57 (26)	128 (58)
Shipping weight		lbs. (kg)	68 (31)	148 (67)
Shipping volume		cu.ft. (m 3)	8.9 (0.253)	13.0 (0.369)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Ceiling-Mounted Type

MODEL No.	Indoor Unit		TH3672R	
	Outdoor Unit		C3672R	
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz	
PERFORMANCE			Cooling	
Capacity * [minimum~muximum]		BTU / h	31,200 [9,500~31,200]	
(17˚F)**		BTU / h	—	
Moisture removal (High)		Pints / h	10.0	
Air circulation (H / M / L) 230 V		CFM	1100 / 930 / 750	
External Static Pressure		in. WG	—	
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	15.1	
ELECTRICAL RATINGS				
Voltage rating		V	230	208
Available voltage range		V	VAC 187 - 253	
Max. Running amperes*		A	18.2	20.1
Power input		W	3,840	3,840
(17˚F)**		W	—	
Back-up Heater		kW	—	
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 35	
FEATURES				
Controls			Microprocessor	
Low ambient control			Built-in 0˚F	
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable	
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG	
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL	
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)	
Air filter			Washable, long life (2,500 hr)	
Drain pump (Drain connection)			— (20A , OD26mm)	
Compressor			Rotary(SANYO)	
Operation sound	Indoor - Hi/Me/Lo	dB - A	42 / 40 / 35	
	Outdoor - Hi	dB - A	52	
Refrigerant control			Electronic Expansion Valve (MOV)	
REFRIGERANT TUBING				
Limit of tubing length		ft. (m)	165 (50)	
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)	
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)	
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)	
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)	
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)	
Refrigerant amount at shipment		lbs. (kg)	6.17 (2.8) - R410A	
DIMENSIONS & WEIGHT			Indoor unit	Outdoor unit
Unit dimensions	Height	in. (mm)	9-7/16 (240)	30- 23/32 (780)
	Width	in. (mm)	62-1/32 (1,575)	37 (940)
	Depth	in. (mm)	26-3/8 (670)	13- 3/8 (340)
Package dimensions			Indoor unit	Outdoor unit
	Height	in. (mm)	12-15/32 (317)	34- 31/32 (888)
	Width	in. (mm)	66-1/16 (1,678)	39- 31/32 (1,015)
	Depth	in. (mm)	31-1/16 (789)	16- 3/32 (409)
Net weight		lbs. (kg)	84 (38)	143 (65)
Shipping weight		lbs. (kg)	97 (44)	161 (73)
Shipping volume		cu.ft. (m 3)	14.8 (0.420)	13.0 (0.369)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-1 Unit Specifications

Ceiling-Mounted Type

MODEL No.	Indoor Unit		TH4272R	
	Outdoor Unit		C4272R	
POWER SOURCE			230 - 208 V / 1 Phase / 60 Hz	
PERFORMANCE			Cooling	
Capacity * [minimum~muximum]		BTU / h	39,000 [9,500~39,000]	
(17˚F)**		BTU / h	—	
Moisture removal (High)		Pints / h	12.6	
Air circulation (H / M / L) 230 V		CFM	1100 / 930 / 750	
External Static Pressure		in. WG	—	
S.E.E.R. / H.S.P.F. (Region 4)		BTU / Wh	15.6	
ELECTRICAL RATINGS				
Voltage rating		V	230	208
Available voltage range		V	VAC 187 - 253	
Max. Running amperes*		A	21.1	23.3
Power input		W	4,140	4,140
(17˚F)**		W	—	
Back-up Heater		kW	—	
Maximum overcurrent protection (Indoor/Outdoor)		A	15 / 40	
FEATURES				
Controls			Microprocessor	
Low ambient control			Built-in 0˚F	
Fan speeds Indoor / Outdoor			3 and Automatic control / Variable	
Optional Wired Remote Controller			RCS-SH80UG / RCS-TM80BG	
Optional Wireless Remote Controller			RCS-SH80UA. WL / RCS-BH80UA. WL	
Air deflection (Horizontal / Vertical)			— / Automatic (Vertical)	
Air filter			Washable, long life (2,500 hr)	
Drain pump (Drain connection)			— (20A , OD26mm)	
Compressor			Rotary(SANYO)	
Operation sound	Indoor - Hi/Me/Lo	dB - A	44 / 41 / 37	
	Outdoor - Hi	dB - A	53	
Refrigerant control			Electronic Expansion Valve (MOV)	
REFRIGERANT TUBING				
Limit of tubing length		ft. (m)	165 (50)	
Limit of tubing length at shipment		ft. (m)	10~100 (3~30)	
Limit of elevation difference		ft. (m)	Outdoor unit is higher than indoor unit : 100 (30)	
between the two units		ft. (m)	Outdoor unit is lower than indoor unit : 50 (15)	
Refrigerant tube	Narrow tube	in. (mm)	3 / 8 (6.35)	
outer diameter	Wide tube	in. (mm)	5 / 8 (15.88)	
Refrigerant amount at shipment		lbs. (kg)	7.94 (3.6) - R410A	
DIMENSIONS & WEIGHT			Indoor unit	Outdoor unit
Unit dimensions	Height	in. (mm)	9-7/16 (240)	48-7/16 (1,230)
	Width	in. (mm)	62-1/32 (1,575)	37 (940)
	Depth	in. (mm)	26-3/8 (670)	13- 3/8 (340)
Package dimensions			Indoor unit	Outdoor unit
	Height	in. (mm)	12-15/32 (317)	52-3/8 (1,330)
	Width	in. (mm)	66-1/16 (1,678)	39- 31/32 (1,015)
	Depth	in. (mm)	31-1/16 (789)	16- 3/32 (409)
Net weight		lbs. (kg)	84 (38)	220 (100)
Shipping weight		lbs. (kg)	97 (44)	240 (109)
Shipping volume		cu.ft. (m 3)	14.8 (0.420)	19.5 (0.552)

DATA SUBJECT TO CHANGE WITHOUT NOTICE.

Cooling:

Rating conditions (*) : Room temperature 80 °F DB / 67 °F WB, Ambient temperature 95 °F DB / 75 °F WB

Heating:

Rating conditions (*) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 47 °F DB / 43 °F WB

Low temp conditions (**) : Room temperature 70 °F DB / 60 °F WB, Ambient temperature 17 °F DB / 15 °F WB

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**XH2672R**
Source			**230 - 208 VAC / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CR - TH2672
Control circuit fuse			250 VAC, 5 A
Fan (Number … diameter)	in.	(mm)	Turbo (1…17-7/16 (443))
Fan motor			
Model			SFG6X - 41D6P
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole … r.p.m. (230 V, High)		rpm	6 … 464
Nominal output		W	40
Coil resistance (Ambient temperature 68 °F)		Ω	BRW - WHT : 170.3 , ORG - YEL : 43.2 WHT - VLT : 18.1 , WHT - PNK : 83.5 VLT - ORG : 43.2 , YEL - BLK : 60.2
Safety device			
Operating temperature	Open	°F	266 ± 14.4
	Close	°F	174.2 ± 27
Run capacitor	VAC,	μF	440 V , 4.5 μF
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows … Fins per inch			2 … 14.9
Face area	$ft.^2$	(m^2)	3.69 (0.343)
Panel			
Model No.			PNR - XH2442
Auto louver motor			MT8 - 3C
Auto louver motor … Rated	V, W,	rpm	240 VAC , 3 W , 3 rpm
Coil resistance (Ambient temperature 77 °F)		Ω	16.430 Ω ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**XH3672R**
Source			**230 - 208 VAC / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CR - TH2672
Control circuit fuse			250 VAC, 5 A
Fan (Number … diameter)	in.	(mm)	Turbo (1…17-7/16 (443))
Fan motor			
Model			SFG6X - 81A6P
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole … r.p.m. (230 V, High)		rpm	6 … 467
Nominal output		W	60
Coil resistance (Ambient temperature 68 °F)		Ω	BRW - WHT : 75.1 , ORG - YEL : 27.4 WHT - VLT : 6.7 , VLT - PNK : 42.7 VLT - ORG : 20.6 , YEL - BLK : 58.0
Safety device			
Operating temperature	Open	°F	266 ± 14.4
	Close	°F	174.2 ± 27
Run capacitor	VAC,	μF	440 V , 5 μF
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows … Fins per inch			2 … 14.9
Face area	$ft.^2$	(m^2)	8.20 (0.762)
Panel			
Model No.			PNR - XH3642
Auto louver motor			MT8 - 3C
Auto louver motor … Rated	V, W,	rpm	240 VAC , 3 W , 3 rpm
Coil resistance (Ambient temperature 77 °F)		Ω	16.430 Ω ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**XH4272R**
Source			**230 - 208 VAC / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CR - TH2672
Control circuit fuse			250 VAC, 5 A
Fan (Number … diameter)	in.	(mm)	Turbo (1…17-7/16 (443))
Fan motor			
Model			SFG6X - 81A6P
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole … r.p.m. (230 V, High)		rpm	6 … 506
Nominal output		W	60
Coil resistance (Ambient temperature 68 °F)		Ω	BRW - WHT : 75.1 , ORG - YEL : 27.4 WHT - VLT : 6.7 , VLT - PNK : 42.7 VLT - ORG : 20.6 , YEL - BLK : 58.0
Safety device			
Operating temperature	Open	°F	266 ± 14.4
	Close	°F	174.2 ± 27
Run capacitor	VAC,	μF	440 V , 6 μF
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows … Fins per inch			2 … 14.9
Face area	$ft.^2$	(m^2)	8.20 (0.762)
Panel			
Model No.			PNR - XH3642
Auto louver motor			MT8 - 3C
Auto louver motor … Rated	V, W,	rpm	240 VAC , 3 W , 3 rpm
Coil resistance (Ambient temperature 77 °F)		Ω	16.430 Ω ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.		**TH2672R**
Source		**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)		Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y		CR - TH2672
Control circuit fuse		250 V, 5 A
Fan (Number … diameter)	in. (mm)	Centrifugal (4 ... 5-1/8(130))
Fan motor		
Model		SR4X - 51A6P
Source		230 - 208 V / 1 phase / 60 Hz
No. of pole … r.p.m. (230 V, High)	rpm	1,179
Nominal output	W	31
Coil resistance (Ambient temperature 68 °F)	Ω	BRW - WHT : 111.0 , ORG - YEL : 16.7 WHT - VLT : 35.4 , BLK - PNK : 23.9 VLT - ORG : 13.4 , YEL - BLK : 136.6
Safety device		
Operating temperature	Open °F	266 ± 14.4
	Close °F	174.2 ± 27
Run capacitor	VAC, μF	440 V , 1.5 μF
Heat exchanger		
Coil		Aluminum plate fin / Copper tube
Rows … Fins per inch		3 … 14.9
Face area	$ft.^2$ (m^2)	1.81 (0.168)
Auto louver motor		
Model No.		MT8 - 3C
Auto louver motor … Rated	V, W, rpm	240 VAC , 3 W , 3 rpm
Coil resistance (Ambient temperature 77 °F)	Ω	16,430 Ω ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.		**TH3672R**
Source		**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)		Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y		CR - TH2672
Control circuit fuse		250 V, 5 A
Fan (Number … diameter)	in. (mm)	Centrifugal (4 ... 5-29/32(150))
Fan motor		
Model		KFG4X - 101C6P
Source		230 - 208 V / 1 phase / 60 Hz
No. of pole … r.p.m. (230 V, High)	rpm	4 ... 1,040
Nominal output	W	100
Coil resistance (Ambient temperature 68 °F)	Ω	BRW - WHT : 61.05 , ORG - YEL : 13.23 WHT - VLT : 9.955 , YEL - BLK : 19.25 VLT - ORG : 9.576 , BLK - PNK : 10.81
Safety device		
Operating temperature	Open °F	266 ± 14.4
	Close °F	174.2 ± 27
Run capacitor	VAC, μF	440 V , 4 μF
Heat exchanger		
Coil		Aluminum plate fin / Copper tube
Rows … Fins per inch		3 … 14.9
Face area	$ft.^2$ (m^2)	3.51 (0.326)
Auto louver motor		
Model No.		MT8 - 3C
Auto louver motor … Rated	V, W, rpm	240 VAC , 3 W , 3 rpm
Coil resistance (Ambient temperature 77 °F)	Ω	16,430 Ω ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**TH4272R**
Source			**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CR - TH2672
Control circuit fuse			250 V, 5 A
Fan (Number … diameter)		in. (mm)	Centrifugal (4 ... 5-29/32(150))
Fan motor			
Model			KFG4X - 101C6P
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole … r.p.m. (230 V, High)		rpm	4 ... 1,099
Nominal output		W	100
Coil resistance (Ambient temperature 68 °F)		Ω	BRW - WHT : 61.05 , ORG - YEL : 13.23 WHT - VLT : 9.955 , YEL - BLK : 19.25 VLT - ORG : 9.576 , BLK - PNK : 10.81
Safety device			
Operating temperature		Open °F	266 ± 14.4
		Close °F	174.2 ± 27
Run capacitor		VAC, μF	440 V , 5 μF
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows … Fins per inch			3 … 14.9
Face area		ft.^{2} (m^2)	3.51 (0.326)
Auto louver motor			
Model No.			MT8 - 3C
Auto louver motor … Rated		V, W, rpm	240 VAC , 3 W , 3 rpm
Coil resistance (Ambient temperature 77 °F)		Ω	16,430 Ω ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.		**THH2672R**
Source		**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)		Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y		CR - TH2672
Control circuit fuse		250 V, 5 A
Fan (Number ... diameter)	in. (mm)	Centrifugal (4 ... 5-1/8(130))
Fan motor		
Model		SR4X - 51A6P
Source		230 - 208 V / 1 phase / 60 Hz
No. of pole ... r.p.m. (230 V, High)	rpm	1,187
Nominal output	W	31
Coil resistance (Ambient temperature 68 °F)	Ω	BRW - WHT : 111.0 , ORG - YEL : 16.7 WHT - VLT : 35.4 , BLK - PNK : 23.9 VLT - ORG : 13.4 , YEL - BLK : 136.6
Safety device		
Operating temperature	Open °F	266 ± 14.4
	Close °F	174.2 ± 27
Run capacitor	VAC, μF	440 V , 1.5 μF
Heater Ass'y (Aux. Heater)		
Model		AH - 1.8THS2432
Input (230 / 208 V)	KW	1.8 / 1.45
Protective thermostat		CS- 12AL OFF 122 ± 6°F, ON 104 ± 10°F
Thermo fuse		SF96U Cut - off 205 ± 4°F
Heat exchanger		
Coil		Aluminum plate fin / Copper tube
Rows ... Fins per inch		3 ... 14.9
Face area	$ft.^2$ (m^2)	1.81 (0.168)
Auto louver motor		
Model No.		MT8 - 3C
Auto louver motor ... Rated	V, W, rpm	240 VAC , 3 W , 3 rpm
Coil resistance (Ambient temperature 77 °F)	Ω	16,430 Ω ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.		**THH3672R**
Source		**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)		Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y		CR - TH2672
Control circuit fuse		250 V, 5 A
Fan (Number ... diameter)	in. (mm)	Centrifugal (4 ... 5-29/32(150))
Fan motor		
Model		KFG4X - 101C6P
Source		230 - 208 V / 1 phase / 60 Hz
No. of pole ... r.p.m. (230 V, High)	rpm	4 ... 1,015
Nominal output	W	100
Coil resistance (Ambient temperature 68 °F)	Ω	BRW - WHT : 61.05 , ORG - YEL : 13.23 WHT - VLT : 9.955 , YEL - BLK : 19.25 VLT - ORG : 9.576 , BLK - PNK : 10.81
Safety device		
Operating temperature	Open °F	266 ± 14.4
	Close °F	174.2 ± 27
Run capacitor	VAC, μF	440 V , 4 μF
Heater Ass'y (Aux. Heater)		
Model		AH - 2.4THS3632
Input (230 / 208 V)	KW	2.4 / 1.94
Protective thermostat		CS- 12AL OFF 122 ± 6°F, ON 104 ± 10°F
Thermo fuse		SF96U Cut - off 205 ± 4°F
Heat exchanger		
Coil		Aluminum plate fin / Copper tube
Rows ... Fins per inch		3 ... 14.9
Face area	$ft.^2$ (m^2)	3.51 (0.326)
Auto louver motor		
Model No.		MT8 - 3C
Auto louver motor ... Rated	V, W, rpm	240 VAC , 3 W , 3 rpm
Coil resistance (Ambient temperature 77 °F)	Ω	16,430 Ω ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**UH2672R**
Source			**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CR - TH2672
Control circuit fuse			250 V, 5 A
Fan (Number … diameter)	in.	(mm)	Centrifugal (4 ... 5-29/32(150))
Fan motor			
Model			KFG4X - 71B6P
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole … r.p.m. (230 V, High)		rpm	4 ... 920
Nominal output		W	100
Coil resistance (Ambient temperature 68 °F)		Ω	BRW - WHT : 74.7 , ORG - YEL : 9.59 WHT - VLT : 19.1 , YEL - BLK : 10.52 VLT - ORG : 10.5 , BLK - PNK : 21.72
Safety device			
Operating temperature	Open	°F	266 ± 14.4
	Close	°F	174.2 ± 27
Run capacitor	VAC,	μF	440 V , 5 μF
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows … Fins per inch			3 … 14.9
Face area	$ft.^2$	(m^2)	2.03 (0.189)

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**UH3672R**
Source			**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CR - TH2672
Control circuit fuse			250 V, 5 A
Fan (Number … diameter)	in.	(mm)	Centrifugal (4 ... 5-29/32(150))
Fan motor			
Model			KFG4X - 141A6P
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole ... r.p.m. (230 V, High)		rpm	4 ... 940
Nominal output		W	100
Coil resistance (Ambient temperature 68 °F)		Ω	BRW - WHT : 39.9 , ORG - YEL : 9.37 WHT - VLT : 6.91 , YEL - BLK : 8.86 VLT - ORG : 11.4 , BLK - PNK : 14.3
Safety device			
Operating temperature	Open	°F	266 ± 14.4
	Close	°F	174.2 ± 27
Run capacitor	VAC,	μF	440 V , 5 μF
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows ... Fins per inch			3 ... 12.7
Face area	$ft.^2$	(m^2)	3.32 (0.308)

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**KH2672R**
Source			**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CB - KR24GXH56A
Control circuit fuse			250 V, 5 A
Fan			Cross-flow
Number ... Dia. and length	in.	(mm)	1 ... O.D. 4-1/3 (110), L39 (990)
Fan motor			
Model			KFT4Q - 31A6P - C
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole ... r.p.m. (230 V, High)		rpm	4 ... 1,224
Nominal output		W	28.8
Coil resistance (Ambient temperature 68 °F)		Ω	BRW - WHT : 260.7 , ORG - YEL : 23.76 WHT - VLT : 42.62 , YEL - PNK : 115.9 VLT - ORG : 30.36 ,
Safety device			
Operating temperature	Open	°F	266 ± 14.4
	Close	°F	174.2 ± 26
Run capacitor	VAC,	μF	440 V , 1.8 μF
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows ... Fins per inch			2 ... 24.1
Face area	$ft.^2$	(m^2)	2.57 (0.24)

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**KH3072R**
Source			**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CR - TH2672
Control circuit fuse			250 V, 5 A
Fan			Cross-flow
Number ... Dia. and length	in.	(mm)	1 ... O.D. 4-13/18 (120), L46 (1,170)
Fan motor			
Model			SGF4Q - 41D6P
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole ... r.p.m. (230 V, High)		rpm	4 ... 1,275
Nominal output		W	50
Coil resistance (Ambient temperature 68 °F)		Ω	GRY - WHT : 125.4 , ORG - YEL : 23.93 WHT - VLT : 20.69 , YEL - PNK : 9.39 VLT - ORG : 11.31 ,
Safety device			
Operating temperature	Open	°F	266 ± 14.4
	Close	°F	174.2 ± 26
Run capacitor	VAC,	μF	440 V , 4.5 μF
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows ... Fins per inch			2 ... 12.7
Face area	$ft.^2$	(m^2)	3.23 (0.3)
Louver Motor			
Model			M2EA24ZA01
Rating			208 to 230 V, 60 Hz
No. of pole ... rpm			8 ... 3
Output		W	2.5
Coil resistance (Ambient temperature 68 °F)		kΩ	16.45 ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**KH3672R**
Source			**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CR - TH2672
Control circuit fuse			250 V, 5 A
Fan			Cross-flow
Number ... Dia. and length	in.	(mm)	1 ... O.D. 4-13/18 (120), L46 (1,170)
Fan motor			
Model			SFG4Q - 41B6P
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole ... r.p.m. (230 V, High)		rpm	4 ... 1,273
Nominal output		W	50
Coil resistance (Ambient temperature 68 °F)		Ω	GRY - WHT : 122.3 , ORG - YEL : 23.03 WHT - VLT : 15.98 , YEL - PNK : 9.272 VLT - ORG : 11.93 ,
Safety device			
Operating temperature	Open	°F	266 ± 14.4
	Close	°F	174.2 ± 26
Run capacitor	VAC,	μF	440 V , 4 μF
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows ... Fins per inch			3 ... 12.7
Face area	$ft.^2$	(m^2)	3.23 (0.3)
Louver Motor			
Model			M2EA24ZA01
Rating			208 to 230 V, 60 Hz
No. of pole ... rpm			8 ... 3
Output		W	2.5
Coil resistance (Ambient temperature 68 °F)		kΩ	16.45 ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1

1-2 Major Component Specifications

(A) Indoor Unit

MODEL No.			**KHH2672R**
Source			**230 - 208 V / 1 phase / 60 Hz**
Remote controller (Option)			Wired or Wireless (See Unit Specification)
Controller P. C. B Ass'y			CR - TH2672
Control circuit fuse			250 V, 5 A
Fan			Cross-flow
Number ... Dia. and length		in. (mm)	1 ... O.D. 4-1/3 (110), L39 (990)
Fan motor			
Model			UF4Q - 31A6P
Source			230 - 208 V / 1 phase / 60 Hz
No. of pole ... r.p.m. (230 V, High)		rpm	4 ... 1,277
Nominal output		W	30
Coil resistance (Ambient temperature 68 °F)		Ω	BRW - WHT : 197.2 , ORG - YEL : 59.1 WHT - VLT : 41.4 , YEL - PNK : 48.8 VLT - ORG : 22.2 ,
Safety device			
Operating temperature	Open	°F	248 ± 9
	Close	°F	171 ± 27
Run capacitor		VAC, μF	440 V , 1.8 μF
Heater Element (Aux. Heater)			
Model			AH - KH2412
Input (230 / 208 V)		KW	1.8 / 1.5
Protective thermostat			OFF 140 ± 5°F, ON 113 ± 9°F
Thermo fuse			Cut - off 370 + 2, - 5°F, 277V - 15A
Heat exchanger			
Coil			Aluminum plate fin / Copper tube
Rows ...			3 ... 12.7
Face area		ft.^{2} (m^2)	2.57 (0.24)
Louver Motor			
Model			M2EA24ZA01
Rating			208 to 230 V, 60 Hz
No. of pole ... rpm			8 ... 3
Output		W	2.5
Coil resistance (Ambient temperature 68 °F)		kΩ	16.45 ± 8 %

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-2 Major Component Specifications

(B) Outdoor Unit

MODEL No.			CH2672R
Source			208 - 230 V / 1 phase / 60 Hz
Controller P.C.B. Ass'y			CR-CH4872R (Microprocessor)
Control circuit fuse (on the P.C.B."FIL-CH4872R")			280 V, 25 A
Compressor			
Model....number			C-7RVN153H0V
Nominal output		W	1,500
Compressor oil		cc	650
Coil resistance (Ambient temperature 25 °C)		Ω	C – R : 0.665 R – S : 0.665 C – S : 0.665
Safety control			
Microprocessor safety devices			Compressor Discharge Gas temperature control Comressor current detection circuit
Overload protector (Operating temperature)	Open	°F (°C)	230 (110)
	Close	°F (°C)	203 (95)
Crank case heater			–
Refrigerant amount at shipment		lbs. (kg)	R410A - 4.19 (1.9)
High pressure switch			–
Set pressure	OFF	PSi	600
	ON	PSi	456
Fan			Propeller
Number.. diameter		mm	1.... ø460
Air circulation (Hi)		m^3/h	3,000
Fan speeds (Max.)			~800 rpm (Inverter drive control)
Fan motor			
Model No.			DAJ12-95B61A (-C, -CR)
Source			DC340 V / 3 phase
No. of pole			8
Nominal output		W	90
Coil resistance (Ambient temperature 20 °C)		Ω	RED – WHT : 30.5 WHT – BLK : 30.5 BLK – RED : 30.5
Safety device			
Operating temperature	Open	°F (°C)	284 (140)
	Close	°F (°C)	–
Run capacitor	VAC,	μF	–
Heat exchanger			
Coil			Aluminium plate fin / Copper tube
Rows...fin pitch		mm	1....1.6
Face area		m^2	0.675

1-2 Major Component Specifications

(B) Outdoor Unit

MODEL No.			CH3072R / CH3672R
Source			208 - 230 V / 1 phase / 60 Hz
Controller P.C.B. Ass'y			CR-CH4872R (Microprocessor)
Control circuit fuse (on the P.C.B."FIL-CH4872R")			280 V, 25 A
Compressor			
Model....number			C-7RVN153H0V
Nominal output		W	1,500
Compressor oil		cc	650
Coil resistance (Ambient temperature 25 °C)		Ω	C – R : 0.665 R – S : 0.665 C – S : 0.665
Safety control			
Microprocessor safety devices			Compressor Discharge Gas temperature control Comressor current detection circuit
Overload protector (Operating temperature)	Open	°F (°C)	230 (110)
	Close	°F (°C)	203 (95)
Crank case heater			–
Refrigerant amount at shipment		lbs. (kg)	R410A - 5.73 (2.6) / 6.17 (2.8)
High pressure switch			–
Set pressure	OFF	PSi	600
	ON	PSi	456
Fan			Propeller
Number.. diameter		mm	1.... ø460
Air circulation (Hi)		m^3/h	3,300
Fan speeds (Max.)			~830 rpm (Inverter drive control)
Fan motor			
Model No.			DAJ12-95B61A (-C, -CR)
Source			DC340 V / 3 phase
No. of pole			8
Nominal output		W	90
Coil resistance (Ambient temperature 20 °C)		Ω	RED – WHT : 30.5 WHT – BLK : 30.5 BLK – RED : 30.5
Safety device			
Operating temperature	Open	°F (°C)	284 (140)
	Close	°F (°C)	–
Run capacitor	VAC,	μF	–
Heat exchanger			
Coil			Aluminium plate fin / Copper tube
Rows.…fin pitch		mm	2....1.8
Face area		m^2	0.675

1-2 Major Component Specifications

(B) Outdoor Unit

MODEL No.			CH4272R
Source			208 - 230 V / 1 phase / 60 Hz
Controller P.C.B. Ass'y			CR-CH4872R (Microprocessor)
Control circuit fuse (on the P.C.B."FIL-CH4872R")			280 V, 25 A
Compressor			
Model....number			C-9RVN273H0W
Nominal output		W	2,700
Compressor oil		cc	1,900
Coil resistance (Ambient temperature 25 °C)		Ω	C – R : 0.169 R – S :0.169 C – S :0.169
Safety control			
Microprocessor safety devices			Compressor Discharge Gas temperature control Comressor current detection circuit
Overload protector (Operating temperature)	Open	°F (°C)	230 (110)
	Close	°F (°C)	203 (95)
Crank case heater			–
Refrigerant amount at shipment		lbs. (kg)	R410A - 7.94 (3.6)
High pressure switch			–
Set pressure	OFF	PSi	600
	ON	PSi	456
Fan			Propeller
Number.. diameter		mm	2.... ø460
Air circulation (Hi)		m^3/h	6,000
Fan speeds (Max.)			~830 rpm (Inverter drive control)
Fan motor			
Model No.			DAJ12-95B61A, B (-C, -CR)
Source			DC340 V / 3 phase
No. of pole			8
Nominal output		W	90
Coil resistance (Ambient temperature 20 °C)		Ω	RED – WHT : 30.5 WHT – BLK : 30.5 BLK – RED : 30.5
Safety device			
Operating temperature	Open	°F (°C)	284 (140)
	Close	°F (°C)	–
Run capacitor	VAC,	μF	–
Heat exchanger			
Coil			Aluminium plate fin / Copper tube
Rows.…fin pitch		mm	2.…2.0
Face area		m^2	1.080

1-2 Major Component Specifications

(B) Outdoor Unit

MODEL No.			C2672R
Source			208 - 230 V / 1 phase / 60 Hz
Controller P.C.B. Ass'y			CR-CH4872R (Microprocessor)
Control circuit fuse (on the P.C.B."FIL-CH4872R")			280 V, 25 A
Compressor			
Model....number			C-7RVN153H0V
Nominal output		W	1,500
Compressor oil		cc	650
Coil resistance (Ambient temperature 25 °C)		Ω	C – R : 0.665 R – S : 0.665 C – S : 0.665
Safety control			
Microprocessor safety devices			Compressor Discharge Gas temperature control Comressor current detection circuit
Overload protector (Operating temperature)	Open	°F (°C)	230 (110)
	Close	°F (°C)	203 (95)
Crank case heater			–
Refrigerant amount at shipment		lbs. (kg)	R410A - 4.19 (1.9)
High pressure switch			–
Set pressure	OFF	PSi	600
	ON	PSi	456
Fan			Propeller
Number.. diameter		mm	1.... ø460
Air circulation (Hi)		m^3/h	3,000
Fan speeds (Max.)			~800 rpm (Inverter drive control)
Fan motor			
Model No.			DAJ12-95B61A (-C, -CR)
Source			DC340 V / 3 phase
No. of pole			8
Nominal output		W	90
Coil resistance (Ambient temperature 20 °C)		Ω	RED – WHT : 30.5 WHT – BLK : 30.5 BLK – RED : 30.5
Safety device			
Operating temperature	Open	°F (°C)	284 (140)
	Close	°F (°C)	–
Run capacitor	VAC,	μF	–
Heat exchanger			
Coil			Aluminium plate fin / Copper tube
Rows....fin pitch		mm	1....1.6
Face area		m^2	0.675

1-2 Major Component Specifications

(B) Outdoor Unit

MODEL No.			C3072R / C3672R
Source			208 - 230 V / 1 phase / 60 Hz
Controller P.C.B. Ass'y			CR-CH4872R (Microprocessor)
Control circuit fuse (on the P.C.B."FIL-CH4872R")			280 V, 25 A
Compressor			
Model....number			C-7RVN153H0V
Nominal output		W	1,500
Compressor oil		cc	650
Coil resistance (Ambient temperature 25 °C)		Ω	C – R : 0.665 R – S : 0.665 C – S : 0.665
Safety control			
Microprocessor safety devices			Compressor Discharge Gas temperature control Comressor current detection circuit
Overload protector (Operating temperature)	Open	°F (°C)	230 (110)
	Close	°F (°C)	203 (95)
Crank case heater			–
Refrigerant amount at shipment		lbs. (kg)	R410A - 5.73 (2.6) / 6.17 (2.8)
High pressure switch			–
Set pressure	OFF	PSi	600
	ON	PSi	456
Fan			Propeller
Number.. diameter		mm	1.... ø460
Air circulation (Hi)		m^3/h	3,300
Fan speeds (Max.)			~830 rpm (Inverter drive control)
Fan motor			
Model No.			DAJ12-95B61A (-C, -CR)
Source			DC340 V / 3 phase
No. of pole			8
Nominal output		W	90
Coil resistance (Ambient temperature 20 °C)		Ω	RED – WHT : 30.5 WHT – BLK : 30.5 BLK – RED : 30.5
Safety device			
Operating temperature	Open	°F (°C)	284 (140)
	Close	°F (°C)	–
Run capacitor	VAC,	μF	–
Heat exchanger			
Coil			Aluminium plate fin / Copper tube
Rows...fin pitch		mm	2....1.8
Face area		m^2	0.675

1-2 Major Component Specifications

(B) Outdoor Unit

MODEL No.			C4272R
Source			208 - 230 V / 1 phase / 60 Hz
Controller P.C.B. Ass'y			CR-CH4872R (Microprocessor)
Control circuit fuse (on the P.C.B."FIL-CH4872R")			280 V, 25 A
Compressor			
Model....number			C-9RVN273H0W
Nominal output		W	2,700
Compressor oil		cc	1,900
Coil resistance (Ambient temperature 25 °C)		Ω	C – R : 0.169 R – S :0.169 C – S :0.169
Safety control			
Microprocessor safety devices			Compressor Discharge Gas temperature control Comressor current detection circuit
Overload protector (Operating temperature)	Open	°F (°C)	230 (110)
	Close	°F (°C)	203 (95)
Crank case heater			–
Refrigerant amount at shipment		lbs. (kg)	R410A - 7.94 (3.6)
High pressure switch			–
Set pressure	OFF	PSi	600
	ON	PSi	456
Fan			Propeller
Number.. diameter		mm	2.... ø460
Air circulation (Hi)		m^3/h	6,000
Fan speeds (Max.)			~830 rpm (Inverter drive control)
Fan motor			
Model No.			DAJ12-95B61A, B (-C, -CR)
Source			DC340 V / 3 phase
No. of pole			8
Nominal output		W	90
Coil resistance (Ambient temperature 20 °C)		Ω	RED – WHT : 30.5 WHT – BLK : 30.5 BLK – RED : 30.5
Safety device			
Operating temperature	Open	°F (°C)	284 (140)
	Close	°F (°C)	–
Run capacitor	VAC,	μF	–
Heat exchanger			
Coil			Aluminium plate fin / Copper tube
Rows….fin pitch		mm	2….2.0
Face area		m^2	1.080

1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			XH2672R
Power Transformer			ATR – IIK224A
Rated	Primary		220 VAC, 60 Hz
	Secondary		BRN - BRN : 14 V, 0.45 A, RED - RED : 14 V, 0.3 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 61.0 , RED - RED : 1.37 BRN - BRN : 0.97 , ORG - ORG : 3.16
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor) : TH2, 3			PBC - 41E - S14
Coil resistance		kΩ	14 °F : 23.7 , 41 °F : 12.1 23 °F : 18.8 , 50 °F : 9.7 32 °F : 15.0 , 59 °F : 8.0
Thermistor (Room sensor) : TH1			KTEC - 35 - S6
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,
Drain pump			PJV - 1428AU
Rated			230 / 208 VAC, 12.5 W
Float switch			FS - 0218 - 102
MAX Rated (Contact rated)			50 W, DC 5V, 0.1 mA
Synchronized Motor			MT8 - 3C

1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			XH3672R
Power Transformer			ATR – IIK224A
Rated	Primary		220 VAC, 60 Hz
	Secondary		BRN - BRN : 14 V, 0.45 A, RED - RED : 14 V, 0.3 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 61.0 , RED - RED : 1.37 BRN - BRN : 0.97 , ORG - ORG : 3.16
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor) : TH2, 3			PBC - 41E - S14
Coil resistance		kΩ	14 °F : 23.7 , 41 °F : 12.1 23 °F : 18.8 , 50 °F : 9.7 32 °F : 15.0 , 59 °F : 8.0
Thermistor (Room sensor) : TH1			KTEC - 35 - S6
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,
Drain pump			PJV - 1428AU
Rated			230 / 208 VAC, 12.5 W
Float switch			FS - 0218 - 102
MAX Rated (Contact rated)			50 W, DC 5V, 0.1 mA
Synchronized Motor			MT8 - 3C

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			XH4272R
Power Transformer			ATR – IIK224A
Rated		Primary	220 VAC, 60 Hz
		Secondary	BRN - BRN : 14 V, 0.45 A, RED - RED : 14 V, 0.3 A
		Capacity	—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 61.0 , RED - RED : 1.37 BRN - BRN : 0.97 , ORG - ORG : 3.16
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor) : TH2, 3			PBC - 41E - S14
Coil resistance		kΩ	14 °F : 23.7 , 41 °F : 12.1 23 °F : 18.8 , 50 °F : 9.7 32 °F : 15.0 , 59 °F : 8.0
Thermistor (Room sensor) : TH1			KTEC - 35 - S6
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,
Drain pump			PJV - 1428AU
Rated			230 / 208 VAC, 12.5 W
Float switch			FS - 0218 - 102
MAX Rated (Contact rated)			50 W, DC 5V, 0.1 mA
Synchronized Motor			MT8 - 3C

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			TH2672R
Power Transformer			ATR – IIK244B
Rated	Primary		AC 220 V, 60 Hz
	Secondary		BRN - BRN : 14 V / 0.55 A, RED - RED : 14 V / 0.3 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 48.0 , RED - RED : 0.89 BRN - BRN : 0.45 , ORG - ORG : 2.05
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S14
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			PBC - 41E - S14
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,
Synchronized Motor			MT8 - 3C

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1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			TH3672R
Power Transformer			ATR – IIK244B
Rated	Primary		AC 220 V, 60 Hz
	Secondary		BRN - BRN : 14 V / 0.55 A, RED - RED : 14 V / 0.55 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 48.0 , RED - RED : 0.89 BRN - BRN : 0.45 , ORG - ORG : 2.05
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S14
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			PBC - 41E - S42
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,
Synchronized Motor			MT8 - 3C

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1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			TH4272R
Power Transformer			ATR – IIK244B
Rated	Primary		AC 220 V, 60 Hz
	Secondary		BRN - BRN : 14 V / 0.55 A, RED - RED : 14 V / 0.3 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 48.0 , RED - RED : 0.89 BRN - BRN : 0.45 , ORG - ORG : 2.05
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S14
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			KTEC - 35 - S6
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,
Synchronized Motor			MT8 - 3C

DATA SUBJECT TO CHANGE WITHOUT NOTICE

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1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			THH2672R
Power Transformer			ATR – IIK244B
Rated		Primary	AC 220 V, 60 Hz
		Secondary	BRN - BRN : 14 V / 0.55 A, RED - RED : 14 V / 0.3 A
		Capacity	—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 48.0 , RED - RED : 0.89 BRN - BRN : 0.45 , ORG - ORG : 2.05
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S14
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			PBC - 41E - S14
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,
Synchronized Motor			MT8 - 3C

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1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			THH3672R
Power Transformer			ATR – IIK244B
Rated	Primary		AC 220 V, 60 Hz
	Secondary		BRN - BRN : 14 V / 0.55 A, RED - RED : 14 V / 0.55 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 48.0 , RED - RED : 0.89 BRN - BRN : 0.45 , ORG - ORG : 2.05
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S14
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			PBC - 41E - S42
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,
Synchronized Motor			MT8 - 3C

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1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			UH2672R
Power Transformer			ATR – IIK244B
Rated	Primary		AC 220 V, 60 Hz
	Secondary		BRN - BRN : 14 V / 0.55 A, RED - RED : 14 V / 0.3 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 48.0 , RED - RED : 0.89 BRN - BRN : 0.45 , ORG - ORG : 2.05
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S36
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			KTEC - 35 - S42
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,

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1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			UH3672R
Power Transformer			ATR – IIK244B
Rated	Primary		AC 220 V, 60 Hz
	Secondary		BRN - BRN : 14 V / 0.55 A, RED - RED : 14 V / 0.3 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 48.0 , RED - RED : 0.89 BRN - BRN : 0.45 , ORG - ORG : 2.05
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S36
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			KTEC - 35 - S85
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,

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1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			KH2672R
Power Transformer			ATR – IIK244D – R
Rated	Primary		AC 230 V, 60 Hz
	Secondary		BRN - BRN : 11 V / 1.25 A, RED - RED : 14 V / 0.45 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 78.5 , RED - RED : 1.95 BRN - BRN : 0.42 , ORG - ORG : 6.11
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S4
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			KTEC - 35 - S6
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			KH3072R
Power Transformer			ATR – IIK244B
Rated	Primary		AC 220 V, 60 Hz
	Secondary		BRN - BRN : 14 V / 0.55 A, RED - RED : 14 V / 0.3 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 48.0 , RED - RED : 0.89 BRN - BRN : 0.45 , ORG - ORG : 2.05
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S4
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			KTEC - 35 - S6
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,
Switch Assy's			SW - KHS2432
Synchronized Motor			M2EA24ZA01

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1-3 Other Component Specifications

(A) Indoor Unit

MODEL No.			KHH2672R
Power Transformer			ATR – IIK244B
Rated	Primary		AC 220 V, 60 Hz
	Secondary		BRN - BRN : 14 V / 0.55 A, RED - RED : 14 V / 0.3 A
	Capacity		—
Coil resistance (Ambient temprature 77 °F)		Ω	WHT - WHT : 48.0 , RED - RED : 0.89 BRN - BRN : 0.45 , ORG - ORG : 2.05
Thermistor cut off temperature		°F	277
Thermistor (Coil sensor)			PBC - 41E - S4
Coil resistance		kΩ	14 °F : 23.7 , 59 °F : 8.0 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 50 °F : 9.7 , 113 °F : 2.6
Thermistor (Room or coil sensor)			KTEC - 35 - S6
Coil resistance		kΩ	32 °F : 16.5 , 104 °F : 2.7 41 °F : 12.8 , 113 °F : 2.2 50 °F : 10.0 , 122 °F : 1.8 68 °F : 6.3 , 131 °F : 1.5 86 °F : 4.0 ,

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1-3 Other Component Specifications

(B) Outdoor Unit

MODEL No.		CH2672R, C2672R		
Thermistor (Coil sensor) : TH2 to 5				
Coil resistance	kΩ	14 °F : 23.7 23 °F : 18.8 32 °F : 15.0 41 °F : 12.1	, , , ,	50 °F : 9.7 68 °F : 6.5 86 °F : 4.4 104 °F : 3.1 113 °F : 2.6
Thermistor (Comp. discharge gas sensor) : TH6				
Coil resistance	kΩ	140 °F : 13.8 158 °F : 9.7 167 °F : 8.2 176 °F : 7.0 185 °F : 5.9	, , , , ,	194 °F : 5.1 212 °F : 3.8 230 °F : 2.8 248 °F : 2.2 266 °F : 1.7
Solenoid coil or 4 way valve				
4 way valve		STF - 02UG		
Solenoid coil		STF - 01AQ503UA1 (Heat pump model only)		
Electric expansion valve (MOV)				
Valve		UKV - 18D13		
Coil		UKV - U013E		

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1

1-3 Other Component Specifications

(B) Outdoor Unit

MODEL No.		CH3072R, C3072R, CH3672R, C3672R
Thermistor (Coil sensor) : TH2 to 5		
Coil resistance	kΩ	14 °F : 23.7 , 50 °F : 9.7 23 °F : 18.8 , 68 °F : 6.5 32 °F : 15.0 , 86 °F : 4.4 41 °F : 12.1 , 104 °F : 3.1 113 °F : 2.6
Thermistor (Comp. discharge gas sensor) : TH6		
Coil resistance	kΩ	140 °F : 13.8 , 194 °F : 5.1 158 °F : 9.7 , 212 °F : 3.8 167 °F : 8.2 , 230 °F : 2.8 176 °F : 7.0 , 248 °F : 2.2 185 °F : 5.9 , 266 °F : 1.7
Solenoid coil or 4 way valve		
4 way valve		STF - 02U2G
Solenoid coil		STF - 01AQ503UA1 (Heat pump models only)
Electric expansion valve (MOV)		
Valve		UKV - 18D13
Coil		UKV - U013E

DATA SUBJECT TO CHANGE WITHOUT NOTICE

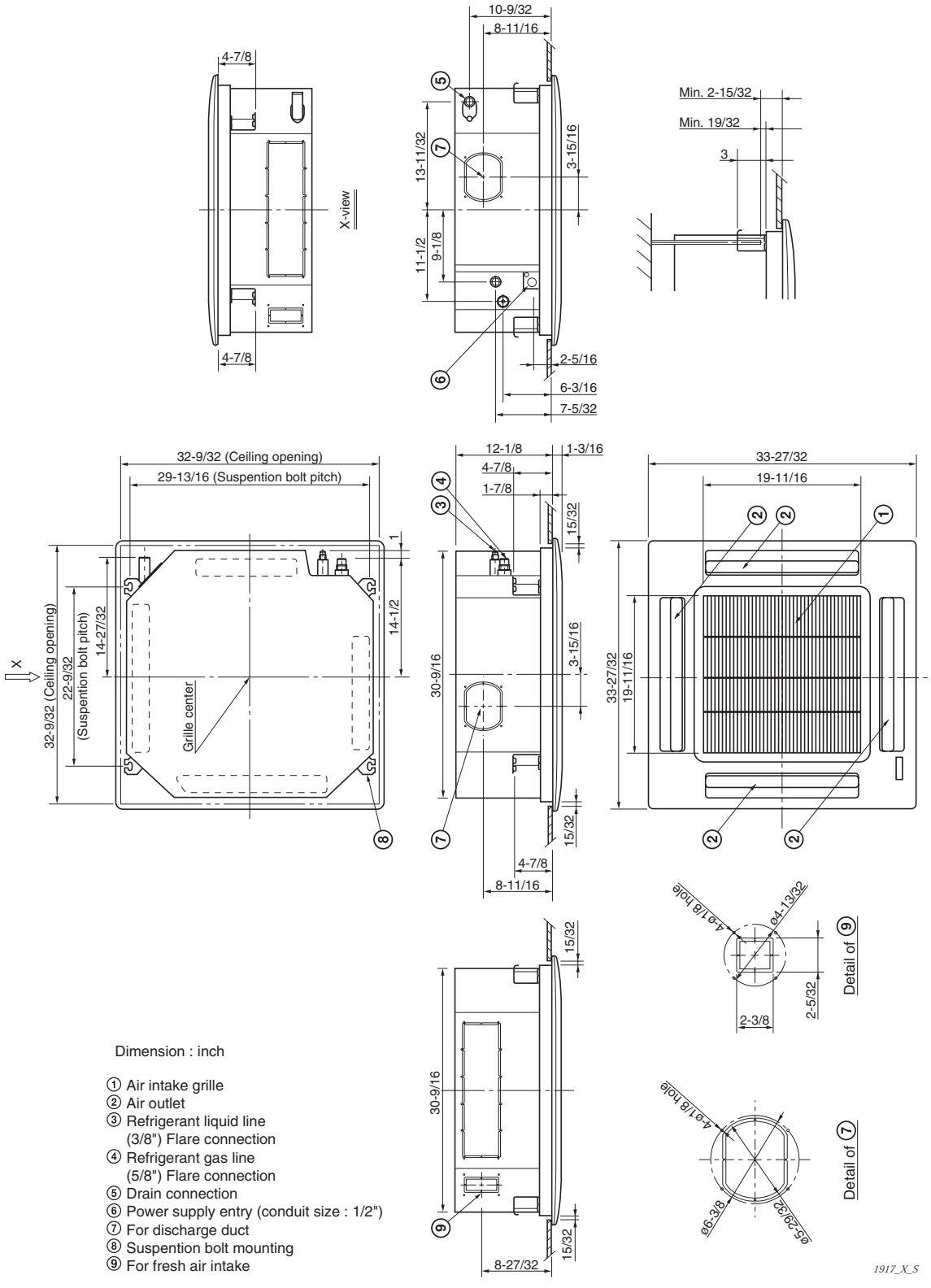
MODEL No.		CH4272R, C4272R		
Thermistor (Coil sensor) : TH2 to 5				
Coil resistance	kΩ	14 °F : 23.7 23 °F : 18.8 32 °F : 15.0 41 °F : 12.1	, , ,	50 °F : 9.7 68 °F : 6.5 86 °F : 4.4 104 °F : 3.1 113 °F : 2.6
Thermistor (Comp. discharge gas sensor) : TH6				
Coil resistance	kΩ	140 °F : 13.8 158 °F : 9.7 167 °F : 8.2 176 °F : 7.0 185 °F : 5.9	, , , , ,	194 °F : 5.1 212 °F : 3.8 230 °F : 2.8 248 °F : 2.2 266 °F : 1.7
Solenoid coil or 4 way valve				
4 way valve		STF - 04U1G		
Solenoid coil		STF - 01AQ503UA1 (Heat pump model only)		
Electric expansion valve (MOV)				
Valve		UKV - 25D		
Coil		UKV - U013E		

DATA SUBJECT TO CHANGE WITHOUT NOTICE

1

1-4 Dimensional data

Indoor unit : 4-Way Air Discharge Semi-concealed Type 26 Type

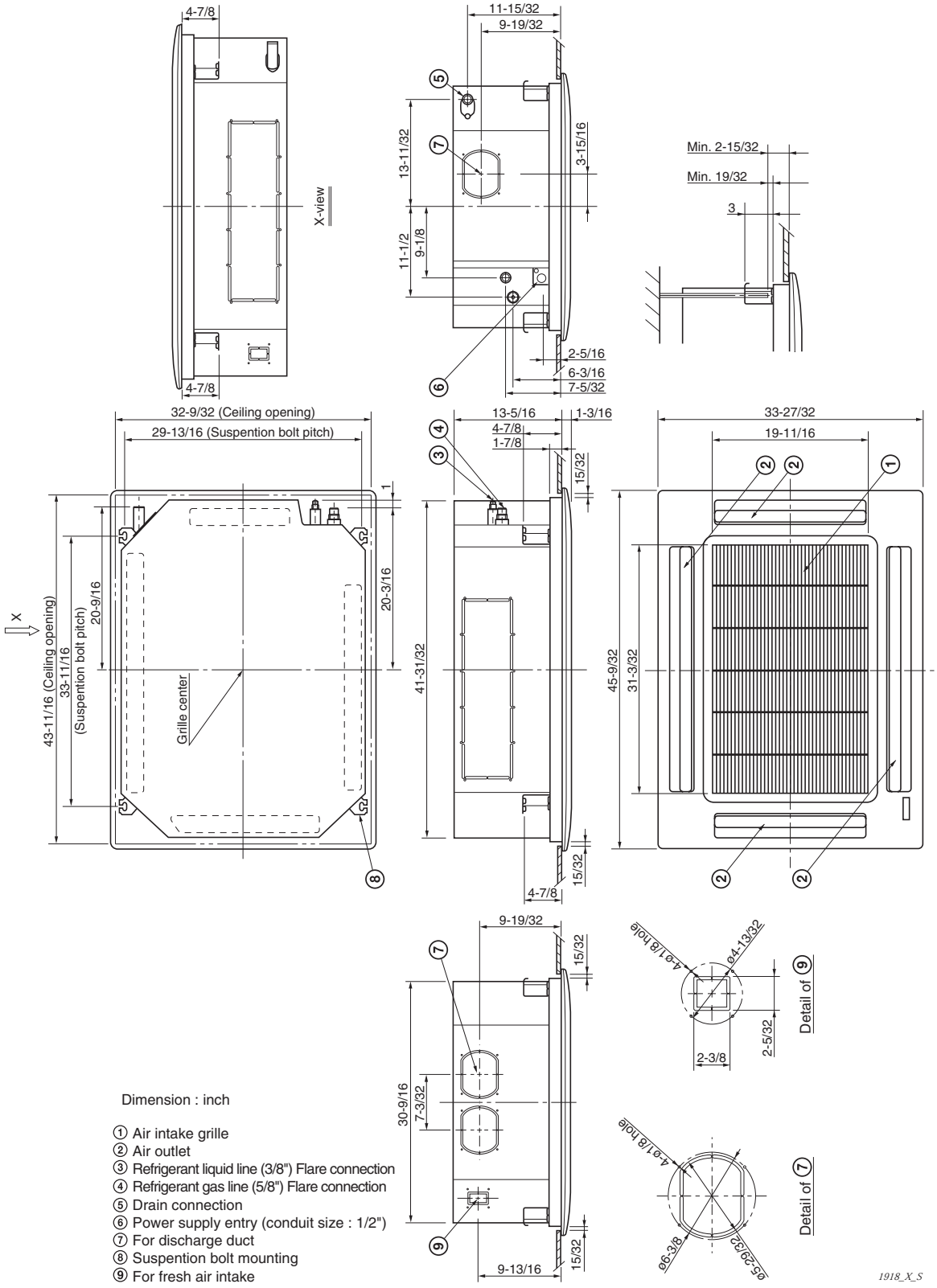


Dimension : inch

① Air intake grille
② Air outlet
③ Refrigerant liquid line (3/8") Flare connection
④ Refrigerant gas line (5/8") Flare connection
⑤ Drain connection
⑥ Power supply entry (conduit size : 1/2")
⑦ For discharge duct
⑧ Suspention bolt mounting
⑨ For fresh air intake

1-4 Dimensional data

Indoor unit : 4-Way Air Discharge Semi-concealed Type
36, 42Type

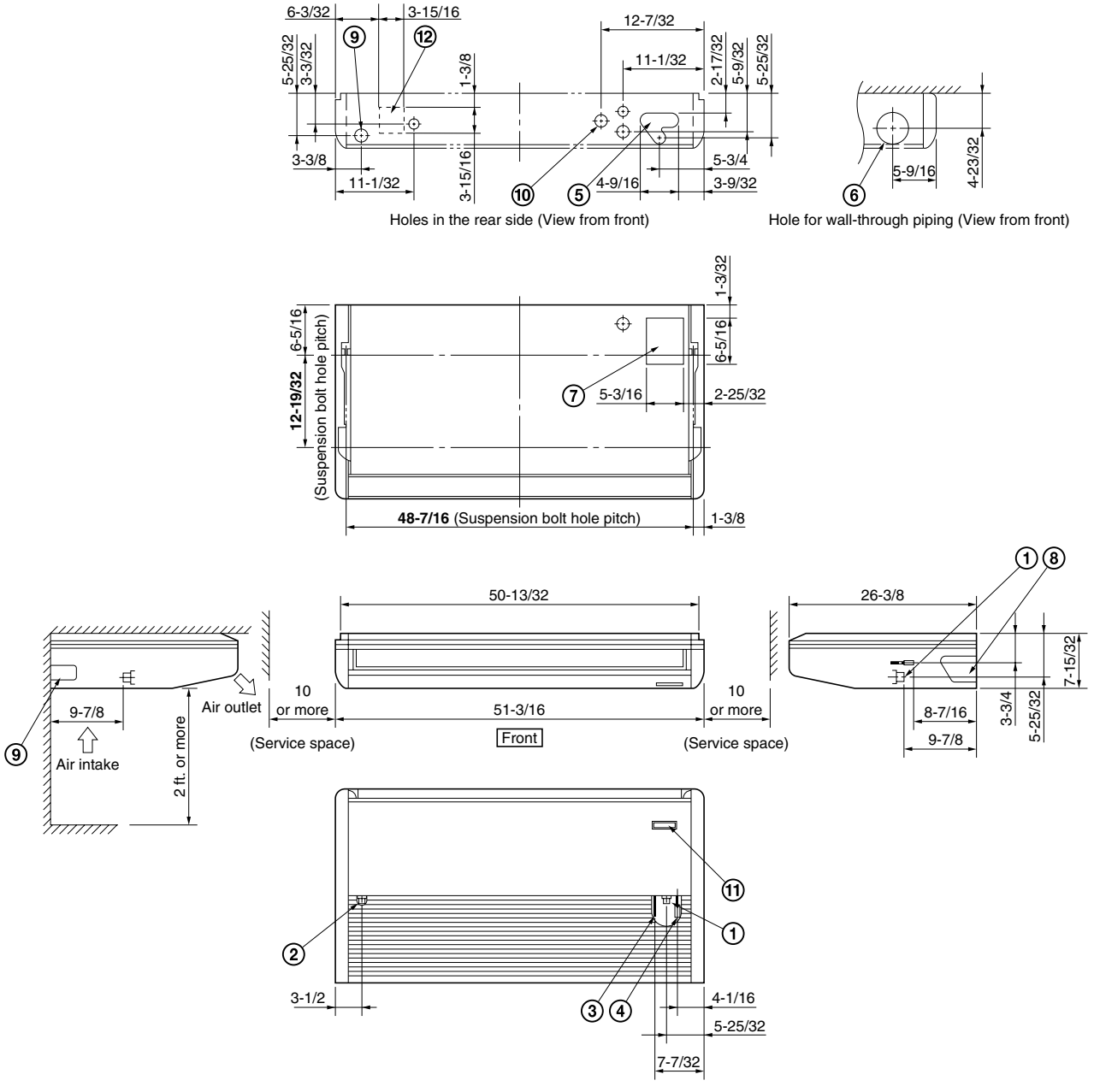


Dimension : inch

① Air intake grille
② Air outlet
③ Refrigerant liquid line (3/8") Flare connection
④ Refrigerant gas line (5/8") Flare connection
⑤ Drain connection
⑥ Power supply entry (conduit size : 1/2")
⑦ For discharge duct
⑧ Suspention bolt mounting
⑨ For fresh air intake

1-4 Dimensional data

Indoor unit : Ceiling Mounted Type
26 Type



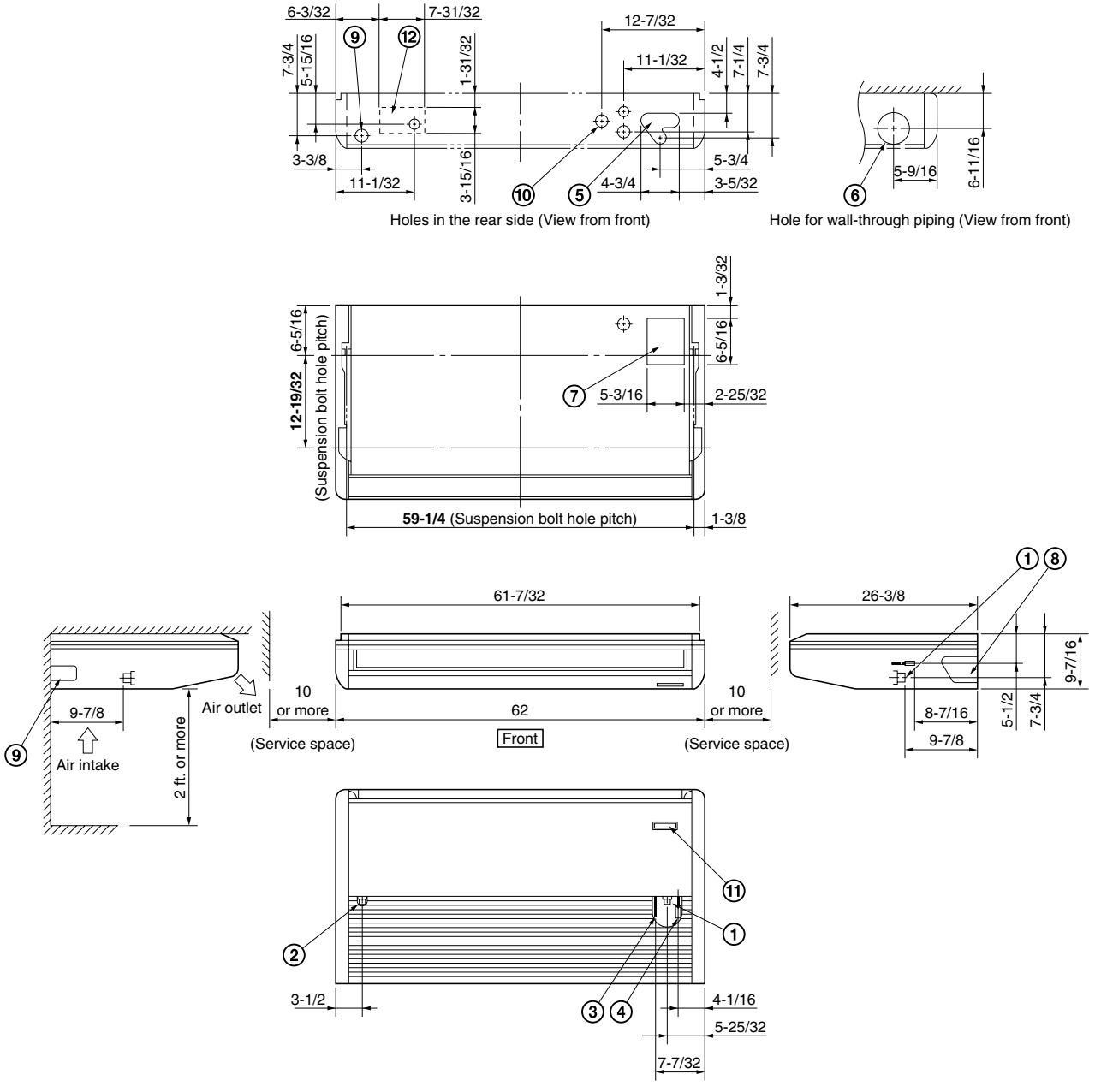
Dimension : inch

① Drain connection
② Drain connection for left side
③ Refrigerant liquid line (3/8") Flare connection
④ Refrigerant gas line (5/8") Flare connection
⑤ Hole for rear side refrigerant tubing
⑥ Hole for through-the-wall refrigerant tubing (ø3-15/16" hole)
⑦ Hole for fresh air intake (Knockout hole)
⑧ Hole for right side refrigerant tubing (Knockout hole)
⑨ Hole for left side drain connection (Knockout hole)
⑩ Hole for power supply (Conduit size 1/2")
⑪ Infrared rays receiver for wireless remote controller
⑫ Cutting position for fresh air intake

1919_THS_1

1-4 Dimensional data

Indoor unit : Ceiling Mounted Type
36, 42 Type



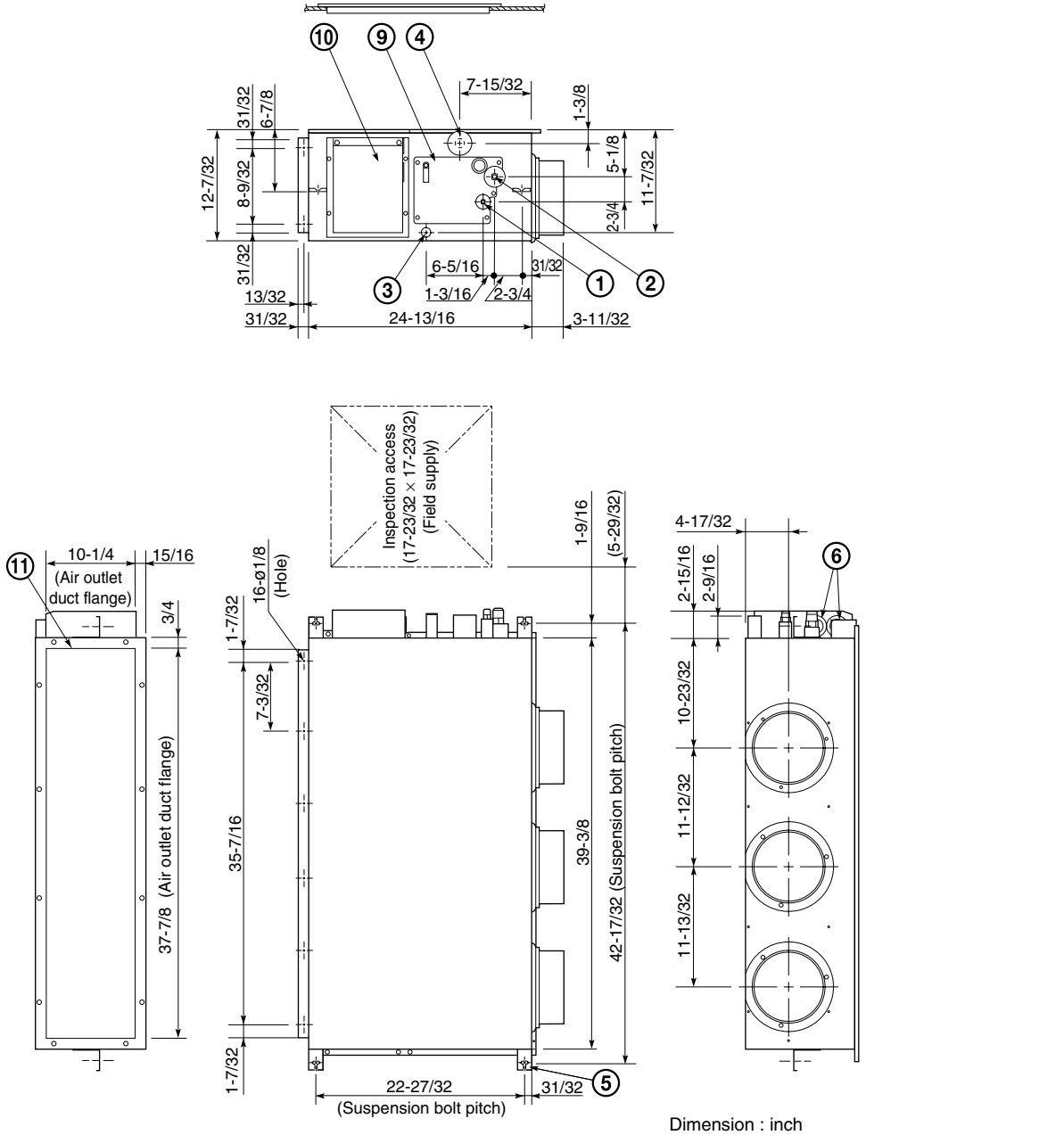
Dimension : inch

① Drain connection
② Drain connection for left side
③ Refrigerant liquid line (3/8") Flare connection
④ Refrigerant gas line (5/8") Flare connection
⑤ Hole for rear side refrigerant tubing
⑥ Hole for through-the-wall refrigerant tubing (ø3-15/16" hole)
⑦ Hole for fresh air intake (Knockout hole)
⑧ Hole for right side refrigerant tubing (Knockout hole)
⑨ Hole for left side drain connection (Knockout hole)
⑩ Hole for power supply (Conduit size 1/2")
⑪ Infrared rays receiver for wireless remote controller
⑫ Cutting position for fresh air intake

1920_TS_I

1-4 Dimensional data

Indoor unit : Concealed Duct Type
26 Type



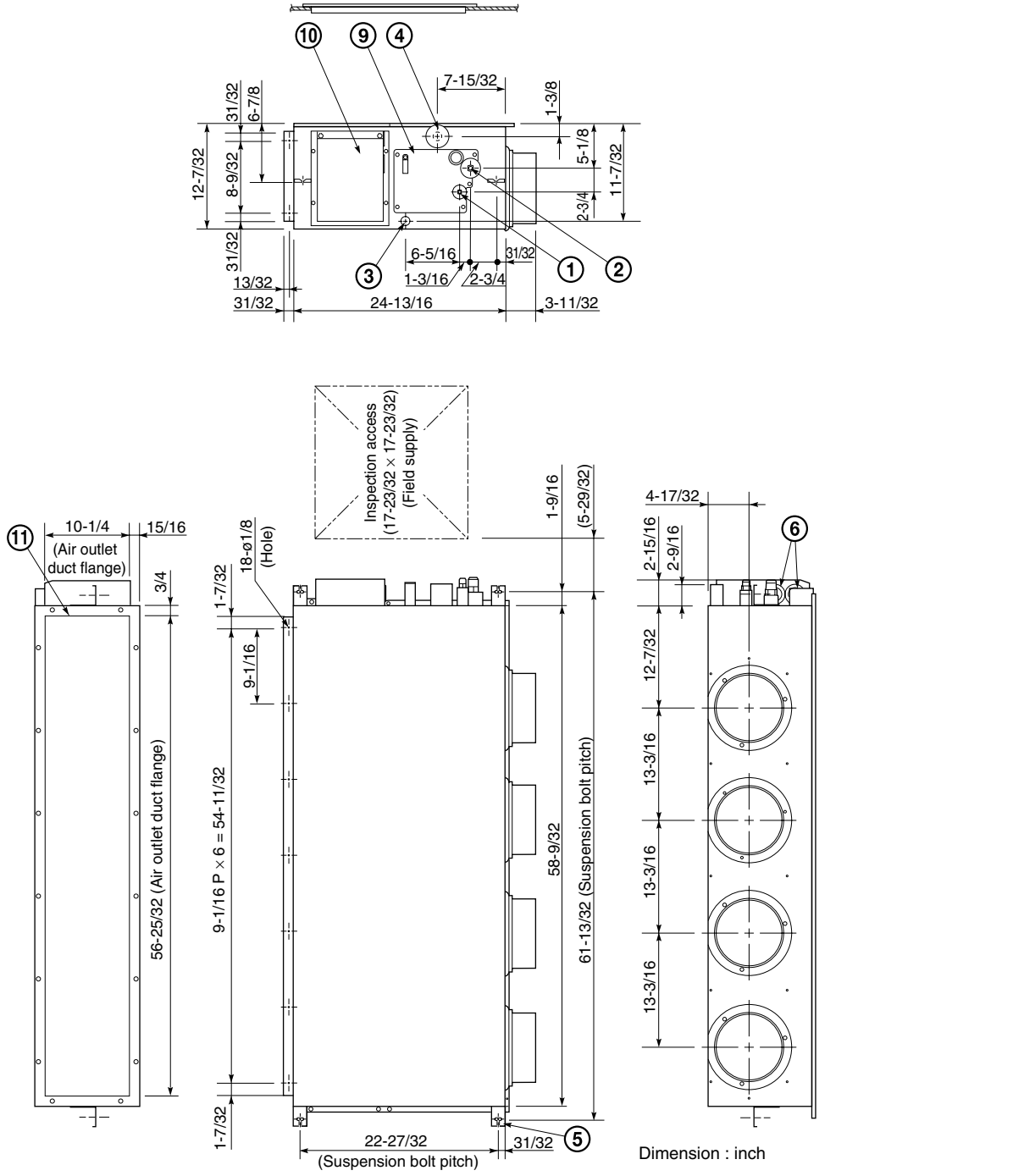
Dimension : inch

① Refrigerant liquid line (3/8") Flare connection
② Refrigerant gas line (5/8") Flare connection
③ Upper drain port (O.D. 1-1/4)
④ Bottom drain port (O.D. 1-1/32)
⑤ Suspension lug
⑥ Power supply inlet (conduit size 1/2")
⑦ Fresh air intake port (ø5-29/32)
⑧ Flange for the flexible air outlet duct (ø7-7/8)
⑨ Tube cover
⑩ Electrical component box
⑪ Flange for the air intake duct
(option or field supply)

1914_U_I

1-4 Dimensional data

Indoor unit : Concealed Duct Type
36 Type



Dimension : inch

① Refrigerant liquid line (3/8") Flare connection
② Refrigerant gas line (5/8") Flare connection
③ Upper drain port (O.D. 1-1/4)
④ Bottom drain port (O.D. 1-1/32)
⑤ Suspension lug
⑥ Power supply inlet (conduit size 1/2")
⑦ Fresh air intake port (ø5-29/32)
⑧ Flange for the flexible air outlet duct (ø7-7/8)
⑨ Tube cover
⑩ Electrical component box
⑪ Flange for the air intake duct
(option or field supply)

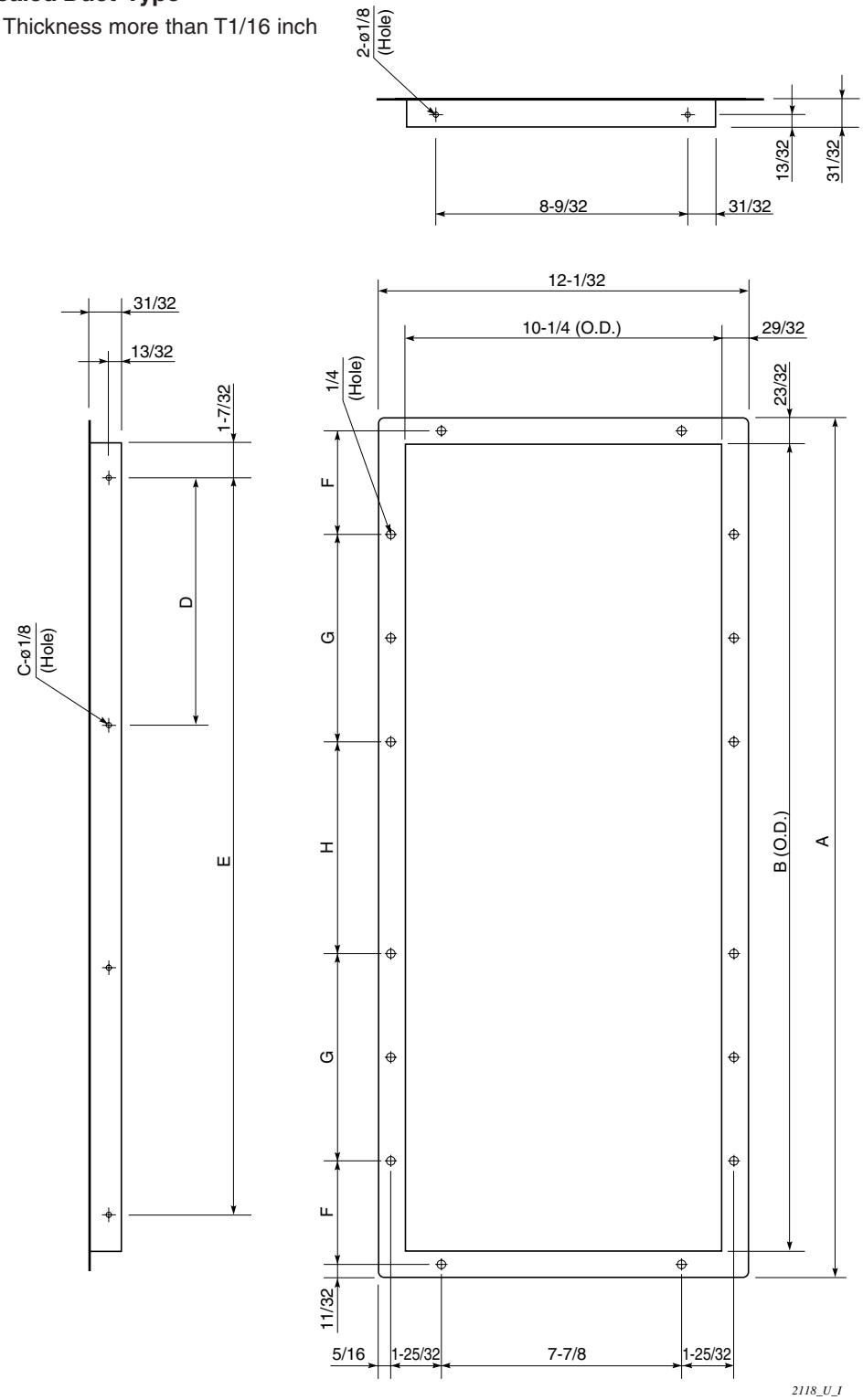
1915_U_I

1-4 Dimensional data

Indoor unit : Concealed Duct Type

■ **Flange for the air intake duct (Field supply)**
: For Concealed Duct Type

Thickness more than T1/16 inch



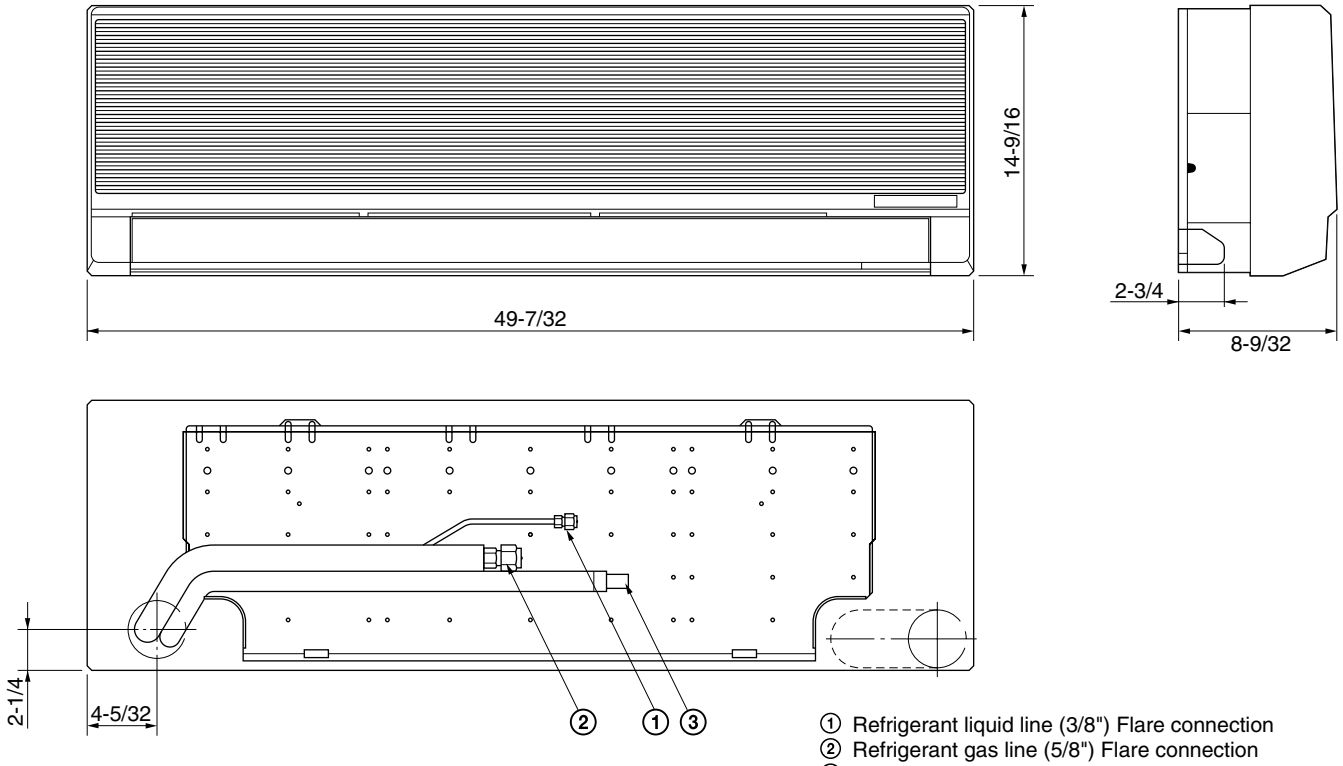
(inch)

	A	B	C*	D	E	F	G	H	I
26 type	39-9/32	37-7/8	5	7-3/32	5 × 7-3/32 = 35-7/16	4-23/32	9-21/32 (9-21/32 × 1)	9-27/32	5/8
36 type	58-3/16	56-25/32	6	9-1/16	6 × 9-1/16 = 54-11/32	4-23/32	19-9/32 (9-21/32 × 2)	9-7/16	25/32

* ø 1/8 Number of holes

1-4 Dimensional data

Indoor unit : Wall Mounted Type
KHH2672R

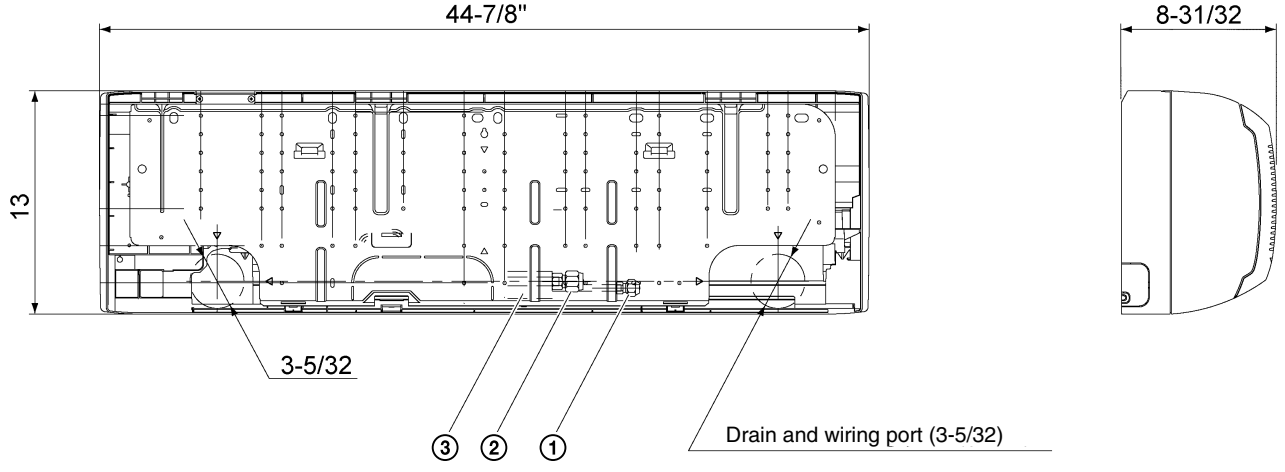


① Refrigerant liquid line (3/8") Flare connection
② Refrigerant gas line (5/8") Flare connection
③ Drain hose OD 1-1/4

Dimension : inch

1911_X_S

Indoor unit : Wall Mounted Type
KH2672R

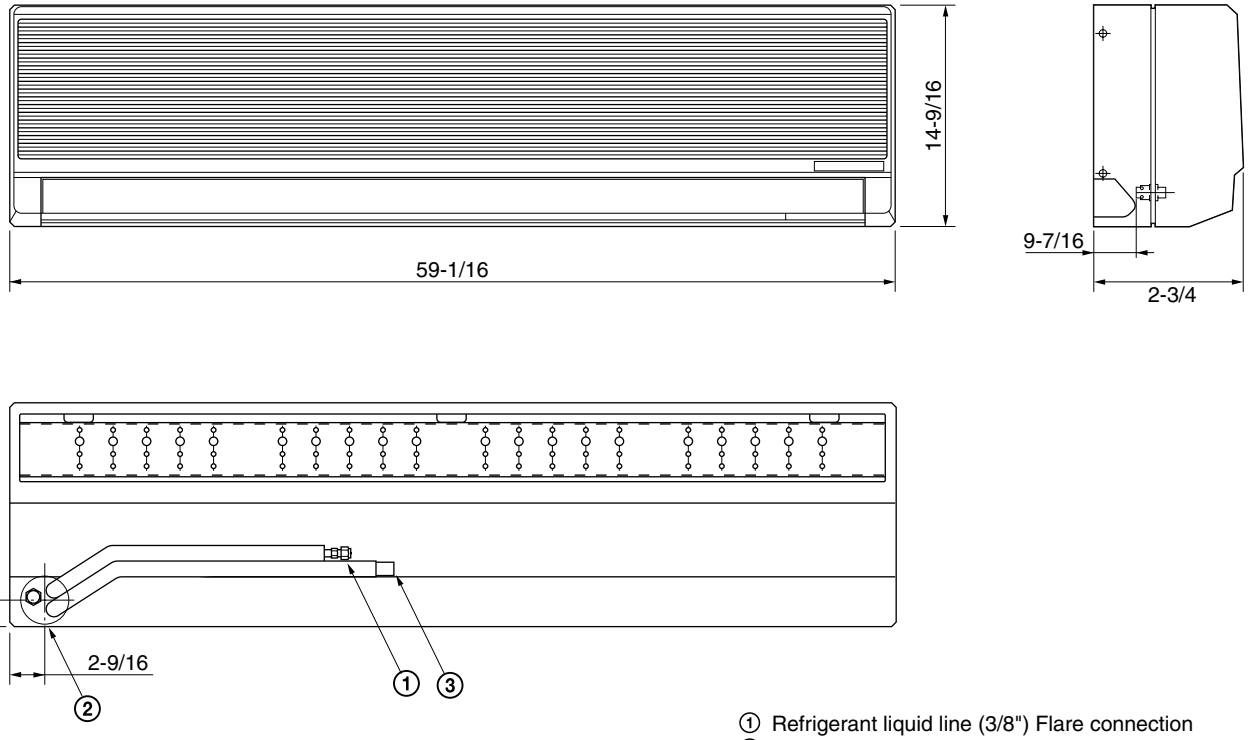


① Refrigerant liquid line (3/8") Flare connection
② Refrigerant gas line (5/8") Flare connection
③ Drain hose OD 45/64

Dimension : inch

1-4 Dimensional data

Indoor unit : Wall Mounted Type
30, 36 Type



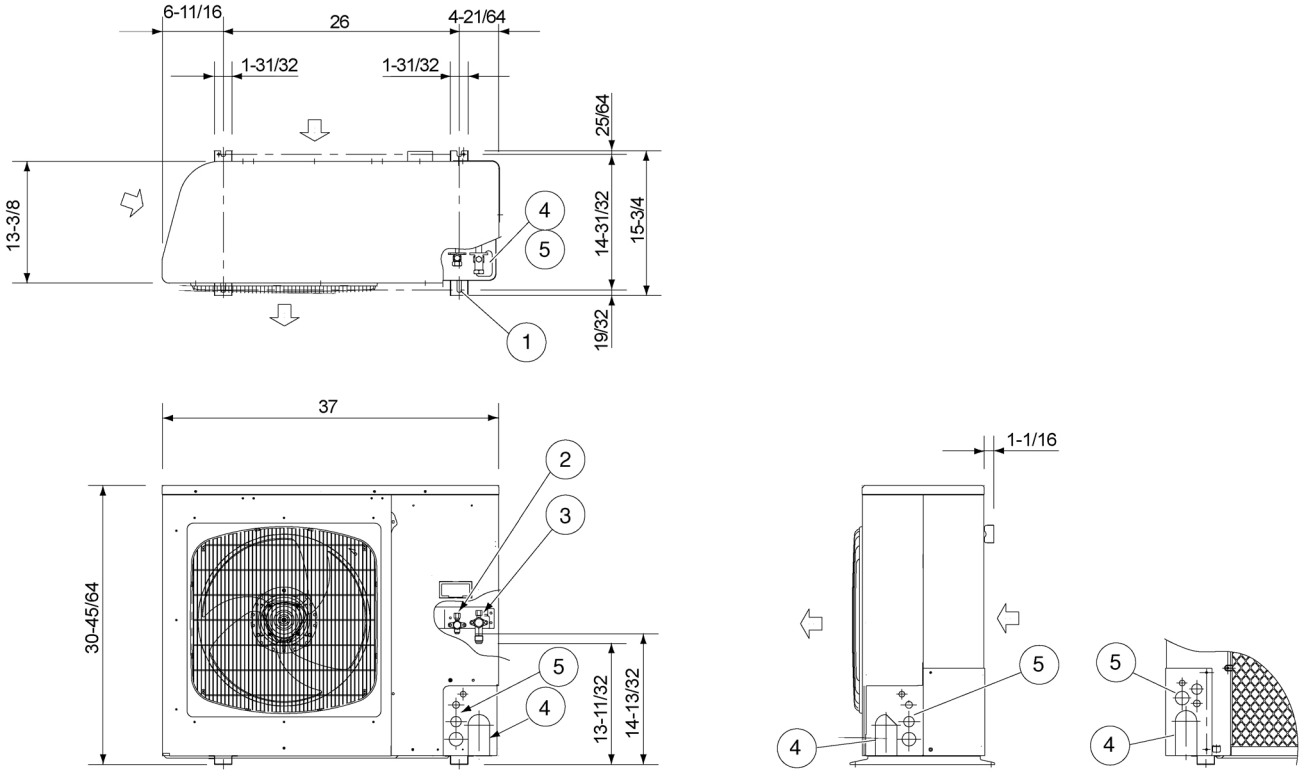
① Refrigerant liquid line (3/8") Flare connection
② Refrigerant gas line (5/8") Flare connection
③ Drain hose OD 1-1/4

Dimension : inch

1912_X_S

1-4 Dimensional Data

(B) Outdoor Unit: CH2672R, C2672R
CH3072R, C3072R
CH3672R, C3672R

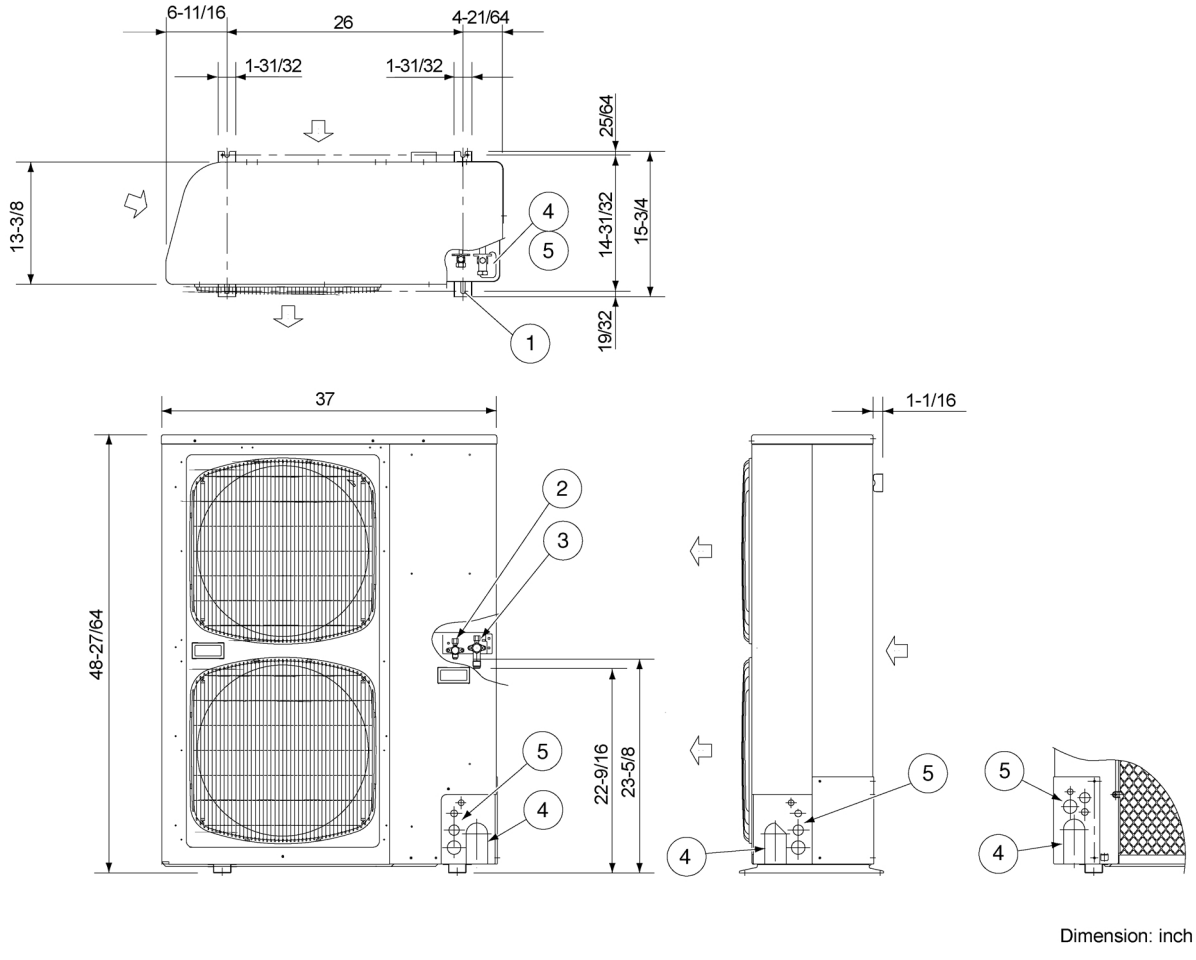


Dimension: inch

①	Hole for anchor bolt (4–R6.5) / Anchor bolt: M10
②	Refrigerant tube joint (liquid line tube) • Flare connection 3/8 in (9.52 mm)
③	Refrigerant tube joint (gas line tube) • Flare connection 5/8 in (15.88 mm)
④	Refrigerant tubing inlet (knock-out hole)
⑤	Power supply inlet (knock-out hole ϕ38, ϕ29, ϕ19, ϕ16 mm)

1-4 Dimensional Data

(B) Outdoor Unit: CH4272R, C4272R



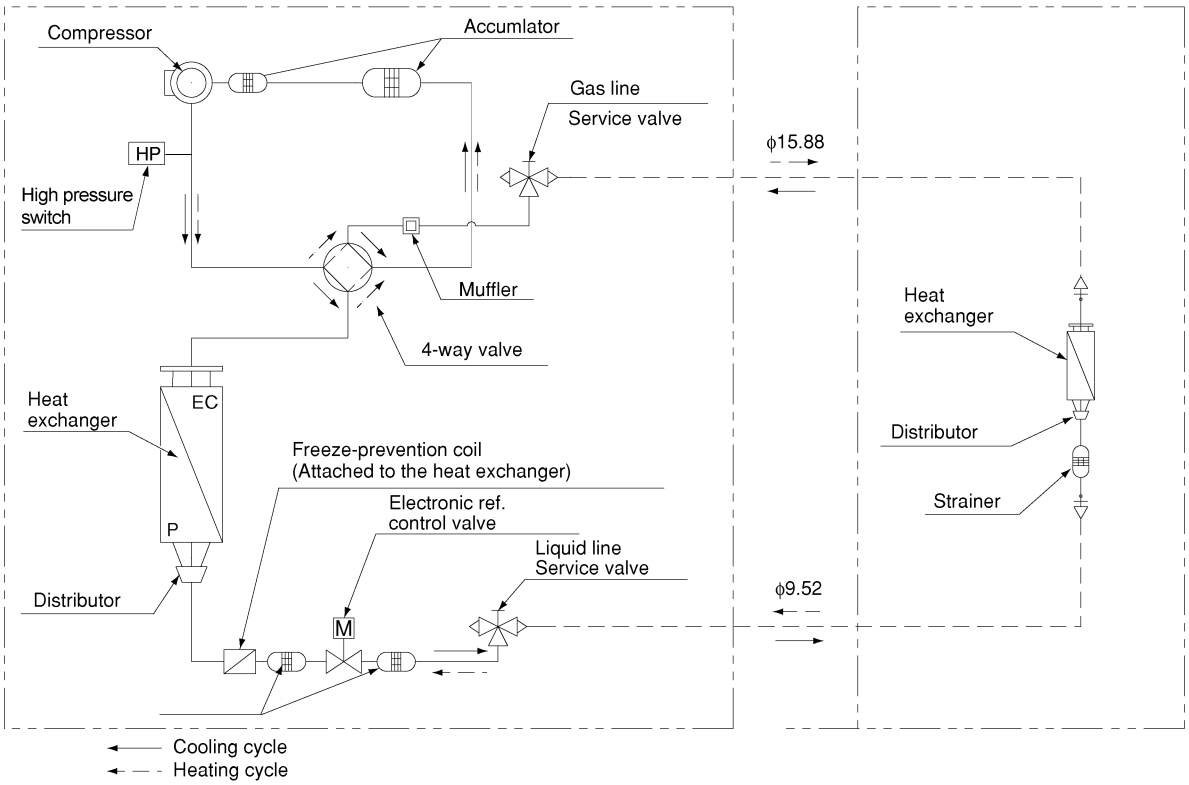
Dimension: inch

①	Hole for anchor bolt (4–R6.5) / Anchor bolt: M10
②	Refrigerant tube joint (liquid line tube) • Flare connection 3/8 in (9.52 mm)
③	Refrigerant tube joint (gas line tube) • Flare connection 5/8 in (15.88 mm)
④	Refrigerant tubing inlet (knock-out hole)
⑤	Power supply inlet (knock-out hole ϕ38, ϕ29, ϕ19, ϕ16 mm)

1-5 Refrigerant Flow Diagram

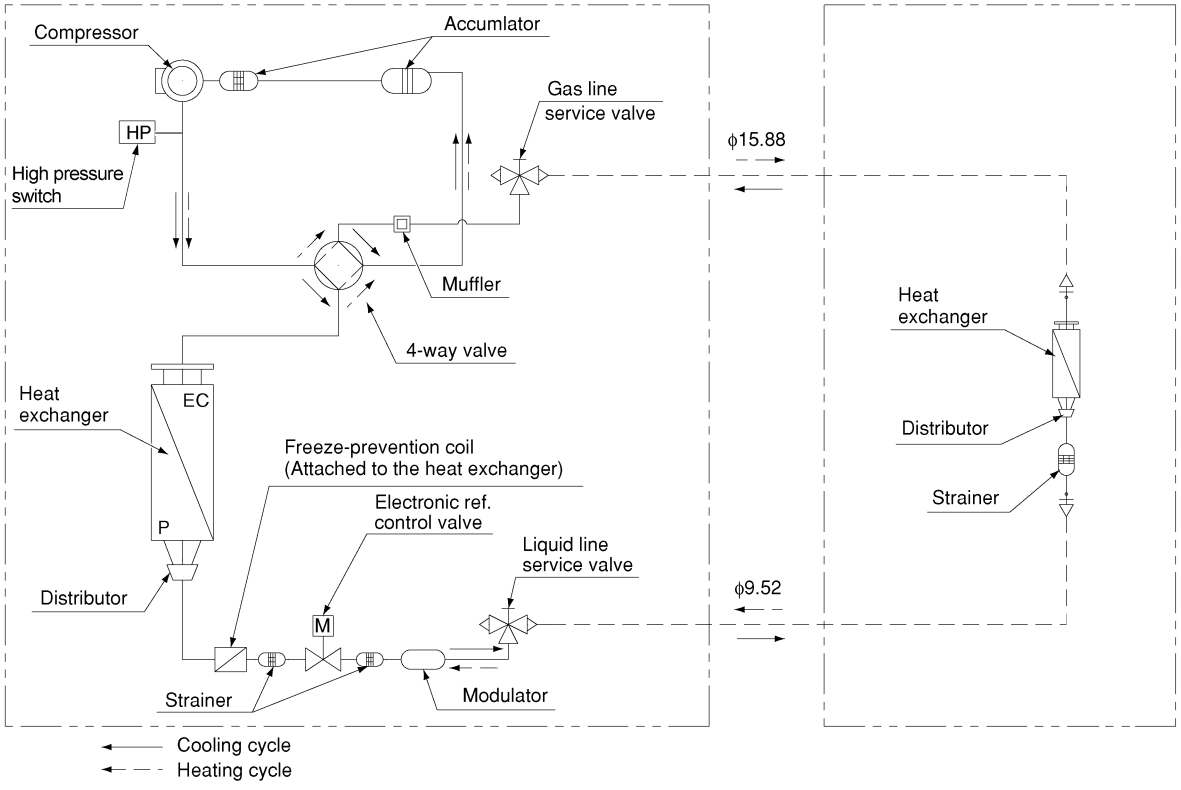
Outdoor Unit: CH2672R, C2672R
CH3072R, C3072R
CH3672R, C3672R

Indoor Unit: 26, 30, 36 Type



1-5 Refrigerant Flow Diagram

Outdoor Unit: CH4272R, C4272R Indoor Unit: 42 Type



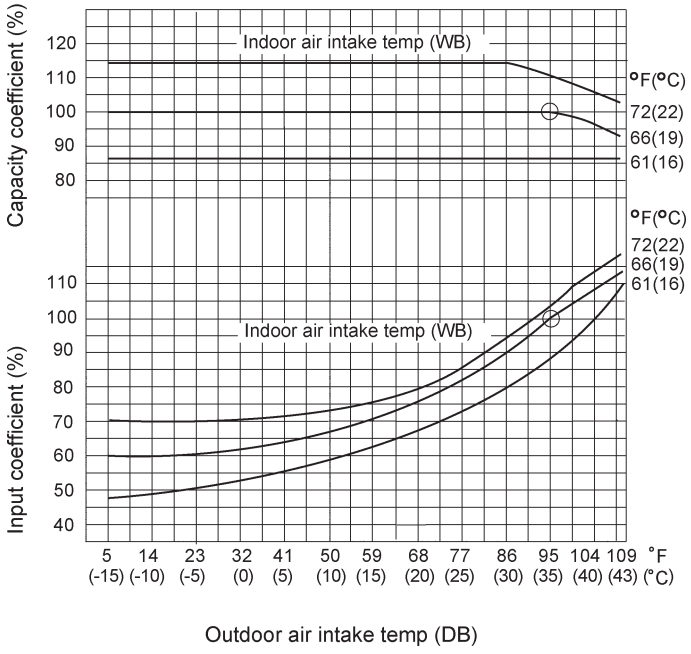
1-6 Operating Range

	Temperature	Indoor Air Intake	Outdoor Air Intake
Cooling	Maximum	95 °F DB / 71 °F WB	109 °F DB
	Minimum	67 °F DB / 57 °F WB	0 °F DB
Heating	Maximum	80 °F DB / 67 °F WB	65 °F WB
	Minimum	-DB / -WB	5 °F WB

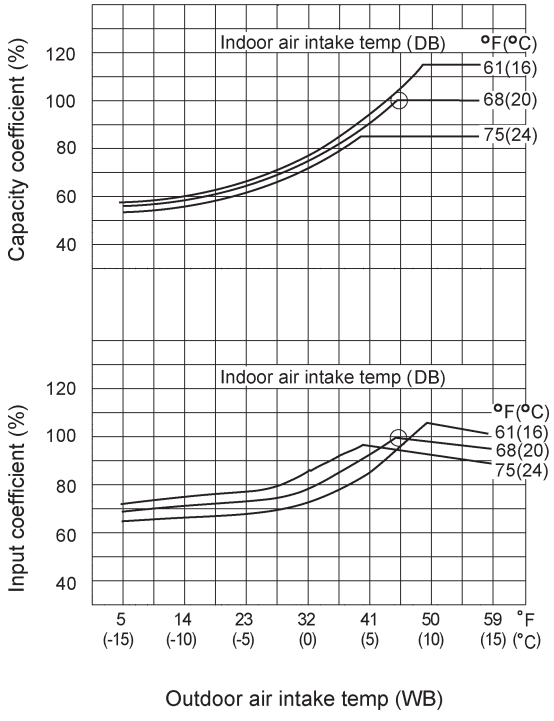
1-7 Heating Capacity

CH2672R, C2672R
CH3072R, C3072R
CH3672R, C3672R
CH4272R, C4272R

Cooling capacity ratio (maximum capacity)



Heating capacity ratio (maximum capacity)



Outdoor unit heating capacity correction coefficient during of frosting/defrosting (RH approximately 85%)

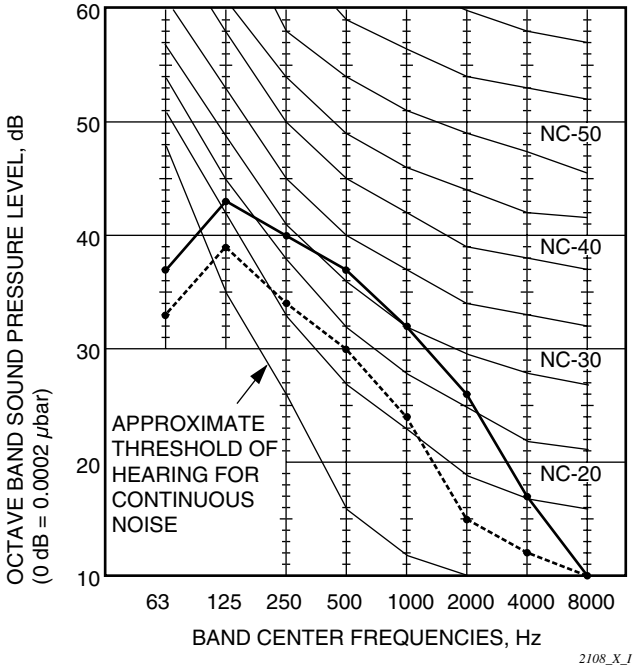
Outdoor intake air temperature °F WB(85% RH) (°C)	5 (-15)	14 (-10)	16 (-9)	18 (-8)	19 (-7)	21 (-6)	23 (-5)	25 (-4)	27 (-3)	28 (-2)	30 (-1)	32 (0)	34 (1)	36 (2)	37 (3)	39 (4)	41 (5)	43 (6)
Correction coefficient	0.97	0.97	0.96	0.96	0.95	0.94	0.91	0.89	0.88	0.87	0.87	0.87	0.88	0.89	0.91	0.92	0.95	1.0

To calculate the heating capacity with consideration for frosting/defrosting operation, multiply the heating capacity found from the capacity graph by the correction coefficient from the table above.

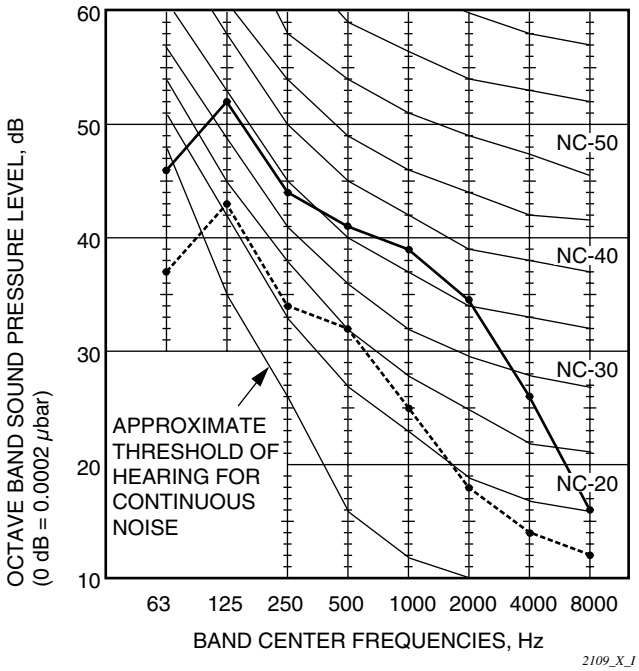
1-8 Noise Criterion Curves

● 4-Way Air Discharge Semi-concealed Type

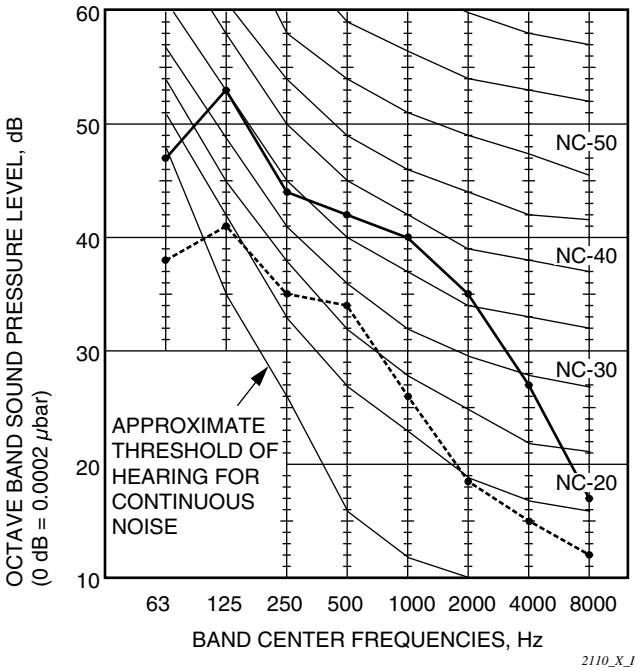
MODEL	: XH2672R
SOUND LEVEL	: HIGH 38 dB(A), NC 31
	LOW 31 dB(A), NC 23
CONDITION	: Center, Under the unit 4.9 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



MODEL	: XH3672R
SOUND LEVEL	: HIGH 44 dB(A), NC 37
	LOW 33 dB(A), NC 25
CONDITION	: Center, Under the unit 4.9 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



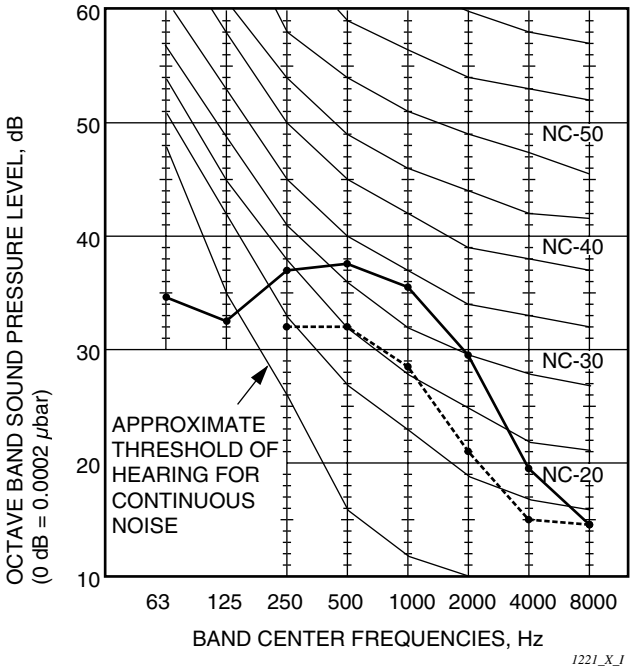
MODEL	: XH4272R
SOUND LEVEL	: HIGH 45 dB(A), NC 38
	LOW 34 dB(A), NC 27
CONDITION	: Center, Under the unit 4.9 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



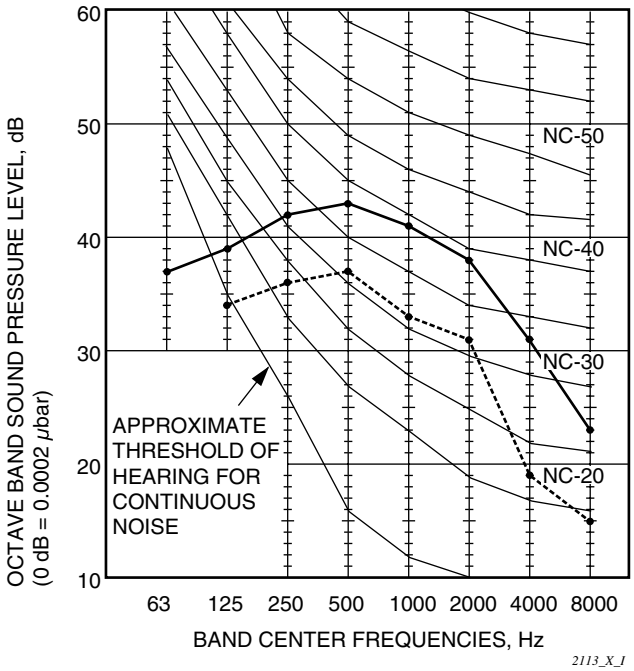
1-8 Noise Criterion Curves

● Ceiling Mounted Type

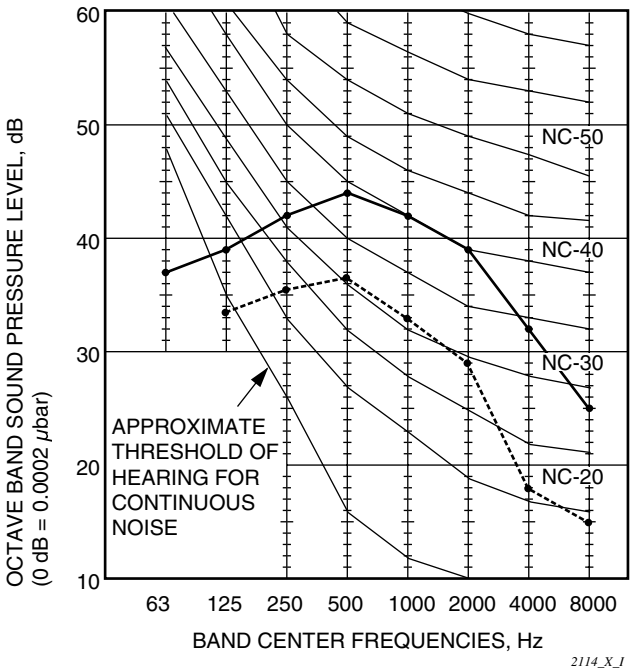
MODEL	: TH2672R, THH2672R
SOUND LEVEL	: HIGH 40 dB(A), NC 34
	LOW 36 dB(A), NC 26
CONDITION	: Distance 3.3 ft., Under the unit 3.3 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



MODEL	: TH3672R, THH3672R
SOUND LEVEL	: HIGH 46 dB(A), NC 39
	LOW 37 dB(A), NC 31
CONDITION	: Distance 3.3 ft., Under the unit 3.3 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



MODEL	: TH4272R
SOUND LEVEL	: HIGH 47 dB(A), NC 40
	LOW 38 dB(A), NC 32
CONDITION	: Distance 3.3 ft., Under the unit 3.3 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



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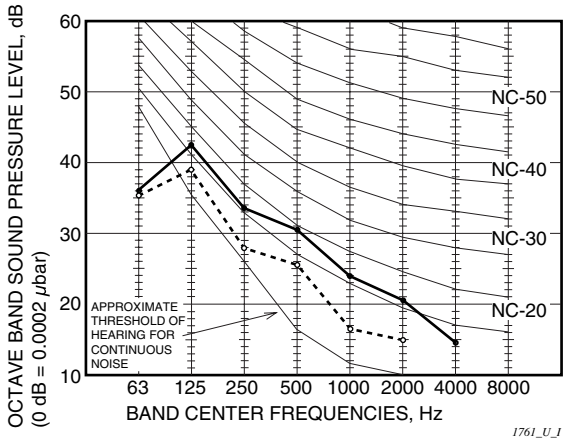
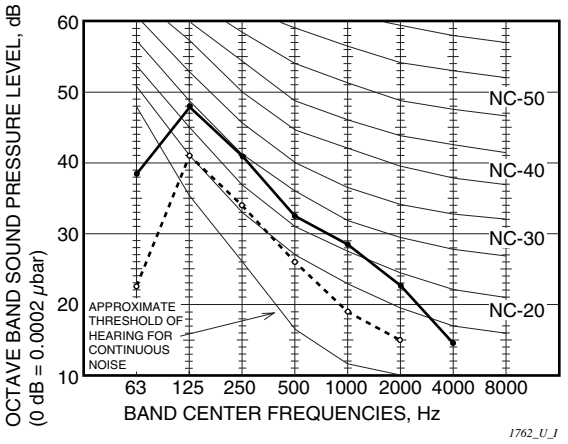
1-8 Noise Criterion Curves

● Concealed Duct Type

MODEL	: UH2672R
SOUND LEVEL	: HIGH 34 dB(A), NC 22 / LOW 27 dB(A), NC 18
CONDITION	: Under the unit 4.9 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



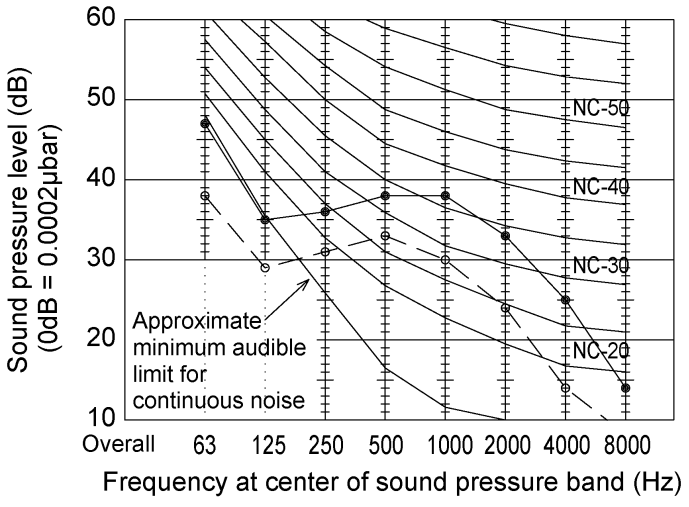
MODEL	: UH3672R
SOUND LEVEL	: HIGH 38 dB(A), NC 30 / LOW 31 dB(A), NC 21
CONDITION	: Under the unit 4.9 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



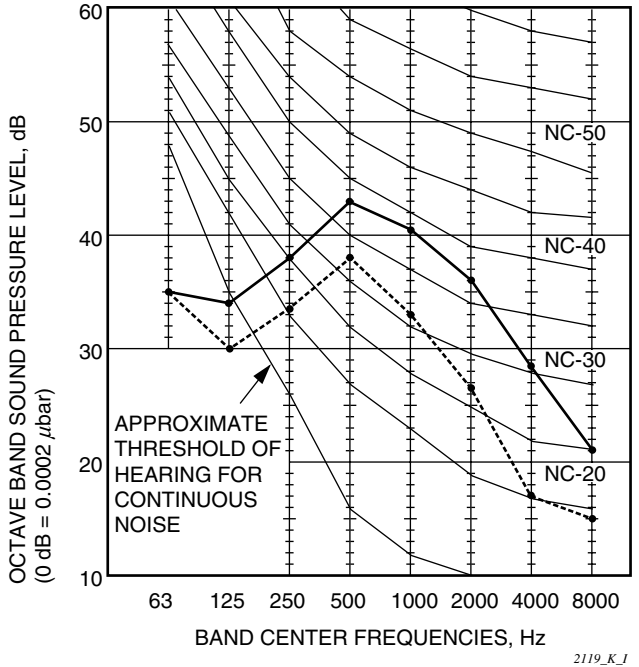
1-8 Noise Criterion Curves

● Wall Mounted Type

MODEL	: KH2672R
SOUND LEVEL	: HIGH 42 dB(A), NC 31
	LOW 35 dB(A), NC 27
CONDITION	: Distance 3.3 ft., Under the unit 3.3 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz

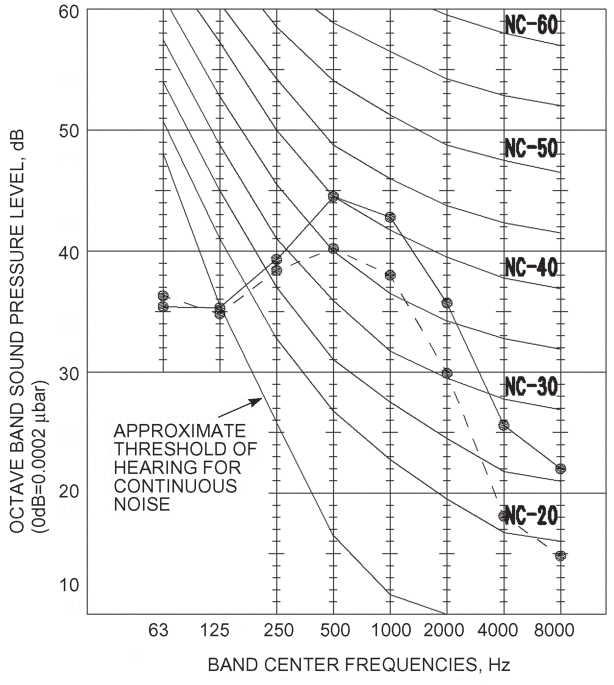


MODEL	: KHH2672R
SOUND LEVEL	: HIGH 45 dB(A), NC 38
	LOW 40 dB(A), NC 33
CONDITION	: Distance 3.3 ft., Under the unit 3.3 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz

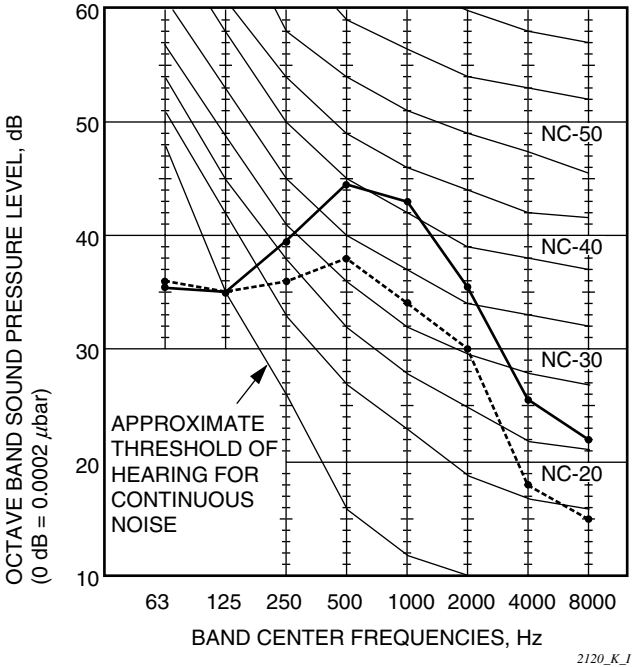


2119_K_I

MODEL	: KH3072R
SOUND LEVEL	: HIGH 46 dB(A), NC 41
	LOW 41 dB(A), NC 36
CONDITION	: Distance 3.3 ft., Under the unit 3.3 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



MODEL	: KH3672R
SOUND LEVEL	: HIGH 48 dB(A), NC 41
	LOW 40 dB(A), NC 33
CONDITION	: Distance 3.3 ft., Under the unit 3.3 ft.
SOURCE	: 208 - 230 V, 1 Phase, 60 Hz



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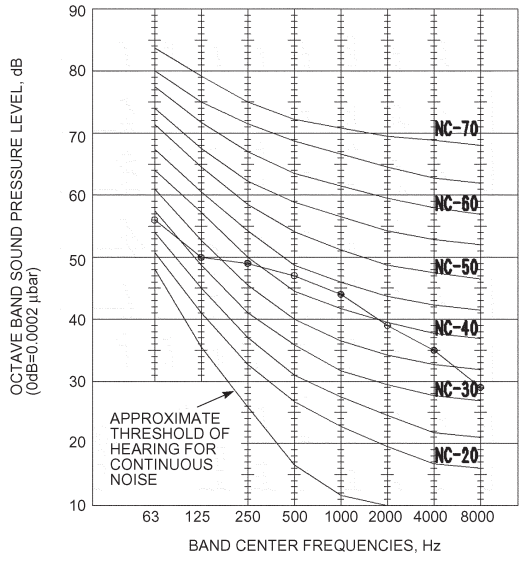
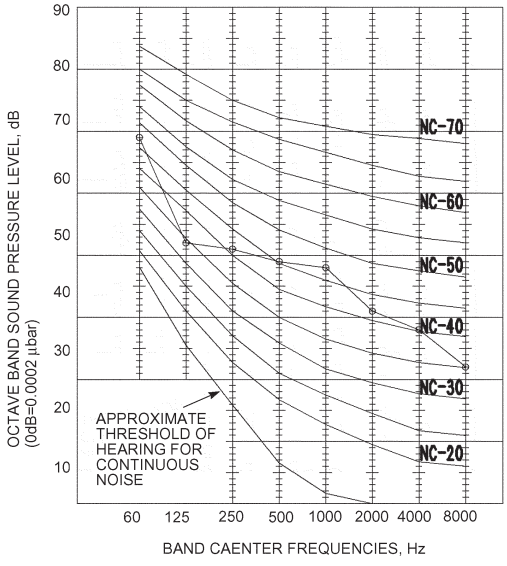
1-8 Noise Criterion Curves

● Outdoor Units

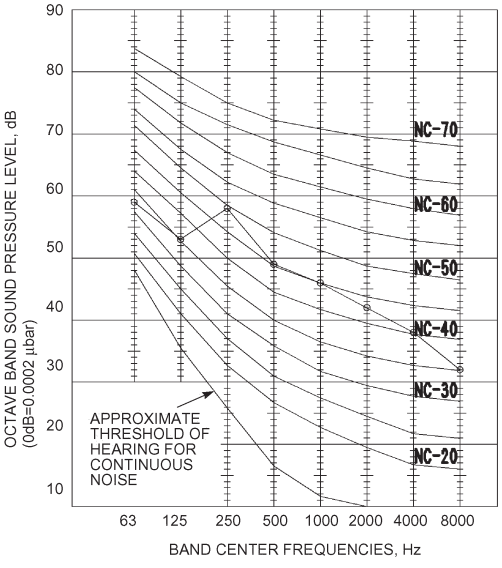
MODEL : CH2672R, C2672R
SOUND LEVEL : 49 dB(A), NC 43
CONDITION : Distance 3.3 ft., Height 3.3 ft.
SOURCE : 230 - 208 V, 1 Phase, 60 Hz



MODEL : CH3072R, C3072R, CH3672R, C3672R
SOUND LEVEL : 52 dB(A), NC 47
CONDITION : Distance 3.3 ft., Height 3.3 ft.
SOURCE : 230 - 208 V, 1 Phase, 60 Hz



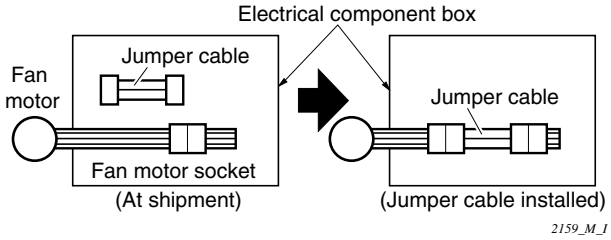
MODEL : CH4272R, C4272R
SOUND LEVEL : 53 dB(A), NC 50
CONDITION : Distance 3.3 ft., Height 3.3 ft.
SOURCE : 230 - 208 V, 1 Phase, 60 Hz



REMARKS:
1. Value obtained in the actual place where the unit is installed may be slightly higher than the values shown in this graph because of the conditions of operation, the structure of the building, the background noise and other factors.
2. The test results were obtained from an nechoic room.

NOTE
To evaluate “Noise level” the maximum number of the measured OCTAVE BAND SOUND PRESSURE LEVEL is used. Read the number on each BAND CENTER FREQUENCIES (horizontal axis) ranging from 63 Hz to 8000 Hz and select the maximum value (vertical axis) among them.

1-9 Increasing the Fan Speed



If external static pressure is too great (due to long extension of ducts, for example), the air flow volume may drop too low at each air outlet. This problem may be solved by increasing the fan speed using the following procedure:

(1) Remove 4 screws on the electrical component box and remove the cover plate.

(2) Disconnect the fan motor sockets in the box.

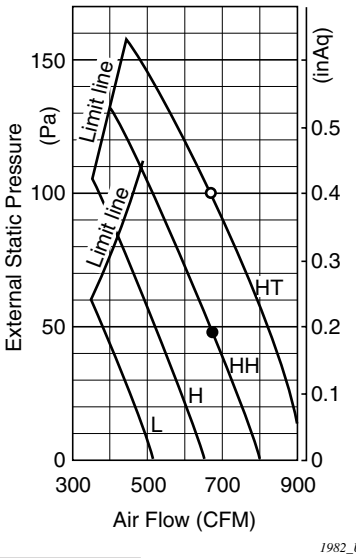
(3) Take out the jumper cable (sockets at both ends) clamped in the box.

(4) Securely connect the jumper cable sockets between the disconnected fan motor sockets in step 2.

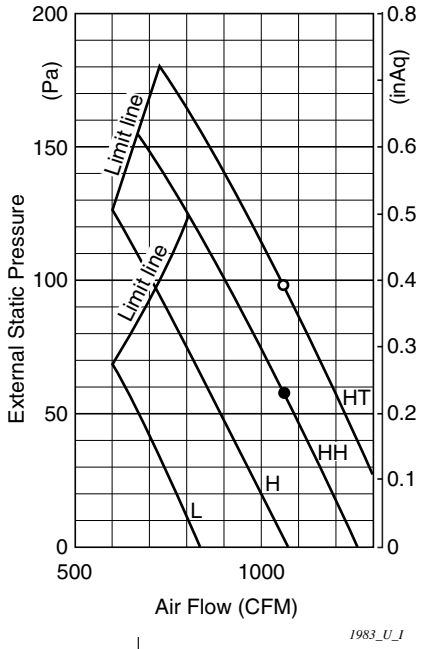
(5) Place the cable neatly in the box and reinstall the cover plate.

Indoor Fan Performance

26 Type



36 Type



NOTE HT : Using the booster cable

H : At shipment

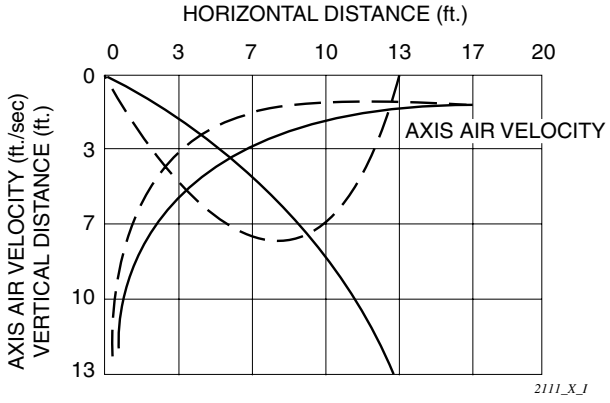
■ **How to read the diagram**

The vertical axis is the external static pressure (Pa) while the horizontal axis represents the AIR FLOW (CFM). The characteristic curves for “HT”, “H”, “M” and “L” fan speed control are shown.
The nameplate values are shown based on the “H” air flow. For the 26 type, the air flow is 636 CFM, while the external static pressure is 49 Pa at “H” position. If external static pressure is too great (due to long extension of duct, for example), the air flow volume may drop too low at each air outlet.
This problem may be solved by increasing the fan speed as explained above.

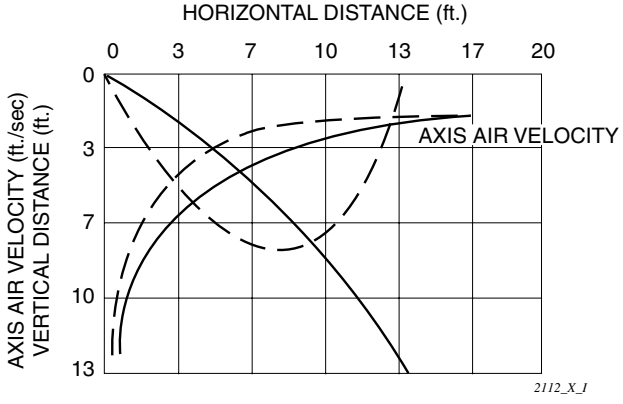
1-10 Air throw distance chart

● 4-Way Air Discharge Semi-concealed Type

Model: 26 Type



Model: 36, 42 Type



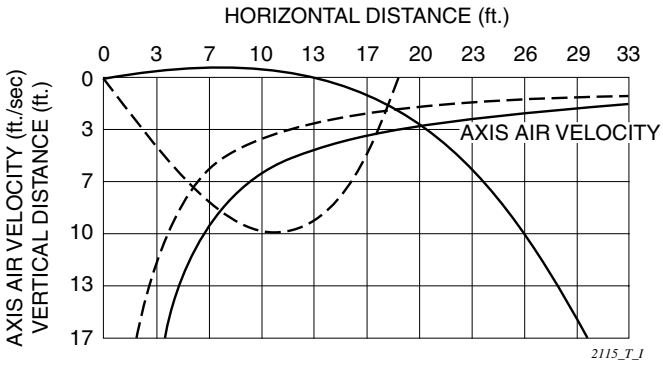
——————— : LOUVER ANGLE 20˚ in Cooling mode
— — — — — — : LOUVER ANGLE 60˚ in Heating mode

Condition Fan Speed : Hi
Room air temp. : 80˚F DB in cooling mode
68˚F DB in heating mode

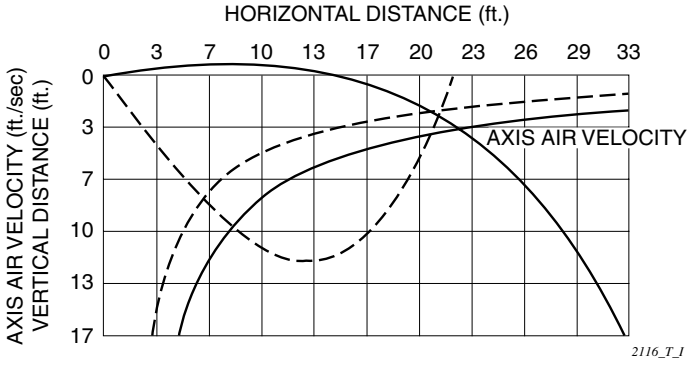
1-10 Air throw distance chart

● Ceiling Mounted Type

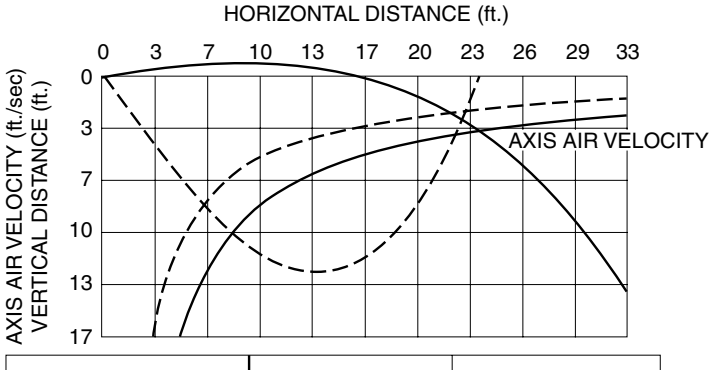
Model: 26 Type



Model: 36 Type



Model: 42 Type



	COOLING	HEATING
FAN SPEED	HIGH	HIGH
ROOM AIR TEMP.	80°F	68° F
LOUVER ANGLE	– 7°	54°

: COOLING

: HEATING

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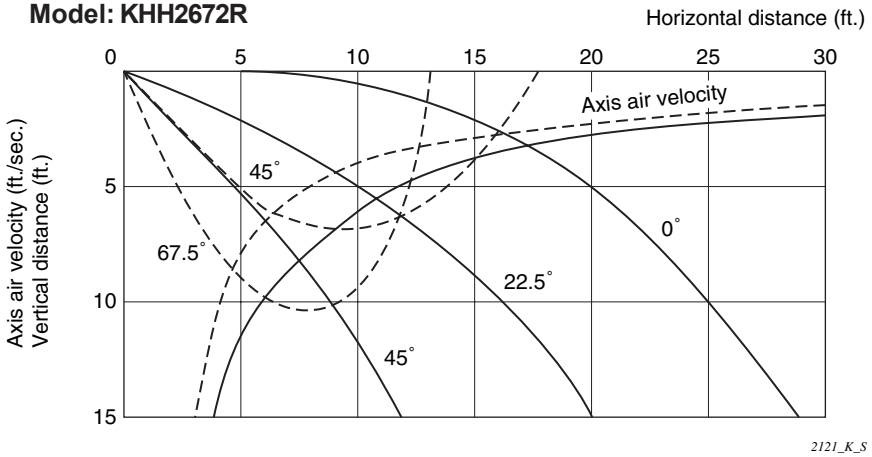
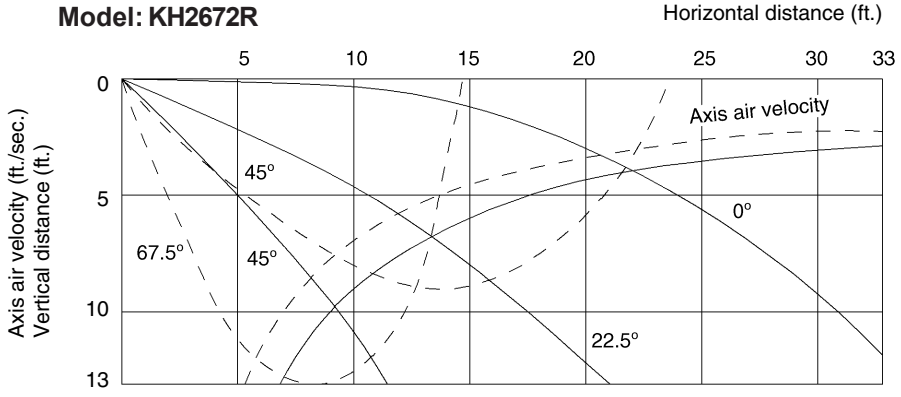
1-10 Air throw distance chart

● Wall Mounted Type

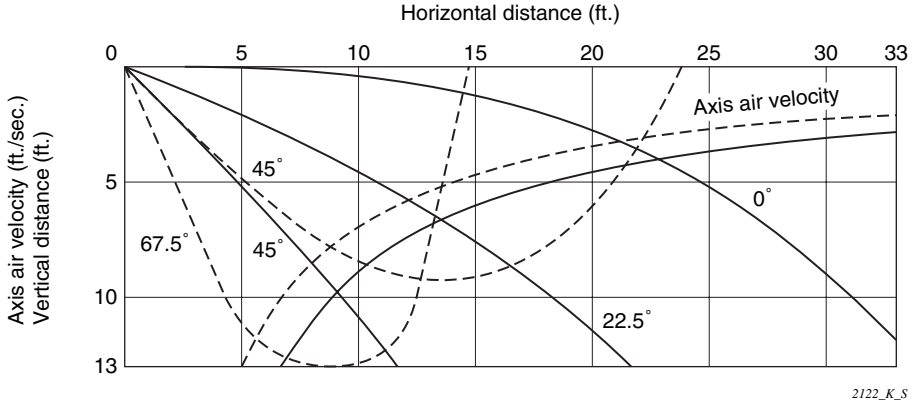
Model: KHH2672R



Model: KH2672R



Model: KH3072R
KH3672R



	—— COOLING	- - - - - HEATING
FAN SPEED	HIGH	HIGH
ROOM AIR TEMP.	80°F	70°F
FLAP ANGLE	0°, 22.5°, 45°	45°, 67.5°

1-11 Installation Instructions

● Tubing Length

Single type

- Refrigerant tubing between the indoor and outdoor units should be kept as short as possible.
- The length of the refrigerant tubes between the indoor and outdoor units are limited by the elevation difference between the 2 units. During tubing work, try to make both the tubing length (L) and the difference in elevation (H1) as short as possible. Refer to Table 1-2.

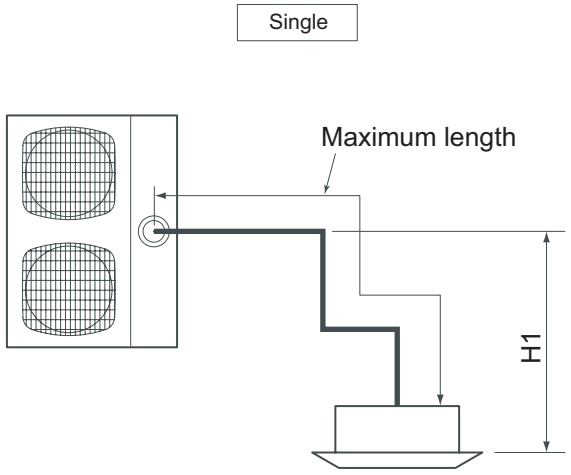


Table 1-1

Indoor unit type	26, 30, 36 types	42 type
Maximum length	165 ft.	165 ft.
Charge-less tubing length (actual length)	10 – 100 ft.	15 – 100 ft.
Additional charge per 1 ft.	0.43 oz.	

Maximum indoor-outdoor height difference	If outdoor unit is higher	H1	≤ 100
	If outdoor unit is lower	H1	≤ 50

1

Table 1-2 Tubing Data for Models

Tubing Data \ Models		C(H)2672R	C(H)3072R C(H)3672R	C(H)4272R
Tubing size outer diameter	Liquid tube in. (mm)	3/8 (9.52)	3/8 (9.52)	3/8 (9.52)
	Gas tube in. (mm)	5/8 (15.88)	5/8 (15.88)	5/8 (15.88)
Limit of tubing length (ft.)		165	165	165
Limit of elevation difference between the 2 units	Outdoor unit is placed higher (ft.)	100	100	100
	Outdoor unit is placed lower (ft.)	50	50	50
Max. allowable tubing length at shipment (ft.)		10 – 100	10 – 100	10 – 100
Required additional refrigerant *1 (oz./ft.)		a) 0.43	b) 0.43	b) 0.43
Refrigerant charged at shipment (lbs.)		4.2	6.2	7.9

No additional charge of compressor oil is necessary.
*1 If total tubing length becomes 100 to 165 ft., charge additional refrigerant by 0.43 oz./ft.

Table 1-3 List of Connection Tube Sizes

	Main tubing (L)
Type capacity of indoor units	26 – 42
Gas tube	ø5/8"
Liquid tube	ø3/8"
Amount of additional charge per 1 ft.	0.43 oz.

■ SELECTING THE INSTALLATION SITE

Indoor Unit

AVOID:

- areas where leakage of flammable gas may be expected.
- places where large amounts of oil mist exist.
- direct sunlight.
- locations near inverter lamps which may affect performance of the unit.
- locations near heat sources which may affect performance of the unit.
- locations where external air may enter the room directly. This may cause “sweating” on the air discharge ports, causing them to spray or drip.
- locations where the remote control unit will be splashed with water or affected by dampness or humidity.
- installing the remote control unit behind curtains or furniture.
- locations where the receiver in the indoor unit is exposed to the inverter lamp light. Faulty operation of the unit occurs.

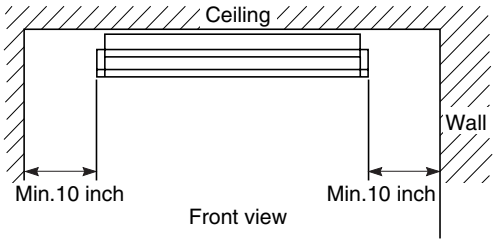
DO:

- select an appropriate position from which every corner of the room can be uniformly cooled.
- select a location where the ceiling is strong enough to support the weight of the unit.
- select a location where tubing and drain pipe have the shortest run to the outdoor unit.
- allow room for operation and maintenance as well as unrestricted air flow around the unit.
- install the unit within the maximum elevation difference above or below the outdoor unit and within a total tubing length from the outdoor unit as detailed in Table 1-1.
- allow room for mounting the remote control unit about 3 ft. off the floor, in an area that is not in direct sunlight nor in the flow of cool air from the indoor unit.

NOTE

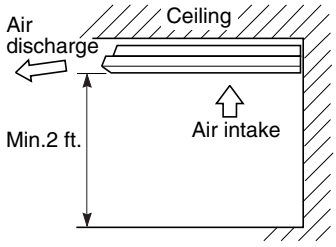
- Air delivery will be degraded if the distance from the floor to the ceiling is greater than 10 ft..

Ceiling-Mounted Type



NOTE

The rear of the indoor unit can be installed flush against the wall.



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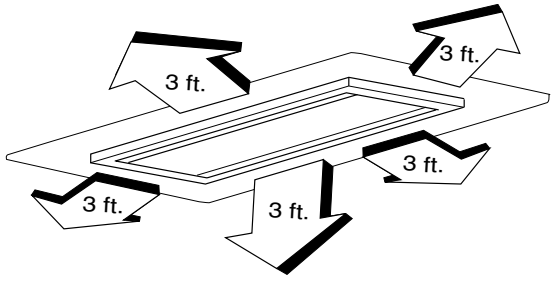
4-Way Air Discharge Type Concealed-Duct Type



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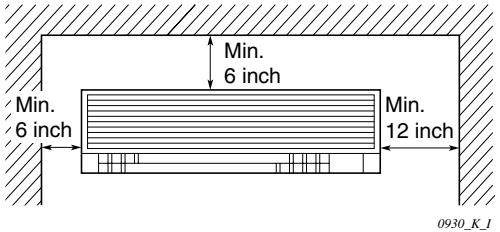
Wall-Mounted Type



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Outdoor Unit

AVOID:

- heat sources, exhaust fans, etc. (Fig. 1-1)
- damp, humid or uneven locations

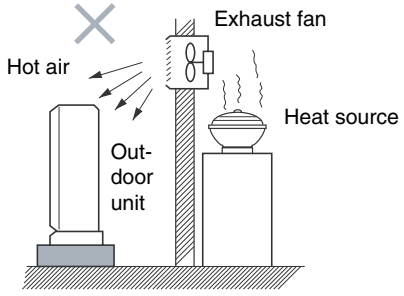


Fig. 1-1

DO:

- choose a place as cool as possible.
- choose a place that is well ventilated and outside air temperature does not exceed maximum 115°F constantly.
- allow enough room around the unit for air intake/ exhaust and possible maintenance. (Fig. 1-2)
- use lug bolts or equal to bolt down unit, reducing vibration and noise.
- if cooling operation is to be used when the outdoor air temperature is 23°F or below, install a duct on the outdoor unit.

Installation space

Distance between obstructions and the unit air inlet and outlet must be as shown below.

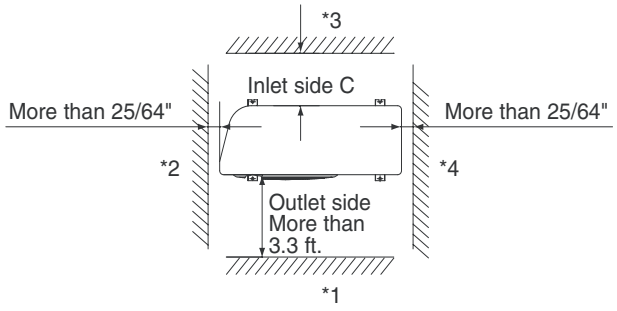


Fig. 1-2

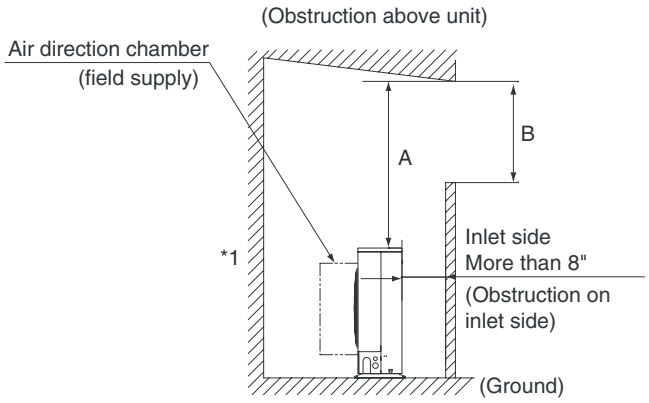


Fig. 1-3

CAUTION

- Concerning inlet-side distance “C” (Fig. 1-2)

  The minimum for distance “C” is 6" if there are no obstructions on the outlet side (wall *1 side) and *2 or *4 is not present. In all other cases, the minimum for distance “C” is 8".
- If the unit is installed with the outlet side facing wall *1, then there must be no obstructions on 2 of the remaining 3 sides: *2, *3, *4.
- If wall *1 is on the outlet side (Fig. 1-2), or if obstructions are present on all 3 sides *2, *3, and *4 (Fig. 1-2), then the minimum distance for “A” and “B” is 80" (Fig. 1-3). Even if there is no wall on the outlet side, a minimum of 3.3 ft. is required.

Installation requirements

- provide a solid base (concrete block, 4" × 16" beams or equal), a minimum of 6" above ground level to reduce humidity and protect the unit gainst possible water damage and decreased service life. (Fig. 1-4)
- use lug bolts or equal to bolt down unit, reducing vibration and noise.

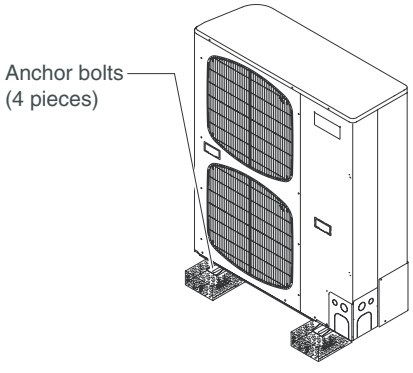


Fig. 1-4

■ **Air-Discharge Chamber for Top Discharge**

Be sure to install an air discharge chamber in the field when:

- it is difficult to keep a space of min. 20" between the air discharge outlet and an obstacle.
- the air discharge outlet is facing a sidewalk and discharged hot air may bother passers-by. Refer to Fig. 1-5.

■ **Installing the Unit in Heavy Snow Areas**

In locations with strong wind, snow-proof ducting should be fitted and direct exposure to the wind should be avoided as much as possible.

■ **Countermeasures against snow and wind**

In regions with snow and strong wind, the following problems may occur when the outdoor unit is not provided with a platform and snow-proof ducting:

a) The outdoor fan may not run and damage to the unit may occur.

b) There may be no air flow.

c) The tubing may freeze and burst.

d) The condenser pressure may drop because of strong wind, and the indoor unit may freeze.

■ **Precautions for Installation in Heavy Snow Areas**

1) The platform should be higher than the max. snow depth. (Fig. 1-6)

2) The 2 anchoring feet of the outdoor unit should be used for the platform, and the platform should be installed beneath the air intake side of outdoor unit.

3) The platform foundation must be firm and the unit must be secured with anchor bolts.

4) In case of installation on a roof subject to strong wind, countermeasures must be taken to prevent the unit from being blown over.

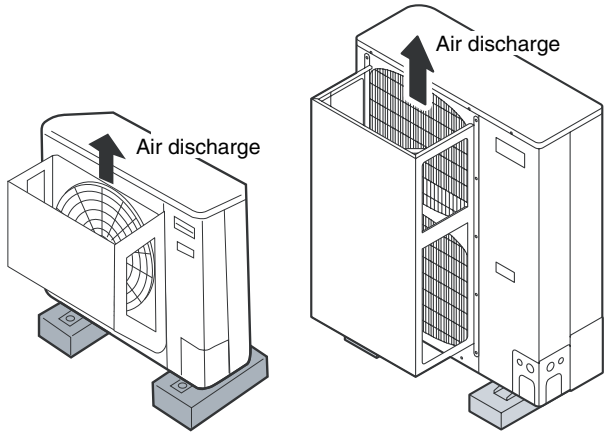


Fig. 1-5

In regions with significant snowfall, the outdoor unit should be provided with a platform and snow-proof duct.

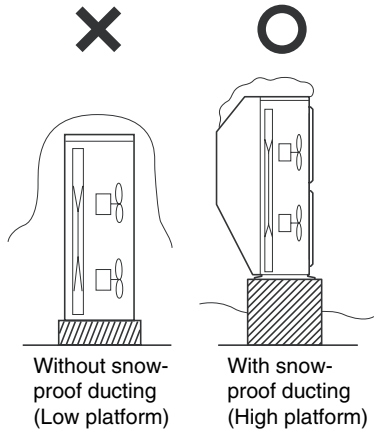


Fig. 1-6

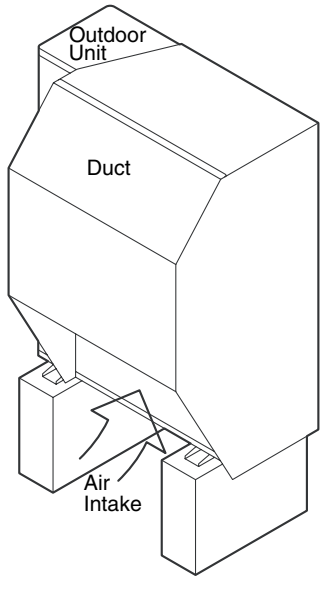


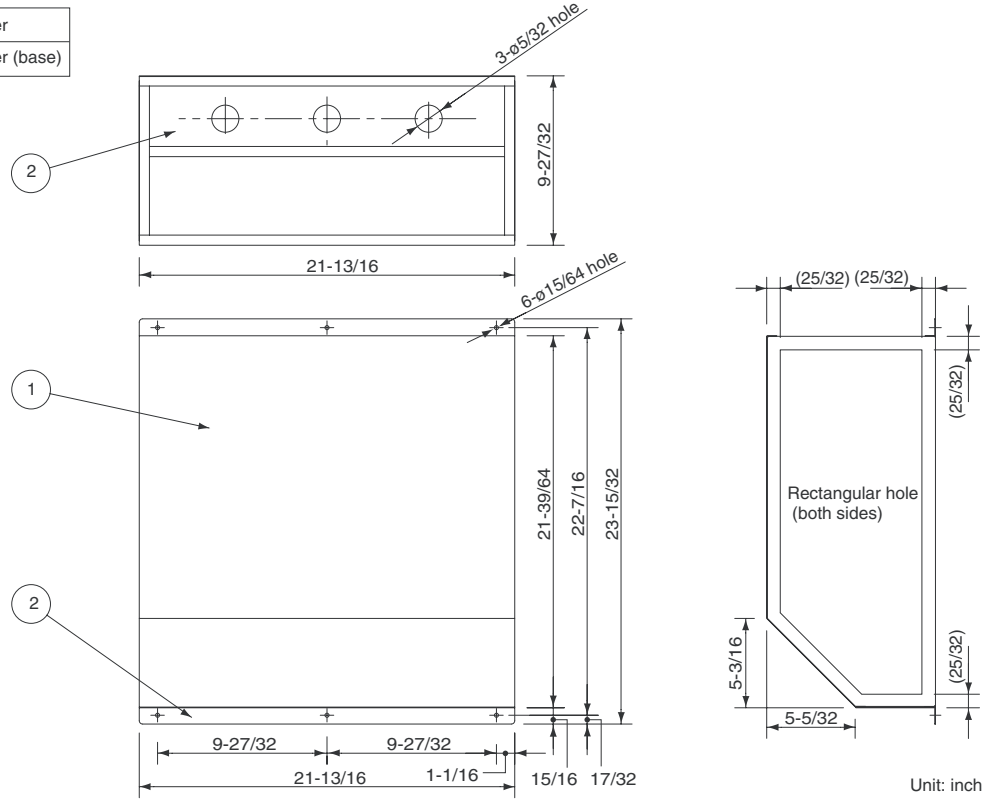
Fig. 1-7

Dimensions of Wind Ducting

Reference diagram for air-discharge chamber (field supply)

For outdoor unit 2672R / 3072R / 3672R

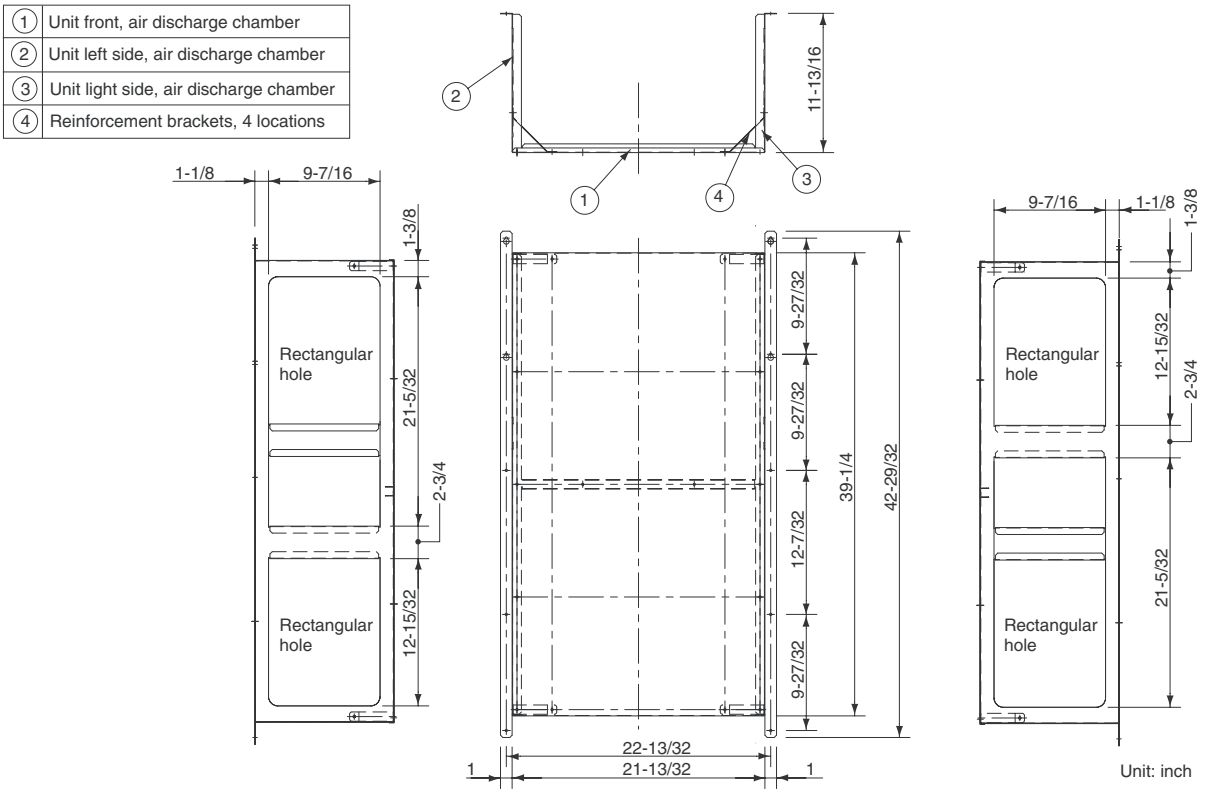
①	Air discharge chamber
②	Air discharge chamber (base)



Note: In snowy regions, if there is concern that snow may enter the air discharge chamber, remove the base of the chamber (10 screws) before using.

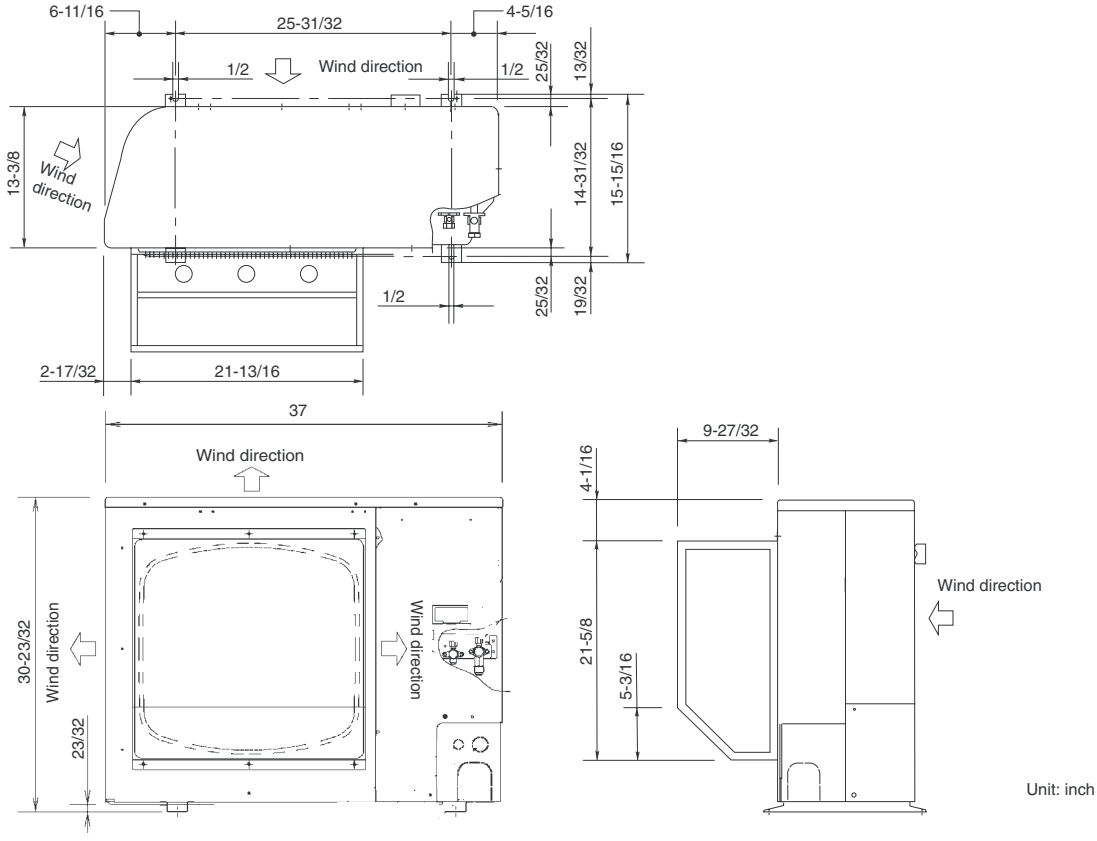
For outdoor unit 4272R

①	Unit front, air discharge chamber
②	Unit left side, air discharge chamber
③	Unit light side, air discharge chamber
④	Reinforcement brackets, 4 locations



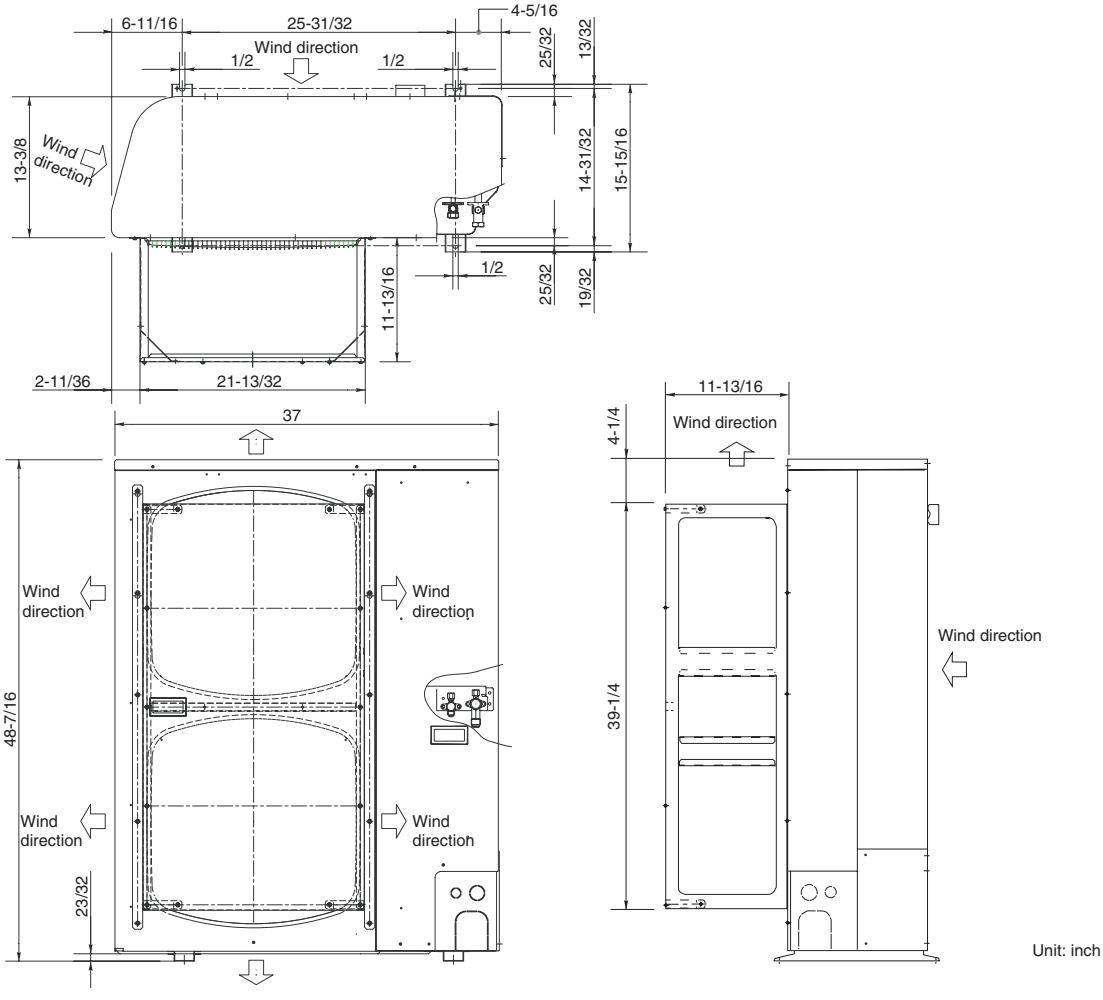
Dimensions of Outdoor Unit with air-discharge chamber (field supply)

For outdoor unit 2672R / 3072R / 3672R



Unit: inch

For outdoor unit 4272R

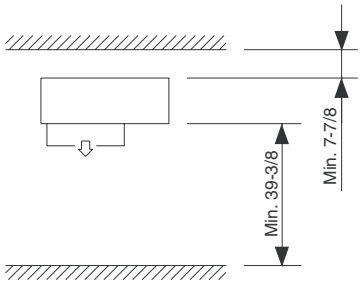


Unit: inch

Reference diagram for air-discharge chamber (field supply)
For outdoor unit C(H)2672R / 3072R / 3672R / 4272R
Required space around outdoor unit

If the air discharge chamber is used, the space shown below must be secured around the outdoor unit.
If the unit is used without the required space, a protective device may activate, preventing the unit from operating.

(1) Single-unit installation



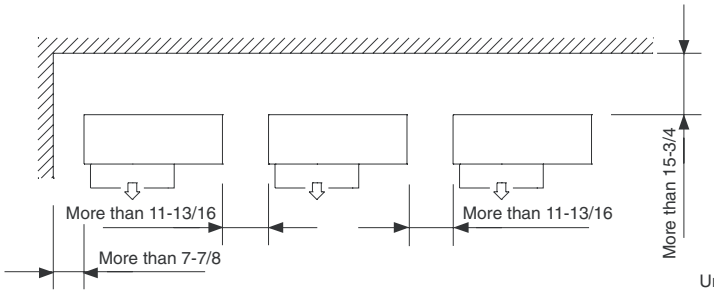
Unit: inch

CAUTION

The top and both sides must remain open. If there are obstacles to the front and rear of the outdoor unit, the obstacle at either the front or rear must be no taller than the height of the outdoor unit.

(2) Multiple-unit installation

- Installation in lateral rows



Unit: inch

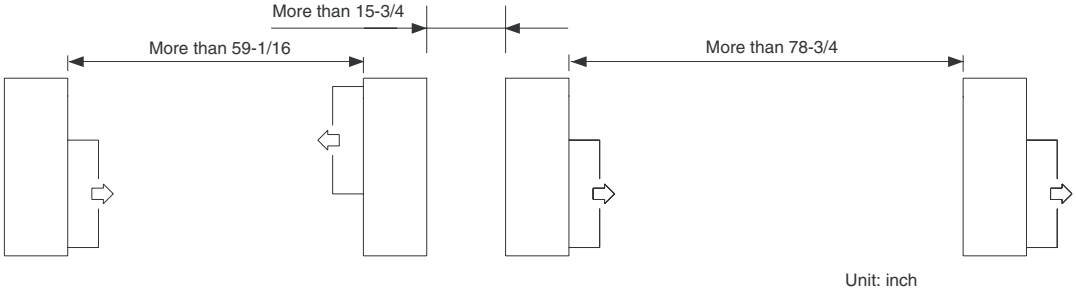
CAUTION

The front and top must remain open.
The obstacles must be no taller than the height of the outdoor unit.

- Installation in front-rear rows

Installation with intakes facing outlets

Installation with intakes facing intakes or outlets facing outlets



Unit: inch

CAUTION

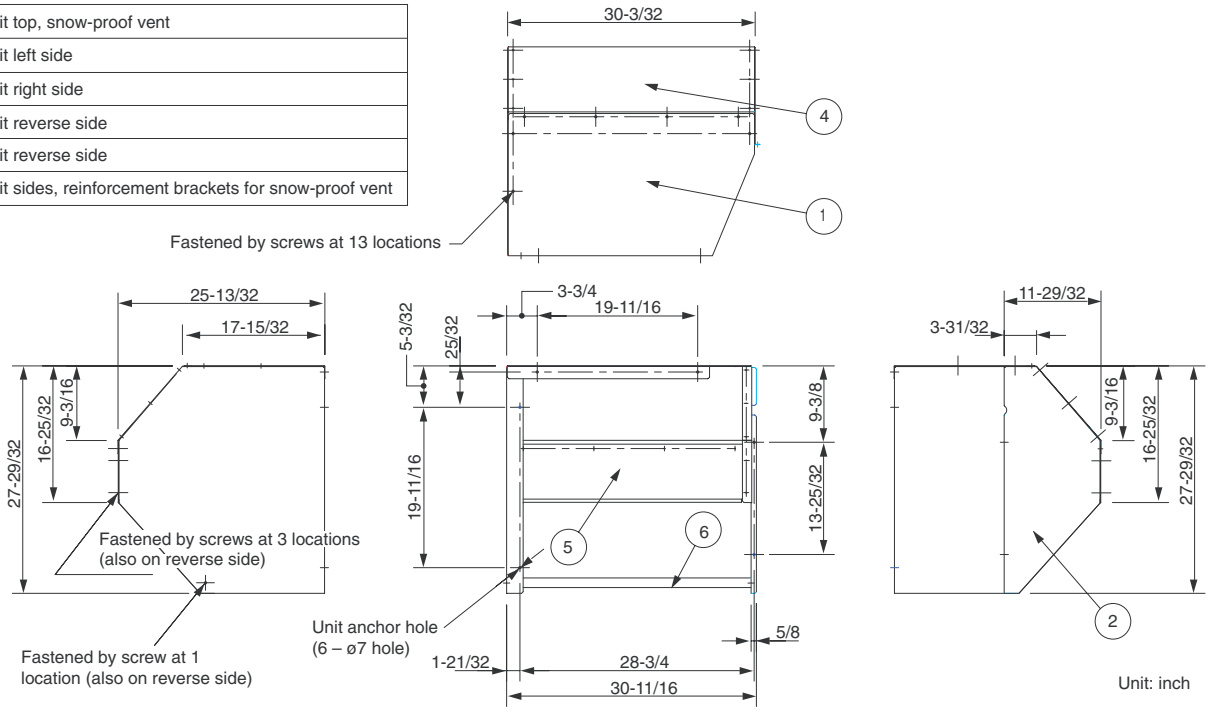
The front and both sides must remain open.

■ Dimensions of Snow Ducting

Reference diagram for snow-proof vents (field supply)

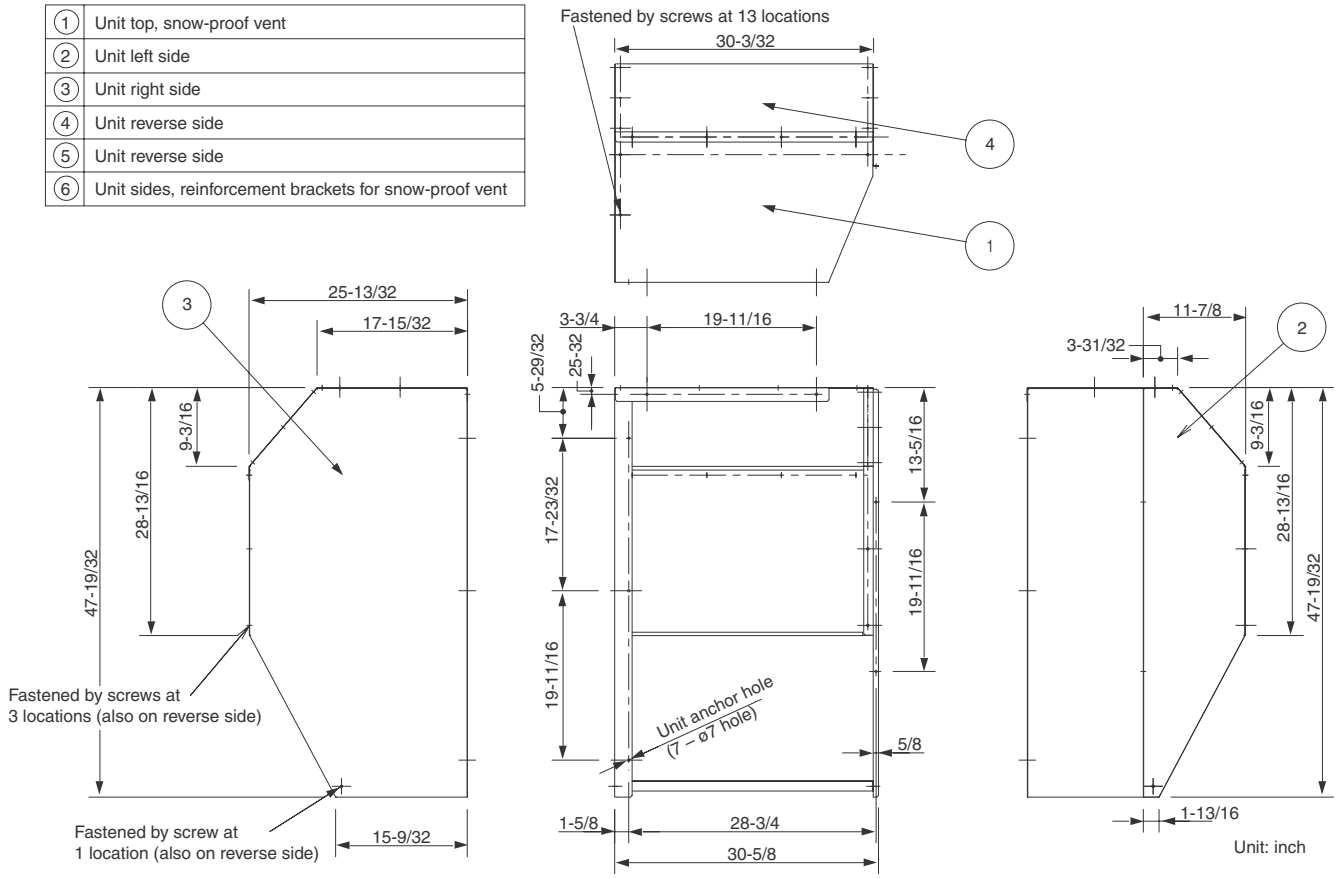
For outdoor unit 2672R / 3072R / 3672R

①	Unit top, snow-proof vent
②	Unit left side
③	Unit right side
④	Unit reverse side
⑤	Unit reverse side
⑥	Unit sides, reinforcement brackets for snow-proof vent



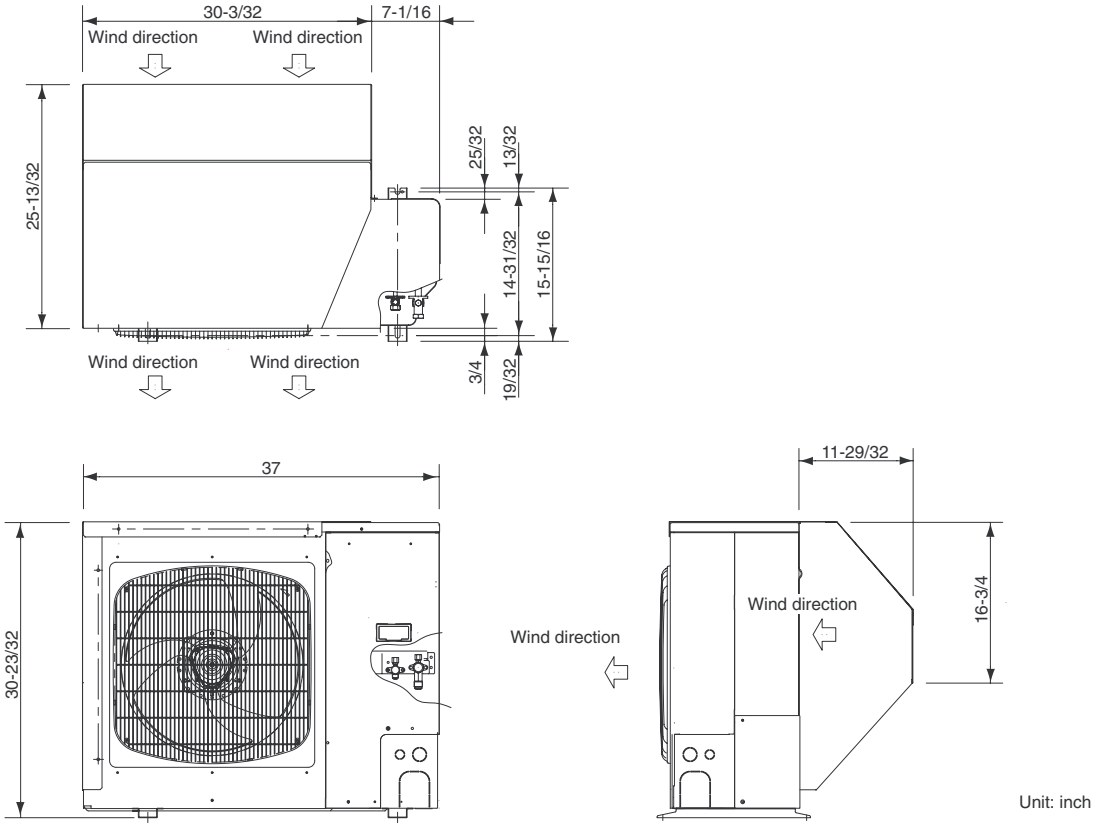
4272R

①	Unit top, snow-proof vent
②	Unit left side
③	Unit right side
④	Unit reverse side
⑤	Unit reverse side
⑥	Unit sides, reinforcement brackets for snow-proof vent



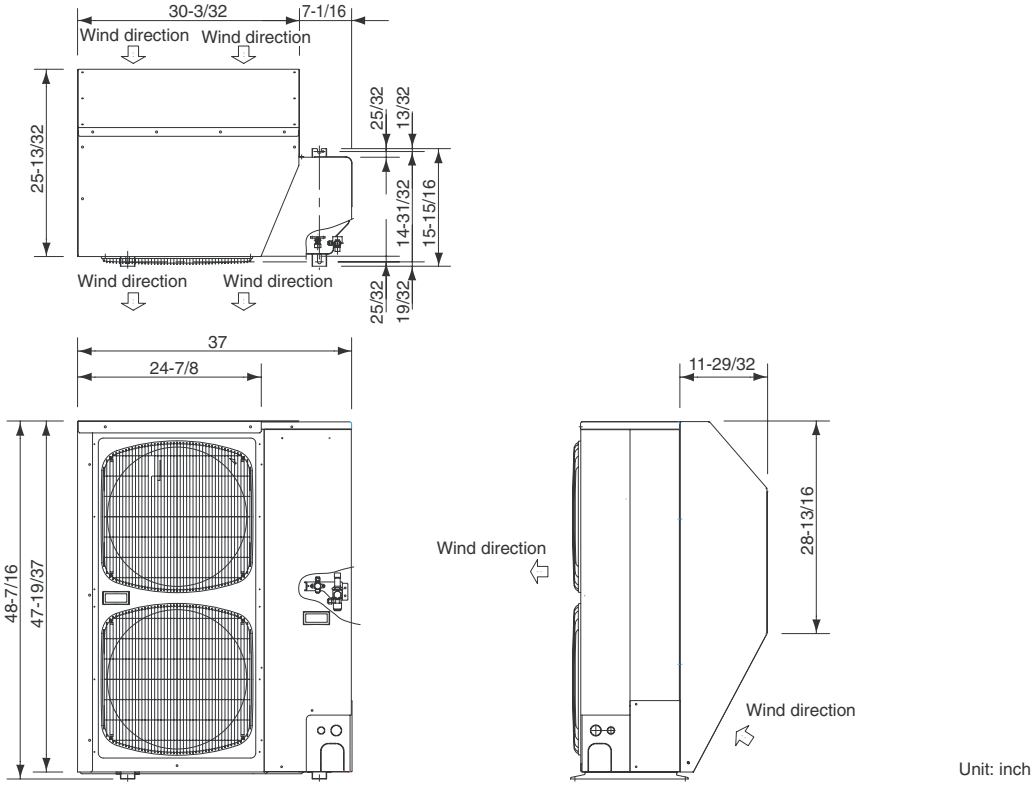
Dimensions of outdoor unit with snow-proof vents (field supply)

2672R / 3072R / 3672R unit with STK-BDRE80A



Unit: inch

4272R unit with STK-BDR140U



Unit: inch

Reference diagram for snow-proof vents - 1

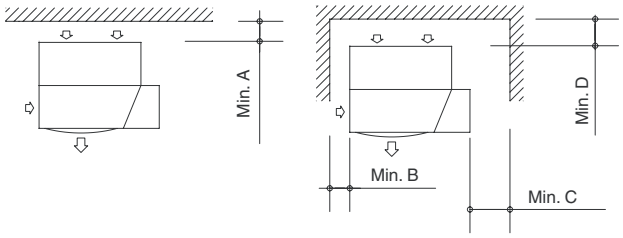
Space requirements for setting - (1)

C(H)2672R / 3072R / 3672R / 4272R with STK-BDRE80A & STK-BDR140U

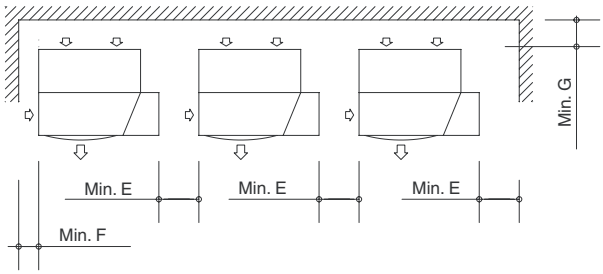
[Obstacle to the rear of unit]

● Top is open:

(1) Single-unit installation (2) Obstacles on both sides



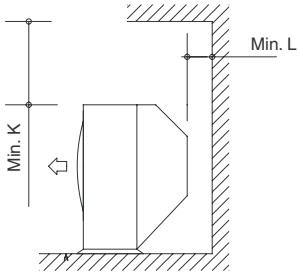
(3) Multiple-unit installation (2 or more units)



Outdoor unit	C(H)2672R / 3072R / 3672R / 4272R
A	5-29/32
B	5-29/32
C	11-13/16
D	7-7/8
E	11-13/16
F	5-29/32
G	7-7/8

Note:
In cases 2 and 3 the height of the obstacle must be no taller than the height of the outdoor unit.

● Top is blocked by an obstacle:

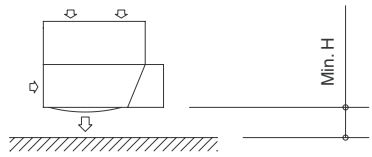


Outdoor unit	L	K
C(H)2672R / 3072R / 3672R / 4272R	19-11/16	5-29/32

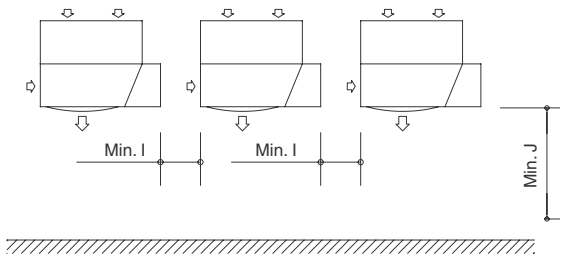
[Obstacle to the front of unit]

● Top is open:

(1) Single-unit installation

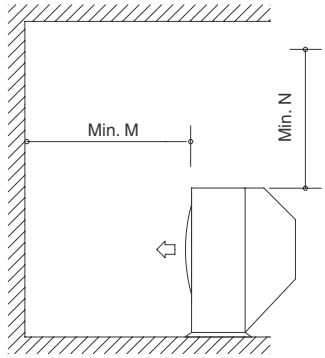


(2) Multiple-unit installation (2 or more units)



Outdoor unit	H	I	J
C(H)2672R / 3072R / 3672R / 4272R	19-11/16	11-13/16	39-3/8

● Top is blocked by an obstacle:



Outdoor unit	M	N
C(H)2672R / 3072R / 3672R / 4272R	39-3/8	39-3/8

Unit: inch

Reference diagram for snow-proof vents - 2

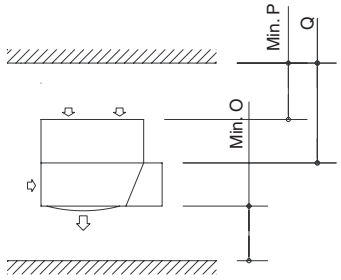
Space requirements for setting - (2)

C(H)2672R / 3072R / 3672R / 4272R with STK-BDRE80A & STK-BDR140U

[Obstacles to the front and rear of unit]

● The top and both sides must remain open. Either the obstacle to the front or the obstacle to the rear must be no taller than the height of the outdoor unit.

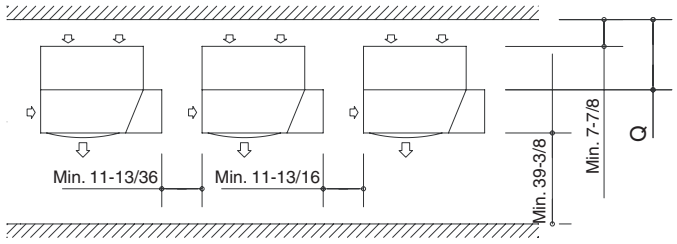
(1) Single-unit installation



Dimension Q
If a snow protection duct is attached after the unit is installed, verify that dimension Q is 19-11/16 in. or more.

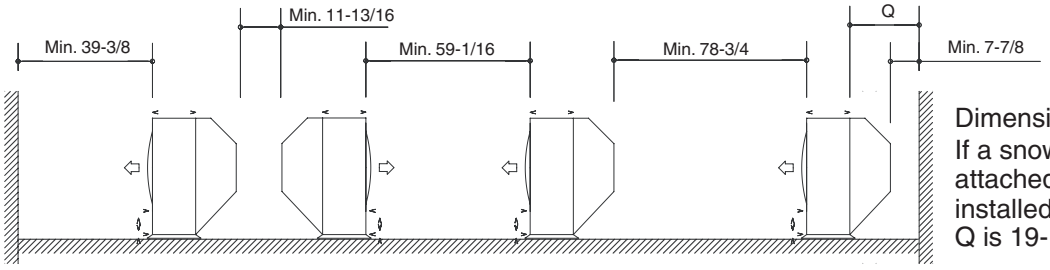
Outdoor unit	O	P
C(H)2672R / 3072R / 3672R / 4272R	39-3/8	5-29/32

(2) Obstacles on both sides



[Installation in front-rear rows]

• The top and both sides must remain open. Either the obstacle to the front or the obstacle to the rear must be no taller than the height of the outdoor unit.



Dimension Q
If a snow protection duct is attached after the unit is installed, verify that dimension Q is 19-11/16 in. or more.

Unit: inch

1

1-12 Electrical Wiring

● General Precautions on Wiring

1) Before wiring, confirm the rated voltage of the unit as shown on its nameplate, then carry out the wiring closely following the wiring diagram.
2) Provide a power outlet to be used exclusively for each unit, and a power supply disconnect and circuit breaker for overcurrent protection should be provided in the exclusive line.
3) To prevent possible hazards from insulation failure, the unit must be grounded.
4) Each wiring connection must be done in accordance with the wiring system diagram.
   Wrong wiring may cause the unit to misoperate or become damaged.
5) Do not allow wiring to touch the refrigerant tubing, compressor, or any moving parts of the fan.
6) Unauthorized changes in the internal wiring can be very dangerous. The manufacturer will accept no responsibility for any damage or misoperation that occurs as a result of such unauthorized changes.
7) To prevent possible hazards from insulation failure, the unit must be grounded.
8) To prevent malfunction of the air conditioner caused by electrical noise, care must be taken when wiring as follows:
   - The remote control wiring and the inter-unit control wiring should be wired apart from the inter-unit power wiring.
   - Use shielded wires for inter-unit control wiring between units and ground the shield on both sides.
9) If the power supply cord of this appliance is damaged, it must be replaced by a repair shop appointed by the manufacturer, because specialpurpose tools are required.
10) All wiring used must be Class 1.

1

● Recommended Wire Length and Wire Diameter for Power Supply System

You must follow LOCAL ELECTRICAL CODES for wiring.

Outdoor Unit

* AWG = American Wire Gauge

Model Name	**(A) Power Supply**	Trade Size of Conduit	MOP (Fuse or HACR type circuit breaker)	Power Supply Terminal Base		Trade Size of Conduit
				Capacity	Max. Wire Diameter	
CH2672R	AWG #12 Max. length 64 ft.	3/4 in.	30 A	50 A	AWG #6	1-1/4 in.
CH3072R	AWG #10 Max. length 92 ft.	3/4 in.	35 A (230/208 V)	50 A	AWG #6	1-1/4 in.
CH3672R	AWG #10 Max. length 92 ft.	3/4 in.	35 A (230/208 V)	50 A	AWG #6	1-1/4 in.
CH4272R	AWG #10 Max. length 81 ft.	3/4 in.	40 A	50 A	AWG #6	1-1/4 in.

Model Name	**(A) Power Supply**	Trade Size of Conduit	MOP (Fuse or HACR type circuit breaker)	Power Supply Terminal Base		Trade Size of Conduit
				Capacity	Max. Wire Diameter	
C2672R	AWG #12 Max. length 76 ft.	3/4 in.	25 A	50 A	AWG #6	1-1/4 in.
C3072R	AWG #10 Max. length 99 ft.	3/4 in.	30 A (230/208 V)	50 A	AWG #6	1-1/4 in.
C3672R	AWG #10 Max. length 99 ft.	3/4 in.	30 A (230/208 V)	50 A	AWG #6	1-1/4 in.
C4272R	AWG #10 Max. length 81 ft.	3/4 in.	35 A	50 A	AWG #6	1-1/4 in.

Indoor Unit

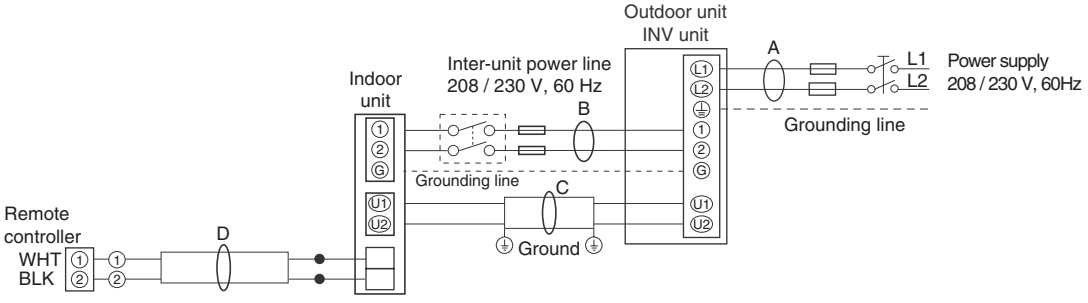
Type	**(B) Power Supply** AWG #14	Trade Size of Conduit	MOP (Fuse or HACR type circuit breaker)
X, K, T, U	Max. length 67 ft.	3/4 in.	15 A

Control Wiring

(C) Inter-Unit Control Wiring	(D) Remote Control Wiring	(E) Control Wiring For Group Control
AWG #18 **Use high voltage wire (300 V)** *1	AWG #18 *2 (0.75 mm^2)	AWG #18 *2 – (0.75 mm^2)
Max. 3,300 ft.	Max. 1,650 ft.	Max. 1,650 – ft. (Total)

*1 With ring-type wire terminal.
*2 Wire joint connection.

● **Wiring System Diagrams**
Basic wiring diagram for standard control

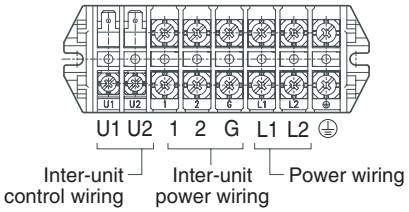


NOTE

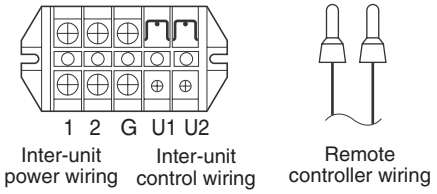
1) Refer to "● Recommended Wire Length and Wire Diameter for Power Supply System" for the explanation of "A", "B", "C", "D", and "E", in the above diagrams.
2) Inter-Unit Control Wiring (C) and remote controller wiring (D), (E) have no polarity. But for other wiring, respect polarity. Be sure to connect as shown in the Wiring System Diagram.
3) In case of separate supply connection to indoor unit, over current protection must be provided between power source and indoor unit.

MAXIMUM OVER CURRENT PROTECTION 15 A (FUSE OR HACRTYPE CIRCUIT BREAKER)

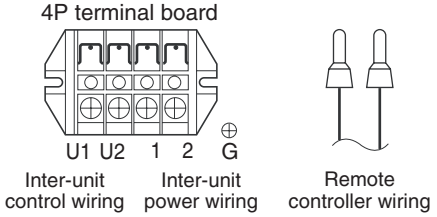
CH Type
8P terminal board



X, T, U Type
5P terminal board



K Type
4P terminal board



WARNING

Loose wiring may cause the terminal to overheat or result in unit malfunction. A fire hazard may also exist. Therefore, ensure that all wiring is tightly connected.

When connecting each power wire to the corresponding terminal, follow the instructions on “How to connect wiring to the terminal” and fasten the wire securely with the fixing screw of the terminal plate.

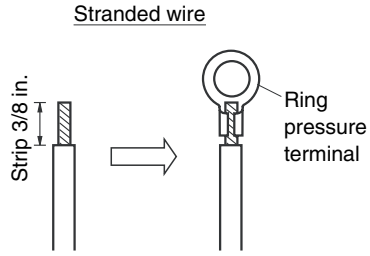


Fig. 1-8

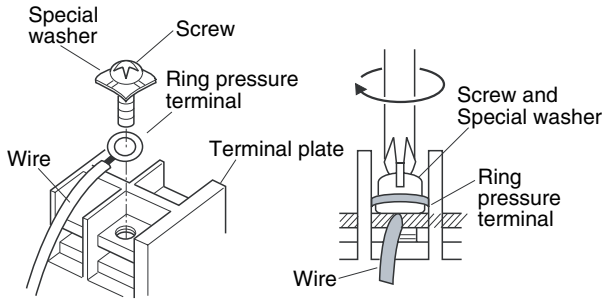


Fig. 1-9

● **How to Connect Wiring to the Terminal**

■ **For stranded wiring**

1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to expose the stranded wiring about 3/8 in. (Fig. 1-8)
2) Using a Phillips head screwdriver, remove the terminal screw(s) on the terminal plate.
3) Using a ring connector fastener or pliers, securely clamp each stripped wire end with a ring pressure terminal. (Fig. 1-8)
4) Place the ring pressure terminal, and replace and tighten the removed terminal screw using a screwdriver. (Fig. 1-9)

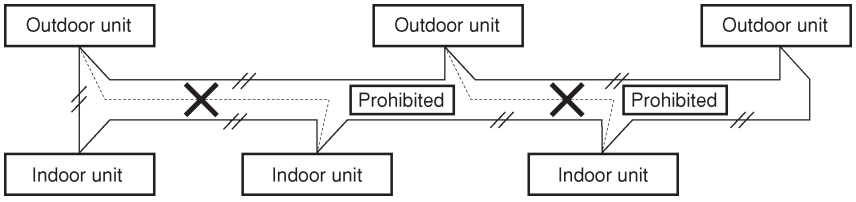
CAUTION

(1) When linking outdoor units in a network (S-net link system), disconnect the terminal extended from the short plug (CN003, 2P Black, location: right bottom on the outdoor main control PCB) from all outdoor units except any one of the outdoor units.

(When shipping: In shorted condition.)

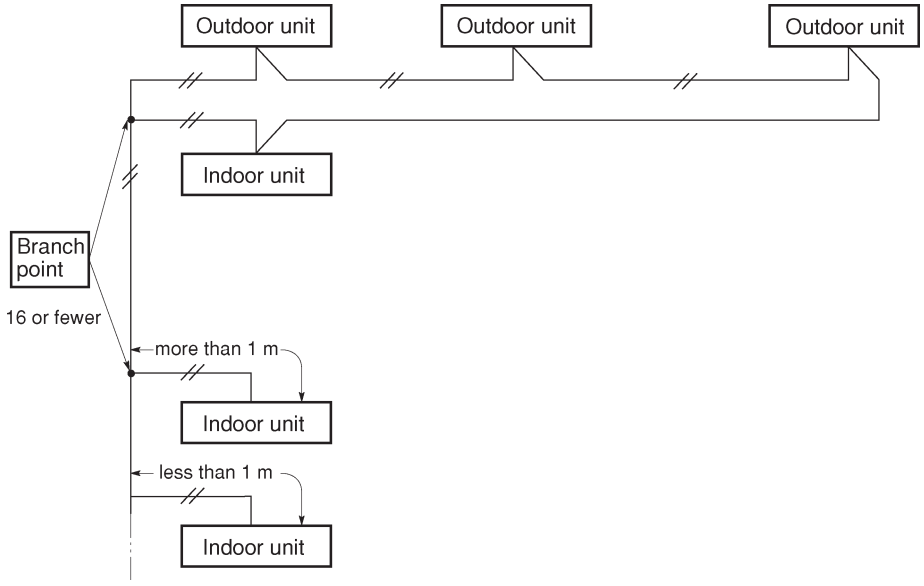
Otherwise the communication of S-net link system is not performed. For a system without link (no connection wiring between outdoor units), do not remove the short plug.

(2) Do not install the inter-unit control wiring in a way that forms a loop. (Fig. 1-10)



(3) If branching the inter-unit control wiring, the number of branch points should be 16 or fewer.

(Branches less than 1 m are not included in the total branch number.) (Fig. 1-11)

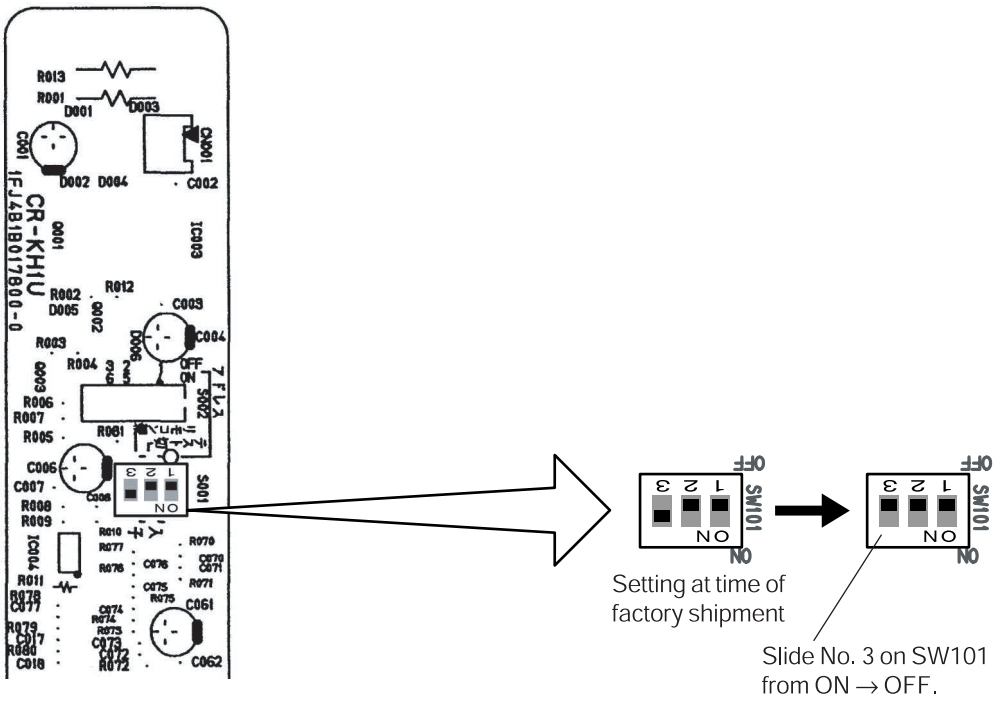


1-13 Using Wireless Remote Controller with Wall-mounted Indoor Unit

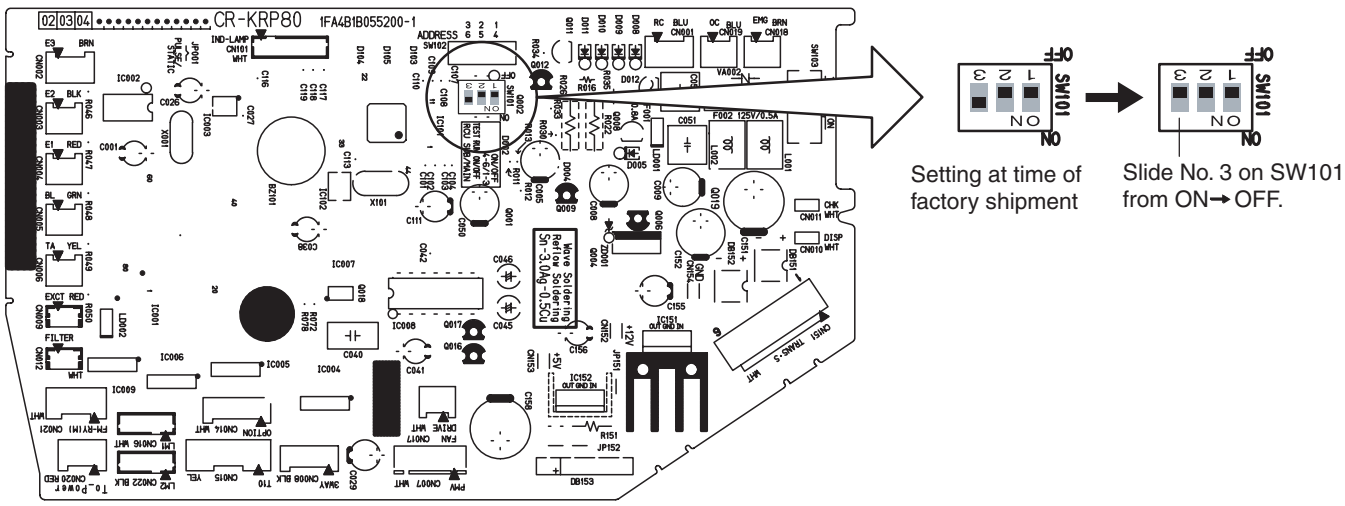
When the wireless remote controller is to be used, slide the switch on the indoor unit control PCB.

- If this setting is not made, an alarm will occur.(The operation lamp on the display blinks.)
- This setting is not necessary if both the wired remote controller and wireless remote controller are used.

- KH3072R
- KH3672R
- KHH2672R



- KH2672R

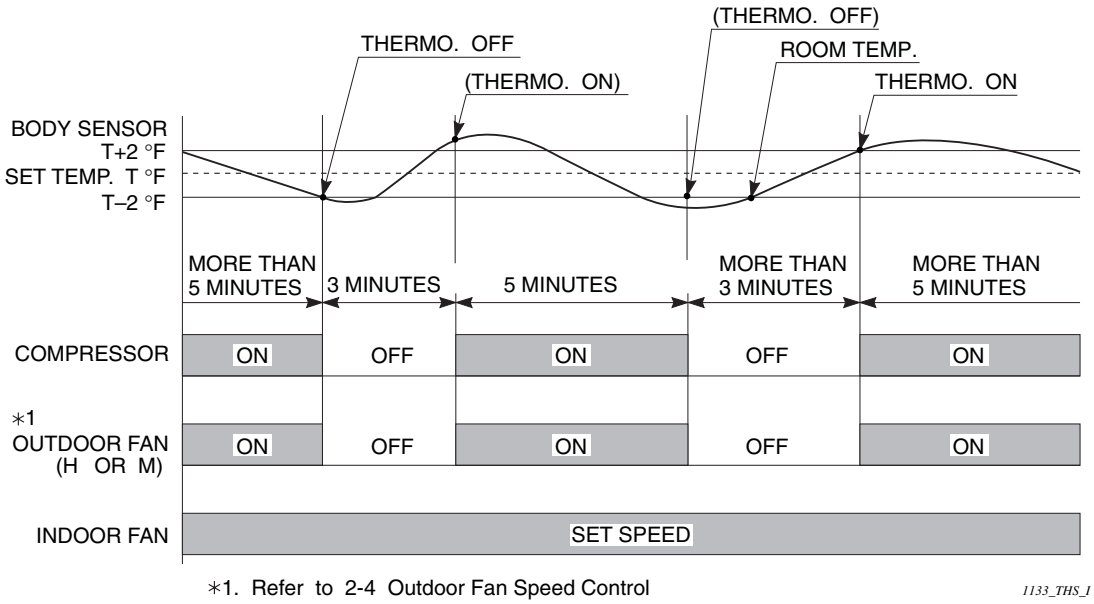


2. PROCESSES AND FUNCTIONS

2-1 Room Temperature Control

The unit adjusts room temperature by turning the outdoor unit's compressor ON and OFF. This process is controlled by the **thermostat** located in the remote control unit.
The figures on this and the next pages show how each part of the system performs when the room temperature changes and the thermostat activates the compressor to start **(thermo ON)** or stop **(thermo OFF)**. Fig. 1 shows about the cooling cycle, and Fig. 2 shows about the heating cycle.

(A) Cooling



∗1. Refer to 2-4 Outdoor Fan Speed Control

1133_THS_1

Fig. 1

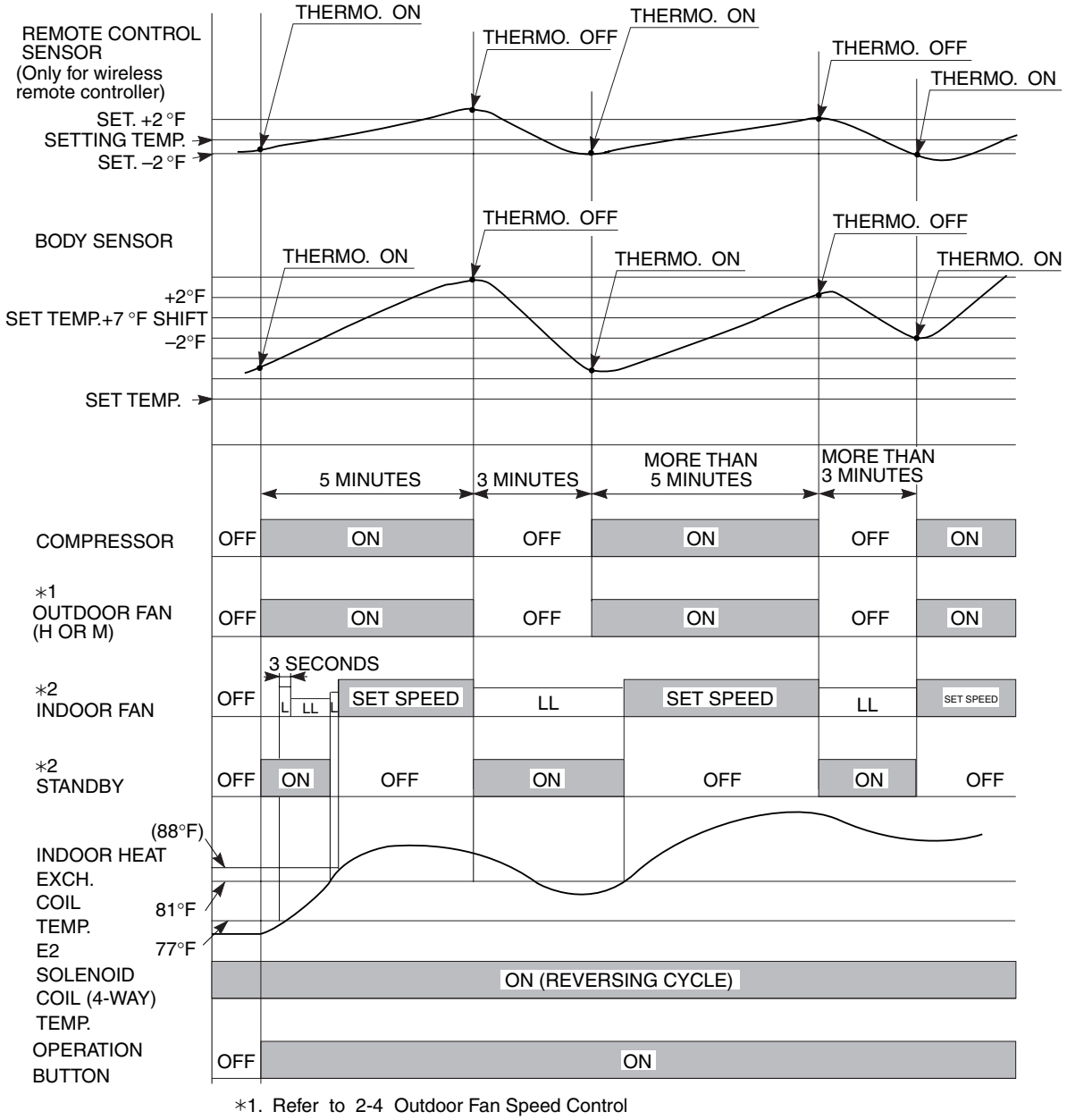
Chart Summary and Explanations

- ❑ Once the compressor **starts**, it keeps running for 5 minutes.
- ❑ Once the compressor **stops**, it will not start running again for 3 minutes.
- ❑ If you **change** the operation mode (**HEAT**, **COOL** or **FAN**) during the heating cycle, the control circuit **stops** the compressor for 3 minutes.
- ❑ For 5 minutes after the compressor is first turned on, and for 3 minutes after it is turned off, the compressor is not controlled by the room sensor.
- ❑ **Thermo ON:** When room temperature rises 2 F (4˚F when set on body sensor) above the set temperature T˚, (T˚+2˚F or T˚+4˚F when set on body sensor):

  Compressor → **ON**
- ❑ **Thermo OFF**: When the room temperature is –2˚F below the set temperature T˚:

  Compressor → **OFF**

(B) Heating



∗1. Refer to 2-4 Outdoor Fan Speed Control
∗2. Refer to 2-2 Cold Draft Prevention (Heating)

1134_THS_I

Fig. 2

Chart Summary and Explanations

- ❑ Once the compressor **starts**, it keeps running for 5 minutes.
- ❑ Once the compressor **stops**, it will not start running again for 3 minutes.
- ❑ If you change the operation mode (**HEAT**, **COOL** or **FAN**) during the heating cycle, the control circuit **stops** the compressor for **3 minutes**.
- ❑ For 5 minutes after the compressor is first turned on, and for 3 minutes after it is turned off, the compressor is not controlled by the room sensor.

When set on remote control sensor

Thermo ON: When room temperature is –2˚F below the set temperature T˚.

Compressor → ON

Thermo OFF: When the room temperature is 2˚F above the set temperature T˚, (T˚+2 ˚F)

Compressor → OFF

When set on body sensor

NOTE: In case of Body sensor, operating temperature is shifted to setting temperature +7˚F.

2-2 Cold Draft Prevention (Heating Cycle)

The cold draft prevention function controls indoor fan speed so a strong draft of cold air will not blow out before the indoor heat exchange coils have warmed up.

- ❑ STANDBY shows on the remote controller when the indoor fan speed is LL (very low) or OFF. This condition occurs in the following 3 cases:
  - During Thermo OFF (refer to 2-1 B. Room Temperature Control, Heating)
  - During the defrosting operation (refer to 2-10 Defrosting Control, Heating)
  - Until either the coil temperature E2 reaches 81°F or when a maximum of 6 minutes has past.
- ❑ The indoor fan motor operates in L instead of LL for 3 seconds as it starts to give the fan an initial boost.

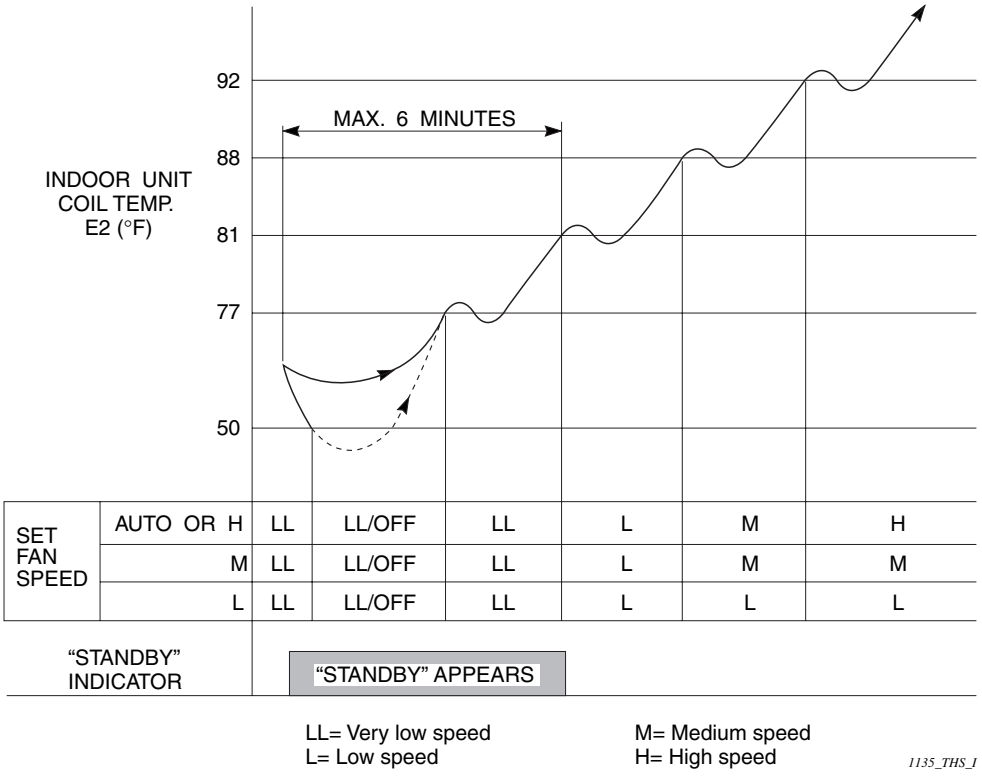


Fig. 3

Chart Summary and Explanations

- ❑ The main idea of this chart is to show that the indoor fan speed increases and gets closer to the set fan speed as the coil temperature **E2** rises.
- ❑ The indoor unit fs coil temperature is taken from sensor **E2** located in the middle of the indoor heat exchange coil.
- ❑ The dotted line shows that the indoor fan motor is **OFF**. When the temperature at sensor **E2** falls below 50 ˚F, the indoor fan motor stops running.

2-3 Automatic Fan Speed (Indoor Unit)

By pressing the FAN SPEED button on the remote controller, the fan speed can be set at one of four steps: AUTO., HI., MED., or LO. When set at AUTO. the indoor unit fan speed will be automatically adjusted to the room temperature as the two charts shown below.

(A) Cooling

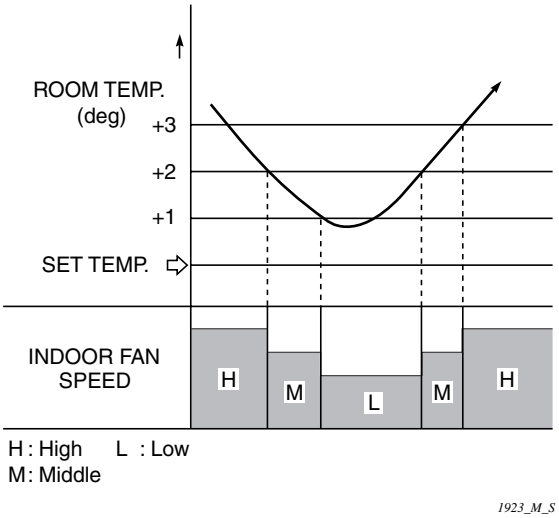


Fig. 4

Chart Explanations and notes

❑ When the fan speed changes, it keeps the speed step for at least 3 minutes, even if the temperature changes to another speed step during the time.

(B) Heating

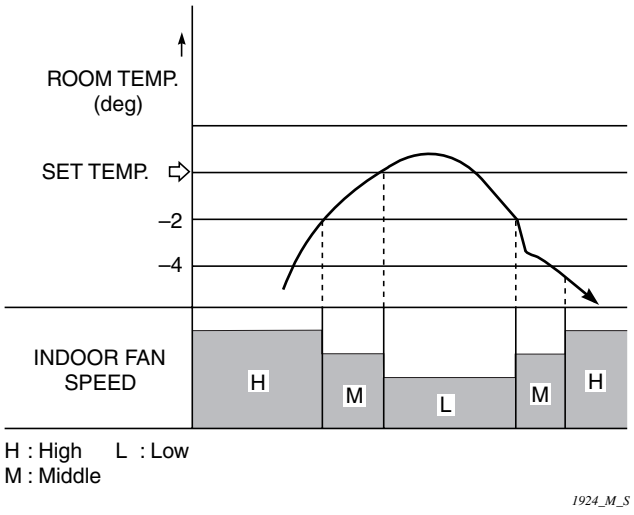


Fig. 5

Chart Explanations and notes

❑ When the fan speed changes, it keeps the speed step for at least 1 minute, even if the temperature changes to another speed step during the time.

2-4 Control Functions

Electronic control valve control
Opening of the electronic control valve is controlled so that the appropriate operating conditions are maintained, based on the signal from each sensor (discharge temperature [TD], intake temperature [TS], outdoor heat exchanger temperature [C1], and indoor heat exchanger temperature [E1, E2]).

Discharge temperature release control

(1) This control lowers the operating frequency of the compressor when electronic control valve control is unable to maintain the appropriate operating conditions because the discharge temperature fails to decline or because there is a sudden increase in the discharge temperature.
(2) If the discharge temperature exceeds 232°F, the compressor is stopped and then restarted. (Error count = 1)
(3) The error count is cleared when operation has continued for 10 minutes after the compressor was restarted.
(4) If (2) repeats 4 times without the error count being cleared (error count = 4), alarm "P03" occurs.

Current release control

The compressor operating frequency is controlled so that the current that is input to the inverter compressor does not exceed the designated value (control value).

Outdoor unit fan control

1. Cooling fan control

(1) The outdoor unit fan minimum speed and maximum speed are determined according to the outdoor air temperature and the operating frequency. The speed is controlled in stages between the minimum speed and maximum speed, based on the outdoor heat exchanger temperature (C2) at that time.
(2) For 60 seconds after start, the outdoor unit fan operates at maximum speed, as determined by the outdoor air temperature and operating frequency at that time. Subsequently, the fan operates at low speed until the outdoor heat exchanger temperature (C2) rises.
(3) If the discharge temperature (TD) sensor is abnormal or has become disconnected, the fan will not operate and a protective device is activated.

2. Heating fan control

(1) The outdoor unit fan minimum speed and maximum speed are determined according to the outdoor air temperature and operating frequency. The speed is controlled in stages between the minimum speed and maximum speed, based on the outdoor heat exchanger temperature (C1) at that time.
(2) If the outdoor heat exchanger temperature (C1) is 75°F or higher continuously for 5 minutes, fan operation may stop (same conditions as when the thermostat is OFF). In this case, the fan will restart after 3 minutes.
(3) This control is not performed during the 3 minutes after start, for 1 minute after defrost ends, and while defrost is in progress.

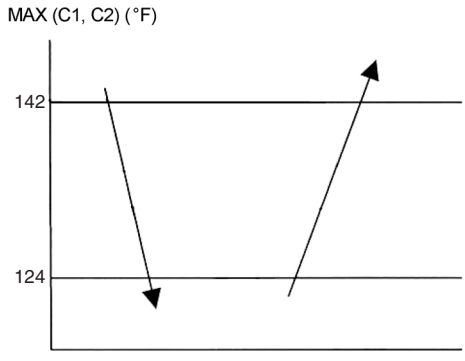
Coil heating control

(1) This control applies current to the coil of the stopped compressor to heat the compressor in place of the crank case heater.
(2) When the discharge temperature (TD) is less than 77°F, the current application judgment is made based on the outdoor air temperature (TO).
- Current application starts when the outdoor air temperature drops to 59°F or below.
- Current application stops when the outdoor air temperature rises above 64°F.

Control for prevention of short intermittent operation

In order to protect the compressor, this control does not allow the compressor to be stopped for 10 minutes after operation starts, even if the thermostat OFF signal is received from the indoor unit.
Control for prevention of high cooling loads
This control reduces abnormal high-pressure increases during cooling operation.

(1) If MAX (C1, C2) (C1 & C2: outdoor heat exchanger temperature) is less than 124°F, the compressor performs normal operation.
(2) If MAX (C1, C2) is 124°F or higher and less than 142°F, the revolution of the compressor is controlled to prevent the high pressure being increased.
(3) If MAX (C1, C2) is 142°F or higher, the compressor stops once. The compressor restarts three times, and if the temperature dose not decrease to less than 142°F, the alert "P20" is displayed.



Overcurrent protection control

(1) If the overcurrent protection circuit detects abnormal current, the compressor is stopped. (Error count = 1.) The compressor then restarts after 3 minutes.
(2) If compressor start/stop is repeated 4 times (error count = 4), alarm "P26", "P29" or "H01" (count = 2 in this case only) occurs. Operation stops and does not restart.

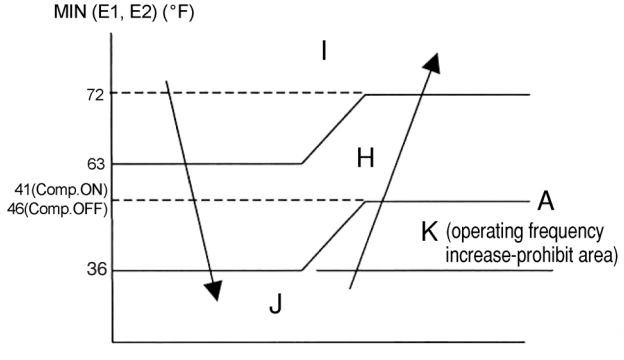
Current release value shift control

(1) This control is intended to improve compressor reliability by preventing continuous high-frequency operation under overload conditions when the outdoor air temperature is high, and by preventing intermittent operation through "control for prevention of high cooling loads".
(2) The control value for "current release control" is corrected according to the outdoor air temperature (TO).
Depending on the temperature, the control value is lowered to 50 – 90% for cooling operation, and to 60 – 98% for heating operation.

Freeze prevention (low-temperature release) control

The below control is performed during cooling operation (including dehumidifying operation), using whichever of the indoor heat exchanger temperatures (E1 or E2) is lower. (See the figure below.)

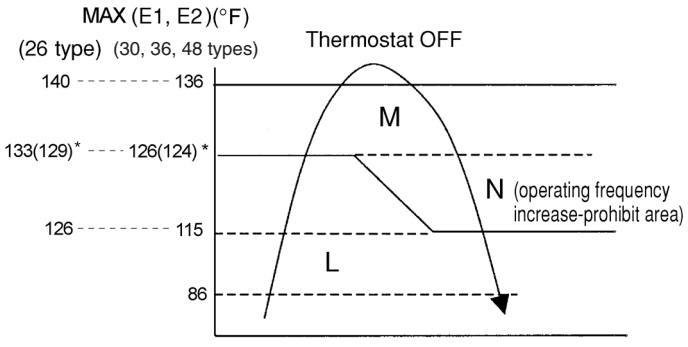
(1) If a temperature in the "J" area (operating frequency reduction and thermostat OFF area) is detected for 6 minutes, the compressor operating frequency is reduced. The compressor operating frequency is reduced every 30 seconds as long as the temperature remains within this area.
(2) If the temperature is in the "K" area (operating frequency increase-prohibit area), the compressor operating frequency is maintained.
(3) If the temperature is in the "H" area (operating frequency control area), and the outdoor air temperature is less than 90°F, the compressor maximum operating frequency is limited according to the indoor unit fan speed.
(4) If the temperature is in the "I" area (normal operating area), the compressors operate normally.
(5) If the temperature is continuously in the "J" area and the compressor operating frequency reaches 0, then temperature A (temperature for changing from "J" area to "H" area) is raised from 41°F to 46°F, and operation continues with the thermostat OFF until the temperature reaches the "H" area.



Heating high-load control

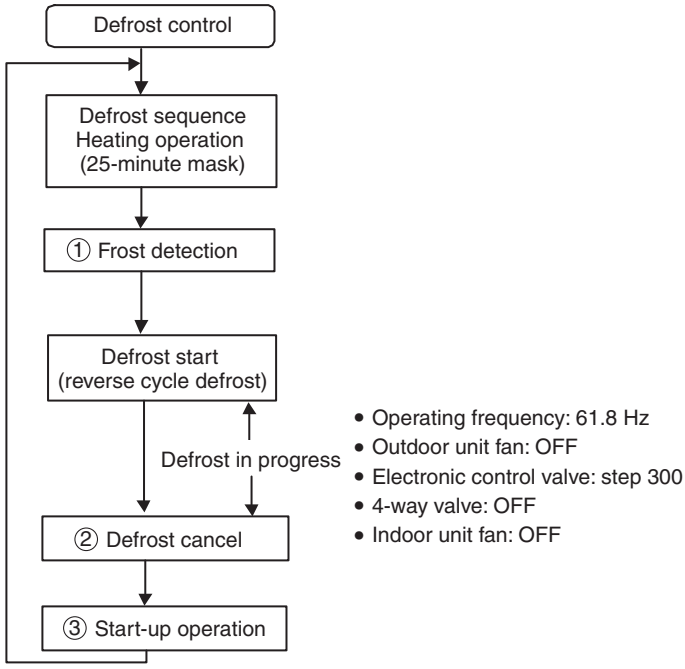
The below control is performed during heating operation, based on the indoor heat exchanger temperature MAX (E1,E2).

(1) If the temperature is in the "M" area (operating frequency reduction and thermostat OFF area), the compressor operating frequency is reduced.
The compressor operating frequency is reduced every 30 seconds as long as the temperature remains within this area.
(2) If the temperature is continuously in the "M" area, the thermostat turns OFF.
(3) If the temperature is in the "N" area, operating frequency increases are prohibited.
(4) If the temperature is in the "L" area, the operating frequency is raised to the original frequency (the frequency prior to frequency reduction) by 6 Hz every 60 seconds.



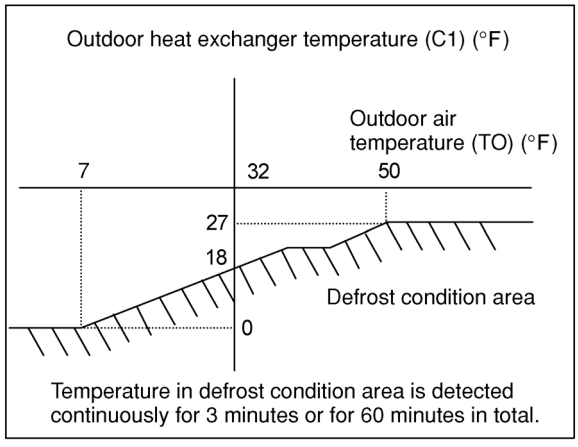
* When the compressor turns ON and the E2 temperature rises, the temperature at which the "M" area is first entered is 124°F (30, 36, 42 types) or higher than 129°F (26 type).
If the E1, E2 temperature subsequently falls to the "L" area, the temperature for entering the "M" area is raised to 126°F (30, 36, 42 types) or 133°F (26 type).
However if the E1, E2 temperature falls to the "L" area and falls below 86°F, then the temperature for entering the "M" area is changed back to 124°F (30, 36, 42 types) or 129°F (26 type).

Defrost control



(1) Frost detection

1. Outdoor heat exchanger temperature (C1) method (15-minute mask after operation start)



2. Outdoor air temperature is 7°F or above and outdoor heat exchanger temperature (C1) of 0°F or below is detected continuously for 20 seconds.
3. Outdoor air temperature is below 7°F and outdoor heat exchanger temperature (C1) of below (outdoor air temperature -10)°F is detected continuously for 20 seconds.

(2) Defrost cancel

• Defrost end conditions

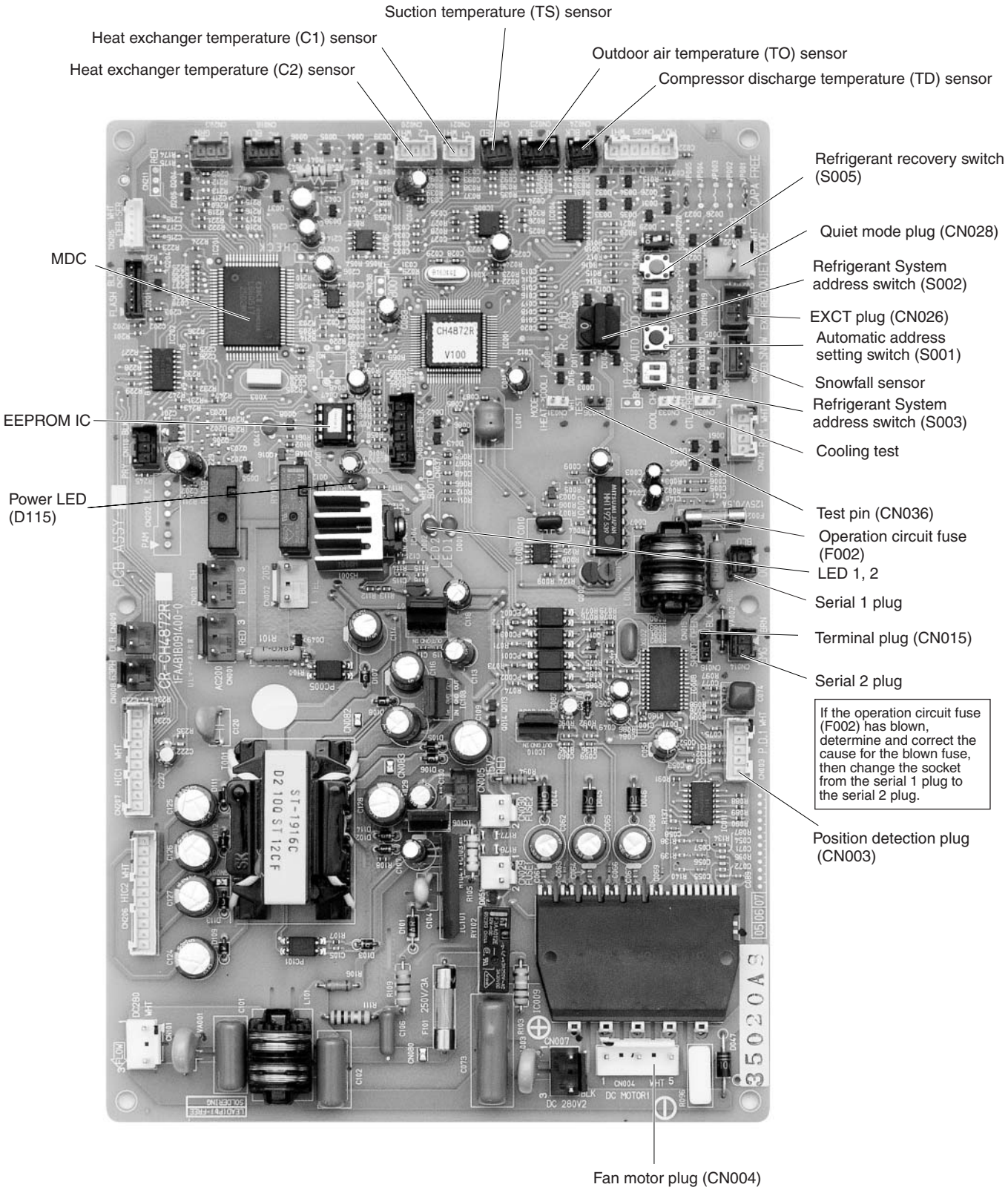
1. Outdoor heat exchanger temperature (C1) rises to 54°F or higher.
2. Outdoor heat exchanger temperature is 45°F or higher continuously for 1 minute.
3. Defrost time of 10 minutes has elapsed.

(3) Startup operation

After defrost ends, the compressors and outdoor unit fan stop for approximately 40 seconds, then operation begins in heating mode.

2-5 Outdoor Unit Control PCB

(1) Layout Diagram (CR-CH4872R)



2-6 Outdoor Unit Control PCB (CR-CH4272R)

(1) Explanation of Functions

S001	Push-button switch (black): Automatic address setting switch • If the system address switch (S002: set to 0 at time of shipment) setting is other than "0" (central control), press this switch once to automatically set the addresses at all indoor units which are in the same system, and are connected to that outdoor unit. During automatic address setting, the 2 LEDs (red) on the outdoor unit control PCB blink alternately. (Pressing this switch again stops automatic address setting.) • If automatic address setting is currently in progress at another system that is subject to central control, only LED 1 on the outdoor unit control PCB blinks to indicate that automatic address setting is in progress at another unit. If automatic address setting is in progress at another unit, automatic address setting cannot be started at this unit, even if S001 is pressed.
S002	Rotary switch (10 positions, black): System address setting switch • This switch is set to 0 (1 system control) at the time of shipment. However the address for each system must be set when multiple systems are controlled or when central control is used. (Figure 1) • If the system address is set to 0, automatic address setting is started when the power is turned ON. Therefore it is not necessary to use switch SW01 and perform automatic address setting in the case of single or simultaneous-operation multi control of a single system. • When using central control for multiple systems, a maximum of 30 systems (maximum 64 units) can be connected. In the case of group control or central control, set the system address to a setting other than 0 (1 or above). • If the number of systems is greater than 9, this switch can be used in combination with DIP switch S003 to set up to 30 systems. The setting can be made as high as 39, however all settings above 30 are handled as 30 for control. (For details, refer to Table 1.) • If system addresses are duplicated (the same address exists more than once), LED 1 on the outdoor unit control PCB lights up, and alarm "L04" is displayed on the remote controller.
S003	DIP switch (2P, blue): System address 10s-digit and 20s-digit place setting switch • When setting 10 systems or more, set this switch in combination with S002. • For 10 – 19 systems, set 1P (10s-digit place) to ON. • For 20 – 29 systems, set 2P (20s-digit place) to ON, and set 1P (10s-digit place) to OFF. • For 30 systems, set both 1P (10s-digit place) and 2P (20s-digit place) to ON. (For details, refer to Table 1.)
S005	Refrigerant recovery switch (red button switch) • Press this switch to perform refrigerant recovery control using cooling operation. The indoor unit fan will operate at HIGH and 55 Hz for a maximum of 10 minutes. When refrigerant recovery is completed, close the valves and press this switch to stop the operation.
Test (CN036)	2P plug (red): Pin used for PCB inspection at the factory
EXCT (CN026)	3P plug (red): Can be used for demand control • The operating ranges are shown in the table.

Short-circuited		Operating range
2P and 3P	1P and 3P	
0	0	normal (at shipment from factory)
0	1	rated capacity
1	0	70%
1	1	0%

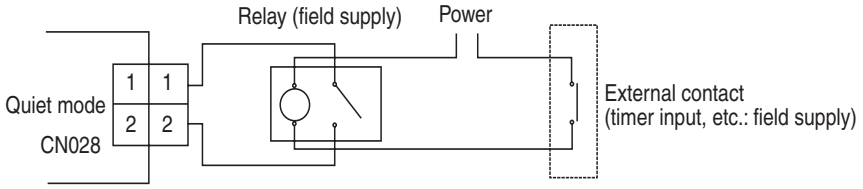
Terminal plug (CN015)	3P plug (black): Terminal plug for the communications line • At the time of shipment from the factory, the short-circuiting socket (2P, black) is installed between pins 1 and 2 on the terminal plug (terminal = yes). • When central control is used for multiple systems, leave the short-circuiting socket in place only on the outdoor unit with a system address of 1. At all other outdoor units (other than unit No. 1), move the short-circuiting socket to between 2 and 3 (terminal = no). If multiple short-circuiting sockets remain in place during central control, a communications failure will occur. • In the case of a single system only (system address = 0), do not remove the short-circuiting socket. (Alarm "E04" will occur.)
Quiet mode (CN028)	2P plug (white): Enables operation in quiet mode. • The outdoor unit fan and compressor frequencies are subject to limits during operation. • Low-noise operation is enabled when the relay is turned ON. ● **Example of wiring**  Outdoor unit control PCB **Note 1:** The maximum length of the wiring between the outdoor unit PCB and the relay is 2 m. • Lead wire with 2P plug (special-order part: WIRE K/ 623-161-2098) • Relay, field supply, contact input specifications: DC 5 V, 0.5 mA (Recommended relay: Fuji Electric HH62SW, compatible with micro contacts) • Use a commercially available timer (such as the Omron H5 daily time switch).

Table 1. Method of System Address Setting

[S002 (rotary, black), S003 (2P DIP switch, green or blue)]

	Outdoor system address No.	S002 setting (system address switch)	S003 setting	
			1P (10s-digit place)	2P (20s-digit place)
1 system only	1	0	OFF	OFF
Central control	1	1	OFF	OFF
	2	2	OFF	OFF
	3	3	OFF	OFF
	4	4	OFF	OFF
	5	5	OFF	OFF
	6	6	OFF	OFF
	7	7	OFF	OFF
	8	8	OFF	OFF
	9	9	OFF	OFF
	10	0	ON	OFF
	11	1	ON	OFF
	12	2	ON	OFF
	13	3	ON	OFF
	14	4	ON	OFF
	15	5	ON	OFF
	16	6	ON	OFF
	17	7	ON	OFF
	18	8	ON	OFF
	19	9	ON	OFF
	20	0	OFF	ON
	21	1	OFF	ON
	22	2	OFF	ON
	23	3	OFF	ON
	24	4	OFF	ON
	25	5	OFF	ON
	26	6	OFF	ON
	27	7	OFF	ON
	28	8	OFF	ON
	29	9	OFF	ON
	30	0	ON	ON

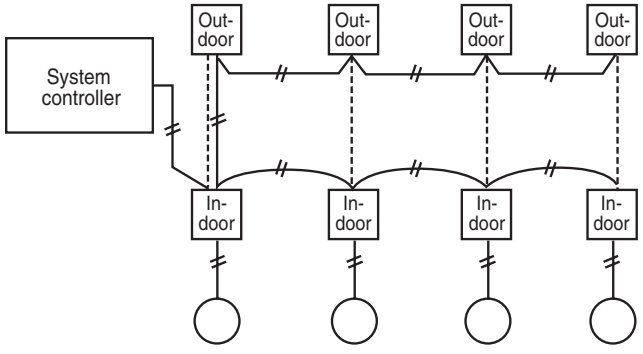


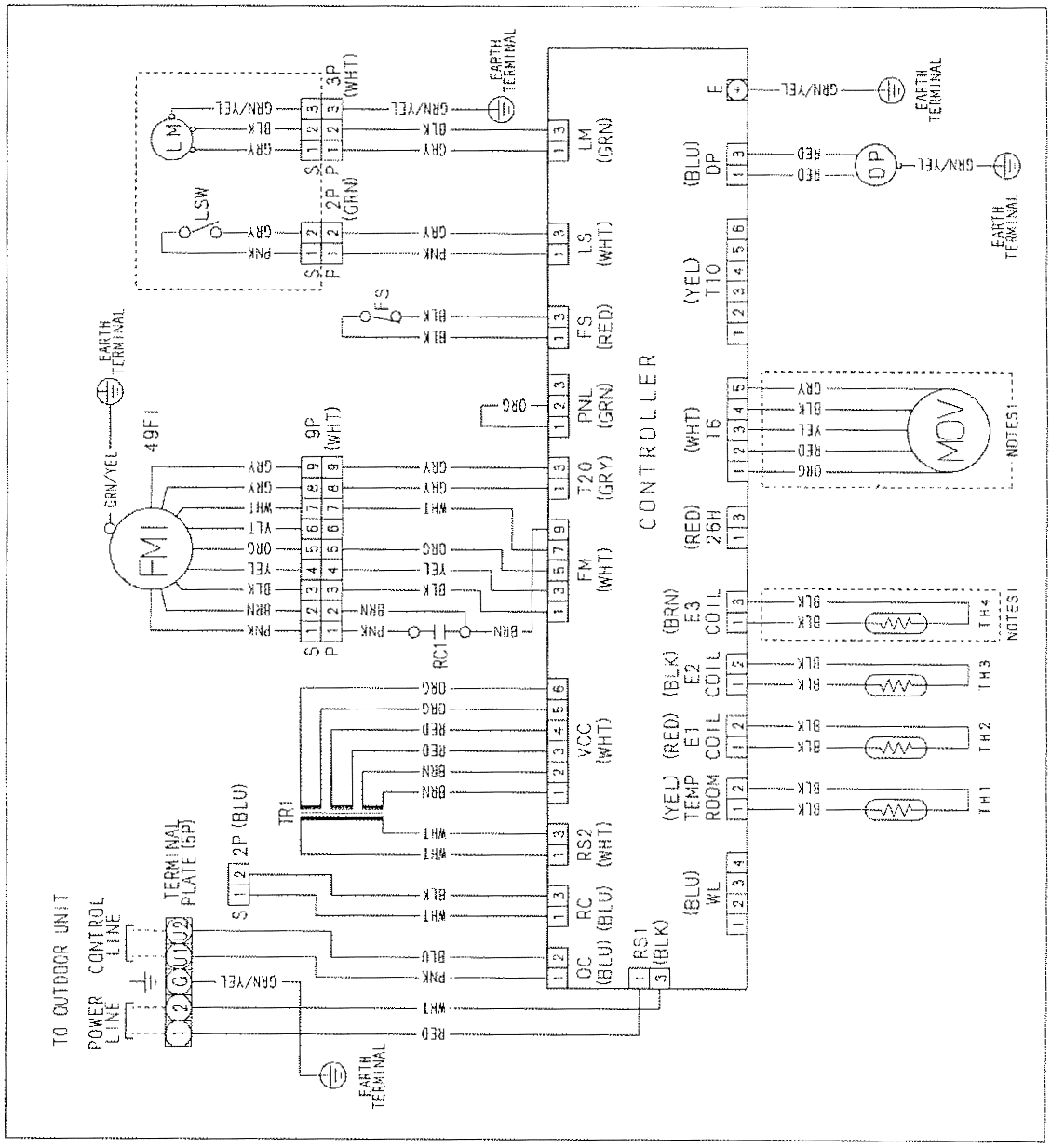
Fig. 6

3. ELECTRICAL DATA

3-1 Indoor Units

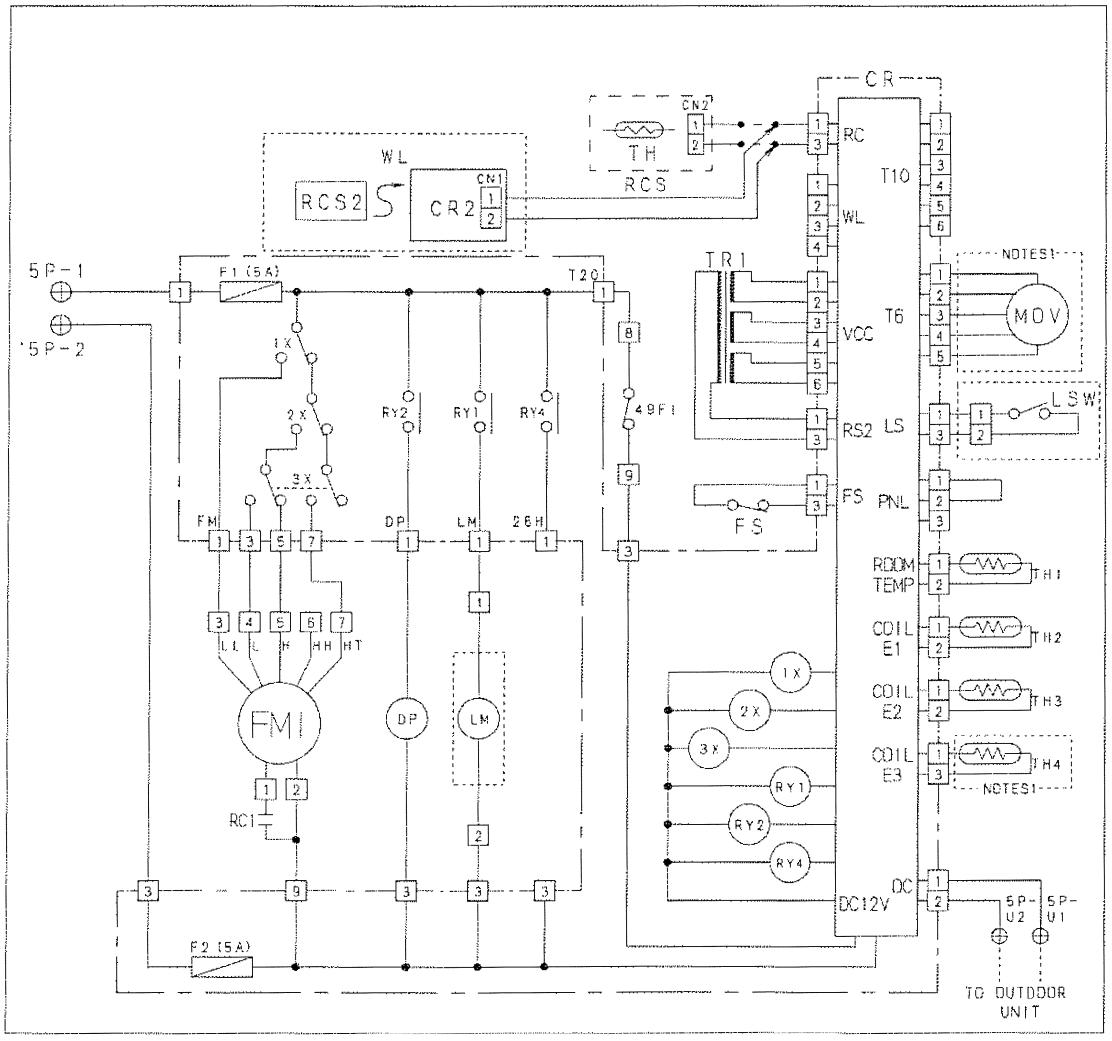
4-Way Air Discharge Semi-concealed Type : XH2672R/XH3672R/XH4272R

• Electric Wiring Diagram



3

• Schematic Diagram

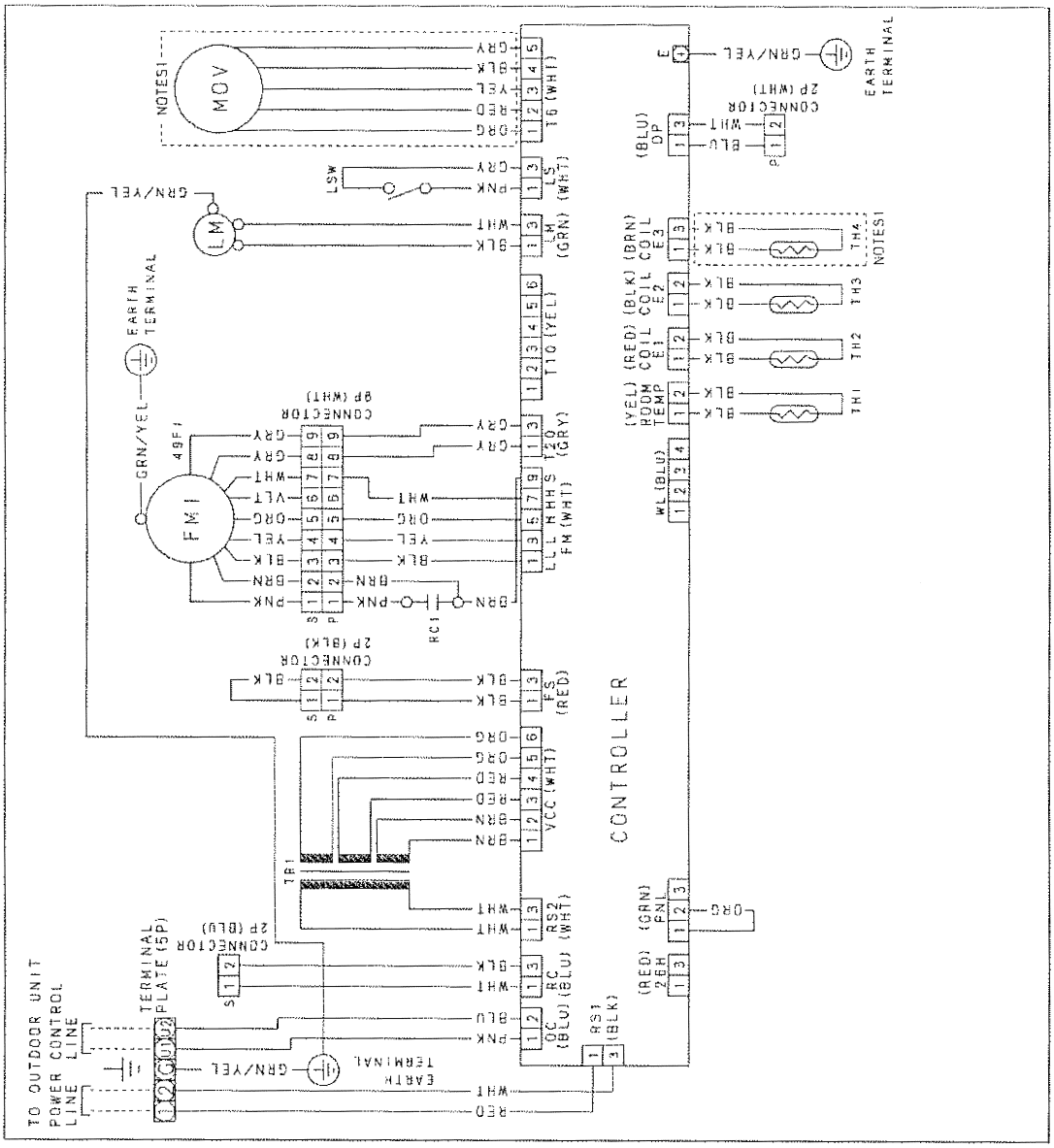


SYMBOLS	DESCRIPTION
FMI	INDOOR FAN MOTOR
MOV (NOTES1)	MOTOR OPERATED VALVE
49FI	INDOOR MOTOR THERMAL PROTECTOR
RC1	RUNNING CAPACITOR
TR1	POWER TRANSFORMER
DP	DRAIN PUMP
FS	FLOAT SWITCH
TH1	ROOM THERMISTOR
TH2	THERMISTOR (INDOOR COIL E1)
TH3	THERMISTOR (INDOOR COIL E2)
TH4 (NOTES1)	THERMISTOR (INDOOR COIL E3)
F1, 2	FUSE
1X~3X	AUXILIARY RELAY
RY1, 2, 4	
CR	INDOOR CONTROLLER
(LSW)	LIMIT SWITCH (OPTIONAL PARTS)
(LM)	AUTO LOUVER MOTOR (OPTIONAL PARTS)
(RCS)	REMOTE CONTROL SWITCH (OPTIONAL PARTS) TH:THERMISTOR (ROOM THERMISTOR)
(WL)	WIRELESS REMOTE CONTROLLER (OPTIONAL PARTS) CR2:WIRELESS CONTROLLER RCS2:WIRELESS REMOTE CONTROLLER
⊕	TERMINAL PLATE
□	CONNECTOR
⊡	TERMINAL

NOTES1 : EXCEPT FOR SEVENTH SERIES

Ceiling Mounted Type : TH2672R/TH3672R/TH4272R

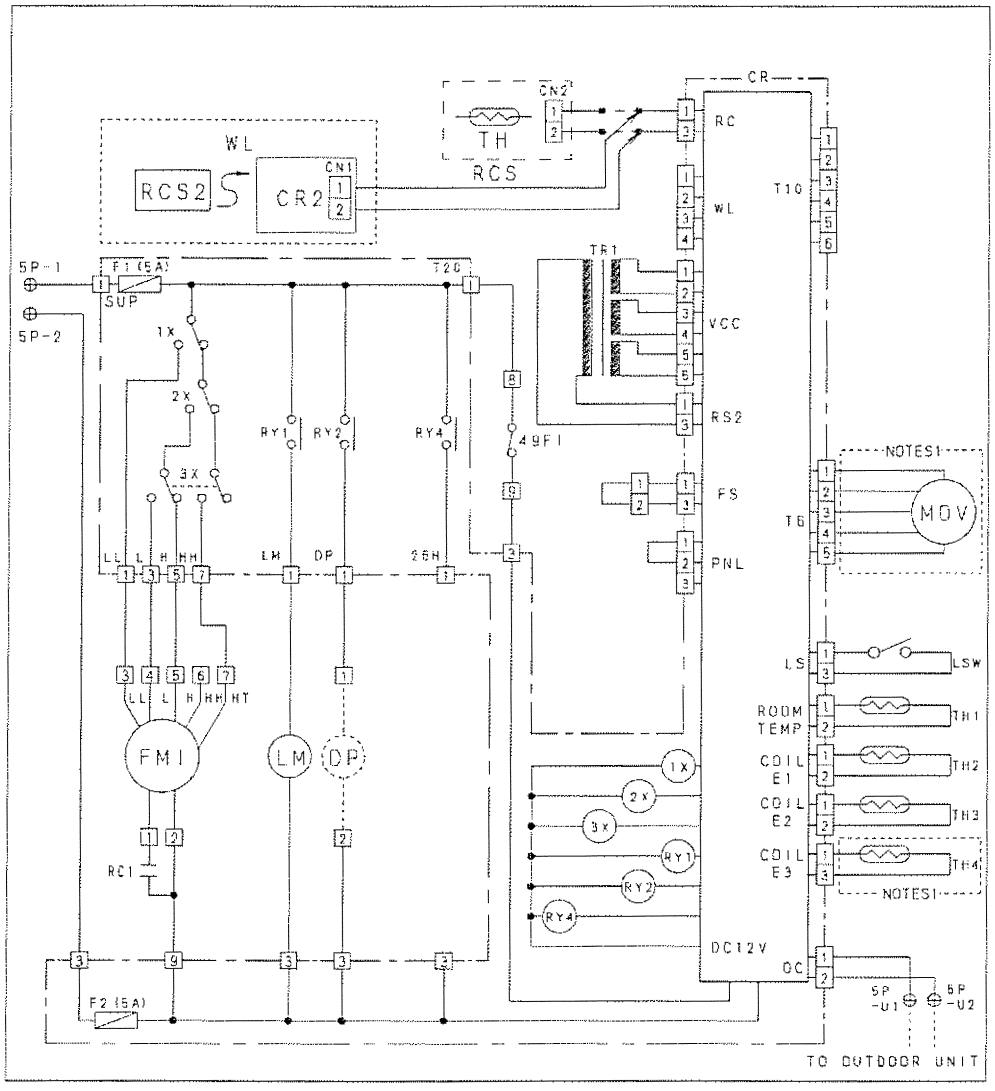
• Electric Wiring Diagram



3

Ceiling Mounted Type : TH2672R/TH3672R/TH4272R

• Schematic Diagram

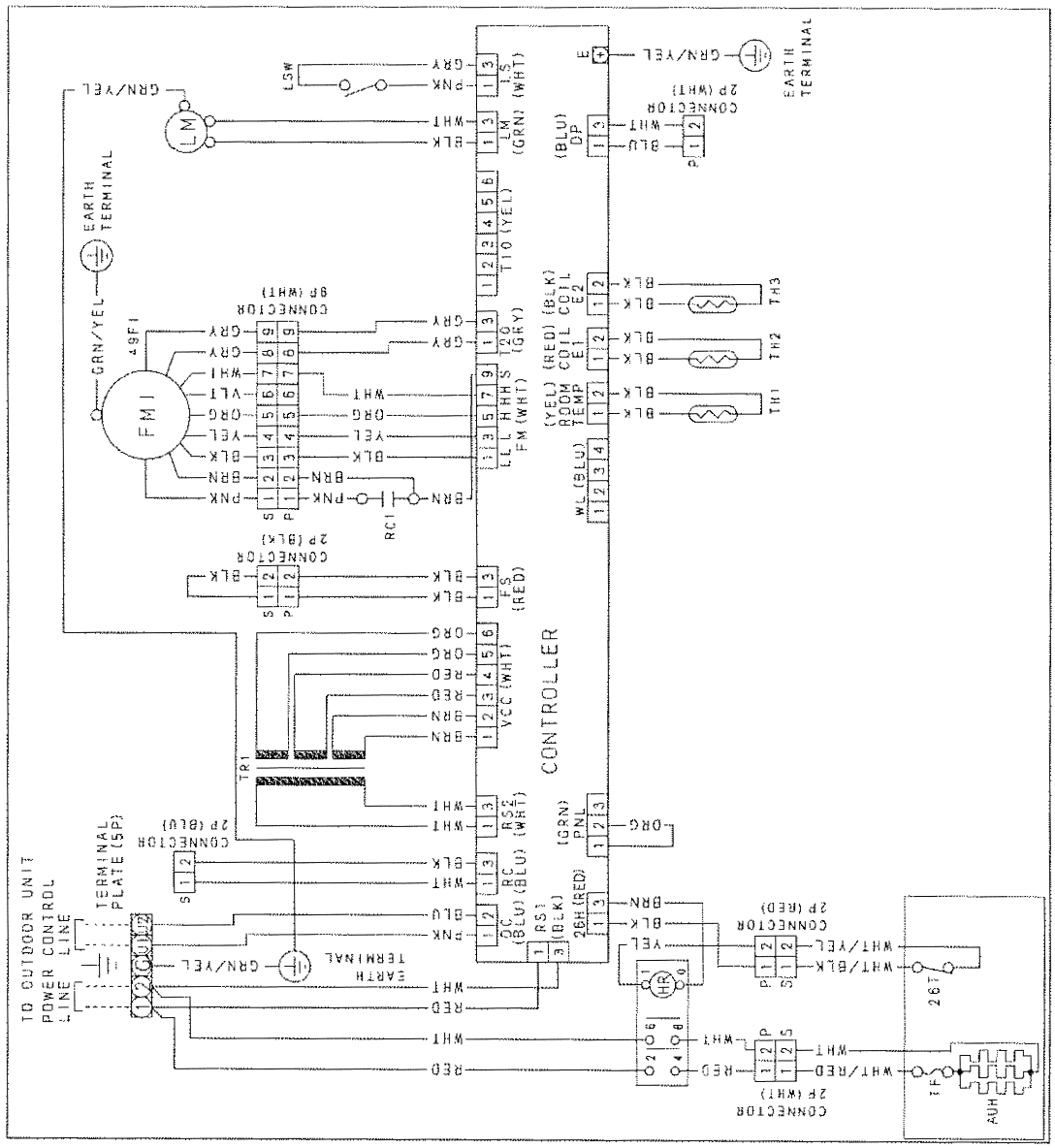


SYMBOLS	DESCRIPTION
FMI	INDOOR FAN MOTOR
49FI	INDOOR MOTOR THERMAL PROTECTOR
RC1	RUNNING CAPACITOR
F1, F2	FUSE
LM	AUTO LOUVER MOTOR
TR1	POWER TRANSFORMER
1X-3X	AUXILIARY RELAY
RY1, 2, 4	AUXILIARY RELAY
MOV (NOTES1)	MOTOR OPERATED VALVE
FS	FLOAT SWITCH
LSW	LIMIT SWITCH
TH1	ROOM THERMISTOR
TH2	THERMISTOR (INDOOR COIL E1)
TH3	THERMISTOR (INDOOR COIL E2)
TH4 (NOTES1)	THERMISTOR (INDOOR COIL E3)
CR	INDOOR CONTROLLER
(RCS)	REMOTE CONTROL SWITCH (OPTIONAL PARTS) TH:THERMISTOR (ROOM THERMISTOR)
(WL)	WIRELESS REMOTE CONTROLLER (OPTIONAL PARTS) CR2:WIRELESS CONTROLLER RCS2:WIRELESS REMOTE CONTROLLER
⊕	TERMINAL PLATE
	CONNECTOR
+	TERMINAL

3

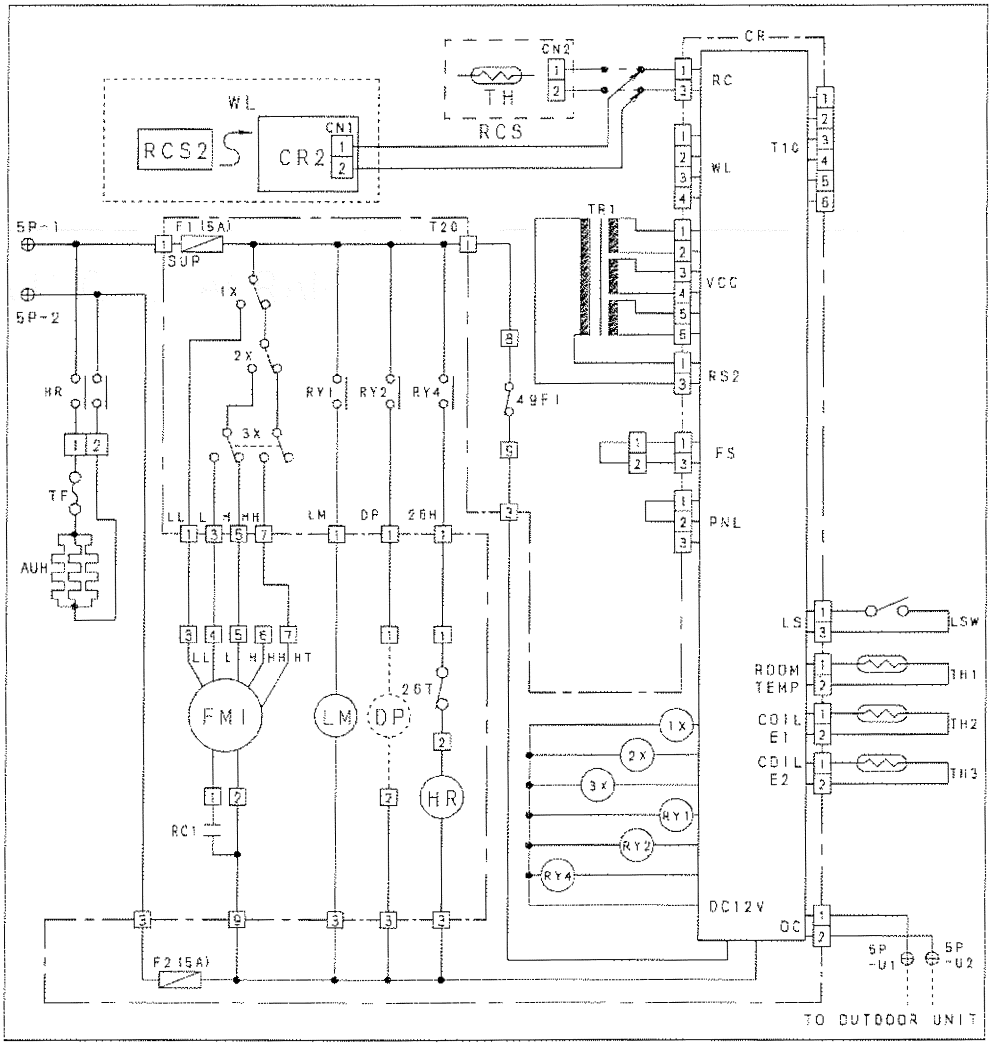
Ceiling Mounted Type : THH2672R/THH3672R

• Electric Wiring Diagram



Ceiling Mounted Type : THH2672R/THH3672R

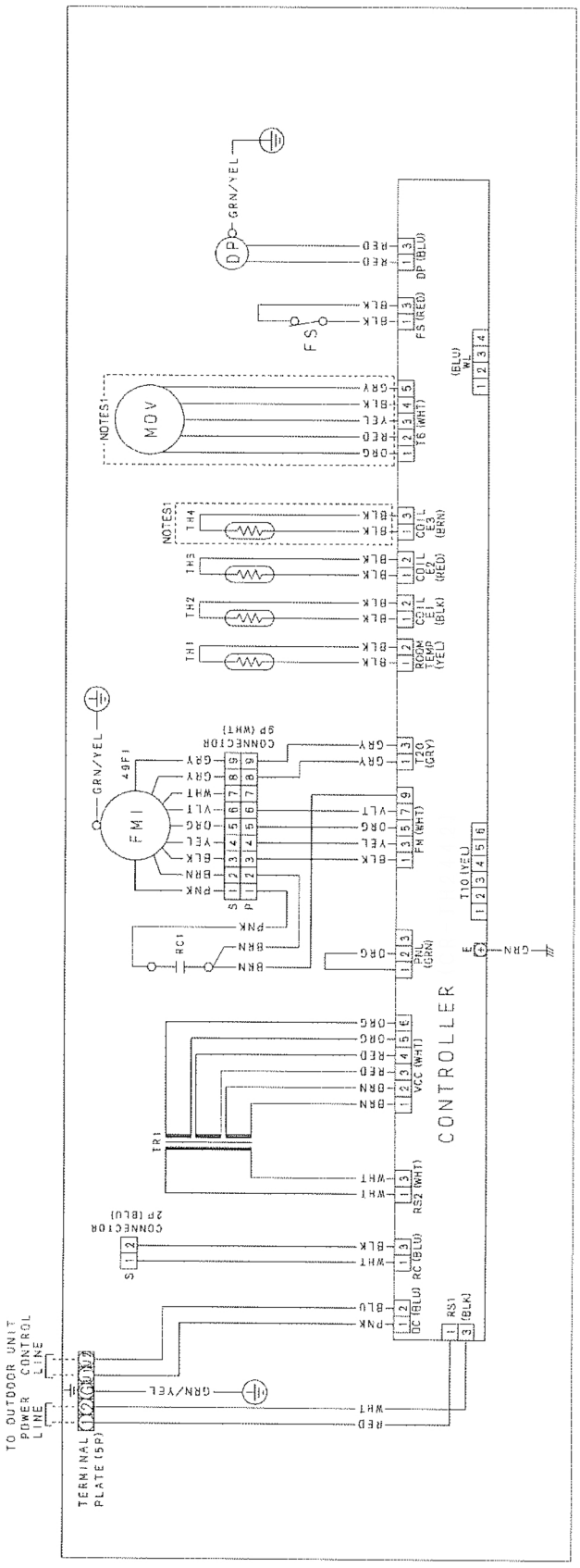
• Schematic Diagram



SYMBOLS	DESCRIPTION
FMI	INDOOR FAN MOTOR
49FI	INDOOR MOTOR THERMAL PROTECTOR
RC1	RUNNING CAPACITOR
F1, F2	FUSE
LM	AUTO LOUVER MOTOR
TR1	POWER TRANSFORMER
1X-3X	AUXILIARY RELAY
RY1, 2, 4	AUXILIARY RELAY
FS	FLOAT SWITCH
LSW	LIMIT SWITCH
TH1	ROOM THERMISTOR
TH2	THERMISTOR(INDOOR COIL E1)
TH3	THERMISTOR(INDOOR COIL E2)
AUH	AUXILIARY HEATER
26T	OVER HEAT PROTECTION THERMOSTAT
TF	OVER HEAT PROTECTION THERMO FUSE
HR	HEATER RELAY
CR	INDOOR CONTROLLER
(RCS)	REMOTE CONTROL SWITCH (OPTIONAL PARTS) TH:THERMISTOR(ROOM THERMISTOR)
(WL)	WIRELESS REMOTE CONTROLLER (OPTIONAL PARTS) CR2:WIRELESS CONTROLLER RCS2:WIRELESS REMOTE CONTROLLER
⊕	TERMINAL PLATE
	CONNECTOR
(+)	TERMINAL

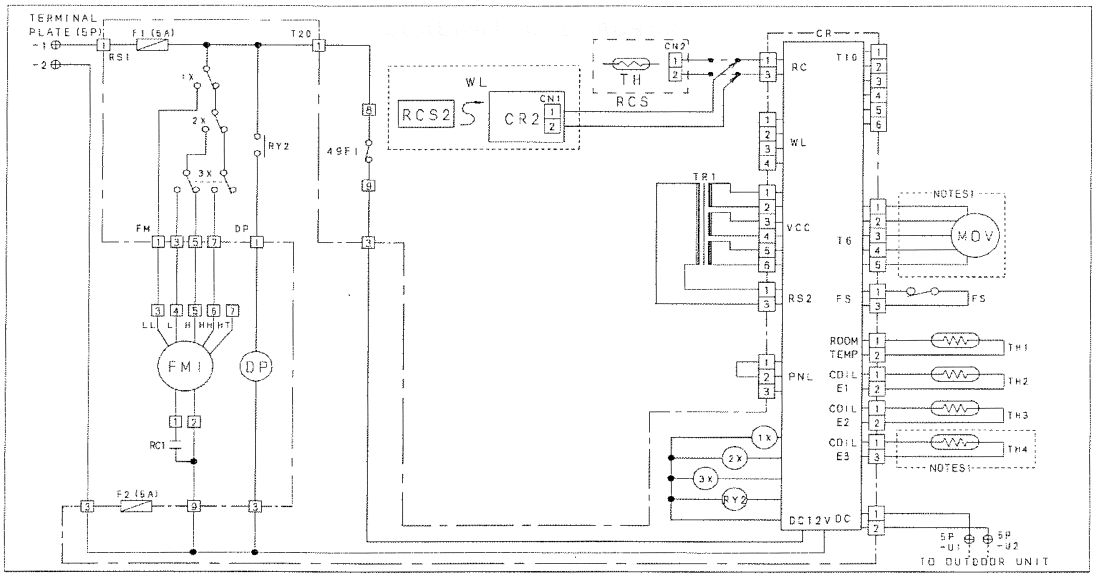
Concealed Duct Type : UH2672R/UH3672R

• Electric Wiring Diagram



Concealed Duct Type : UH2672R/UH3672R

• Schematic Diagram



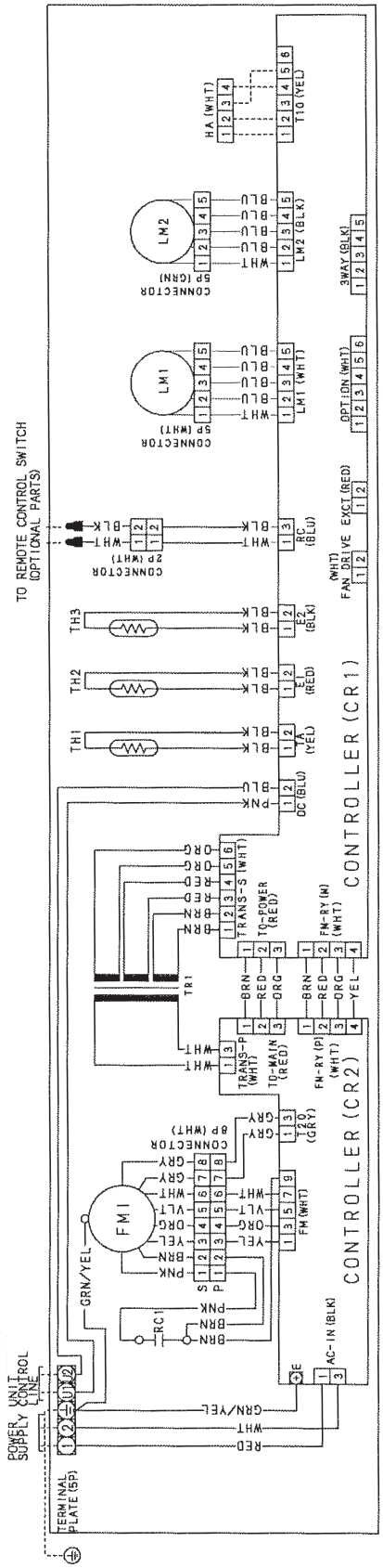
SYMBOLS	DESCRIPTION
FMI	INDOOR FAN MOTOR
49FI	INDOOR MOTOR THERMAL PROTECTOR
RC1	RUNNING CAPACITOR
F1, F2	FUSE
DP	DRAIN PUMP
FS	FLOAT SWITCH
TR1	POWER TRANSFORMER
1X-3X	AUXILIARY RELAY
RY2	AUXILIARY RELAY
MOV (NOTES1)	MOTOR OPERATED VALVE
TH1	ROOM THERMISTOR
TH2	THERMISTOR (INDOOR COIL E1)
TH3	THERMISTOR (INDOOR COIL E2)
TH4 (NOTES1)	THERMISTOR (INDOOR COIL E3)
CR	INDOOR CONTROLLER
(RCS)	REMOTE CONTROL SWITCH (OPTIONAL SWITCH) TH:THERMISTOR (ROOM THERMISTOR)
(WL)	WIRELESS REMOTE CONTROLLER (OPTIONAL PARTS) CR2:WIRELESS CONTROLLER RCS2:WIRELESS REMOTE CONTROLLER
⊕	TERMINAL PLATE
□	CONNECTOR
⊕	TERMINAL

NOTES1:EXCEPT FOR SEVENTH SERIES

3

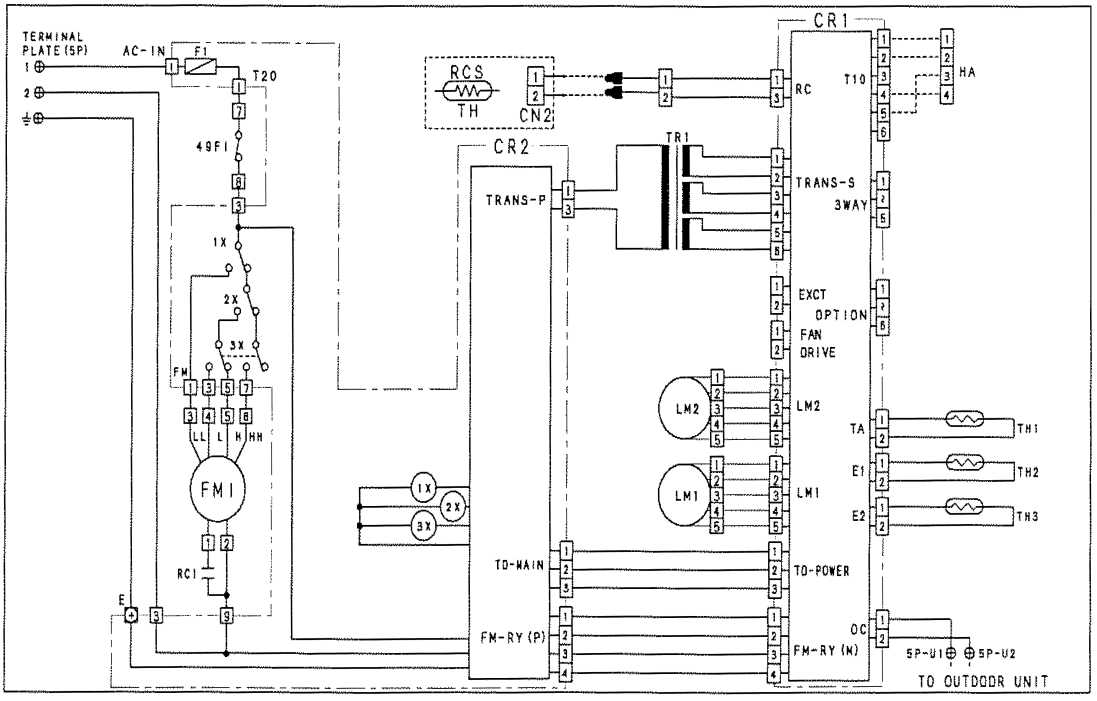
Wall Mounted Type : KH2672R

• Electric Wiring Diagram



Wall Mounted Type : KH2672R

• Schematic Diagram

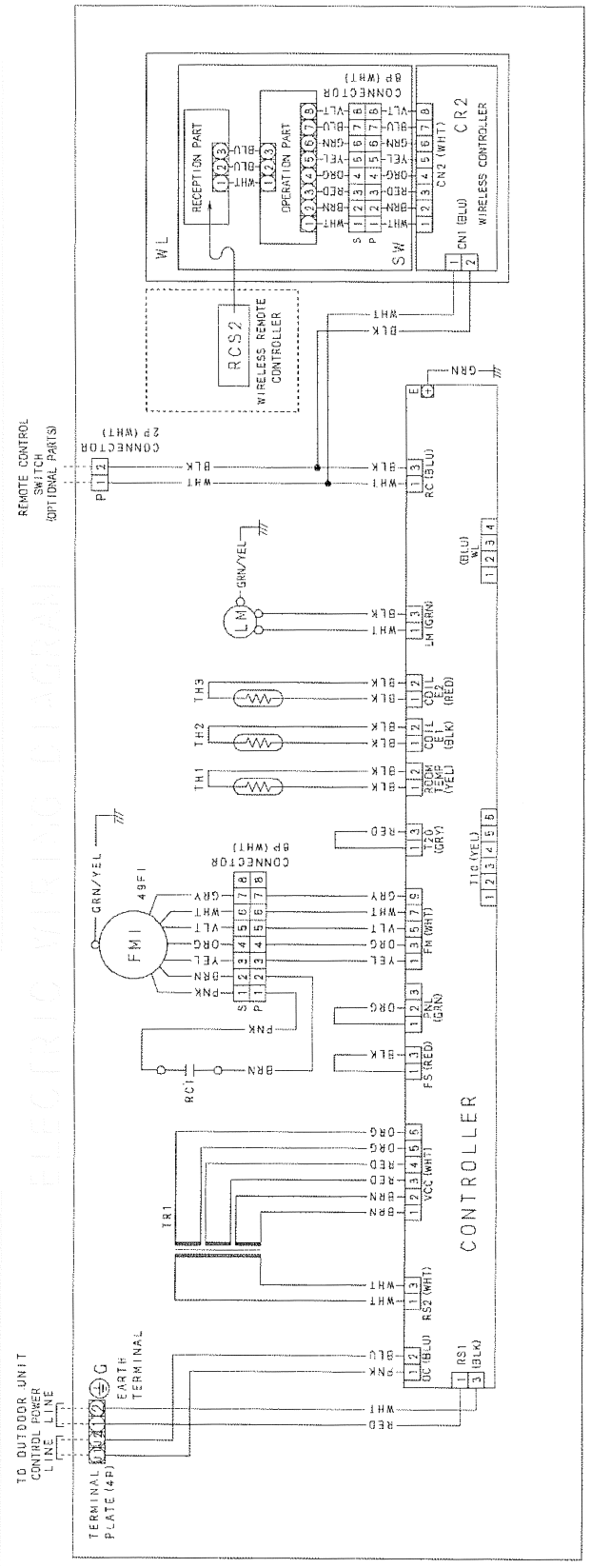


SYMBOLS	DESCRIPTION
FM1	INDOOR FAN MOTOR
49F1	INDOOR MOTOR THERMAL PROTECTOR
RC1	RUNNING CAPACITOR
TR1	POWER TRANSFORMER
TH1	ROOM THERMISTOR
TH2	THERMISTOR (INDOOR COIL E1)
TH3	THERMISTOR (INDOOR COIL E2)
F1	FUSE
LM	AUTO LOUVER MOTOR
1X-3X	AUXILIARY RELAY
CR1, CR2	INDOOR CONTROLLER
(RCS)	REMOTE CONTROL SWITCH (OPTIONAL PARTS) TH:ROOM THERMISTOR
⊕	TERMINAL PLATE
□	CONNECTOR
⊡	TERMINAL

3

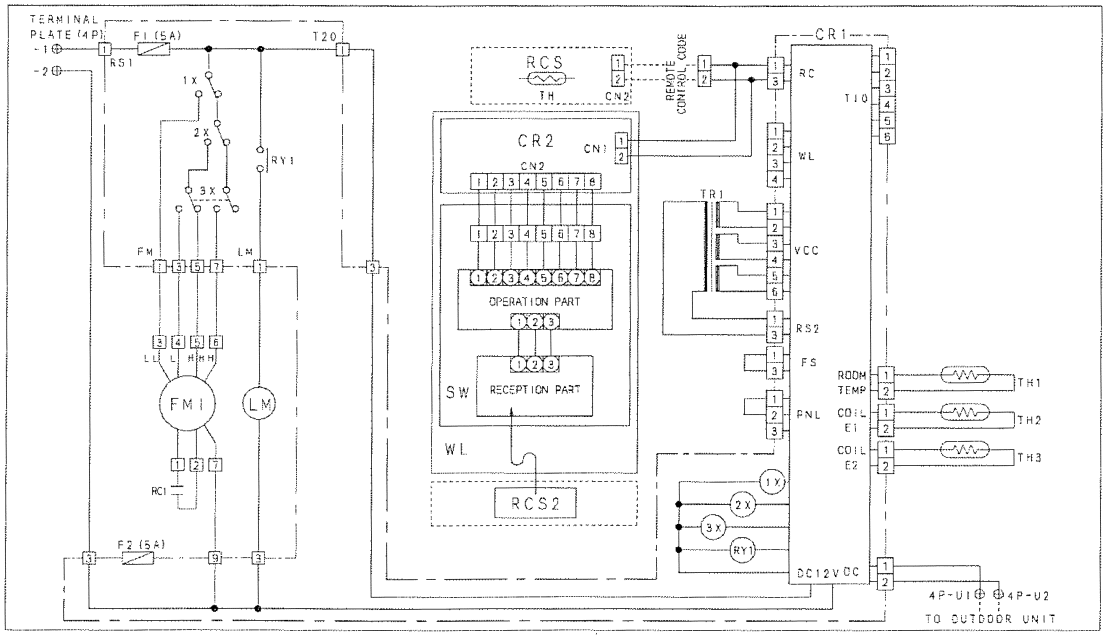
Wall Mounted Type : KH3072R/KH3672R

• Electric Wiring Diagram



Wall Mounted Type : KH3072R/KH3672R

• Schematic Diagram

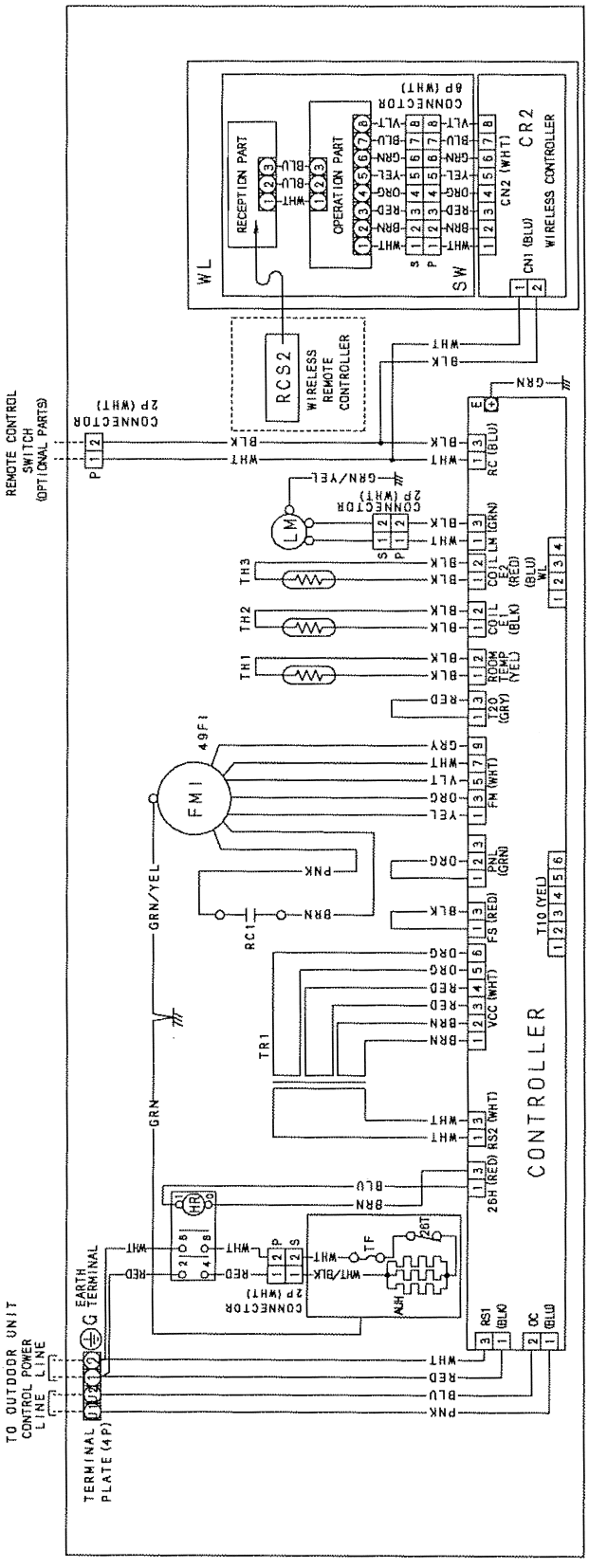


SYMBOLS	DESCRIPTION
FMI	INDOOR FAN MOTOR
49FI	INDOOR MOTOR THERMAL PROTECTOR
RC1	RUNNING CAPACITOR
F1, F2	FUSE
LM	AUTO LOUVER MOTOR
TR1	POWER TRANSFORMER
1X-3X	AUXILIARY RELAY
RY1	AUXILIARY RELAY
TH1	ROOM THERMISTOR
TH2	THERMISTOR (INDOOR COIL E1)
TH3	THERMISTOR (INDOOR COIL E2)
CR1	INDOOR CONTROLLER
(RCS)	REMOTE CONTROL SWITCH (OPTIONAL PARTS) TH:THERMISTOR (ROOM THERMISTOR)
WL	WIRELESS REMOTE CONTROLLER CR2:WIRELESS CONTROLLER SW :SWITCH ASSY OPERATION PART RECEPTION PART+INDICATE LAMP
(RCS2)	WIRELESS REMOTE CONTROLLER (OPTIONAL PARTS)
⊕	TERMINAL PLATE
□	CONNECTOR
(+)	TERMINAL

3

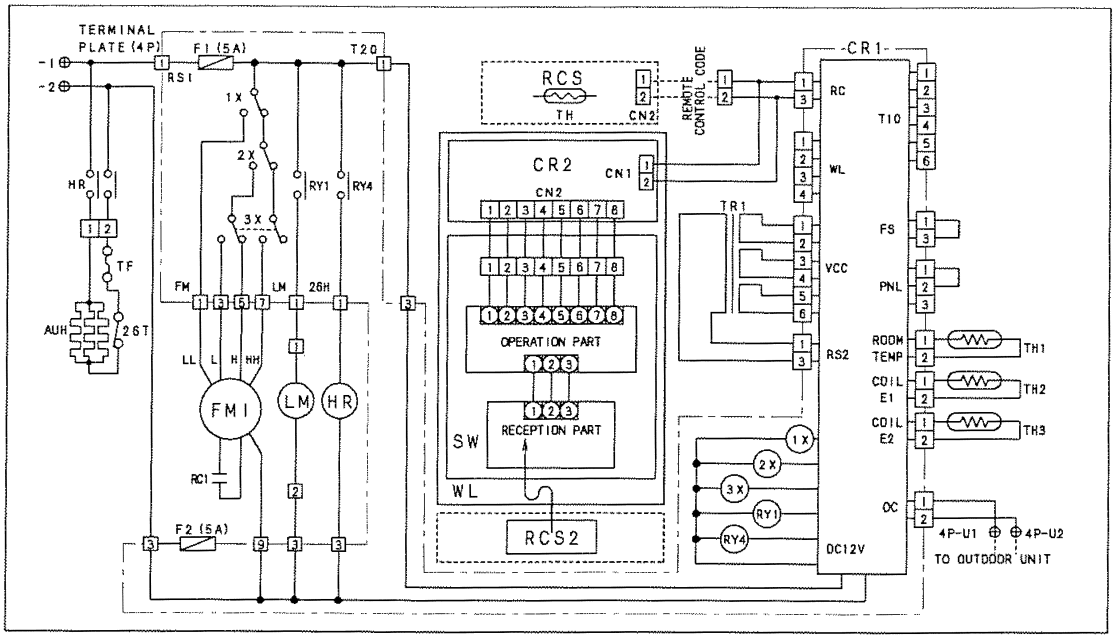
Wall Mounted Type : KHH2672R

• Electric Wiring Diagram



Wall Mounted Type : KHH2672R

• Schematic Diagram



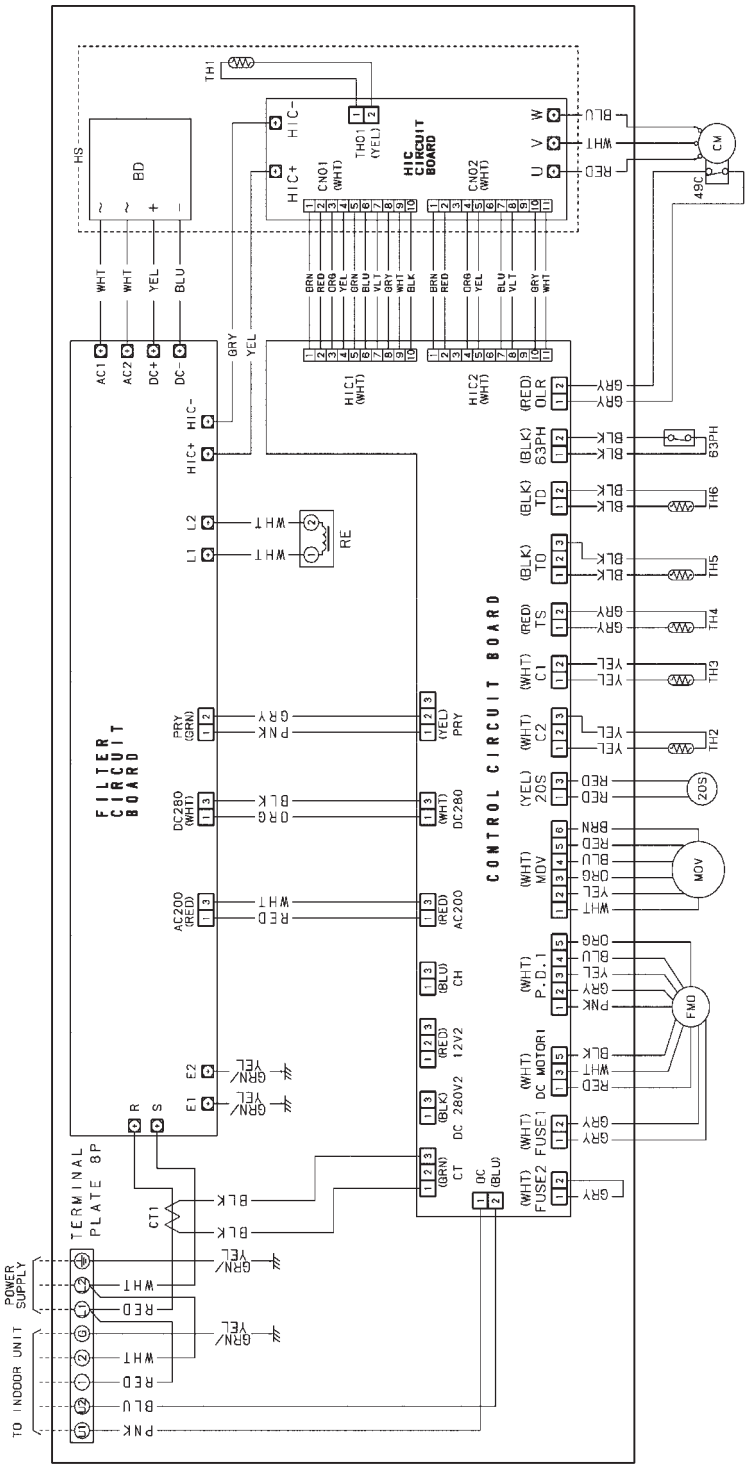
SYMBOLS	DESCRIPTION
FMI	INDOOR FAN MOTOR
49FI	INDOOR MOTOR THERMAL PROTECTOR
RC1	RUNNING CAPACITOR
F1, F2	FUSE
LM	AUTO LOUVER MOTOR
TR1	POWER TRANSFORMER
1X~3X	AUXILIARY RELAY
RY1, 4	AUXILIARY RELAY
TH1	ROOM THERMISTOR
TH2	THERMISTOR (INDOOR COIL E1)
TH3	THERMISTOR (INDOOR COIL E2)
AUH	AUXILIARY HEATER
26T	OVER HEAT PROTECTION THERMOSTAT
TF	OVER HEAT PROTECTION THERMO FUSE
HR	HEATER RELAY
CR1	INDOOR CONTROLLER
(RCS)	REMOTE CONTROL SWITCH (OPTIONAL PARTS) TH:THERMISTOR (ROOM THERMISTOR)
WL	WIRELESS REMOTE CONTROLLER CR2:WIRELESS CONTROLLER SW :SWITCH ASSY OPERATION PART RECEPTION PART+INDICATE LAMP
(RCS2)	WIRELESS REMOTE CONTROLLER (OPTIONAL PARTS)
⊕	TERMINAL PLATE
	CONNECTOR
⊕	TERMINAL

3

3-2 Outdoor Units

CH2672R

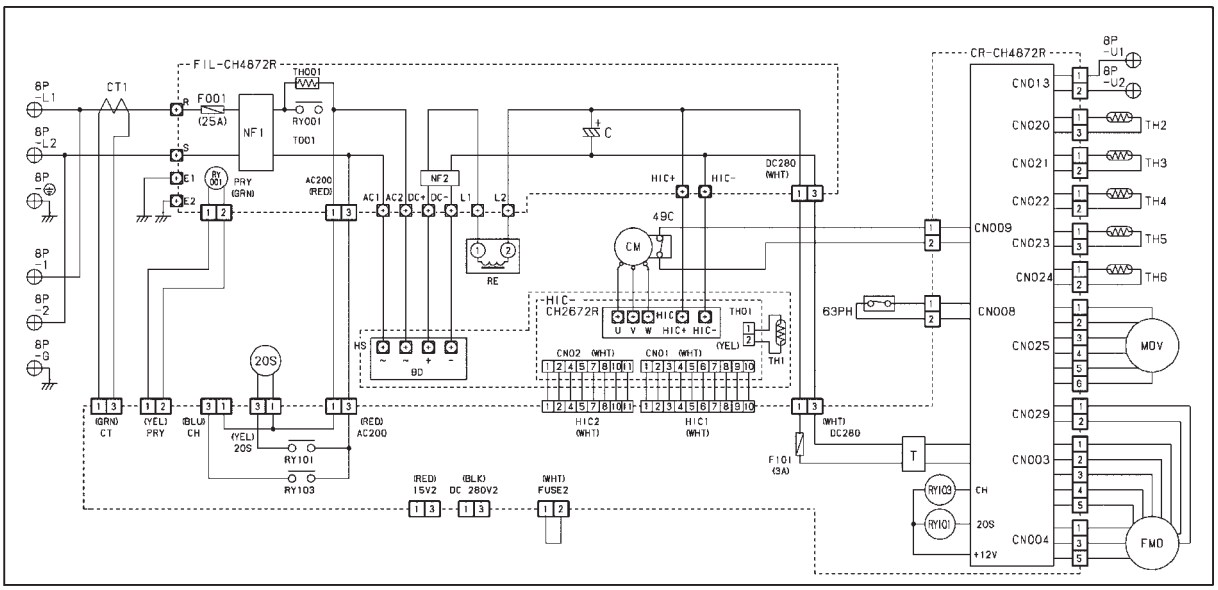
• Electric Wiring Diagram



3-2 Outdoor Units

CH2672R

• Schematic Diagram



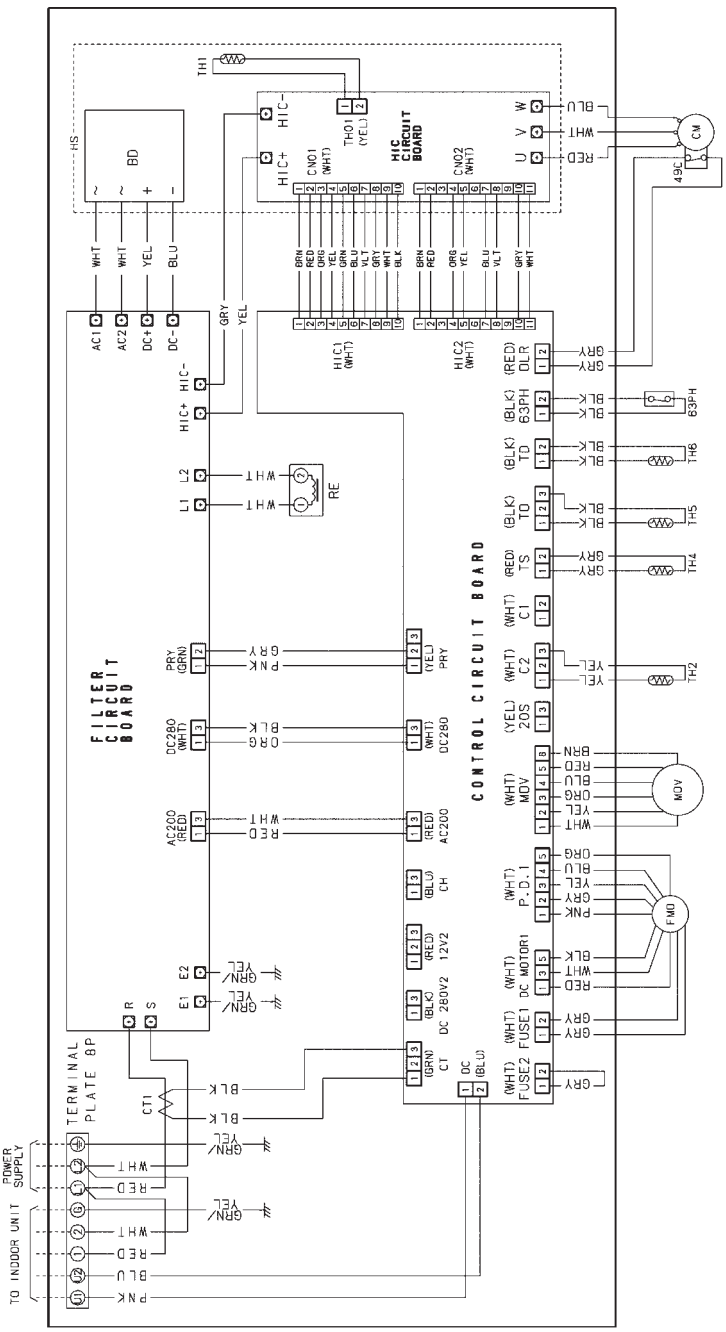
SYMBOLS	DESCRIPTION
CM	COMPRESSOR MOTOR
FMO	OUTDOOR FAN MOTOR
20S	FOUR WAY VALVE
63PH	HIGH PRESSURE SWITCH
49C	COMPRESSOR MOTOR THERMAL PROTECTOR
MOV	MOTOR OPERATED VALVE
F001, 101	OPERATION CIRCUIT FUSE
NF1, 2	NOISE FILTER
C	ELECTROLYTIC CAPACITOR
RE	REACTOR
HIC	HYBRID IC
BD	BRIDGE DIODE
HS	HEAT SINK (RADIATOR)
T	TRANSFORMER
CT1	CURRENT TRANSFORMER
RY001, 101, 103	RELAY
CR-CH4872R	CONTROL CIRCUIT BOARD
FIL-CH4872R	FILTER CIRCUIT BOARD
HIC-CH2672R	HIC CIRCUIT BOARD
	THERMISTOR
	CONNECTOR
	TERMINAL
	TERMINAL BOARD

3

3-2 Outdoor Units

C2672R

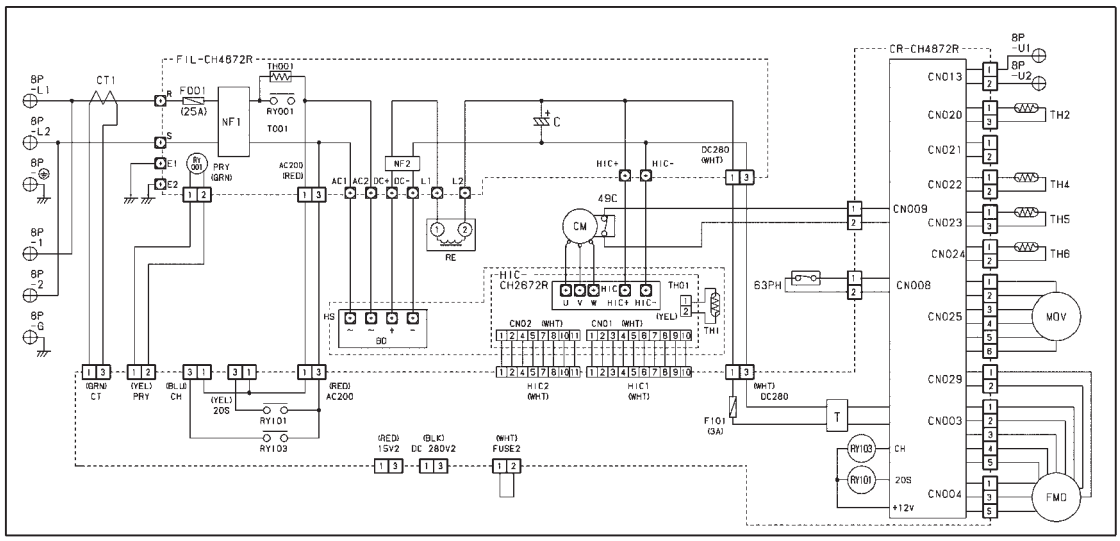
• Electric Wiring Diagram



3-2 Outdoor Units

C2672R

• Schematic Diagram



SYMBOLS	DESCRIPTION
CM	COMPRESSOR MOTOR
FMO	OUTDOOR FAN MOTOR
63PH	HIGH PRESSURE SWITCH
49C	COMPRESSOR MOTOR THERMAL PROTECTOR
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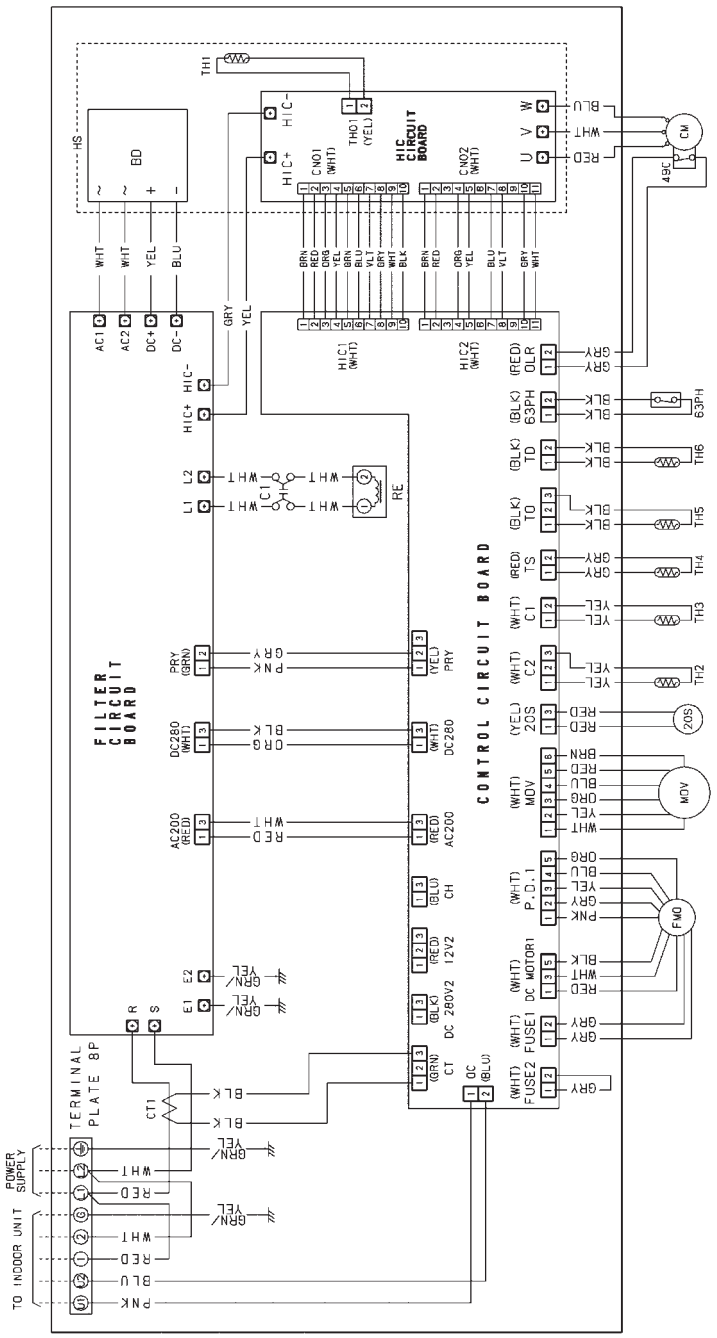
	THERMISTOR
	CONNECTOR
	TERMINAL
	TERMINAL BOARD

3

3-2 Outdoor Units

CH3072R/CH3672R

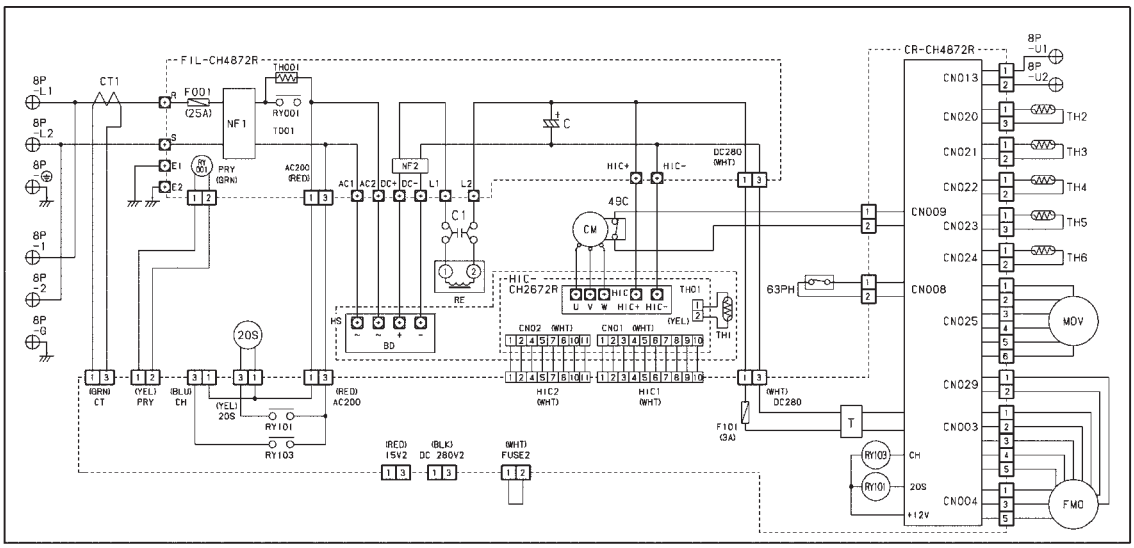
• Electric Wiring Diagram



3-2 Outdoor Units

CH3072R/CH3672R

• Schematic Diagram

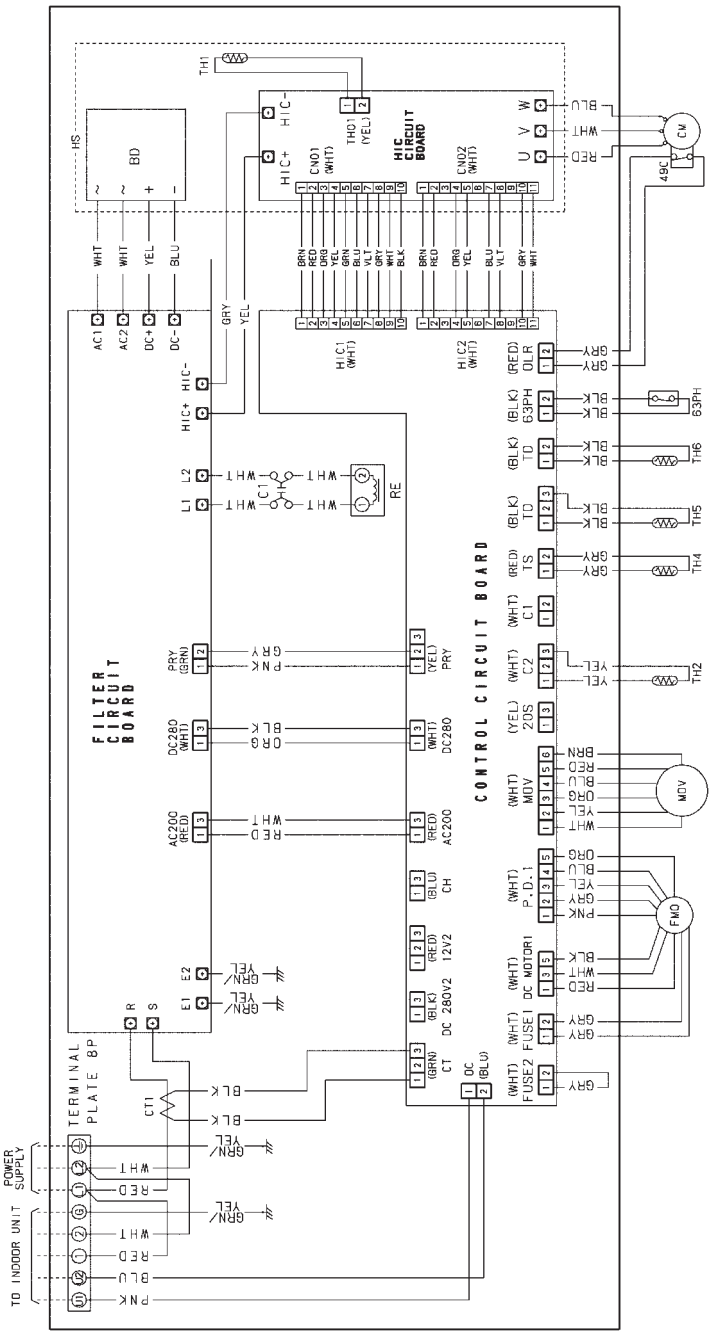


SYMBOLS	DESCRIPTION
CM	COMPRESSOR MOTOR
FMO	OUTDOOR FAN MOTOR
20S	FOUR WAY VALVE
63PH	HIGH PRESSURE SWITCH
49C	COMPRESSOR MOTOR THERMAL PROTECTOR
MOV	MOTOR OPERATED VALVE
F001, 101	OPERATION CIRCUIT FUSE
NF1, 2	NOISE FILTER
C	ELECTROLYTIC CAPACITOR
C1	CAPACITOR
RE	REACTOR
HIC	HYBRID IC
BD	BRIDGE DIODE
HS	HEAT SINK (RADIATOR)
T	TRANSFORMER
CT1	CURRENT TRANSFORMER
RY001, 101, 103	RELAY
CR-CH4872R	CONTROL CIRCUIT BOARD
FIL-CH4872R	FILTER CIRCUIT BOARD
HIC-CH2672R	HIC CIRCUIT BOARD
	THERMISTOR
	CONNECTOR
	TERMINAL
	TERMINAL BOARD

3-2 Outdoor Units

C3072R/C3672R

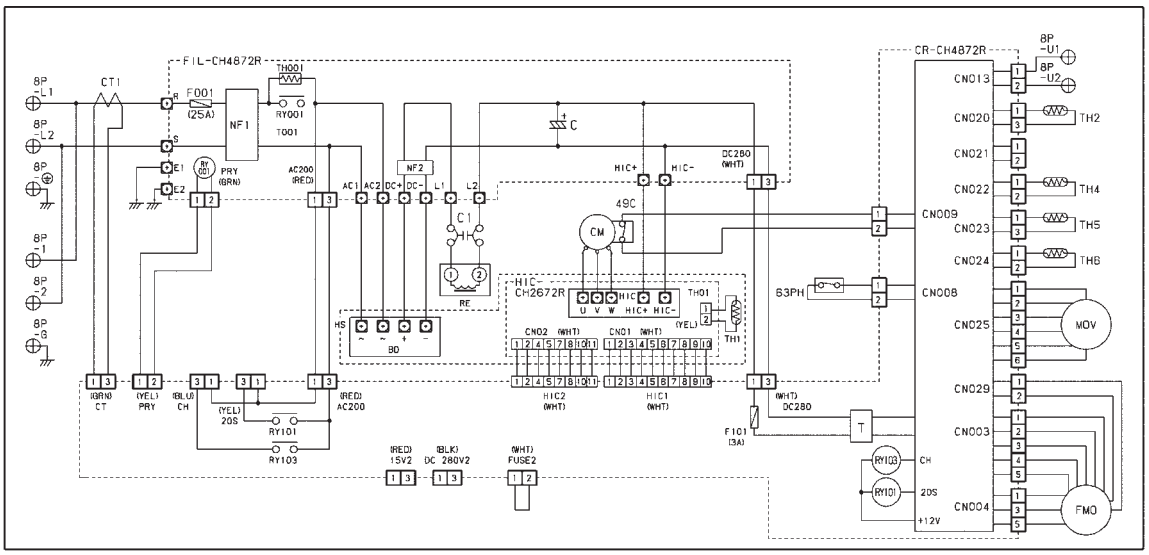
• Electric Wiring Diagram



3-2 Outdoor Units

C3072R/C3672R

• Schematic Diagram



SYMBOLS	DESCRIPTION
CM	COMPRESSOR MOTOR
FMO	OUTDOOR FAN MOTOR
63PH	HIGH PRESSURE SWITCH
49C	COMPRESSOR MOTOR THERMAL PROTECTOR
MOV	MOTOR OPERATED VALVE
F001, 101	OPERATION CIRCUIT FUSE
NF1, 2	NOISE FILTER
C	ELECTROLYTIC CAPACITOR
C1	CAPACITOR
RE	REACTOR
HIC	HYBRID IC
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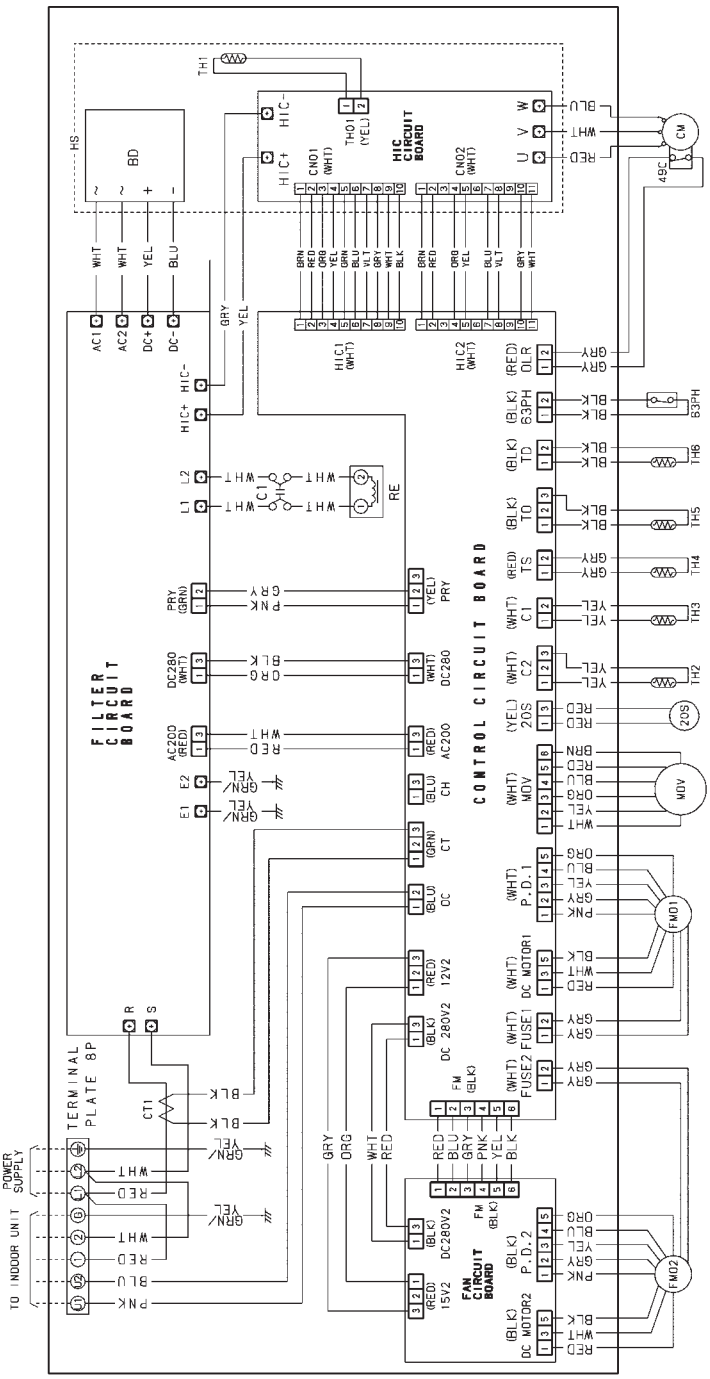
HIC-CH2672R	HIC CIRCUIT BOARD
	THERMISTOR
	CONNECTOR
	TERMINAL
	TERMINAL BOARD

3

3-2 Outdoor Units

CH4272R

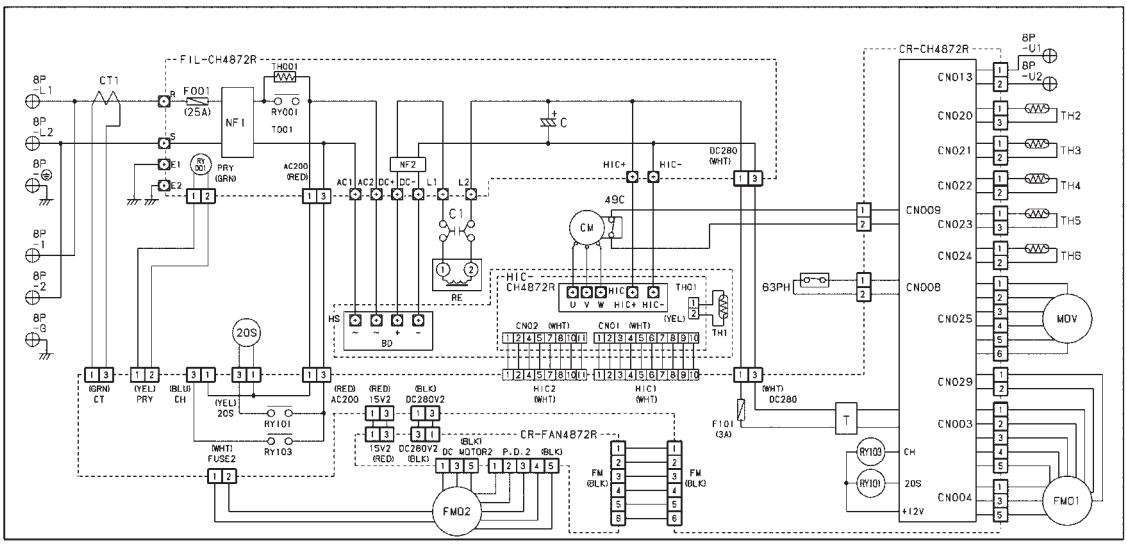
• Electric Wiring Diagram



3-2 Outdoor Units

CH4272R

• Schematic Diagram



SYMBOLS	DESCRIPTION
CM	COMPRESSOR MOTOR
FM01, 2	OUTDOOR FAN MOTOR
20S	FOUR WAY VALVE
63PH	HIGH PRESSURE SWITCH
49C	COMPRESSOR MOTOR THERMAL PROTECTOR
MOV	MOTOR OPERATED VALVE
F001, 101	OPERATION CIRCUIT FUSE
NF1, 2	NOISE FILTER
C	ELECTROLYTIC CAPACITOR
C1	CAPACITOR
RE	REACTOR
HIC	HYBRID IC
BD	BRIDGE DIODE
HS	HEAT SINK (RADIATOR)
T	TRANSFORMER
CT1	CURRENT TRANSFORMER
RY001, 101, 103	RELAY
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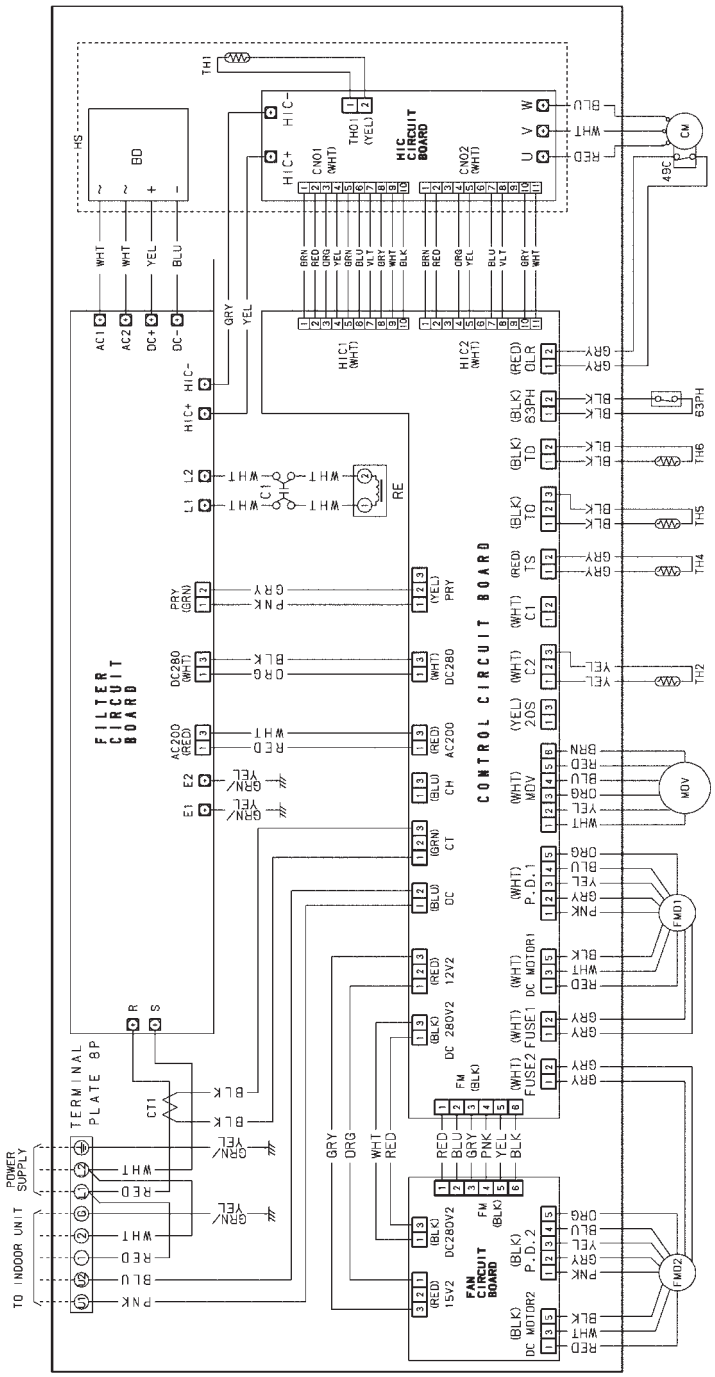
FIL-CH4872R	FILTER CIRCUIT BOARD
HIC-CH4872R	HIC CIRCUIT BOARD
CR-FAN4872R	FAN CIRCUIT BOARD
	THERMISTOR
	CONNECTOR
	TERMINAL
	TERMINAL BOARD

3

3-2 Outdoor Units

C4272R

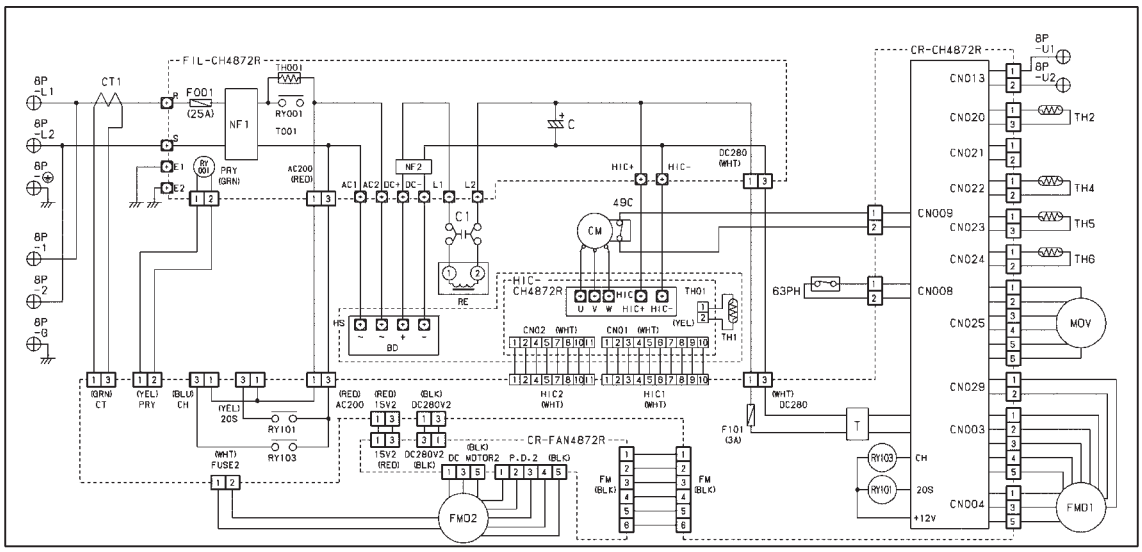
• Electric Wiring Diagram



3-2 Outdoor Units

C4272R

• Schematic Diagram



SYMBOLS	DESCRIPTION
CM	COMPRESSOR MOTOR
FMO1, 2	OUTDOOR FAN MOTOR
63PH	HIGH PRESSURE SWITCH
49C	COMPRESSOR MOTOR THERMAL PROTECTOR
MOV	MOTOR OPERATED VALVE
F001, 101	OPERATION CIRCUIT FUSE
NF1, 2	NOISE FILTER
C	ELECTROLYTIC CAPACITOR
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	CONNECTOR
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	TERMINAL BOARD

4. SERVICE PROCEDURES

4-1. Meaning of Alarm Messages

(1) Contents of remote controller switch alarm display

ON: ○ Blinking: ☼ OFF: ●

Possible cause of malfunction			Wired remote control display	Wireless remote controller receiver display		
				Operation	Timer	Standby
Serial communication errors Mis-setting	Remote controller is detecting error signal from indoor unit	Error in receiving serial communication signal (Signal from main indoor unit in case of group control) Outdoor system address, indoor system address, or indoor unit individual/main/sub setting is not set (Automatic address setting is not completed) Auto address is not completed	E01	☼	●	●
		Error in transmitting serial communication signal	E02			
	Indoor unit is detecting error signal from remote controller (and system controller)		E03			
	Improper setting of indoor unit or remote controller	Indoor unit address setting is duplicated	E08			
		Remote controller setting is duplicated	E09			
	Indoor unit is detecting error signaled from signal option	Error in transmitting serial communications signal	E10			
		Error in receiving serial communications signal	E11			
	Automatic address setting failed	Starting auto address setting is prohibited This alarm message shows that the auto address connector CN100 is shorted while other RC line is executing auto address operation.	E12	●	●	☼
		Indoor unit capacity too low	E15			
		Indoor unit capacity too high	E16			
		No indoor units connected	E20			
	Setting error	Main unit duplication in simultaneous-operation multi control (detected by outdoor unit)	E14			
	Indoor unit is detecting error signaled from outdoor unit	Error in receiving serial communications signal	E04			
		Error in transmitting serial communications signal	E05			
	Outdoor unit is detecting error signaled from indoor unit	Error in receiving serial communications signal (including unit quantity verification failure)	E06			
		Error in transmitting serial communications signal	E07			
	An indoor unit detected trouble in the signal from another indoor unit	Error in transmitting serial communications signal	E17	☼	●	●
		Error in receiving serial communications signal	E18			
	Communications trouble between units	Communications failure with MDC	E31	●	●	☼
Mis-setting	Setting error	Indoor unit group settings error	L01	☼ Simultaneously	● Simultaneously	☼ Simultaneously
		Indoor/outdoor unit type mismatch	L02			
		Main unit duplication in group control (detected by indoor unit)	L03			
		Outdoor unit address duplication (system address)	L04	☼ Simultaneously	○ Simultaneously	☼ Simultaneously
		Group wiring connected for independent indoor unit	L07			
		Address not set or group not set	L08	☼ Simultaneously	● Simultaneously	☼ Simultaneously
		Indoor unit capacity not set	L09			
		Outdoor unit capacity not set or setting error	L10	☼ Simultaneously	○ Simultaneously	☼ Simultaneously
		Miswiring in group control wiring	L11			
		Indoor unit type setting error (capacity)	L13			

Continued

Possible cause of malfunction			Wired remote control display	Wireless remote controller receiver display		
				Operation	Timer	Standby
Ceiling panel connection failure			P09	●	☼ Alter.	☼
Activation of protective device	Indoor protection	Fan protective thermostat	P01			
		Float switch	P10			
	Outdoor protection	Discharge temperature trouble	P03	☼ Alternately	●	☼
		High pressure switch or compressor motor thermal protector is activated.	P04			
		Open phase detected, AC power trouble	P05			
		No gas	P15			
		4-way valve locked	P19			
		High cooling load	P20			
		Outdoor fan trouble	P22			
		Inverter compressor trouble (HIC PCB)	P26			
		Inverter compressor trouble (MDC)	P29			
		Simultaneous-operation multi control trouble	P31			
		Compressor current failure (overload)	H01	●	☼	●
Thermistor fault	Thermistor open circuit • Short circuit (indoor)	Indoor heat exchanger temperature sensor (E1)	F01	☼ Alter.	☼	●
		Indoor heat exchanger temperature sensor (E2)	F02			
		Indoor temperature sensor	F10			
	Thermistor open circuit • Short circuit (outdoor)	Discharge temperature (TD)	F04	☼ Alter.	☼	○
		Outdoor heat exchanger temperature (C1)	F06			
		Outdoor heat exchanger temperature (C2)	F07			
		Outdoor air temperature (TO)	F08			
		Intake temperature (TS)	F12			
		Indoor EEPROM error	F29	☼ Simul.	☼	●
		Outdoor EEPROM error	F31	☼ Simul.	☼	○

4

(2) LED Indicator Messages on Outdoor Control PCB

	LED 1	LED 2	Remarks
Power ON sequence			
1. No communication from indoor units in system	○	○	If it is not possible to advance to 3, repeats 1 → 2. At 3, changes to normal control.
2. Communication received from 1 or more indoor units in system	●	●	
3. Regular communication OK (Capacity and unit quantity match)	●	●	
Normal operation	○	☼	Displayed during automatic address setting 1 and initial communication. After these are completed, alarm F31 is displayed.
EEPROM error (F31)			
Pre-trip (insufficient gas)	☼ (0.25/0.75)	●	**P03**
Pre-trip (P20)	☼ (0.75/0.25)	●	
Pre-trip (other)	☼	●	
Alarm	**Alternate blinking during alarms** LED 1 blinks M times, then LED 2 blinks N times. The cycle then repeats. M = 2: P alarm 3: H alarm 4: E alarm 5: F alarm 6: L alarm N = Alarm No. * Refer to "1. Examples of alarm display" below.		
Insufficient gas indicator	☼	●	
Refrigerant recovery mode	☼	●	
Automatic address setting			
Automatic address setting in progress	☼	☼	Blinking alternately
Automatic address setting alarm (E15)	☼ (0.25/0.75)	☼ (0.25/0.75)	Blinking simultaneously
Automatic address setting alarm (E20)	☼ (0.75/0.25)	☼ (0.75/0.25)	Blinking simultaneously
Automatic address setting alarm (Other than E15 and E20)	☼	☼	Blinking simultaneously

○ : **ON**

☼ : **Blinking (0.25/0.75)** indicates that the lamp illuminates for 0.25 seconds, and then is OFF for 0.75 seconds. Unless otherwise indicated, the blinking is (0.5/0.5).

● : **OFF**

(3) Examples of alarm display (other than E15, E16, and E20)

Alarm / Display	LED 1 ← Alternately → LED 2	
P03	☼ (Blinks 2 times)	☼ (Blinks 3 times)
P04	☼ (")	☼ (Blinks 4 times)
P05	☼ (")	☼ (Blinks 5 times)
P31	☼ (")	☼ (Blinks 31 times)
H01	☼ (Blinks 3 times)	☼ (Blinks 1 times)
•	•	
E04	☼ (Blinks 4 times)	☼ (Blinks 4 times)
•	•	
F07	☼ (Blinks 5 times)	☼ (Blinks 7 times)
•	•	
L13	☼ (Blinks 6 times)	☼ (Blinks 13 times)
•	•	

Note:
This table shows example alarms. Other alarms may also be displayed.

4

4-2. Symptoms and Parts to Inspect

Remote controller alarm display	Alarm contents	Judgment condition	Clear condition	Judgment and correction
P03	Abnormal discharge temperature • Discharge temp. detected at or above the specified value.	Stops when temp. exceeds 232 ˚F.	Recovery at restart	1. Check refrigerant cycle (gas leak). 2. Electronic control valve trouble 3. Check tubing sensor (TD).
P04	High pressure switch is activated. Compressor motor thermal protector is activated.	Stops when pressure exceeds 600 psi. Stops when temp. exceeds 230 ˚F.	Recovery at restart	1. Check the high pressure switch connector is securely connected. 2. Check the ourdoor unit heat exchanger is not clogged (cooling operation). 3. Check the indoor unit air filter has not become clogged (heating operation)
P05	Missing phase detected. (CT disconnected or AC power trouble)	Current value sent from MDC on outdoor unit control PCB is low. No AC power input for 3 minutes or longer: pre-trip - 5	Recovery at restart	1. Check R/S/T power. 2. Check inverter control PCB. 3. Check outdoor unit control PCB.
P15	Insufficient gas level detected.	The following conditions continue for 1 minute. • Discharge temp. is 203 ˚F or higher. • Electronic control valve is at step 480. • Current value from MDC is 2.0 A or less.	Recovery at restart	Check refrigerant cycle (gas leak).
P19	4-way valve locked • Judgment occurs after compressor has been ON for 5 minutes.	Indoor heat exchanger temp. drops although compressors are ON in heating mode: [min(E1, E2)] ≤ 50 ˚F. Indoor heat exchanger temp. rises although compressors are ON in cooling mode: E2 ≥ 104 ˚F.	Recovery at restart	1. Check 4-way valve. 2. Check 4-way valve wiring. 3. Check outdoor unit control PCB.
P20	High-pressure protection trouble	If MAX (C1,C2) is 142°F or higher, the compressor stops one. The compressor restarts three time, and if the temperature does not decrease to less than 142°F, the alert “P20” is displayed.	Recovery at restart	1. Refrigerant cycle overload operation 2. Outdoor coil temperature sensor C1 or C2
P22	Outdoor unit fan motor trouble • Inverter protection circuit was activated, or lock was detected, at outdoor unit fan motor.	Inverter stops after alarm is detected	Recovery at restart	1. Position detection trouble 2. Overcurrent protection circuit at outdoor unit fan motor was activated. • Check outdoor unit control PCB. • Refer to outdoor unit fan judgment methods.
P26	Inverter protection circuit was activated, or G-Tr short-circuit (short time: 0.8 s or less) in inverter control	Inverter stops after alarm is detected. Alarm is output when inverter stops (pre-trip) consecutively 4 times.	Recovery at restart	1. Stops immediately when restarted. • Layer short in the compressor 2. Check inverter control PCB. • Wiring trouble

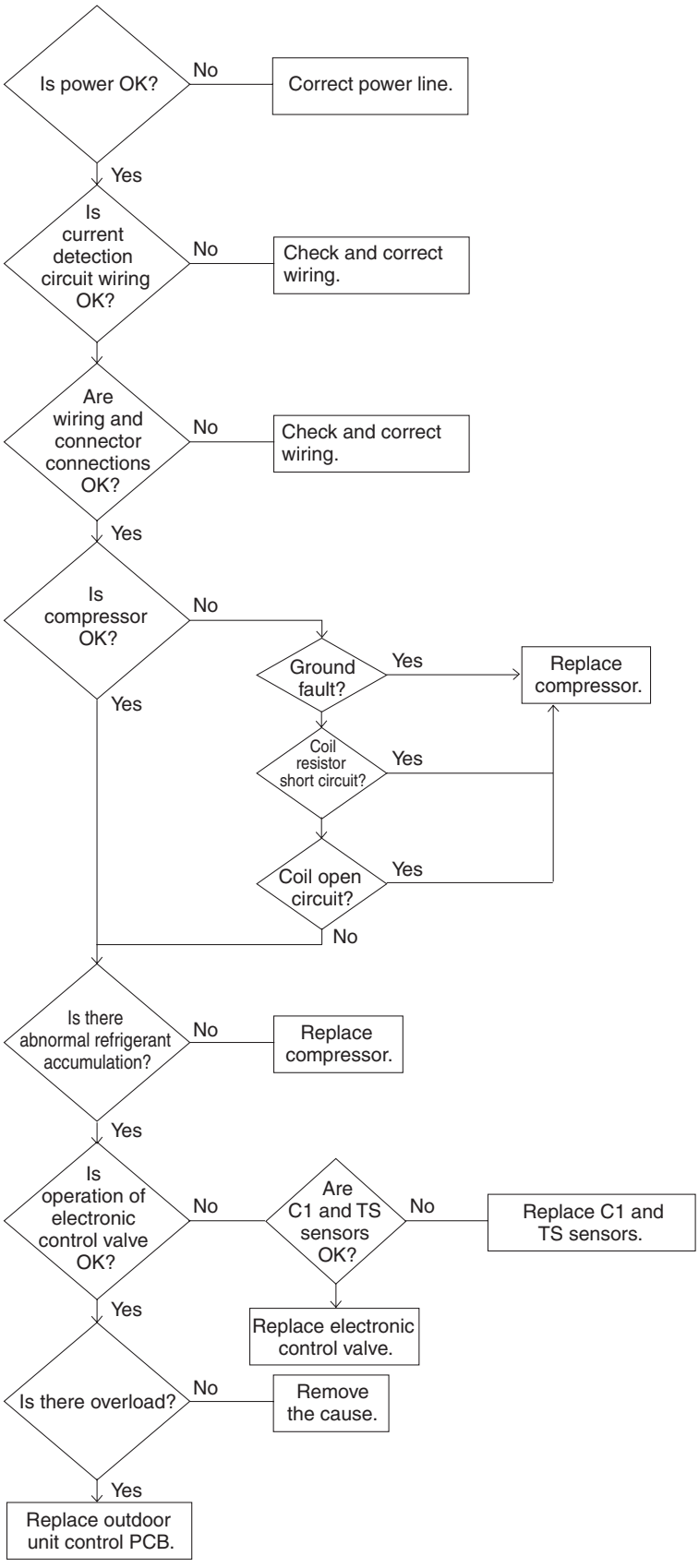
Remote controller alarm display	Alarm contents	Judgment condition	Clear condition	Judgment and correction
P29	Current detection circuit trouble • AC current value is high even when compressor is stopped.	Inverter stops after alarm is detected. Alarm is output when inverter stops (pre-trip) consecutively 4 times.	Recovery at restart	1. Stops immediately when restarted. • Layer short in the compressor 2. Check inverter control PCB. • Wiring trouble
	Compressor motor output trouble, Inverter compressor trouble, MDC trouble	Inverter stops after alarm is detected.	Recovery at restart	1. Refrigerant cycle trouble, overload operation 2. Loose screws and contact failure between HIC control PCB and radiating plate 3. Cooling failure of radiating plate 4. Check outdoor unit PCB wiring.
	Compressor does not run. (Overcurrent protection circuit activates after a certain period of time following compressor start.)	Inverter stops after alarm is detected.	Recovery at restart	1. Compressor trouble (locked, etc.) • Replace the compressor. 2. Compressor wiring trouble (missing phase)
	Compressor breakdown • Starts to operate but operating frequency drops and compressor stops.	Inverter stops after alarm is detected.	Recovery at restart	1. Check power voltage: AC 203 V ±20 V or 230 V ± 23 V. 2. Refrigerant cycle overload operation 3. Check AC current detection circuit.
	Inverter control PCB position detection circuit trouble	Inverter stops after alarm is detected.	Recovery at restart	Position detection circuit is activated even when the compressor 3P connector is disconnected and the compressor operated. • Replace the inverter control PCB.
F04	Disconnection, open circuit, or short circuit in discharge temp. sensor (TD)	26, 30, 36 MODEL: Sensor detection trouble (194°F or higher when 15 minutes have elapsed after compressor stopped). (Open circuit) 42 MODEL: Sensor defection trouble (194°F or higher when 60 minutes have elapsed after compressor stopped). (Open circuit)	Automatic recovery	1. Check discharge temp. sensor (TD). 2. Check outdoor unit control PCB.
F06	Disconnection, open circuit, or short circuit in outdoor heat exchanger temp. sensor (C1)	Open circuit or short circuit	Automatic recovery	1. Check outdoor heat exchanger temp. sensor (C1). 2. Check outdoor unit control PCB.
F07	Disconnection, open circuit, or short circuit in outdoor heat exchanger temp. sensor (C2)	Open circuit or short circuit	Automatic recovery	1. Check outdoor heat exchanger temp. sensor (C2). 2. Check outdoor unit control PCB.
F08	Disconnection, open circuit, or short circuit in outdoor air temp. sensor (TO)	Open circuit or short circuit	Automatic recovery	1. Check outdoor air temp. sensor (TO). 2. Check outdoor unit control PCB.
F12	Disconnection, open circuit, or short circuit in intake temp. sensor (TS)	Open circuit or short circuit	Automatic recovery	1. Check intake temp. sensor (TS). 2. Check outdoor unit control PCB.

Remote controller alarm display	Alarm contents	Judgment condition	Clear condition	Judgment and correction
F31	EEPROM trouble	Reading/writing failure	Recovery at power reset	1. Check EEPROM (IC007). 2. Check outdoor unit control PCB.
L02	Mismatch of indoor and outdoor unit types (Espacio, Multi)	Indoor unit judges that type does not match outdoor unit type.	Recovery at power reset	1. Check indoor unit EEPROM. 2. Check indoor unit control PCB.
L04	Settings failure	Duplicated outdoor unit address (system address)	Automatic recovery	1. Check outdoor unit system address. 2. Check inter-unit control wiring.
L07	Settings failure	Group control wiring is connected to an independent-control indoor	Recovery at power reset	1. Check inter-unit control wiring. 2. Check indoor unit EEPROM.
L10	Settings failure	Outdoor unit capacity not set.	Recovery at power reset	Check outdoor unit EEPROM.
L13	Indoor-outdoor unit types	Outdoor unit judges that type does not match indoor unit type.	Recovery at power reset	1. Check indoor unit EEPROM. 2. Check outdoor unit control PCB.
E06	Outdoor unit detected abnormal signal from indoor unit.	Serial signal receiving failure (including failure to verify No. of units)	Automatic recovery	1. Check inter-unit control wiring. 2. Check outdoor unit
E07	Outdoor unit sending failure to indoor unit	Serial signal sending failure	Automatic recovery	1. Check inter-unit control wiring. 2. Check outdoor unit control PCB.
E14	Settings failure	Duplicated master unit in simultaneous-operation multi control (Detected by outdoor unit)	Recovery at power reset	1. Check inter-unit control wiring. 2. Check indoor unit combination.
E15	Automatic address setting failure	Indoor unit capacity too low.	Recovery at power reset	1. Check inter-unit control wiring. 2. Check outdoor unit control PCB.
E16	Automatic address setting failure	Indoor unit capacity too high.	Recovery at power reset	1. Check inter-unit control wiring. 2. Check outdoor unit control PCB.
E20	Automatic address setting failure	Outdoor unit cannot receive any serial signals from indoor units.	Recovery at power reset	1. Check inter-unit control wiring. 2. Check outdoor unit control PCB.
E31	Communications trouble within unit	No communication possible with MDC for 3 minutes or longer.	Automatic recovery	Check outdoor unit control PCB.
H01	Overcurrent	Inverter stops after alarm is detected.	Recovery at restart	1. Refrigerant cycle trouble, overload operation 2. Loose screws between HIC control PCB and radiating plate 3. Cooling failure of radiating plate 4. Check outdoor unit PCB wiring.

4-3. Details of Alarm Messages

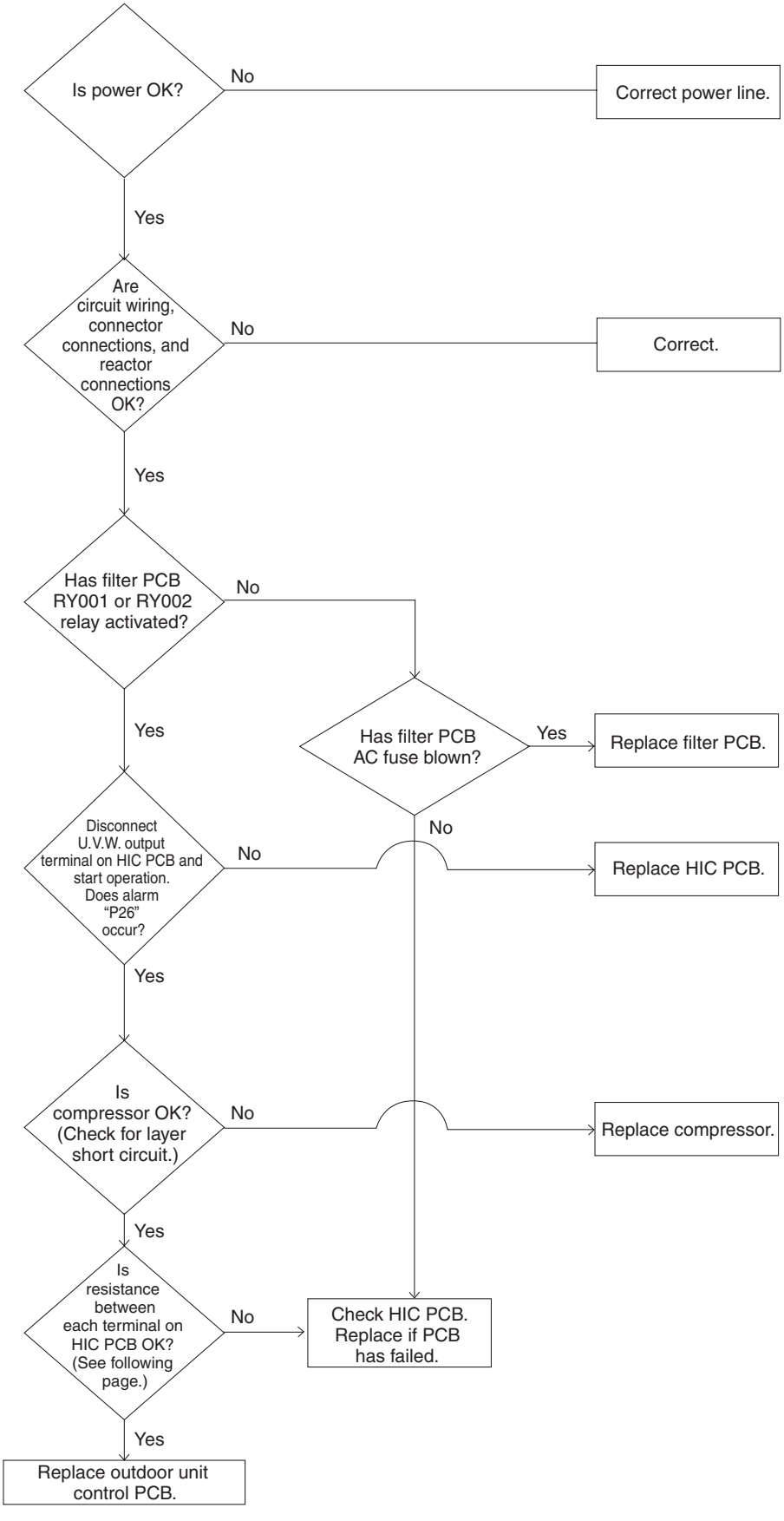
(1) [Alarm "P29"] (MDC trouble)

- Input power detection circuit trouble
- Compressor does not run.
- Breakdown
- Motor current detection circuit trouble

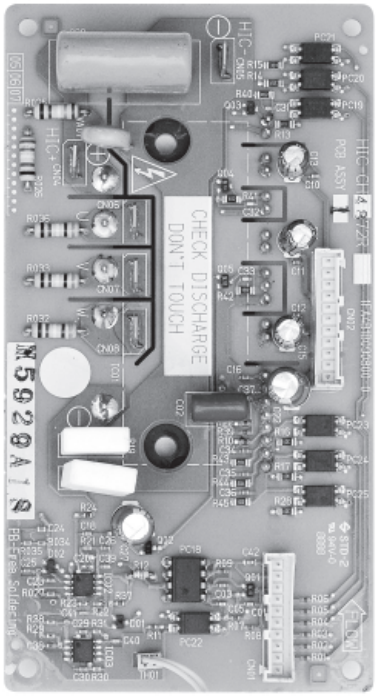


4

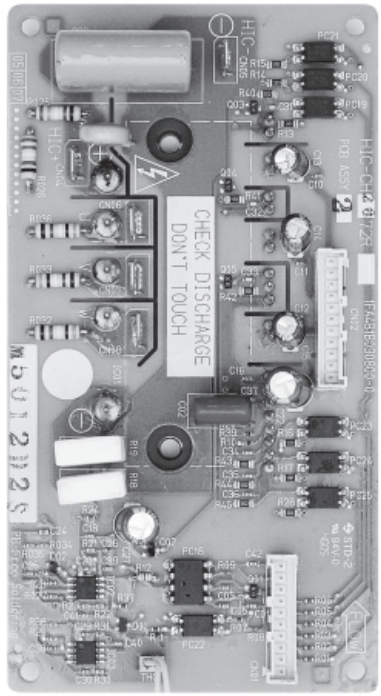
(2) [Alarm "P26"] ——— IGBT short-circuit protection on inverter control (IPDU) PCB
HIC PCB trouble)



HIC-CH4872R
(42 Type)



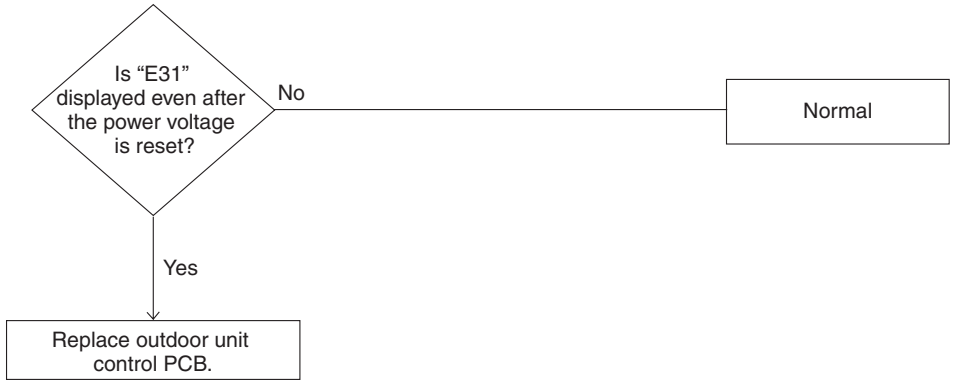
HIC-CH2672R
(26, 30, 36 Type)



Resistance

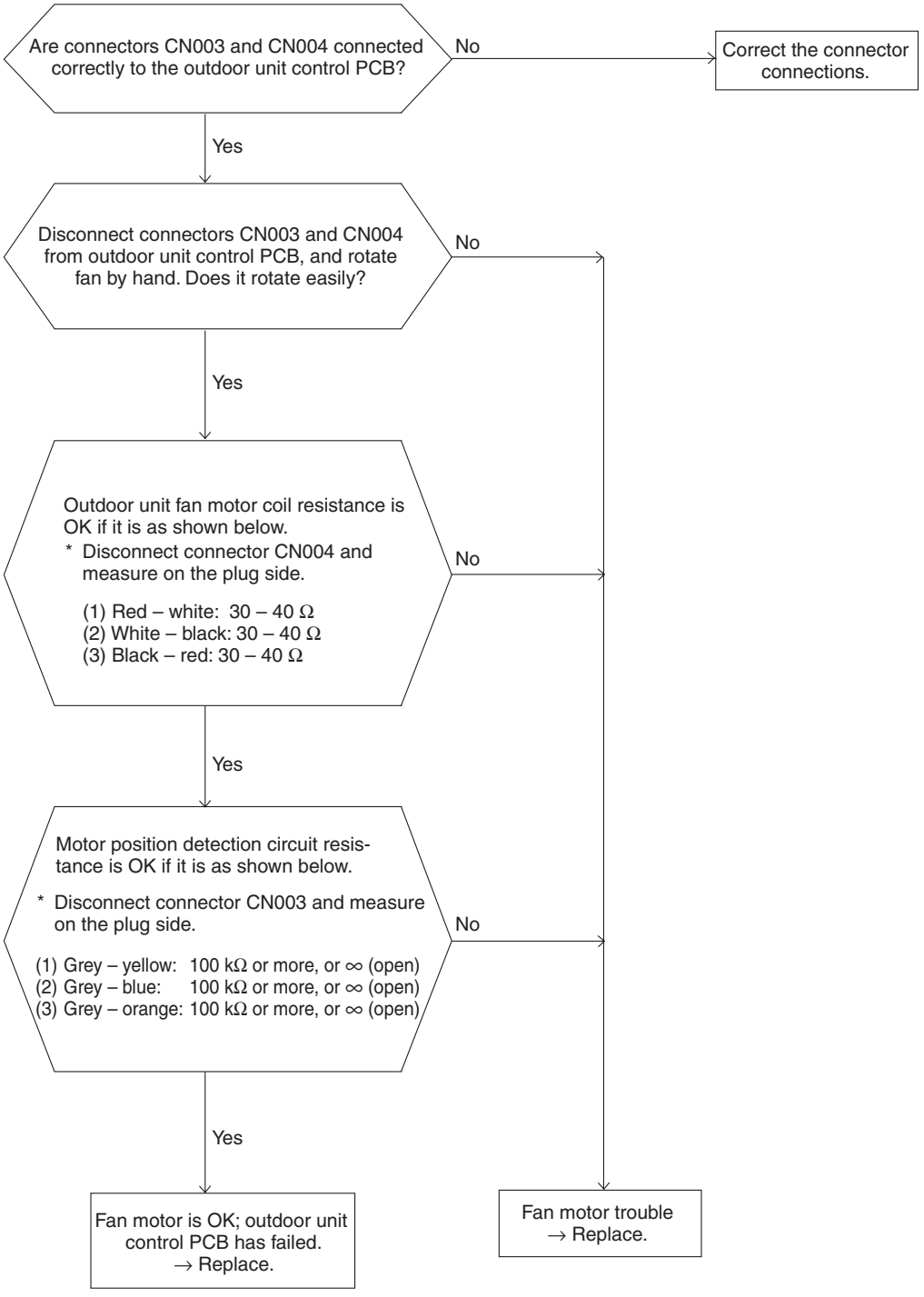
Between terminals	Resistance
HIC + —— HIC –	200 kΩ or more
HIC + —— U	300 kΩ or more
HIC + —— V	300 kΩ or more
HIC + —— W	300 kΩ or more
HIC – —— U	200 kΩ or more
HIC – —— V	200 kΩ or more
HIC – —— W	200 kΩ or more

(3) [Alarm "E31"] (communications trouble within unit) —— IGBT short-circuit protection



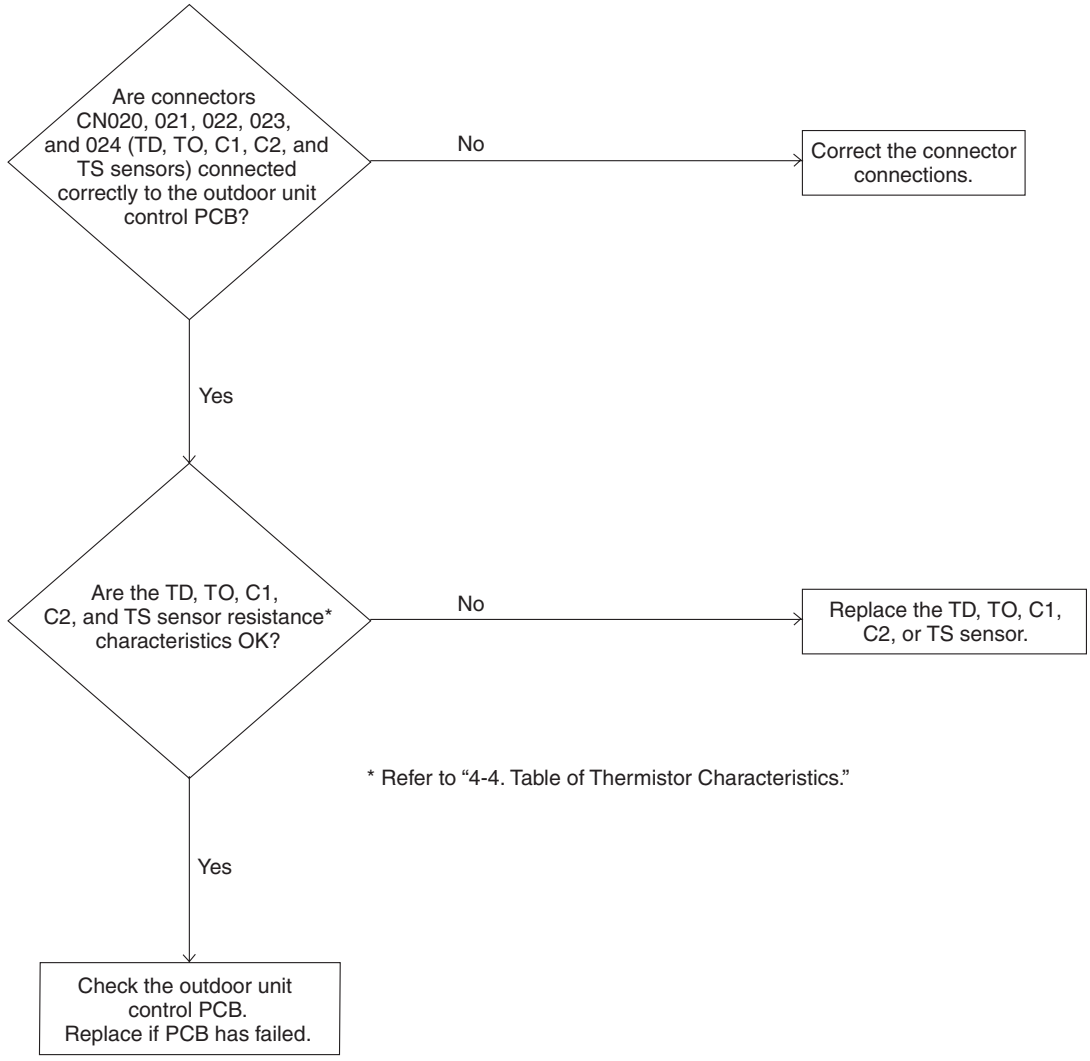
4

(4) [Alarm "P22"] ———— Outdoor unit fan motor drive circuit trouble



Note:
In the case of a GND circuit failure inside the motor, the results of the above check may be OK.
If operation is not OK after the outdoor unit control PCB has been replaced, then replace the outdoor unit fan motor.

(5) [Alarms "F04," "F06," "F07," "F08," "F12"] ——— Sensor trouble



* Refer to "4-4. Table of Thermistor Characteristics."

4

Sensor Temperature Display Function (Displayed both when operating and stopped)

- The below check procedure can be used to display all remote controller, indoor unit, and outdoor unit sensor temperatures.

<Check procedure>

(1) Press and hold the button and button simultaneously for 4 seconds or longer.

(2) Unit No. X-X (main unit No.), item code XX (sensor address), and service monitor 00XX (sensor temperature) appear on the remote controller LCD. (See figure.)

(3) Press the temperature setting and buttons and change the item code to the sensor address of the sensor that you want to monitor.
(For the relationship between the sensor address and the sensor type, refer to the below Sensor Temperature Correlation Table.)

(4) During group control and simultaneous operation multi control, press the button and change to the unit that you want to monitor.

(5) Press the button to return to normal remote controller operation.

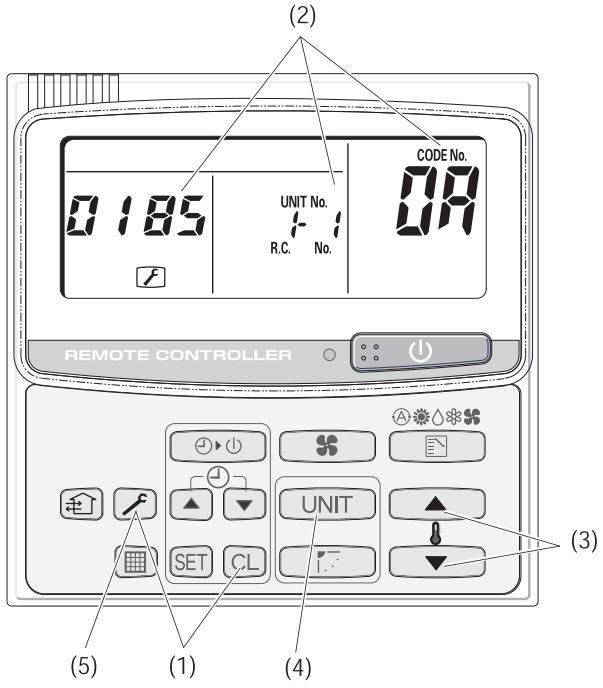


Figure: Sample display when discharge temperature at unit No. 1-1 is 185˚F

NOTE
The temperature display reads "- - - - " for units that are not connected.

- If monitor mode is selected during normal operation, the only parts of the LCD that change are those shown in the figure.
All other displays do not change, and remain as they were during normal operation.

Sensor Temperature Correlation Table

Sensor installation location	Sensor address	Sensor type	Sensor address	Sensor type
Indoor unit	00	Room temp. (temp. used for control)*	05	–
	01	Remote controller temp.	06	Discharge temp.
	02	Indoor intake temp.	07	–
	03	Indoor heat exchanger temp. (E1)	08	–
	04	Indoor heat exchanger temp. (E2)	09	–
Outdoor unit	0A	Discharge temp. (TD)	12	–
	0b	–	13	–
	0C	–	14	Current (AC current)
	0d	Intake temp. (TS)	15	Outdoor electronic control valve position
	0E	Outdoor heat exchanger temp. (C1)	16	–
	0F	Outdoor heat exchanger temp. (C2)	17	–
	10	–	18	–
	11	Outdoor air temp.	19	–

* Main unit only when group control is enabled

SM831148

Check Pin

Short-circuit the cooling check pin (or heating check pin) on the outdoor unit control PCB to perform the control described below.

1. Thermistor checks
   The checks listed below are performed for 1 second each, in order from the top down. The results are displayed by LED 1 and 2.

Thermistor	Check results	
	Normal	Abnormal
Discharge temp. (TD)	LED 1 lit	LED 1 and 2 OFF
Outdoor air temp. (TO)	LED 2 lit	
Heat exchanger temp. (C1)	LED 1 lit	
Heat exchanger temp. (C2)		
Intake temp. (TS)	LED 1 lit	

↓

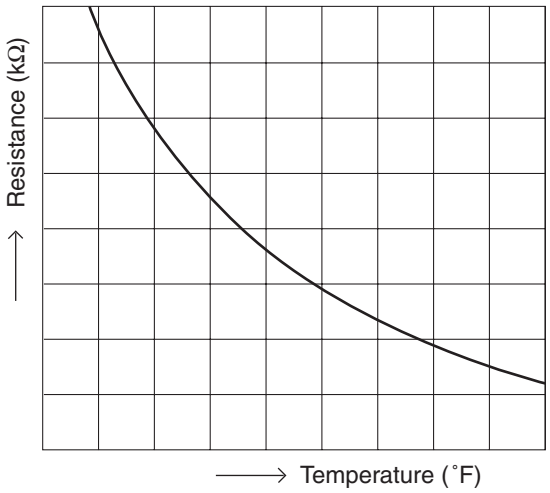
2. 4-way valve turns ON for 1 second.

↓

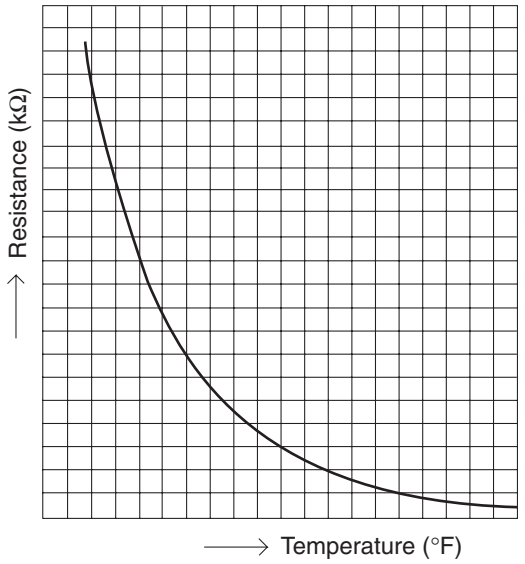
3. Forced cooling (or heating) operation

4-4. Table of Thermistor Characteristics

(1) Outdoor Air Temp. (TO), Intake Temp. (TS), Heat Exchanger Temp. (C1) Sensor, Heat Exchanger Temp. (C2) Sensor



(2) Discharge Temp. (TD) Sensors



4

5. OUTDOOR UNIT MAINTENANCE REMOTE CONTROL

5-1. Overview

What is the outdoor unit maintenance remote controller?

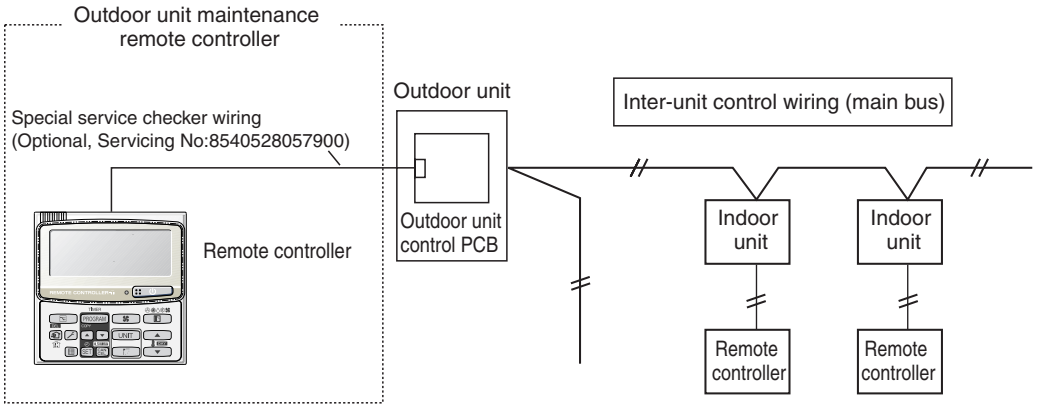
Beginning with the DC-INV series of outdoor units, nonvolatile memory (EEPROM) is used in the outdoor unit PCB. In this way, the setting switches that were located on earlier PCBs have been converted to EEPROM data. This remote controller is an outdoor unit maintenance tool that is used to make and change the EEPROM settings.

This remote controller can be used for checking the outdoor unit EEPROM settings and contents, and also can be used to monitor the outdoor unit alarm history and indoor/outdoor unit temperatures, and to check the status of the indoor unit connections (No. of units, operating status, etc.).

Note: Because this tool does not function as a remote controller, it is used only during test runs and servicing.

RCS-TM80BG

System diagram



* The special service checker wiring is required in order to connect the outdoor unit maintenance remote controller to the outdoor unit PCB.

* Even when the outdoor unit maintenance remote controller is connected, a separate remote controller or other control device must be connected to the indoor unit.

5-2. Functions

■ **Normal display functions**

(1) Functions: Button operations can be used to perform the following functions.

- Start/stop of all indoor units
- Switching between cooling and heating
- Test run of all indoor units
- High-speed operation of indoor units (Do not use with actual units. This may damage the devices.)

(2) Display: The following can be displayed.

- Alarm details display
- No. of indoor/outdoor units
- Unit Nos. of connected indoor/outdoor units
- Indoor/outdoor unit operating status (blinks when an alarm occurs)
- Indoor unit thermostat ON
- Individual display of outdoor unit alarms
- Outdoor unit compressor total operating time
- Outdoor unit oil sensor oil level
- Outdoor unit total power ON time
- Outdoor unit microcomputer version
- Other

■ **Temperature monitor**

- Displays the indoor/outdoor unit sensor temperatures.

■ **Outdoor unit alarm history monitor**

- Displays the outdoor unit alarm history.

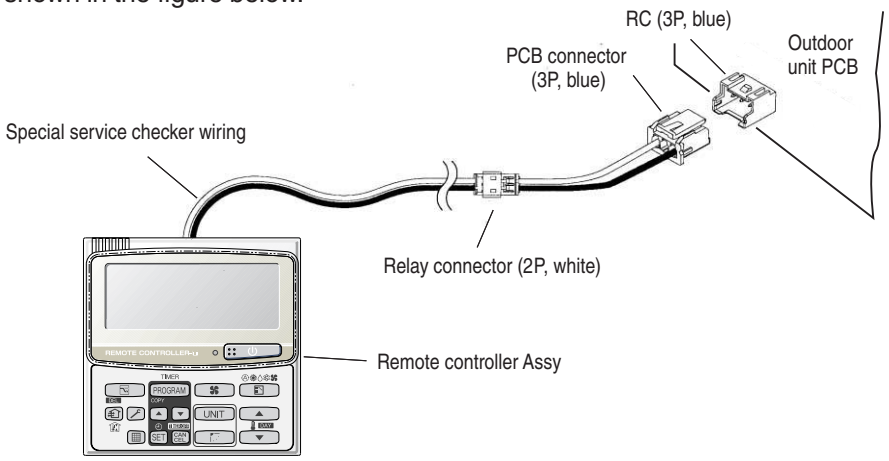
■ **Setting modes**

- Setting mode 1 and setting mode 2 are used to make the outdoor EEPROM setting.

5-3. Normal Display Operations and Functions

■ Normal display functions

- Connect the special service checker wiring to the outdoor unit PCB.
  The connection is shown in the figure below.



* It is not necessary to disconnect the communications line in the inter-unit control wiring if it has already been connected at this time.
* Setting modes 1 and 2 can be used even when the outdoor unit is independent (when 1 maintenance remote controller is connected to 1 outdoor unit and automatic address setting for the indoor units has not been completed).
* Displays the overall system status for that refrigerant system.

● All units start/stop (Fig. 1)

<Operation>
The ⏻ button can be used to start and stop all the indoor units.

- The LED turns ON when 1 or more indoor units is operating.
- The LED blinks when an alarm has occurred at 1 or more indoor units during operation.

Fig. 1

● Switching between cooling/heating (Fig. 1)

<Operation>
The ⏍ button switches between heating and cooling modes.

- The specifications are equivalent to the heating/cooling input that was present on earlier outdoor unit PCBs.
- The display shows the operating mode of the indoor unit with the lowest number.

Fig.2

● All units test run (Fig. 2)

<Operation>
The ⏍ button switches test run ON/OFF for all indoor units.

- Press and hold for 4 seconds to turn ON.
  "Test run" is displayed while the test run is in progress.
- Conditions of test runs that are started from the unit remote controller are not displayed on the outdoor unit maintenance remote controller.

■ Display (functions)

- Use the temperature setting ▲ and ▼ buttons to change the item code.

Item code	Display contents	Remarks
00 (1)	Outdoor unit alarm contents (code): OFF when normal Blinking 8-alarm code display at pre-trip, LED (2)	At initial status
01	No. of indoor units connected in that refrigerant system	
02	Unit. Nos. of connected indoor units in that refrigerant system *2	
03	Operating status of indoor units in that refrigerant system (blinks when alarms occur) *2	
04	Unit Nos. of indoor units in that refrigerant system where the thermostats are ON *2	
05	No. of outdoor units connected in that refrigerant system	No. of connected units: 1
06	Unit Nos. of connected outdoor units in that refrigerant system *2	
07	Operating status of outdoor units in that refrigerant system (blinks when alarms occur) *2	
08		
09		
0A		
0b		
0C		
0d		
0E		
0F		
10	Total compressor operating time (in 1-hr. units) *3	
11		
12		
13		
14		
15		
16	Total power ON time of outdoor unit (in 1-hr. units)	
17	Compressor start count	
18		
19		
FE	Outdoor unit microcomputer firmware version	
FF	Outdoor unit microcomputer software version	

* See following page for *2 and *3.

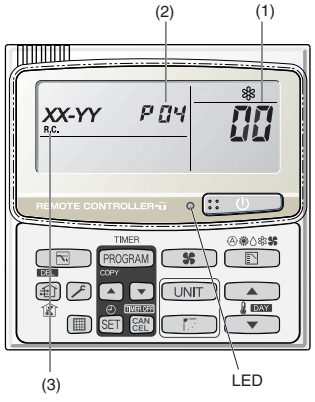
(3) XX-YY R.C.
Displays the outdoor unit address of the selected outdoor sub-bus.
XX = Main bus line outdoor system address (1 – 30)
YY = Outdoor unit address in outdoor sub-bus (1 – 4). This is “1” when there is only 1 outdoor unit.

<Sample displays>

01: <No. of connected indoor units>
4 units connected

02: <Unit Nos. 1, 2, 3, and 4 are connected>

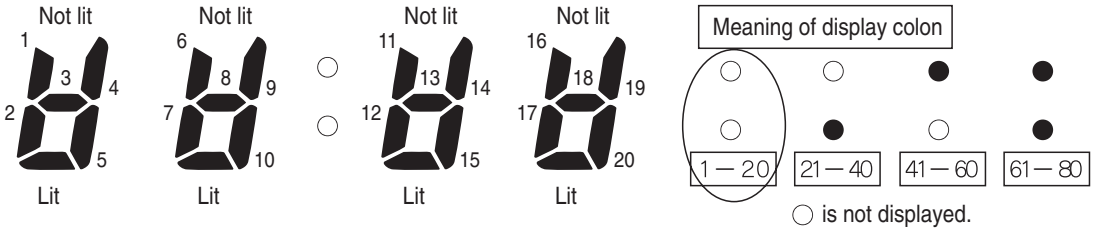
Locations where (1), (2), and (3) are displayed are shown below.



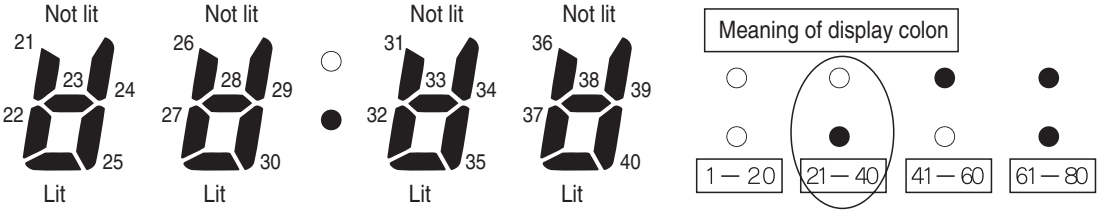
***2:** 7-segment, 4-digit display for remote controller timer display

The connected unit Nos. are displayed as shown below, using the 7-segment 4-digit (88 : 88) display and the colon.

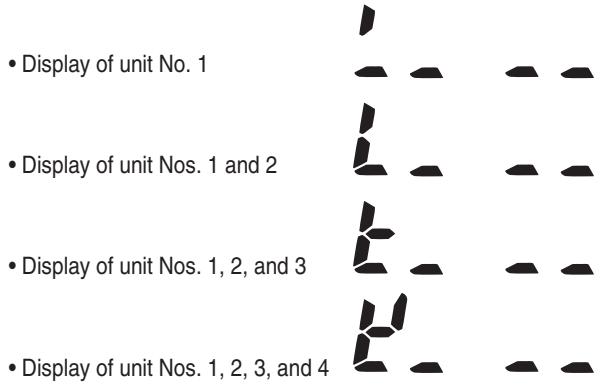
- Display for unit Nos. 1 – 20



- Display for unit Nos. 21 – 40



- The meaning of the colon display changes in the same way, allowing unit Nos. up to 80 to be displayed.
- Sample displays of the unit Nos. of connected indoor units



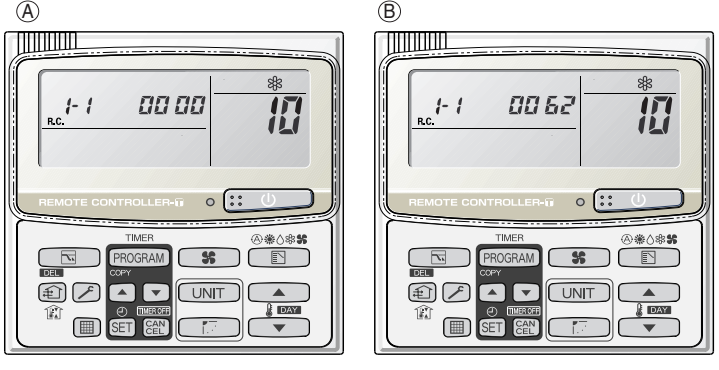
NOTE

The colon display changes automatically every 10 seconds. (The display does not change if higher unit numbers do not exist.)

Pressing the ▭ button switches the display immediately to the next higher level, even if 10 seconds have not passed.

***3:** The total compressor operating time is displayed (in 1-hour units) using 8 digits.

- When the first 4 digits are displayed, the top point of the colon is lit.
- When the last 4 digits are displayed, the colon points are not lit.
- The display of the first 4 and last 4 digits changes automatically every 10 seconds. It can also be changed by pressing the ▭ button.



10: <Total compressor operating time> (A) and (B) are displayed alternately.

NOTE

With the outdoor unit maintenance remote controller (when connected to the outdoor unit), the unit remote controller check functions will not operate.

5

5-4. Monitoring Operations: Display of Indoor Unit and Outdoor Unit Sensor Temperatures

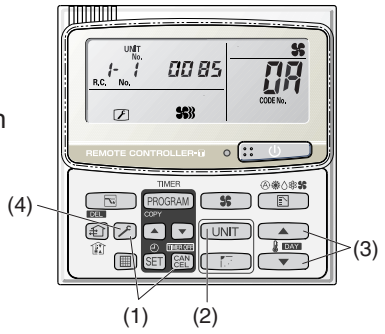
<Operating procedure>

(1) Press and hold the ⊘ button and CL button simultaneously for 4 seconds or longer to switch to temperature monitor mode.
During temperature monitoring, “Service Monitor” is lit.
(The display and operations are the same as when monitor mode is started from the unit remote controller.)

(2) Press UNIT the button and select the indoor unit to monitor.

(3) Use the temperature setting ▲ and ▼ buttons to select the item code of the temperature to monitor.
The selected indoor unit No. and the temperature data are displayed.

(4) To end monitoring, press the ⊘ button. The display returns to the normal display.



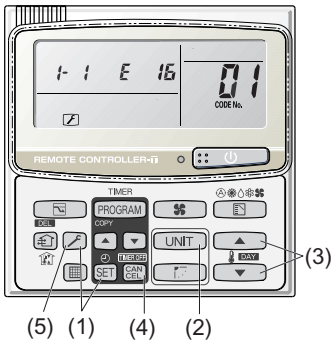
* The display does not blink.

	Item code	Meaning of Code
Indoor unit data	02	Indoor unit intake temp.
	03	Indoor unit heat exchanger temp. (E1)
	04	Indoor unit heat exchanger temp. (E2)
	05	–
	06	Indoor unit discharge temp.
	07	–
	08	–
	09	
Outdoor unit data	0A	Discharge temp. (TD)
	0b	–
	0C	–
	0d	Intake temp. (TS)
	0E	Outdoor unit heat exchanger temp. (C1)
	0F	Outdoor unit heat exchanger temp. (C2)
	10	–
	11	Outdoor air temp. (TO)
	12	–
	13	–
	14	Current value
	15	Outdoor MV value
	19	Frequency

* Depending on the model, some items may not be displayed.

5-5. Monitoring the Outdoor Unit Alarm History: Display of Outdoor Unit Alarm History

* Displays outdoor unit alarms only. Does not display indoor unit alarms.
* Check the indoor unit alarm histories separately using the indoor unit remote controllers or other control device.



<Operating procedure>

(1) Press and hold the button and SET button simultaneously for 4 seconds or longer to change to outdoor unit alarm history mode.
During the alarm history display, “Service Check” is lit.
The display and operations are the same as the monitoring of the alarm device history that is performed using the unit remote controller. However, the outdoor unit address appears instead of the unit No.

↓

(2) Press the UNIT button and select the outdoor unit for alarm history monitoring.

↓

(3) Use the temperature setting and buttons to select the item code for the alarm history.
The display shows the address of the selected outdoor unit, the item code, and the alarm history (alarm data).
The outdoor unit address is displayed as system XX-YY.
System XX = Outdoor unit system address

↓

YY = Outdoor unit sub-bus address

The item code is displayed as 01– 08. 01 indicates the most recent alarm.
The alarm history is indicated by the alarm code. (If there have been no alarm codes, “----” is displayed.)

(4) To clear the alarm history, press the CL button. (The outdoor unit alarm history will be cleared.)

↓

(5) To end, press the button. The display returns to the normal remote controller display.

5-6. Setting Modes: Setting the Outdoor Unit EEPROM

● Setting mode 1
<Operating procedure>

(1) Press and hold the button and button simultaneously for 4 seconds or longer.

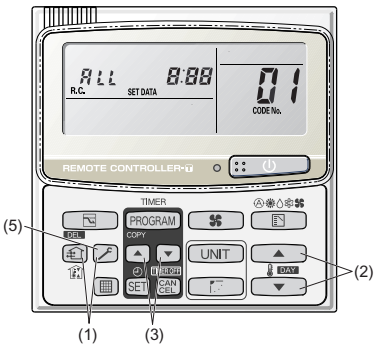
(2) Use the temperature setting and buttons to change the item code.
The item codes and setting data are shown in the table on the next page.

(3) Use the timer time and buttons to change the setting data.
To confirm the changed setting data, press the SET button.
(At this time, “Setting” stops blinking and remains lit.)

(4) During this mode, “Setting” is displayed, blinking. The outdoor unit address display section displays “ALL,” the item code and number (DN value in the table), and the setting data (6 digits).
(The setting data is displayed in 6 digits. The display changes between the first 3 digits (Fig. Ⓐ) and the last 3 digits (Fig. Ⓑ).
When the first 3 digits are displayed, the top point of the colon is lit.)

(5) To end the setting mode, press the button.

Ⓐ Display of first 3 digits



Ⓑ Display of last 3 digits

Ⓐ and Ⓑ are displayed alternately.
(Example shows display of 000 001.)

5

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List of Item Codes

Item code		Parameter
01	Control system schedule	Do not set
02	Control system schedule	Do not set
03	Control system schedule	Do not set
04	Snowfall sensor operation	0 = No sensor, control performed 1 = No sensor, control not performed 2 = Sensor present, control performed 3 = Sensor present, control not performed
05	Outdoor fan quiet mode	Do not set
06	Defrost fan speed selection	Do not set
07	Ignore capacity	0 = Disabled 1 = Ignores capacity ratio
08	Control system schedule	Do not set
09	Control system schedule	Do not set
0A	Control system schedule	Do not set
0b	Control system schedule	Do not set
0C	Forced operation of indoor unit drain pump	0 = Disabled 1 = During cooling only, 2 hours stopped + 20 minutes operating (regardless of whether the unit is running or stopped) 2 = During cooling only, 4 hours stopped + 20 minutes operating (regardless of whether the unit is running or stopped) 3 = At all times, 4 hours stopped + 20 minutes operating 4 = At all times, 2 hours stopped + 20 minutes operating
0d	Odor countermeasure when indoor cooling thermostat is OFF	Do not set
0E	Cool only	0 = Heat pump 1 = Cool only
0F	Control system schedule	Do not set
10	Control system schedule	Do not set
11	Multi-floor installation	Do not set
12	External Electronic Expansion Valve Kit	0 = No 1 = Yes
13	Control system schedule	Do not set
4E	Test mode 1	Do not set
4F	Test mode 2	Do not set
50	Demand 1	40%, 45% ... 100% ... 160%
51	Demand 2	40%, 45% ... 100% ... 160%
52	Current control level	40%, 45% ... 100% ... 160%, –1 (normal: at shipment from factory)
53	Control system schedule	Do not set
54	Control system schedule	Do not set
55	Control system schedule	Do not set
56	Control system schedule	Do not set
57	Control system schedule	Do not set
58	Control system schedule	Do not set
59	Control system schedule	Do not set
5A	Control system schedule	Do not set
5B	Control system schedule	Do not set

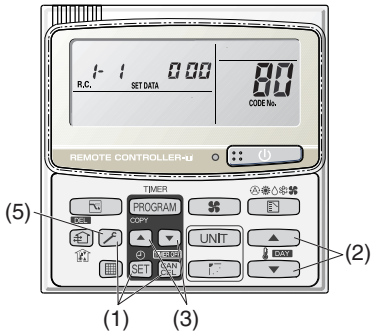
* Figures in parentheses indicate the data at the time of shipment from the factory.

● Setting mode 2
<Operating procedure>

(1) Press and hold the ⊘ button, SET button, and CL button simultaneously for 4 seconds or longer.

(2) Use the temperature setting ▲ and ▼ buttons to change the item code. The item codes and setting data are shown in the table below.

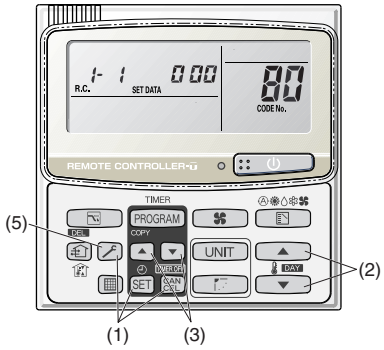
(3) Use the timer time ▲ and ▼ buttons to change the setting data.
To confirm the changed setting data, press the SET button.
(At this time, "Setting" stops blinking and remains lit.)



(4) During this mode, "Setting" is displayed, blinking. The display shows the set outdoor unit address "System XX-YY" (System XX = System address, YY = Address at outdoor unit sub-bus), item code number (DN value in the table below), and the setting data (6 digits).
(The setting data is displayed in 6 digits. The display changes between the first 3 digits (Fig. Ⓐ) and the last 3 digits (Fig. Ⓑ). When the first 3 digits are displayed, the top point of the colon is lit.)

(5) To end the setting mode, press the ⊘ button. The display returns to the normal display mode.

Ⓐ Display of first 3 digits



Ⓑ Display of last 3 digits

80: <Refrigerant type> Ⓐ and Ⓑ are displayed alternately. (Example shows 000 410 (R410A).)

5

List of Item Codes

Item code	Parameter	
80	Refrigerant type	407 = R407C 22 = R22 410 = R410A
81	Outdoor unit capacity*	0 = Disabled 80 : 26 type 112 : 30, 36 type 140 : 42 type
82	Control system schedule	Do not set
83	Control system schedule	Do not set
84	3-phase or single-phase	0 = 3-phase 1 = single-phase
85	Power frequency	Do not set
86	Control system schedule	Do not set
87	Control system schedule	Do not set
88	Control system schedule	Do not set
89	Crank case heater control	0 = No 1 = Yes
8A	Control system schedule	Do not set
8b	Control system schedule	Do not set
8E	Control system schedule	Do not set

(*) Figures represent the capacity data for each model.

6. TEST RUN

6. TEST RUN

6-1. Preparing for Test Run

- **Before attempting to start the air conditioner, check the following:**

(1) All loose matter is removed from the cabinet especially steel filings, bits of wire, and clips.

(2) The control wiring is correctly connected and all electrical connections are tight.

(3) The protective spacers for the compressor used for transportation have been removed. If not, remove them now.

(4) The transportation pads for the indoor fan have been removed. If not, remove them now.

(5) The power has been supplied to the unit for at least 5 hours before starting the compressor. The bottom of the compressor should be warm to the touch and the crankcase heater around the feet of the compressor should be hot to the touch. (Fig. 6-1)

(6) Both the gas and liquid tube service valves are open. If not, open them now. (Fig. 6-2)

(7) Request that the customer be present for the trial run.
Explain the contents of the instruction manual, then have the customer actually operate the system.

(8) Be sure to give the instruction manual and warranty certificate to the customer.

(9) When replacing the control PCB, be sure to make all the same settings on the new PCB as were in use before replacement.
The existing EEPROM is not changed, and is connected to the new control PCB.

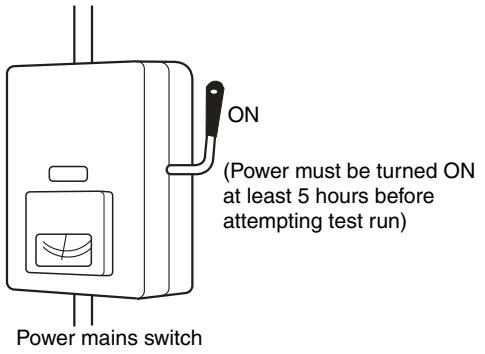


Fig. 6-1

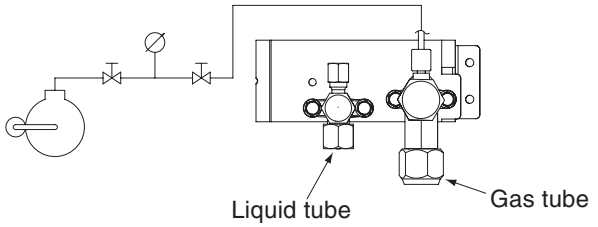


Fig. 6-2

■ X, T, U, K Type

6-2. Caution

- This unit may be used in a single-type refrigerant system where 1 outdoor unit is connected to 1 indoor unit.
- The indoor and outdoor unit control PCBs utilize a semiconductor memory element (EEPROM). The settings required for operation were made at the time of shipment.
  Only the correct combination of indoor and outdoor units can be used.
- This test run manual describes primarily the procedure when using the wired remote controller.

6-3. Test Run Procedure

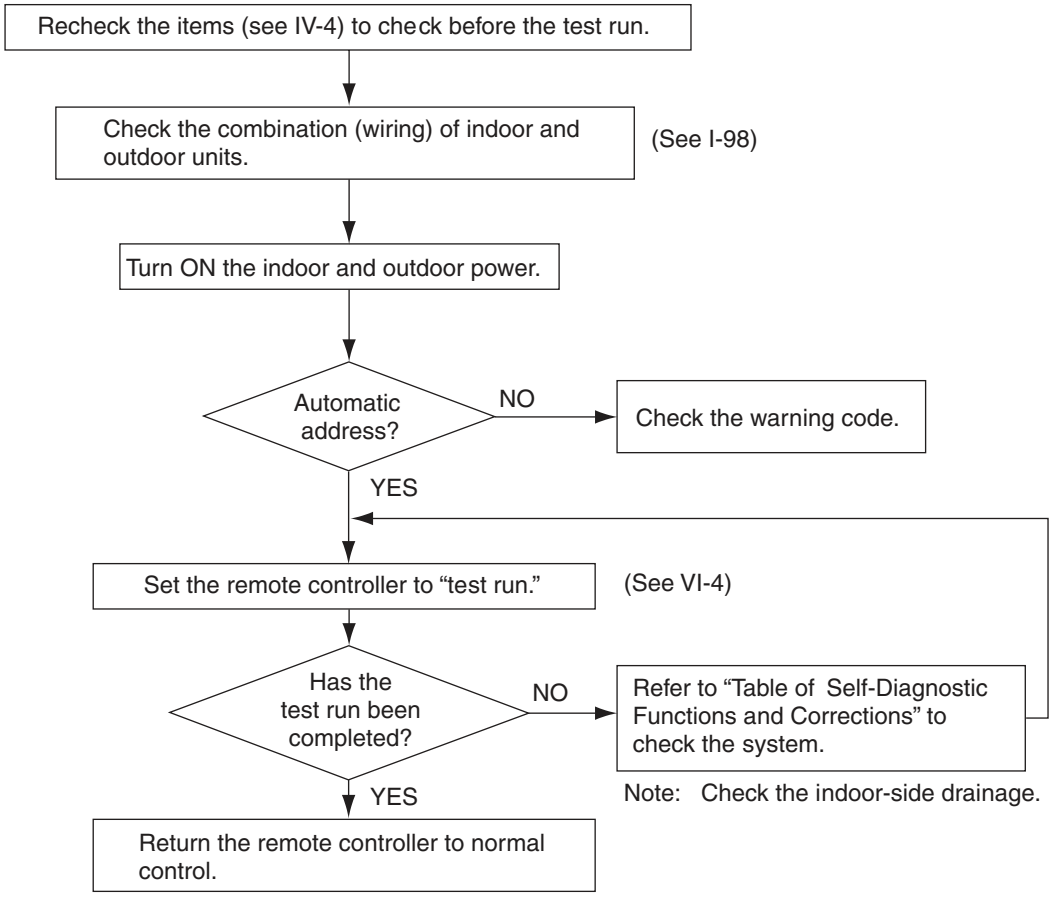


Fig. 6-3

6-4. Items to Check Before the Test Run

(1) Turn the breaker ON at least 12 hours in advance in order to energize the crank case heater.

(2) Fully open the closed valves on the liquid tube and gas tube sides.

6-5. Test Run Using the Remote Controller

(1) Press and hold the remote controller ⊘ button for 4 seconds or longer. Then press the ⏻ button.

- "TEST" appears in the LCD display during the test run.
- Temperature control is not possible when test run mode is engaged.
  (This mode places a large load on the devices. Use it only when performing the test run.)

(2) Use either Heating or Cooling mode to perform the test run.

Note: The outdoor unit will not operate for approximately 3 minutes after the power is turned ON or after it stops operating.

(3) If normal operation is not possible, a code appears on the remote controller LCD display.
Refer to the "Table of Self-Diagnostic Functions and Corrections" on the next page, and correct the problem.

(4) After the test run is completed, press the ⊘ button again. Check that "TEST" disappears from the LCD display.
(This remote controller includes a function that cancels test run mode after 60 minutes have elapsed, in order to prevent continuous test run operation.)

(5) For the test run of an inverter outdoor unit, operate the compressors for a minimum of 10 minutes.

* When performing a test run using a wired remote controller, operation is possible without attaching the cassette-type ceiling panel.
("P09" will not be displayed.)

RCS-TM80BG

6-6. Precautions

- Request that the customer be present when the test run is performed. At this time, explain the operation manual and have the customer perform the actual steps.
- Be sure to pass the manuals and warranty certificate to the customer.
- Check that the AC 230 / 208 V power is not connected to the inter-unit control wiring connector terminal.

* If AC 230 / 208 V is accidentally applied, the indoor or outdoor unit control PCB fuse (0.5A for both indoor and outdoor units) will blow in order to protect the PCB. Correct the wiring connections, then disconnect the 2P connectors (indoor: blue, OC) (outdoor: blue, OC) that are connected to the PCB, and replace them with 2P connectors (indoor: brown, EMG) (outdoor: brown, EMG). (Refer to the figure below.) If operation is still not possible after changing the brown connectors, try cutting the varistor (VA002) (both indoor and outdoor).
(Be sure to turn the power OFF before performing this work.)

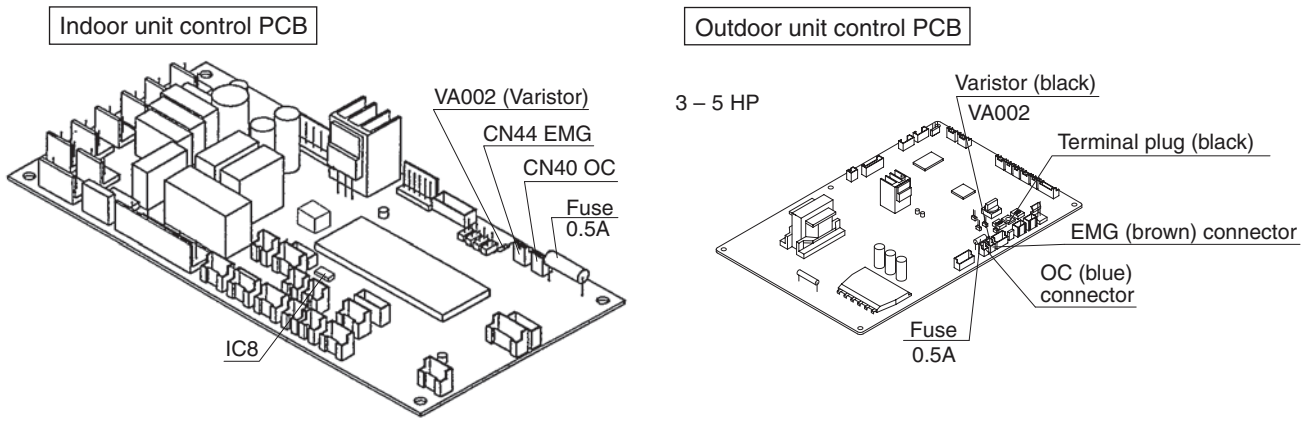


Fig. 6-4

6-7. Table of Self-Diagnostic Functions and Corrections (X, T, U, K Type)

Wired remote controller display	Indoor unit receiver lamp	Cause				Correction
		1:1 connection (single type)	Group connection	Simultaneous-operation multi system (flexible combination)	Control by main-sub remote controllers	
Nothing is displayed	Nothing is displayed	● Remote controller is not connected correctly. ● Indoor unit power is not ON.	● Remote controller is not connected with indoor unit correctly ● Indoor unit power is not ON.	● Same as at left	● Same as at left	Connect the remote controller correctly. Turn ON the indoor unit power.
E 0 1 displayed	Operating lamp is blinking.	● Automatic address setting has not been completed. ● Inter-unit control wiring is cut or is not connected correctly. ● Remote controller is not connected correctly (remote controller receiving failure).	● Automatic address setting has not been completed. ● Inter-unit control wiring is cut or is not connected correctly. ● Remote controller is not connected with indoor unit correctly	● Same as at left	● Same as at left	Check the remote controller and inter-unit control wiring. Perform automatic address setting.
E 0 2 displayed		● Remote controller is not connected correctly (failure in transmission from remote controller to indoor unit).	● Remote controller is not connected with indoor unit correctly	● Same as at left	● Same as at left	Connect the remote controller correctly.
E 0 9 displayed		———	———	———	● 2 remote controllers are set as the main remote controller.	Refer to 11-8-6 Main-sub remote control, and make the correct settings.
E 1 4 displayed		———	———	● Remote controller crossover wiring is cut or is not connected correctly.	● Same as at left	Check the remote controller crossover wiring. Perform automatic address setting again.
E 0 4 displayed	Standby lamp is blinking.	● Indoor-outdoor inter-unit wiring is not connected correctly.	● Same as at left	● Same as at left	● Same as at left	Connect the wiring correctly.
E 0 6 displayed			● Indoor-outdoor inter-unit wiring is cut or is not connected correctly.	● Same as at left	● Same as at left	Refer to 11-8 System Control, and make the correct settings.
E 1 5 displayed		● Indoor unit capacity is too low.	● Same as at left	● Same as at left	● Same as at left	Check that the total capacities of the indoor and outdoor units are appropriate.
E 1 6 displayed		● Indoor unit capacity is too high.				
E 2 0 displayed		● No serial signal is being received at all from the indoor units.				Check that the indoor unit power is ON, and that the inter-unit control wiring is connected correctly.
P 0 5 displayed	Operation lamp and Standby lamp are blinking alternately.	● Inter-unit circuit or open phase in the outdoor unit power ● Insufficient gas	● Reversed phase or open phase in the 3-phase power at one of the outdoor units in the group	● Reversed phase or open phase in the outdoor unit 3-phase power	● Same as at left	Reverse 2 phases of the outdoor unit 3-phase power and connect them correctly.
L 0 2 displayed **L 1 3** displayed	Both the Operation lamp and Standby lamp are blinking together.	● Indoor-outdoor unit type mismatch	● Same as at left	● Same as at left		Check that the indoor and outdoor unit types are correct.
L 0 7 displayed		———	———	● Remote controller crossover wiring is connected to the indoor unit, however it is set for individual operation.	● Same as at left	Perform automatic address setting.
P 0 9 displayed	Timer lamp and Standby lamp are blinking alternately.	● The indoor unit ceiling panel connector is not connected correctly.	● Ceiling panel connector at one of the indoor units in the group is not connected correctly.	● Indoor unit ceiling panel connector is not connected correctly.	● Same as at left	Connect the indoor unit ceiling panel connector correctly.

6-8. Examples of Wiring Diagrams

Basic wiring diagram 1

Single-type system

- Be careful to avoid miswiring when connecting the wires. (Miswiring will damage the units.)

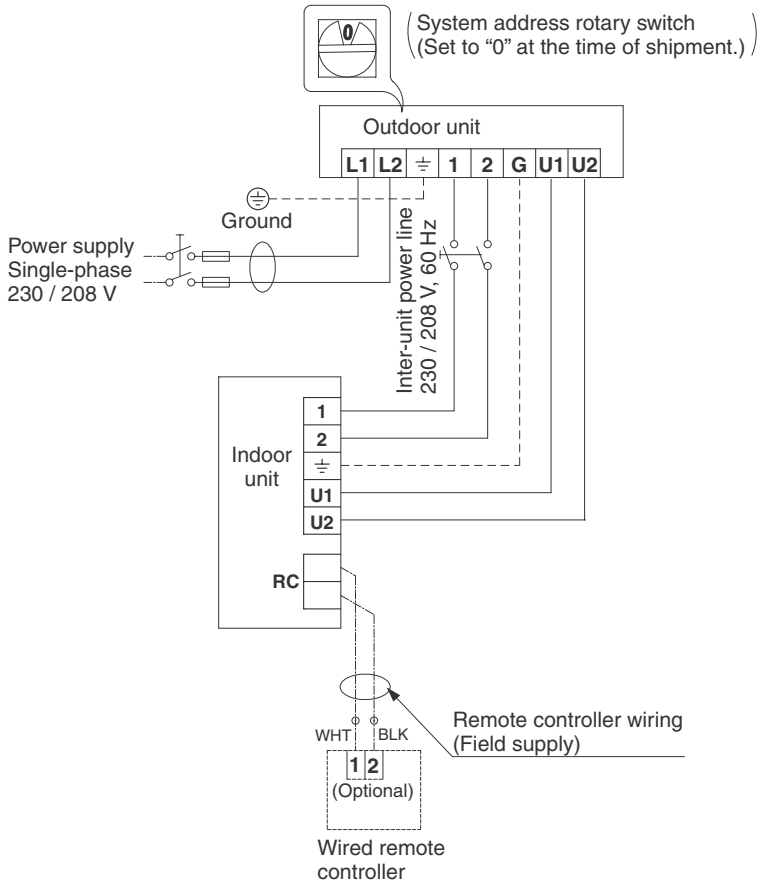


Fig. 6-5

Basic wiring diagram 2

Group control (when a central control device is not used)

- Simultaneous-operation multi system
  A maximum of 8 indoor units can be connected to 1 remote controller.
  Set the system address (refrigerant tubing system address) before turning on the remote power switch.
  (Refer to “Setting the system addresses” on next page.)
  (Set using the system address rotary switch on the outdoor unit control PCB.)

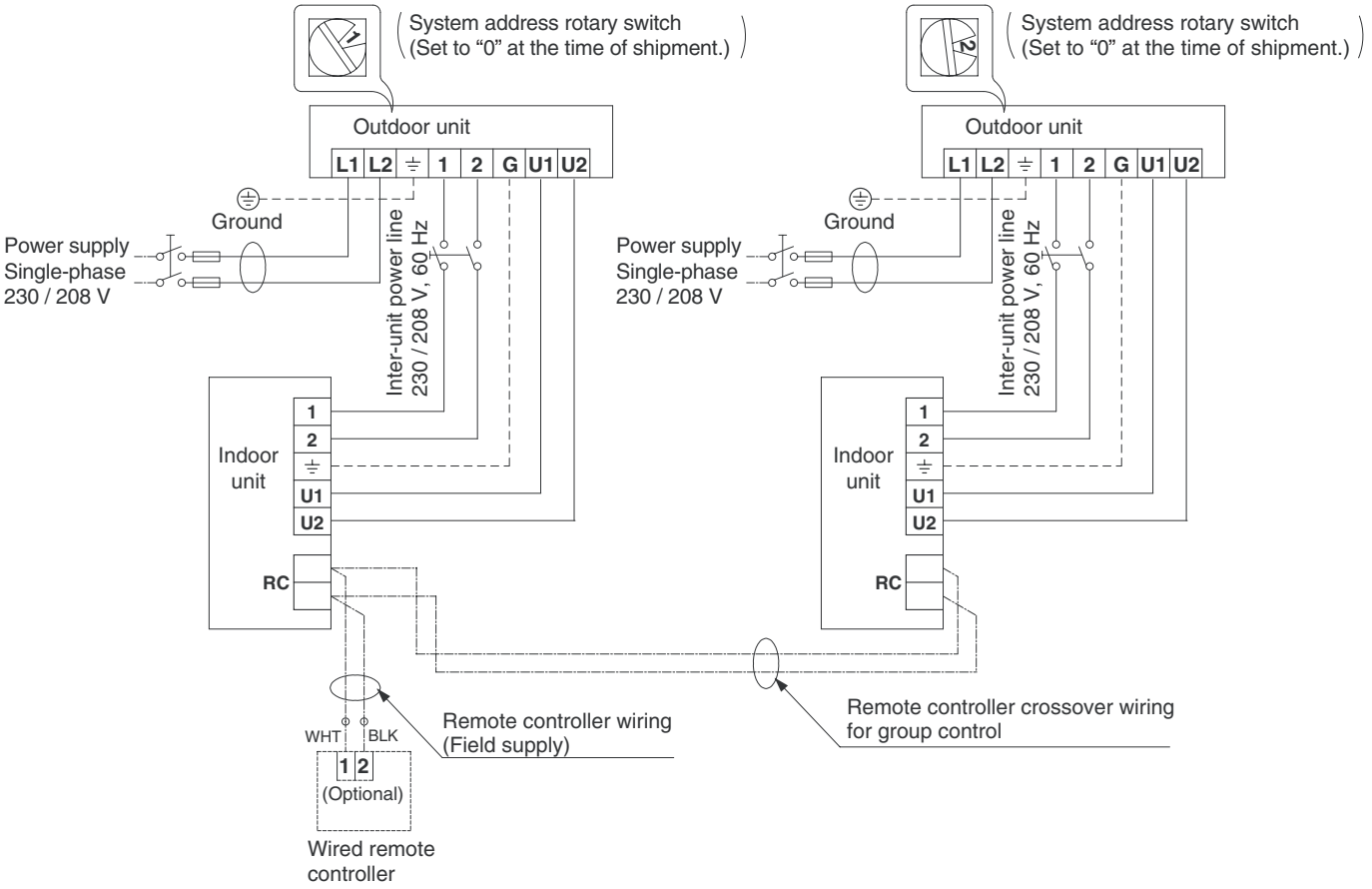


Fig. 6-6a

(Wiring procedure)

(1) Connect the remote controller to the indoor unit remote controller wiring.
Use the remote controller connection wire coming from the indoor unit, and field-supply wire and a wire joint to complete the connection as shown in Fig. 6-6b. The remote controller connection wire coming from the indoor unit includes a connector, therefore cut off the connector and use the wire joint to connect the wire from the remote controller.

(2) Connect the indoor units (U1, U2) and the outdoor units (1, 2).
Connect the other outdoor units and indoor units (with different refrigerant systems) in the same way.
Connect the inter-unit control wiring to the indoor units (U1, U2) for each refrigerant system.
(Inter-unit control wiring)

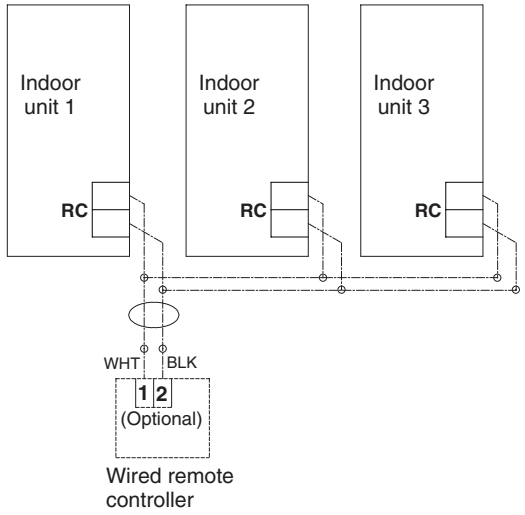


Fig. 6-6b

Setting the outdoor unit system addresses

For basic wiring diagram 2 (Set the system addresses: 1, 2, 3...)

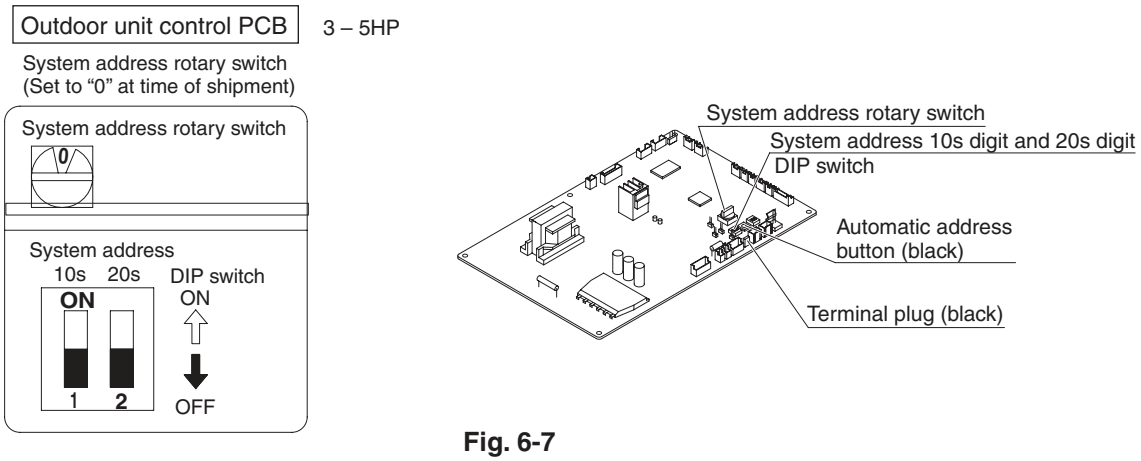


Fig. 6-7

System address No.	System address 10s digit (2P DIP switch)	System address 1s place (Rotary switch)
0 Automatic address (Setting at shipment = "0")	Both OFF	"0" setting
1 (If outdoor unit is No. 1)	Both OFF	"1" setting
2 (If outdoor unit is No. 2)	Both OFF	"2" setting
11 (If outdoor unit is No. 11)	10s digit ON	"1" setting
21 (If outdoor unit is No. 21)	20s digit ON	"1" setting
30 (If outdoor unit is No. 30)	10s digit and 20s digit ON	"0" setting

Automatic address setting using the remote controller

When the outdoor unit shown in "Basic wiring diagram 2" is used for group control of multiple outdoor units , use the remote controller to perform automatic address setting. (During automatic address setting, "SETTING" blinks on the remote controller display.)

- Press the remote controller timer time ▲ button and ✎ button simultaneously. (Hold for 4 seconds or longer.) Then press the SET button. (Item code "AA" appears: All systems automatic address setting.) (Automatic address setting is performed in sequence for all outdoor units from No. 1 to No. 30. When automatic address setting is completed, the units return to normal stopped status.)
- To select each refrigerant system individually and perform automatic address setting, press the remote controller timer time ▲ button and ✎ button simultaneously. (Hold for 4 seconds or longer.) Then press either the temperature setting ▲ or ▼ button. (Item code "A1" appears: Individual system automatic address setting) Use either the UNIT or ☐ button to select the outdoor unit to perform automatic address setting. (For example, when selected R.C.1 "R.C.1" is displayed.) Then press the SET button. (Automatic address setting is performed for refrigerant circuit 1.) When automatic address setting for circuit 1 is completed, the system returns to normal stopped status. When automatic address setting for circuit 1 is completed, the system returns to normal stopped status. In the same way, press the remote controller timer time ▲ button and ✎ button simultaneously to perform automatic address setting for a different R.C. (refrigerant circuit) if necessary. Then in the same way as above (use the UNIT button to display "R.C.2," for example), select the next circuit and perform automatic address setting.

Indicating (marking) the indoor and outdoor unit combination number

Indicate (mark) the number after automatic address setting is completed.

(1) So that the combination of each indoor unit can be easily checked when multiple units are installed, ensure that the indoor and outdoor unit numbers correspond to the system address number on the outdoor unit control PCB, and use a magic marker or similar means which cannot be easily erased to indicate the numbers in an easily visible location on the indoor units (near the indoor unit nameplates).
Example: (Outdoor) 1 - (Indoor) 1-1...(Outdoor) 2 - (Indoor) 2-2...

(2) These numbers will be needed for maintenance. Be sure to indicate them.

* Use the remote controller to check the addresses of the indoor units. Press and hold the button and button for 4 seconds or longer (simple settings mode). Then press the button UNIT and select the indoor address. (Each time the button is pressed, the address changes as follows: 1-1, 2-1, ...) The indoor unit fan operates only at the selected indoor unit. Confirm that correct fan is operating, and indicate address on the indoor unit.

Press the button again to return to the normal remote controller mode.

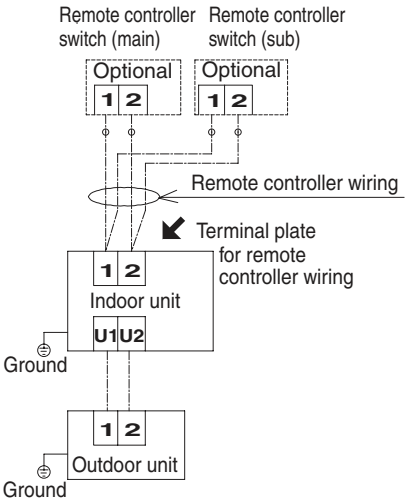
For details, refer to the separate handbook.

Main-sub remote controller control

Control using 2 remote controller switches

Main-sub remote controller control refers to the use of 2 remote controllers to control 1 indoor unit.
(A maximum of 2 remote controllers can be connected.)

● **Connecting 2 remote controllers to control 1 indoor unit**



(Setting procedure)

(1) Set 1 of the 2 connected remote controllers as the main remote controller.

(2) On the other remote controller (sub remote controller), change the remote controller address connector on the reverse side of the remote controller switch PCB from the Main position to the Sub position.
The remote controller will now function as the sub remote controller.

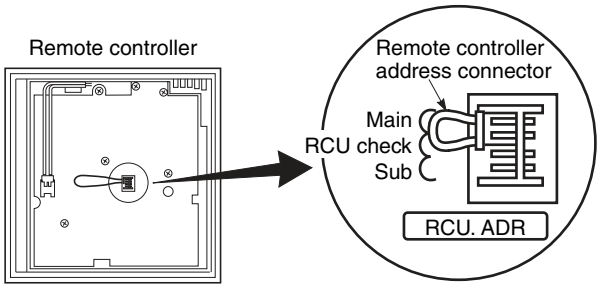


Fig. 6-8

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