

AIR CONDITIONER

**Cassette type**

# DESIGN & TECHNICAL MANUAL

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INDOOR



WHU09CTA21S  
WHU12CTA21S



WHU18CTA21S  
WHU24CTA21S

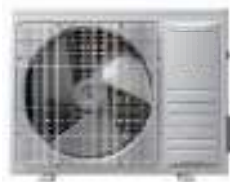


WHU36CTA21S

OUTDOOR



WHU09SZA21S  
WHU12SZA21S




WHU18SZA21S



WHU24SZA21S



WHU36SZA21S

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** WARNING**

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This product can expose you to chemicals including Plumbum, which is known to the State of California to cause cancer and birth defects or other reproductive harm.  
For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

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# Part 1. INDOOR UNIT

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## CASSETTE TYPE:

WHU09CTA21S

WHU12CTA21S

WHU18CTA21S

WHU24CTA21S

WHU36CTA21S

# 1. Specifications

Type				Cassette				
				Inverter, Heat pump				
Model name				WHU09CTA21S	WHU12CTA21S	WHU18CTA21S	WHU24CTA21S	
Power supply				208/230 V ~ 60 Hz				
Power supply intake				Outdoor unit				
Available voltage range				198—253 V			176—253 V	
Capacity	Cooling	Rated	kW	2.64	3.52	5.28	7.03	
			Btu/h	9,000	12,000	18,000	24,000	
		Min.—Max.	kW	1.27—3.40	1.70—3.84	1.23—6.16	2.52—7.39	
			Btu/h	4,850—11,600	5,800—13,100	4,200—21,000	8,600—25,200	
	Heating	Rated	kW	2.93	3.52	5.57	7.03	
			Btu/h	10,000	12,000	19,000	24,000	
		Min.—Max.	kW	1.27—3.60	1.29—4.22	1.64—7.03	2.23—8.32	
			Btu/h	4,340—12,280	4,400—14,400	5,600—24,000	7,600—28,400	
Heating (5°F) <sup>*1</sup>	Max.	kW	2.43	2.48	3.87	5.57		
		Btu/h	8,300	8,450	13,200	19,000		
Input power	Cooling	Rated	kW	0.700	0.960	1.420	1.920	
				0.332—0.941	0.388—1.319	0.252—1.870	0.760—2.260	
	Heating	Rated	kW	0.709	0.926	1.425	1.950	
				0.221—1.022	0.457—1.611	0.345—2.068	0.780—2.400	
Current	Cooling	Rated	A	3.6	4.3	6.5	8.6	
	Heating			3.5	4.1	6.3	8.7	
EER2	Cooling		W/W	3.8		3.7		
				Btu/hW	12.85		12.50	
COP2	Heating		W/W	4.1	3.8	3.9	3.6	
				Btu/hW	14.10	12.96	13.33	12.31
SEER2	Cooling		Btu/hW	20.5			18.5	
HSPF2	Heating		Btu/hW	10.0	9.5	10.0		
Power factor	Cooling		%	99				
	Heating		%	99				
Moisture removal			pints/h (L/h)	1.7 (0.8)	2.3 (1.1)	3.2 (1.5)	4.0 (1.9)	
Maximum operating current <sup>*2</sup>			Cooling	15.0	20.0		35.0	
			Heating	15.0	20.0		35.0	
Fan	Airflow rate	Cooling	HIGH	CFM (m <sup>3</sup> /h)	309 (520)	324 (550)	588 (1,000)	647 (1,100)
			MED		274 (460)	294 (500)	500 (850)	530 (900)
			LOW		232 (390)	235 (400)	394 (670)	400 (680)
		Heating	HIGH		309 (520)	324 (550)	588 (1,000)	647 (1,100)
			MED		274 (460)	294 (500)	500 (850)	530 (900)
			LOW		232 (390)	235 (400)	394 (670)	400 (680)
	Type × Qty		Turbo × 1					
	Motor output		W		57		80	
Sound pressure level <sup>*3</sup>	Cooling	HIGH	dB (A)	38	42	38	44	
		MED		34	37	36	40	
		LOW		31	33	34	38	
	Heating	HIGH		38	42	38	44	
		MED		34	37	36	40	
		LOW		31	33	34	38	
Heat exchanger type	Dimensions (H × W × D)		in (mm)	6-9/16 × 49-1/2 × 3/4 (166 × 1,258 × 18.8)	6-9/16 × 47-3/4 × 1-1/8 (166.7 × 1,213 × 28.2)	7-7/16 × 73-5/8 × 1-1/16 (189 × 1,870 × 27.2)	7-7/16 × 76-3/8 × 1-5/8 (189 × 1,940 × 40.8)	
	Fin pitch		FPI	20		17		
	Rows × Stages			2 × 8	3 × 8	2 × 10	3 × 10	
	Pipe type			Copper				
	Fin type			Aluminum				
Dimensions (H × W × D)	Net		in (mm)	8-1/2 × 22-1/2 × 22-1/2 (215 × 570 × 570)		9-3/4 × 33-1/8 × 33-1/8 (248 × 840 × 840)		
	Gross			4-1/2 × 26-3/4 × 27-1/8 (292 × 668 × 730)		4-3/4 × 40 × 40-3/8 (370 × 956 × 996)		
Weight	Net		lb (kg)	32 (14.5)	34 (15.5)	56 (25)	59.5 (27)	
	Gross			38.5 (17.5)	40.5 (18.5)	76 (34)	79.5 (36)	
Connection pipe	Size	Liquid	in (mm)	Ø1/4 (Ø6.35)		Ø1/4 (Ø6.35)	Ø3/8 (Ø9.52)	
		Gas		Ø3/8 (Ø9.52)		Ø1/2 (Ø12.70)	Ø5/8 (Ø15.88)	
Drain hose	Method		Flare					
	Material		PE/PVC					
Operation range	Tip diameter		in (mm)	Ø1-1/8 (Ø27.8) (I.D.), Ø1-1/4 (Ø32.3) (O.D.)				
	Cooling	°F (°C)		61 to 86 (16 to 30)				
		%RH		80 or less				
Remote controller type	Heating		°F (°C)		61 to 86 (16 to 30)			
			Wireless (Wired [option])					
Cassette grille (Grid type: Option)	Model name		WH-AG4CT1		WH-AG4CT2			
	Dimensions (H × W × D)	Net	in (mm)	1-5/8 × 24-3/8 × 24-3/8 (40 × 620 × 620)		1-3/4 × 37-3/8 × 37-3/8 (45 × 950 × 950)		
		Gross		4-1/2 × 26-3/4 × 27-1/8 (115 × 680 × 690)		4-3/4 × 40 × 40-3/8 (120 × 1,015 × 1,025)		
	Weight	Net	lb (kg)	5.7 (2.6)		14.3 (6.5)		
		Gross		9.9 (4.5)		20.9 (9.5)		

## NOTES:

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 80°FDB (26.67°CDB) /67°FWB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB) / 75°FWB (23.9°CWB).
  - Heating: Indoor temperature of 70°FDB (21.11°CDB) /59°FWB (15.56°CWB), and outdoor temperature of 47°FDB (8.33°CDB) /43°FWB (6.11°CWB).
  - \*1: Heating (5°F): Indoor temperature of 70°FDB (21.11°CDB) /60°FWB (15.56°CWB), and outdoor temperature of 5°FDB (-15.0°CDB) /4°FWB (-15.56°CWB).
  - Test conditions are based on AHRI 210/240 2023.
  - Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- \*2: Maximum current is maximum value when operated within the operation range.
- \*3: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

M condition							
Model name			WHU09CTA21S	WHU12CTA21S	WHU18CTA21S	WHU24CTA21S	
Capacity	Cooling	Rated	kW	2.64	3.52	5.28	7.03
			Btu/h	9,000	12,000	18,000	24,000
		Min.—Max.	kW	1.27—3.40	1.70—3.84	1.23—6.16	2.52—7.39
	Heating	Rated	Btu/h	4,850—11,600	5,800—13,100	4,200—21,000	8,600—25,200
			kW	2.93	3.52	5.57	7.03
		Min.—Max.	Btu/h	10,000	12,000	19,000	24,000
Input power	Cooling	Rated	kW	1.27—3.60	1.29—4.22	1.64—7.03	2.23—8.32
			Btu/h	4,340—12,280	4,400—14,400	5,600—24,000	7,600—28,400
		Min.—Max.	kW	0.700	0.960	1.420	1.920
	Heating	Rated	kW	0.332—0.941	0.388—1.319	0.252—1.870	0.760—2.260
			Btu/h	0.709	0.926	1.425	1.950
		Min.—Max.	kW	0.221—1.022	0.457—1.611	0.345—2.068	0.780—2.400
Current	Cooling	Rated	A	3.6	4.3	6.5	8.6
	Heating		A	3.5	4.1	6.3	8.7
EER	Cooling	Rated	W/W	3.77	3.66	3.72	3.66
			Btu/hW	12.86	12.50	12.68	12.50
COP	Heating	Rated	W/W	4.13	3.80	3.91	3.61
			Btu/hW	14.11	12.96	13.33	12.31
SEER	Cooling	Rated	Btu/hW	22.0	23.0	22.0	19.0
HSPF	Heating	Rated	Btu/hW	10.0	11.5	11.0	10.0
Power factor	Cooling	Rated	%	99			
	Heating			99			

**NOTES:**

Specifications are based on the following conditions:

- Cooling: Indoor temperature of 80°FDB (26.67°CDB)/67°FWB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB)/75°FWB (23.9°CWB).
- Heating: Indoor temperature of 70°FDB (21.11°CDB)/59°FWB (15.56°CWB), and outdoor temperature of 47°FDB (8.33°CDB)/43°FWB (6.11°CWB).
- Test conditions are based on AHRI 210/240 2017.
- Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)

Type				Cassette	
				Inverter, Heat pump	
Model name				WHU36CTA21S	
Power supply				208/230 V ~ 60 Hz	
Power supply intake				Outdoor unit	
Available voltage range				176—253 V	
Capacity	Cooling	Rated	kW	10.55	
			Btu/h	36,000	
		Min.—Max.	kW	3.69—10.79	
				Btu/h	12,600—36,800
	Heating	Rated	kW	10.55	
			Btu/h	36,000	
		Min.—Max.	kW	4.40—12.49	
				Btu/h	15,000—42,600
	Heating (5°F)*1	Max.	kW	7.85	
Btu/h			26,800		
Input power	Cooling	Rated	kW	3.380	
		Min.—Max.		1.102—3.981	
	Heating	Rated		3.190	
		Min.—Max.		1.200—3.760	
Current	Cooling	Rated	A	14.6	
	Heating			14.0	
EER2	Cooling		W/W	3.12	
			Btu/hW	10.65	
COP2	Heating		W/W	3.31	
			Btu/hW	11.29	
SEER2	Cooling		Btu/hW	18.0	
HSPF2	Heating		Btu/hW	9.8	
Power factor	Cooling		%	99	
	Heating			99	
Moisture removal				pints/h (L/h)	5.3 (2.5)
Maximum operating current*2		Cooling	A	45.0	
		Heating		25.0	
Fan	Airflow rate	Cooling	HIGH	941 (1,600)	
			MED	794 (1,350)	
			LOW	676 (1,150)	
		Heating	HIGH	941 (1,600)	
			MED	794 (1,350)	
			LOW	676 (1,150)	
	Type × Qty			Turbo × 1	
Motor output		W		124	
Sound pressure level*3	Cooling	HIGH	dB (A)	49	
		MED		43	
		LOW		39	
	Heating	HIGH		49	
		MED		43	
		LOW		39	
Heat exchanger type	Dimensions (H × W × D)		in (mm)	9-15/16 × 76-3/8 × 1-5/8 (252 × 1,940 × 40.8)	
	Fin pitch		FPI	17	
	Rows × Stages			3 × 12	
	Pipe type			Copper	
	Fin type			Aluminum	
Dimensions (H × W × D)	Net		in (mm)	11-3/4 × 33-1/8 × 33-1/8 (298 × 840 × 840)	
	Gross			16-1/2 × 37-5/8 × 39-1/4 (420 × 956 × 996)	
Weight	Net		lb (kg)	70.5 (32)	
	Gross			90.5 (41)	
Connection pipe	Size	Liquid	in (mm)	Ø3/8 (Ø9.52)	
		Gas		Ø3/4 (Ø19.05)	
	Method				Flare
Drain hose	Material			PE/PVC	
	Tip diameter			Ø1-1/8 (Ø27.8) (I.D.), Ø1-1/4 (Ø32.3) (O.D.)	
Operation range	Cooling		°F (°C)	61 to 86 (16 to 30)	
		%RH		80 or less	
	Heating			61 to 86 (16 to 30)	
Remote controller type				Wireless (Wired [option])	
Cassette grille (Grid type: Option)	Model name			WH-AG4CT2	
	Dimensions (H × W × D)	Net	in (mm)	1-3/4 × 37-3/8 × 37-3/8 (45 × 950 × 950)	
		Gross		4-3/4 × 40 × 40-3/8 (120 × 1,015 × 1,025)	
	Weight	Net	lb (kg)	14.3 (6.5)	
		Gross		20.9 (9.5)	

**NOTES:**

- Specifications are based on the following conditions:
  - Cooling: Indoor temperature of 80°FDB (26.67°CDB) /67°FWB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB) / 75°FWB (23.9°CWB).
  - Heating: Indoor temperature of 70°FDB (21.11°CDB) /59°FWB (15.56°CWB), and outdoor temperature of 47°FDB (8.33°CDB) /43°FWB (6.11°CWB).
  - \*1: Heating (5°F): Indoor temperature of 70°FDB (21.11°CDB)/60°FWB (15.56°CWB), and outdoor temperature of 5°FDB (-15.0°CDB)/4°FWB (-15.56°CWB).
  - Test conditions are based on AHRI 210/240 2023.
  - Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)
- Protective function might work when using it outside the operation range.
- \*2: Maximum current is maximum value when operated within the operation range.
- \*3: Sound pressure level:
  - Measured values in manufacturer's anechoic chamber.
  - Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.



M condition				
Model name				WHU36CTA21S
Capacity	Cooling	Rated	kW	10.55
			Btu/h	36,000
		Min.—Max.	kW	3.69—10.79
			Btu/h	12,600—36,800
	Heating	Rated	kW	10.55
			Btu/h	36,000
		Min.—Max.	kW	4.40—12.49
			Btu/h	15,000—42,600
Input power	Cooling	kW	Rated	3.380
			Min.—Max.	1.102—3.981
	Heating		Rated	3.190
			Min.—Max.	1.200—3.760
Current	Cooling	A	Rated	14.6
	Heating		14.0	
EER	Cooling	W/W	3.12	
		Btu/hW	10.65	
COP	Heating	W/W	3.31	
		Btu/hW	11.29	
SEER	Cooling	Btu/hW	19.5	
HSPF	Heating	Btu/hW	10.5	

**NOTES:**

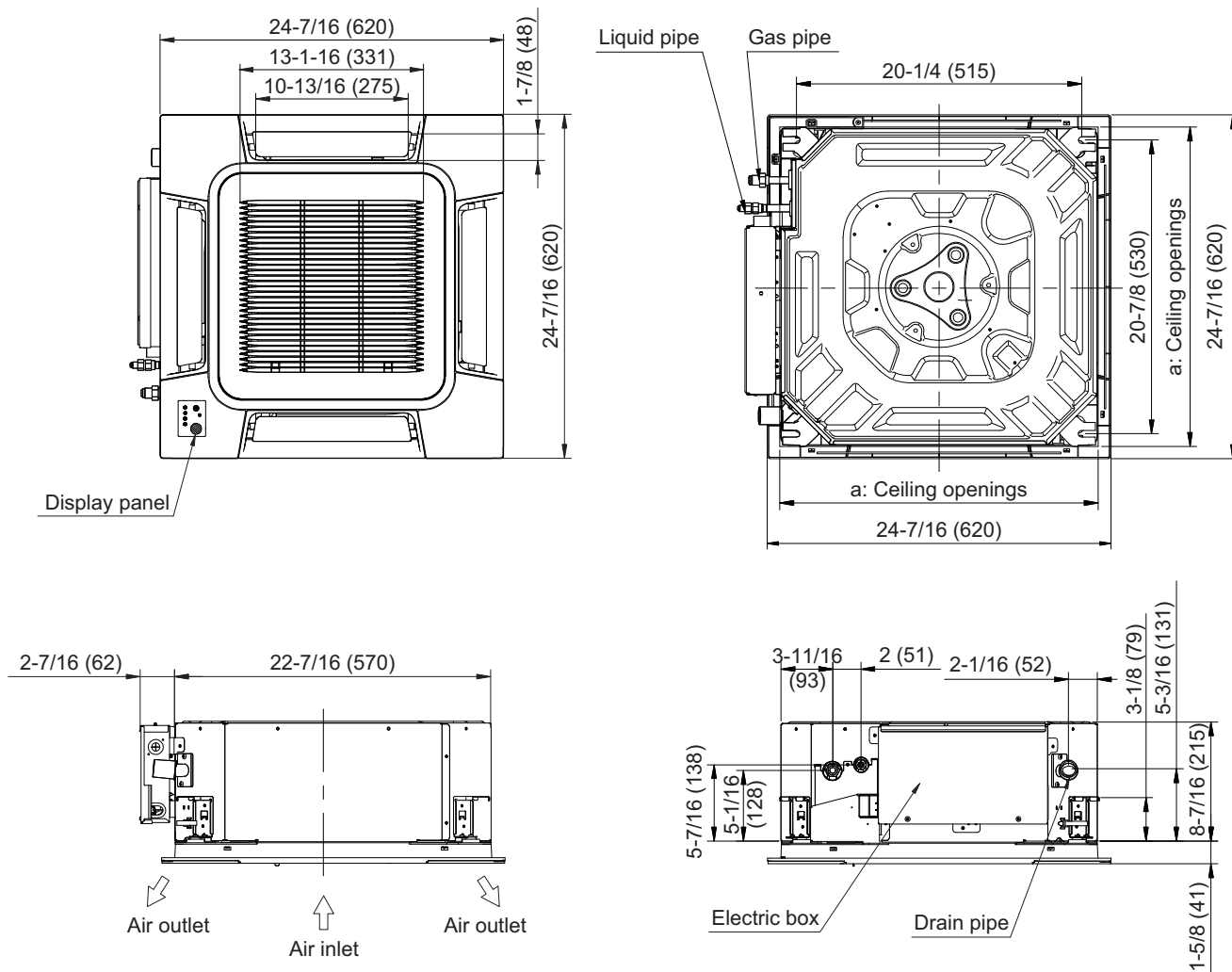
Specifications are based on the following conditions:

- Cooling: Indoor temperature of 80°FDB (26.67°CDB)/67°FWB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB)/75°FWB (23.9°CWB).
- Heating: Indoor temperature of 70°FDB (21.11°CDB)/59°FWB (15.56°CWB), and outdoor temperature of 47°FDB (8.33°CDB)/43°FWB (6.11°CWB).
- Test conditions are based on AHRI 210/240 2017.
- Pipe length: 25 ft (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)

## 2. Dimensions

### 2-1. Models: WHU09CTA21S and WHU12CTA21S

Unit: in (mm)



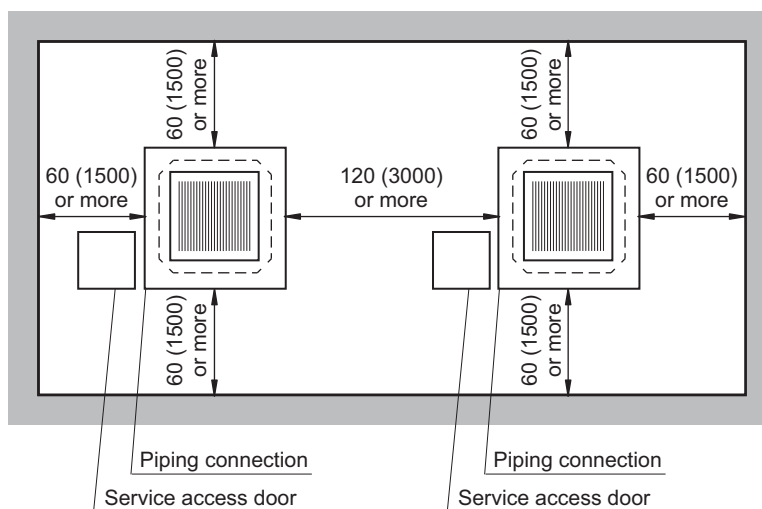
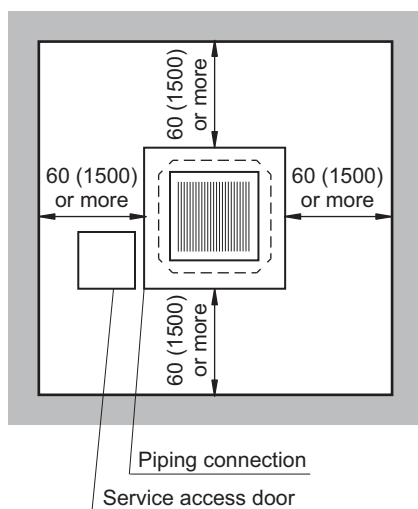
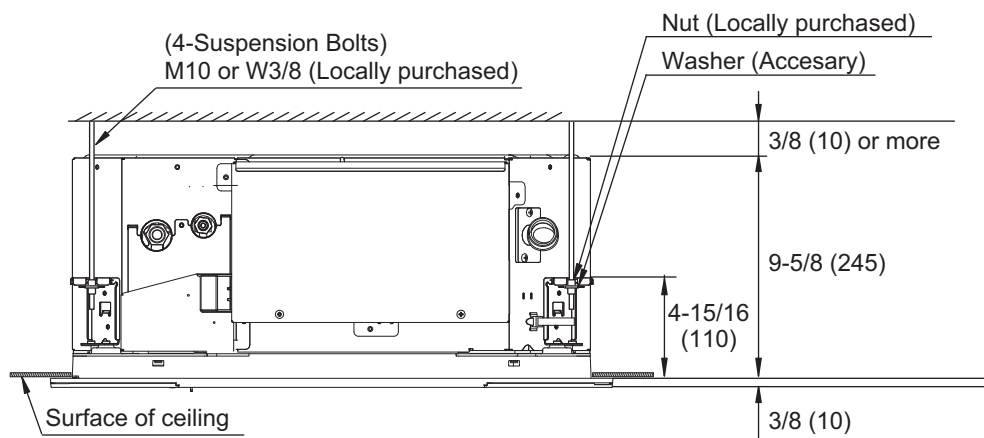
#### a: Ceiling openings

a: Ceiling openings		
Cassette grille (Option [Grid type])	in (mm)	22-5/8 to 23-1/4 (575 to 590)

## 2-2. Installation space requirement

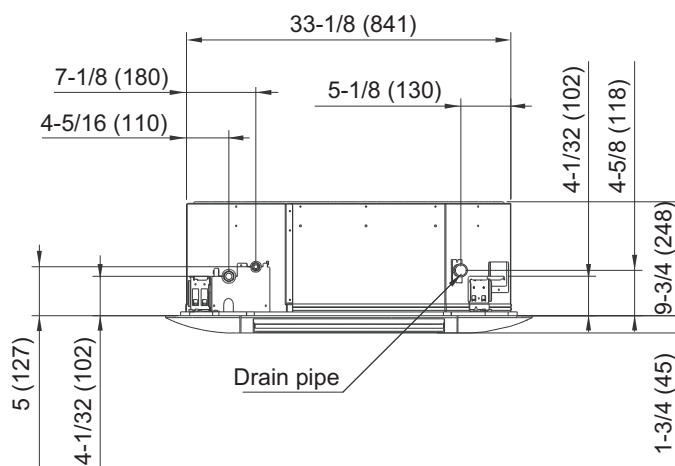
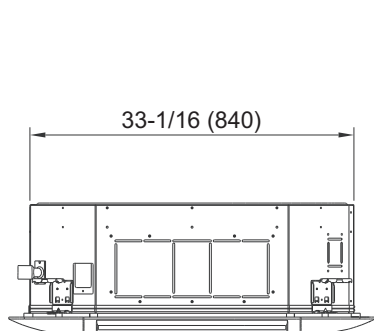
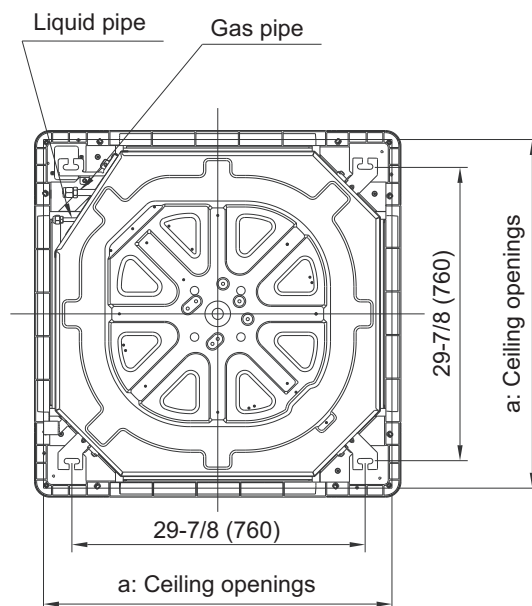
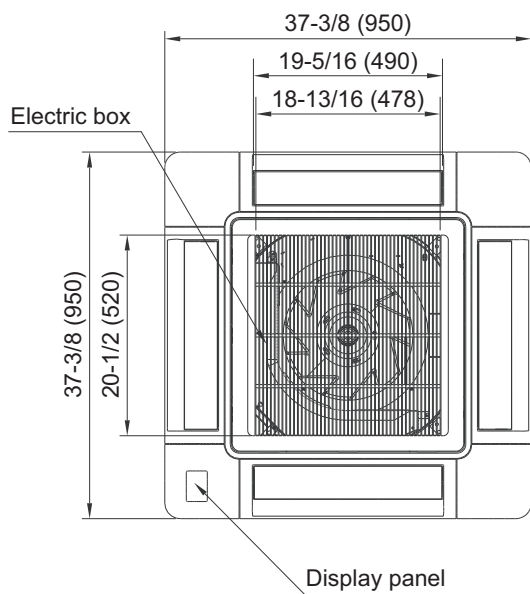
Provide sufficient installation space for product safety.

Unit: in (mm)



## 2-3. Models: WHU18CTA21S and WHU24CTA21S

Unit: in (mm)

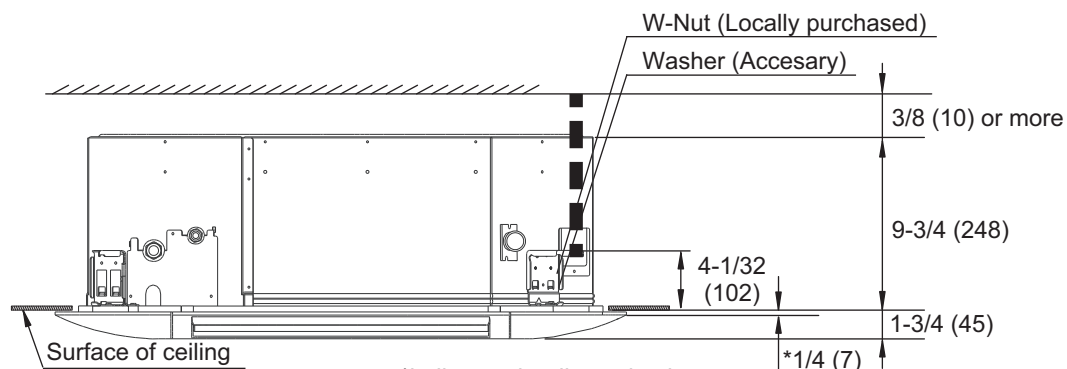


a: Ceiling openings		
Cassette grille (Option [Grid type])	in (mm)	$33\frac{7}{8}$ to $35\frac{13}{16}$ (860 to 910)

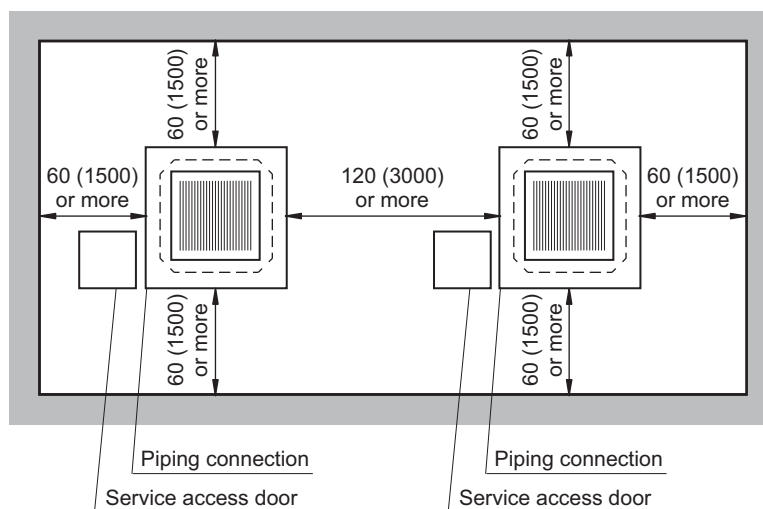
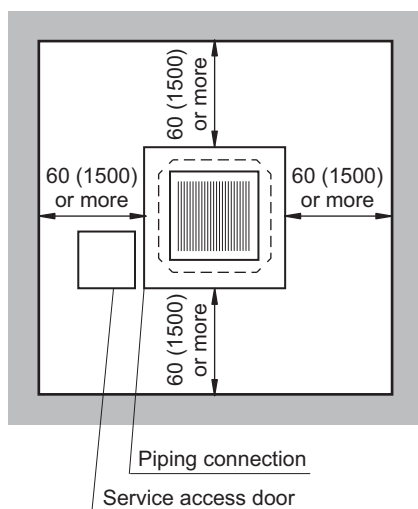
## 2-4. Installation space requirement

Provide sufficient installation space for product safety.

Unit: in (mm)

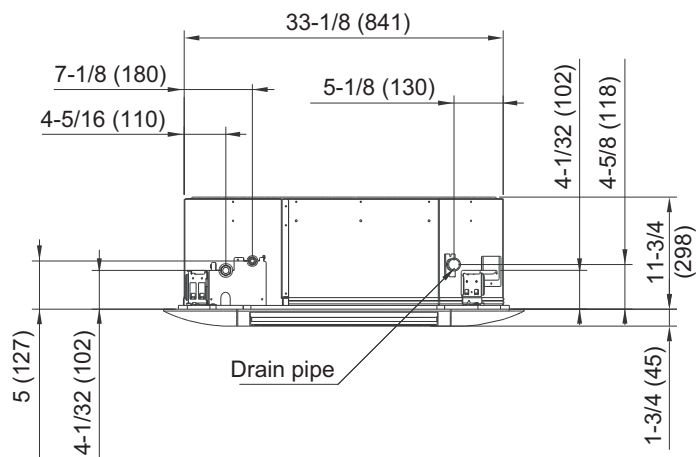
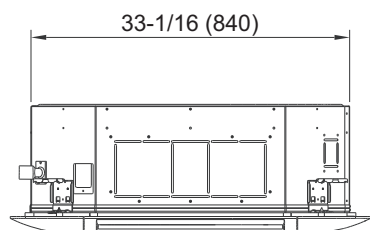
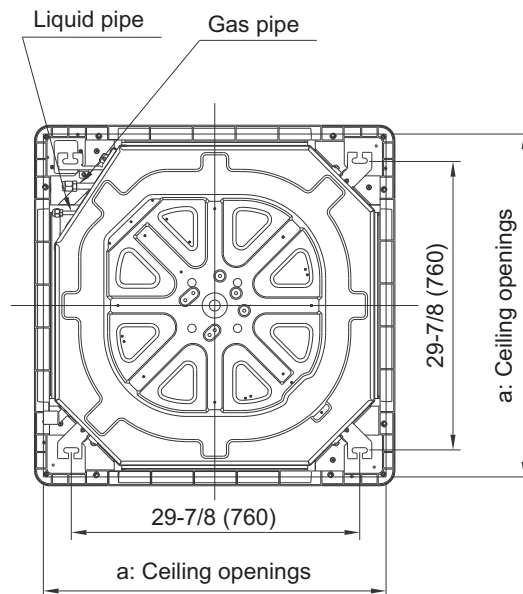
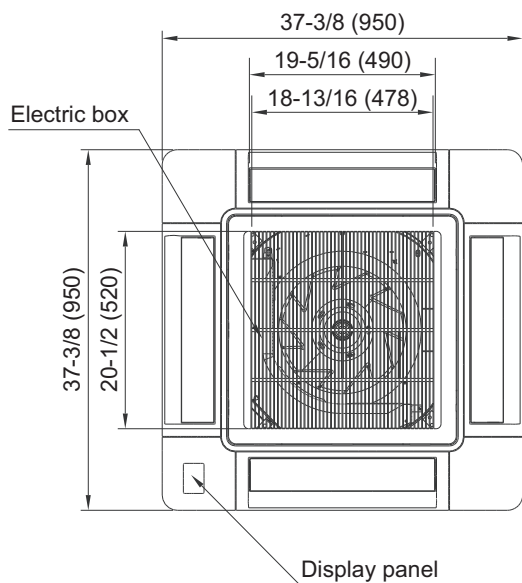


\*indicates the dimension between lower face of indoor unit and surface of ceiling.



## 2-5. Model: WHU36CTA21S

Unit: in (mm)

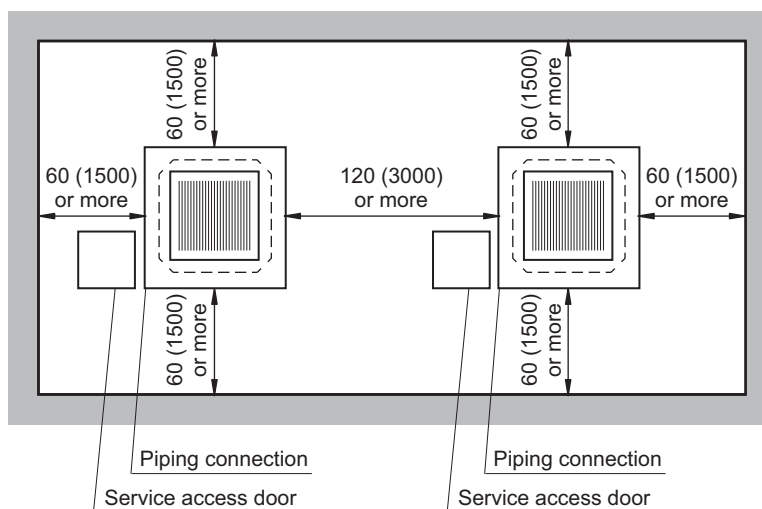
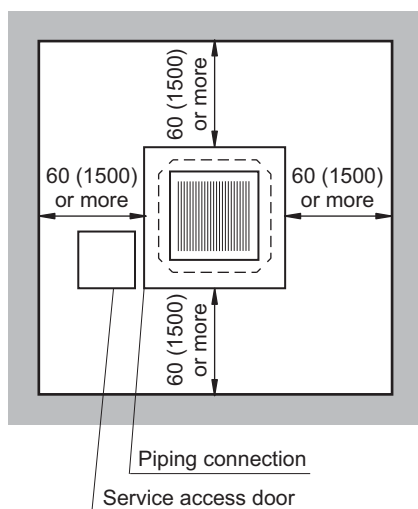
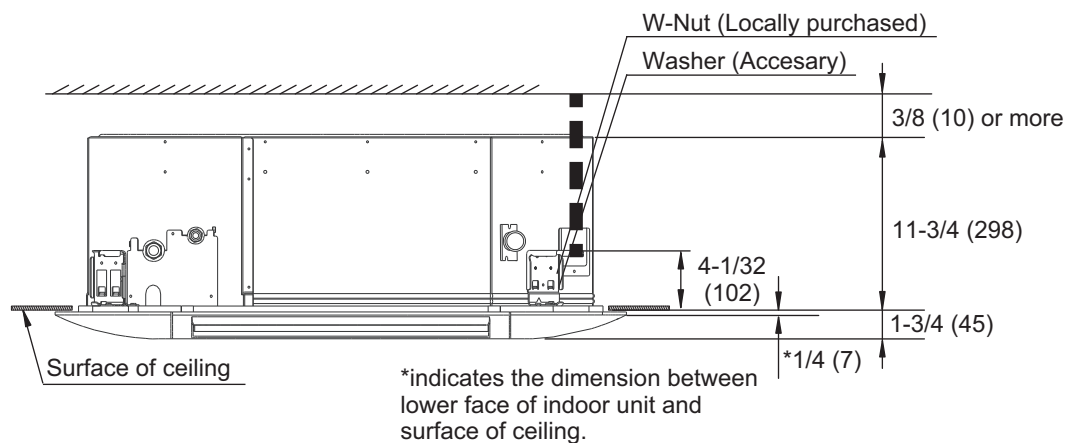


a: Ceiling openings		
Cassette grille (Option [Grid type])	in (mm)	33-7/8 to 35-13/16 (860 to 910)

## 2-6. Installation space requirement

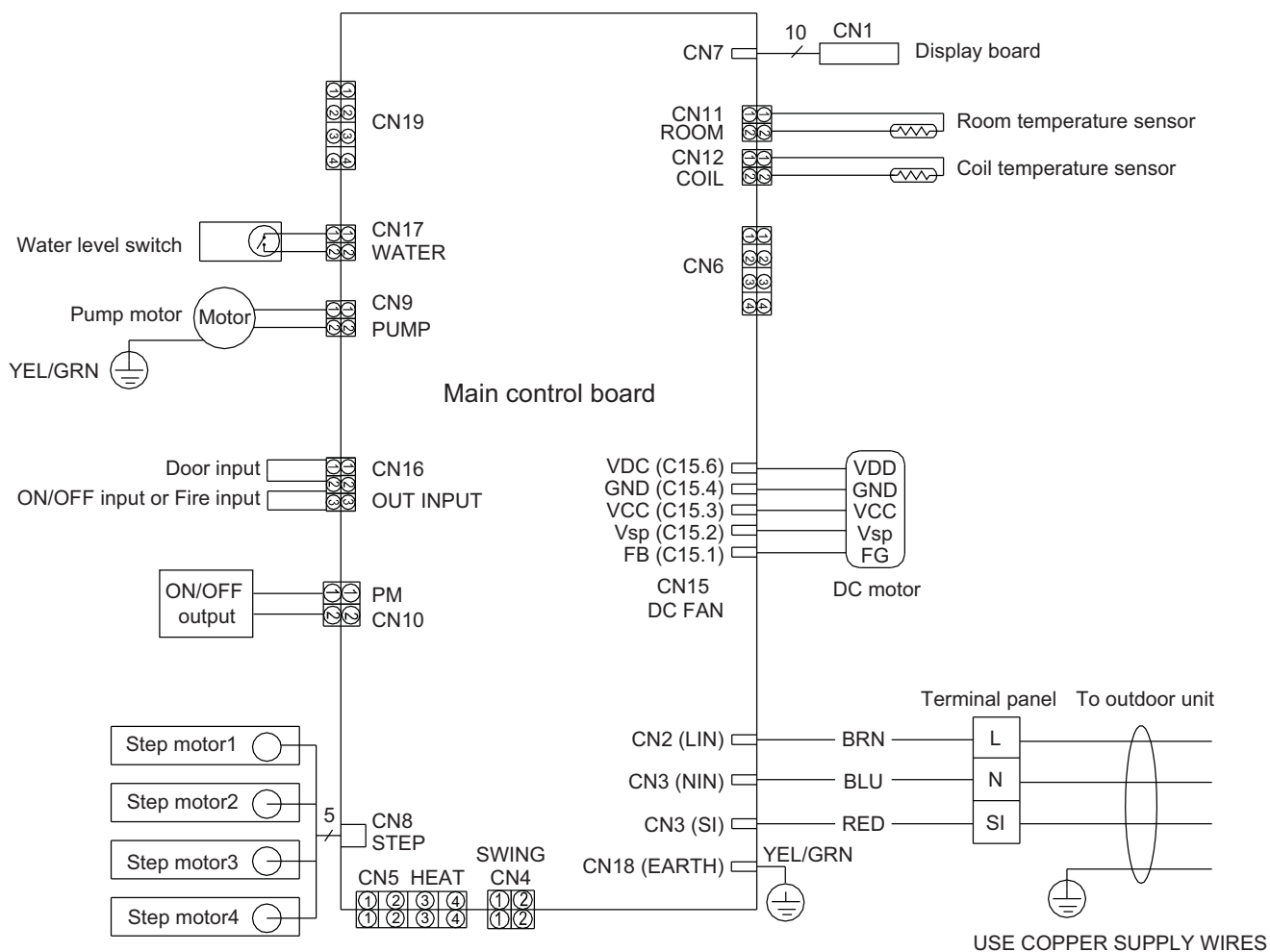
Provide sufficient installation space for product safety.

Unit: in (mm)



### 3. Wiring diagrams

#### 3-1. Models: WHU09CTA21S, WHU12CTA21S, WHU18CTA21S, WHU24CTA21S, and WHU36CTA21S



Temperature	0°C 32°F	20°C 68°F	30°C 86°F
Thermistor ( Pipe temp. )	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V
Thermistor ( Room temp. )	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V

#### Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	Vm	Motor power voltage input	Red
2	—	—	—
3	—	—	—
4	GND	GND	Black
5	Vcc	Control power voltage input	White
6	Vsp	Speed control voltage input	Yellow
7	FG	Revolution pulse output	Blue







# Model: WHU36CTA21S

AFR	CFM	941
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		Indoor temperature																	
		68			73			77			80			86			90		
		57			61			64			67			72			75		
°FDB	°FWB	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP	TC	SHC	IP
		kBTu			kW			kBTu			kW			kBTu			kW		
5		36.09	28.91	1.29	38.33	30.53	1.74	40.58	31.43	1.89	42.19	30.18	1.92	45.06	30.44	1.92	47.29	31.02	1.92
10		36.04	29.12	1.32	38.27	30.76	1.79	40.52	31.65	1.94	42.13	30.41	1.97	45.00	30.67	1.97	47.23	31.24	1.97
15		35.98	29.33	1.36	38.23	30.99	1.84	40.46	31.88	2.00	42.07	30.62	2.02	44.92	30.88	2.03	47.17	31.47	2.02
20		35.94	29.53	1.39	38.17	31.20	1.89	40.40	32.11	2.05	42.01	30.85	2.08	44.86	31.11	2.08	47.09	31.70	2.08
25		35.89	29.74	1.44	38.11	31.43	1.94	40.34	32.34	2.10	41.95	31.06	2.13	44.80	31.32	2.13	47.03	31.91	2.13
30		35.83	29.95	1.47	38.06	31.64	1.98	40.28	32.57	2.15	41.89	31.27	2.18	44.74	31.55	2.19	46.96	32.14	2.18
35		35.78	30.17	1.50	38.00	31.85	2.03	40.23	32.79	2.21	41.83	31.50	2.24	44.67	31.76	2.24	46.90	32.37	2.24
40		35.72	30.36	1.53	37.95	32.08	2.08	40.17	33.02	2.26	41.77	31.72	2.29	44.60	31.97	2.29	46.82	32.58	2.29
45		35.68	30.58	1.58	37.89	32.29	2.13	40.11	33.25	2.31	41.70	31.93	2.34	44.54	32.20	2.36	46.76	32.81	2.34
50		35.63	30.77	1.61	37.83	32.50	2.18	40.05	33.46	2.36	41.64	32.14	2.40	44.48	32.41	2.40	46.68	33.02	2.40
55		35.57	30.99	1.65	37.79	32.73	2.23	39.99	33.69	2.42	41.58	32.35	2.45	44.41	32.63	2.45	46.62	33.25	2.45
60		35.53	31.18	1.68	37.73	32.94	2.28	39.93	33.92	2.47	41.52	32.57	2.50	44.35	32.84	2.52	46.55	33.46	2.50
65		35.47	31.38	1.73	37.67	33.16	2.32	39.88	34.13	2.52	41.46	32.78	2.57	44.29	33.05	2.57	46.49	33.69	2.57
70		35.42	31.59	1.76	37.62	33.37	2.37	39.82	34.36	2.58	41.40	32.99	2.61	44.23	33.26	2.61	46.41	33.90	2.61
75		34.57	31.06	1.87	36.76	32.87	2.45	38.96	33.87	2.65	40.54	32.55	2.69	43.34	32.87	2.71	45.53	33.52	2.73
80		33.72	30.53	1.98	35.91	32.34	2.53	38.09	33.37	2.71	39.67	32.09	2.76	42.46	32.46	2.81	44.67	33.13	2.84
85		32.87	29.98	2.26	35.06	31.81	2.74	37.24	32.85	2.92	38.82	31.62	2.97	41.60	32.02	3.02	43.78	32.70	3.07
90		32.02	29.41	2.52	34.20	31.24	2.97	36.38	32.32	3.11	37.95	31.14	3.16	40.73	31.56	3.23	42.92	32.28	3.28
95		31.11	29.10	2.79	33.28	30.97	3.16	35.45	32.08	3.28	36.44	30.46	3.23	39.78	31.40	3.39	41.95	32.14	3.45
100		30.35	28.33	2.94	32.52	30.18	3.23	34.69	31.31	3.31	35.97	29.98	3.28	39.02	30.71	3.39	41.19	31.47	3.45
105		29.59	27.54	3.07	31.76	29.41	3.29	33.93	30.55	3.32	35.50	29.51	3.34	38.26	30.05	3.39	40.43	30.82	3.45
110		28.83	26.60	2.98	31.00	28.45	3.11	33.17	29.60	3.10	34.74	28.63	3.08	37.50	29.19	3.11	39.67	29.97	3.19
115		28.07	25.81	2.68	30.24	27.65	2.71	32.41	28.82	2.65	33.98	27.90	2.60	36.74	28.50	2.61	38.91	29.29	2.68
118		26.52	24.59	2.37	28.60	26.39	2.34	30.68	27.52	2.23	32.19	26.66	2.18	34.84	27.27	2.18	36.92	28.04	2.23
122		25.99	24.18	2.28	28.06	25.96	2.21	30.11	27.08	2.10	31.58	26.25	2.03	34.20	26.84	2.03	36.25	27.62	2.08

## 4-2. Heating capacity

NOTE: Values mentioned in the table are calculated based on the maximum capacity.

### ■ Model: WHU09CTA21S

AFR	CFM	309
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		Indoor temperature													
		°FDB		61		64		68		70		72		75	
		°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	0	-0.4	4.46	0.48	4.20	0.50	4.19	0.51	4.10	0.52	4.02	0.52	3.85	0.54	
	5	4.5	5.21	0.49	4.97	0.51	4.90	0.52	4.79	0.53	4.71	0.53	4.52	0.55	
	10	9	5.72	0.50	5.49	0.52	5.37	0.53	5.26	0.54	5.17	0.54	4.97	0.56	
	17	15	6.28	0.51	6.06	0.52	5.89	0.54	5.77	0.55	5.68	0.56	5.46	0.57	
	20	19	6.62	0.52	6.41	0.53	6.20	0.55	6.08	0.56	5.99	0.57	5.76	0.58	
	25	23	7.18	0.53	6.97	0.54	6.72	0.56	6.60	0.57	6.50	0.58	6.25	0.60	
	30	28	7.75	0.54	7.50	0.56	7.25	0.58	7.11	0.59	7.01	0.60	6.75	0.61	
	35	32	8.31	0.56	8.05	0.58	7.77	0.59	7.63	0.60	7.52	0.61	7.25	0.63	
	40	36	8.73	0.57	8.49	0.59	8.22	0.61	8.08	0.62	7.96	0.63	7.68	0.65	
	45	41	9.27	0.59	9.04	0.61	8.78	0.63	8.63	0.64	8.51	0.65	8.20	0.67	
	47	43	9.48	0.60	9.27	0.62	9.00	0.64	8.85	0.65	8.73	0.66	8.42	0.68	
	50	46	9.50	0.60	9.31	0.61	9.08	0.63	8.95	0.64	8.85	0.65	8.55	0.67	
	55	51	9.55	0.59	9.39	0.60	9.22	0.62	9.11	0.62	9.03	0.63	8.76	0.64	
	60	56	9.60	0.58	9.47	0.59	9.35	0.60	9.28	0.61	9.21	0.61	8.98	0.62	
63	59	9.62	0.58	9.52	0.59	9.44	0.60	9.37	0.60	9.32	0.60	9.10	0.61		
68	64	9.65	0.58	9.57	0.58	9.52	0.59	9.47	0.59	9.43	0.59	9.24	0.60		

### ■ Model: WHU12CTA21S

AFR	CFM	324
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		Indoor temperature													
		°FDB		61		64		68		70		72		75	
		°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	0	-0.4	5.94	0.70	5.60	0.73	5.59	0.74	5.46	0.75	5.36	0.75	5.14	0.78	
	5	4.5	6.95	0.71	6.63	0.74	6.53	0.75	6.39	0.76	6.28	0.77	6.03	0.80	
	10	9	7.63	0.72	7.32	0.75	7.16	0.77	7.01	0.77	6.89	0.78	6.62	0.81	
	17	15	8.37	0.73	8.08	0.76	7.85	0.78	7.69	0.80	7.57	0.81	7.28	0.83	
	20	19	8.82	0.75	8.54	0.77	8.27	0.80	8.11	0.81	7.98	0.82	7.68	0.84	
	25	23	9.57	0.76	9.29	0.78	8.97	0.81	8.80	0.83	8.66	0.84	8.34	0.87	
	30	28	10.33	0.78	10.01	0.81	9.67	0.83	9.49	0.85	9.35	0.87	9.00	0.89	
	35	32	11.08	0.80	10.73	0.83	10.37	0.85	10.18	0.87	10.03	0.89	9.67	0.91	
	40	36	11.65	0.82	11.32	0.85	10.96	0.88	10.77	0.90	10.62	0.91	10.23	0.94	
	45	41	12.35	0.85	12.06	0.88	11.70	0.91	11.51	0.93	11.35	0.94	10.94	0.97	
	47	43	12.63	0.87	12.35	0.89	12.00	0.92	11.80	0.94	11.65	0.95	11.22	0.98	
	50	46	12.67	0.86	12.42	0.89	12.11	0.91	11.93	0.93	11.79	0.94	11.40	0.96	
	55	51	12.73	0.85	12.52	0.87	12.29	0.89	12.15	0.90	12.04	0.91	11.68	0.93	
	60	56	12.80	0.84	12.63	0.86	12.47	0.87	12.37	0.88	12.28	0.89	11.97	0.90	
63	59	12.83	0.84	12.69	0.85	12.58	0.87	12.50	0.87	12.43	0.87	12.14	0.88		
68	64	12.87	0.83	12.76	0.84	12.70	0.85	12.63	0.85	12.58	0.86	12.31	0.87		

### ■ Model: WHU18CTA21S

AFR	CFM	588
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		Indoor temperature													
		°FDB		61		64		68		70		72		75	
		°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	0	-0.4	8.91	1.02	8.39	1.07	8.39	1.08	8.20	1.09	8.04	1.10	7.70	1.14	
	5	4.5	10.43	1.04	9.94	1.08	9.79	1.10	9.59	1.11	9.42	1.13	9.04	1.16	
	10	9	11.44	1.05	10.98	1.09	10.73	1.12	10.52	1.13	10.34	1.15	9.93	1.18	
	17	15	12.56	1.07	12.12	1.11	11.77	1.15	11.54	1.16	11.36	1.18	10.92	1.21	
	20	19	13.23	1.09	12.81	1.12	12.40	1.16	12.16	1.18	11.97	1.20	11.51	1.23	
	25	23	14.36	1.11	13.93	1.15	13.45	1.19	13.19	1.21	12.99	1.23	12.50	1.27	
	30	28	15.50	1.15	15.01	1.18	14.50	1.22	14.23	1.24	14.02	1.27	13.50	1.30	
	35	32	16.62	1.18	16.09	1.22	15.55	1.25	15.27	1.28	15.04	1.30	14.50	1.33	
	40	36	17.47	1.21	16.98	1.25	16.44	1.28	16.15	1.31	15.93	1.33	15.35	1.37	
	45	41	18.53	1.25	18.09	1.29	17.55	1.33	17.26	1.36	17.03	1.37	16.41	1.42	
	47	43	18.95	1.27	18.53	1.31	18.00	1.35	17.70	1.37	17.47	1.39	16.83	1.43	
	50	46	19.01	1.26	18.62	1.30	18.16	1.33	17.90	1.36	17.69	1.37	17.10	1.41	
	55	51	19.10	1.25	18.79	1.28	18.44	1.31	18.22	1.32	18.06	1.33	17.52	1.36	
	60	56	19.19	1.23	18.94	1.25	18.71	1.28	18.55	1.29	18.42	1.30	17.95	1.31	
63	59	19.25	1.22	19.04	1.24	18.87	1.27	18.75	1.27	18.64	1.27	18.21	1.29		
68	64	19.30	1.22	19.13	1.23	19.04	1.25	18.94	1.25	18.87	1.25	18.47	1.27		

# Model: WHU24CTA21S

AFR	CFM	647
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		Indoor temperature													
		°FDB		61		64		68		70		72		75	
		°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	0	-0.4	11.88	1.48	11.19	1.54	11.18	1.56	10.93	1.58	10.72	1.58	10.27	1.65	
	5	4.5	13.90	1.51	13.25	1.56	13.05	1.59	12.78	1.61	12.56	1.63	12.06	1.68	
	10	9	15.26	1.52	14.64	1.58	14.31	1.62	14.02	1.64	13.79	1.65	13.25	1.71	
	17	15	16.74	1.55	16.16	1.60	15.69	1.65	15.39	1.68	15.14	1.71	14.56	1.75	
	20	19	17.64	1.58	17.08	1.62	16.53	1.68	16.22	1.71	15.97	1.73	15.35	1.78	
	25	23	19.15	1.61	18.58	1.65	17.93	1.71	17.59	1.75	17.32	1.78	16.67	1.83	
	30	28	20.66	1.65	20.01	1.71	19.33	1.76	18.97	1.79	18.69	1.83	18.00	1.87	
	35	32	22.16	1.70	21.46	1.76	20.73	1.80	20.35	1.85	20.06	1.87	19.33	1.92	
	40	36	23.29	1.74	22.64	1.80	21.92	1.85	21.53	1.90	21.24	1.92	20.47	1.98	
	45	41	24.71	1.80	24.11	1.86	23.41	1.92	23.01	1.96	22.71	1.98	21.88	2.05	
	47	43	25.27	1.83	24.71	1.89	24.00	1.95	23.61	1.98	23.29	2.01	22.44	2.07	
	50	46	25.35	1.82	24.83	1.87	24.22	1.92	23.87	1.96	23.59	1.98	22.79	2.04	
	55	51	25.47	1.80	25.05	1.85	24.59	1.89	24.30	1.91	24.08	1.92	23.36	1.97	
	60	56	25.59	1.78	25.26	1.81	24.94	1.85	24.73	1.86	24.56	1.87	23.94	1.90	
63	59	25.66	1.77	25.38	1.79	25.16	1.83	25.00	1.84	24.86	1.84	24.28	1.86		
68	64	25.74	1.76	25.51	1.78	25.39	1.80	25.26	1.80	25.15	1.81	24.63	1.83		

# Model: WHU36CTA21S

AFR	CFM	941
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		Indoor temperature													
		°FDB		61		64		68		70		72		75	
		°FDB	°FWB	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP	TC	IP
Outdoor temperature	0	-0.4	20.74	2.86	19.53	2.98	19.51	3.01	19.07	3.05	18.71	3.06	17.93	3.18	
	5	4.5	24.26	2.91	23.13	3.01	22.78	3.08	22.31	3.11	21.91	3.15	21.04	3.25	
	10	9	26.62	2.95	25.54	3.05	24.98	3.13	24.47	3.16	24.06	3.20	23.12	3.30	
	17	15	29.22	3.00	28.20	3.10	27.39	3.20	26.85	3.25	26.43	3.30	25.40	3.38	
	20	19	30.79	3.05	29.81	3.13	28.85	3.25	28.30	3.30	27.86	3.35	26.79	3.43	
	25	23	33.41	3.11	32.42	3.20	31.29	3.32	30.70	3.38	30.23	3.43	29.10	3.53	
	30	28	36.05	3.20	34.92	3.30	33.73	3.40	33.11	3.47	32.62	3.53	31.42	3.62	
	35	32	38.68	3.28	37.44	3.40	36.18	3.48	35.52	3.57	35.00	3.62	33.73	3.72	
	40	36	40.65	3.37	39.50	3.48	38.25	3.58	37.58	3.67	37.06	3.72	35.72	3.82	
	45	41	43.12	3.48	42.08	3.60	40.84	3.72	40.16	3.79	39.62	3.84	38.17	3.96	
	47	43	44.09	3.53	43.12	3.65	41.88	3.77	41.20	3.84	40.65	3.89	39.17	4.01	
	50	46	44.23	3.52	43.33	3.62	42.26	3.72	41.65	3.79	41.17	3.82	39.78	3.94	
	55	51	44.45	3.48	43.71	3.57	42.90	3.65	42.40	3.69	42.02	3.72	40.77	3.80	
	60	56	44.66	3.43	44.08	3.50	43.53	3.57	43.16	3.60	42.86	3.62	41.78	3.67	
63	59	44.78	3.42	44.29	3.47	43.91	3.53	43.62	3.55	43.38	3.55	42.37	3.60		
68	64	44.92	3.40	44.52	3.43	44.31	3.48	44.08	3.48	43.90	3.50	42.98	3.53		

# 5. Remote controller

## 5-1. Wireless remote controller

### 1 MODE

Press this button to select the operation mode.

### 3 SLEEP

Used to set or cancel Sleep Mode operation.

### 6 SUPER

Used to start or stop the fast cooling/heating. (Fast cooling operates at high fan speed with 16°C (61°F) set temp automatically ; Fast heating operates at auto fan speed with 30°C (86°F) set temp automatically)

### 8 ON TIMER

Used to set or cancel the timer operation.

### 9 QUIET

Used to set or cancel Quiet Mode operation.

### 11 OFF TIMER

Used to set or cancel the timer operation.

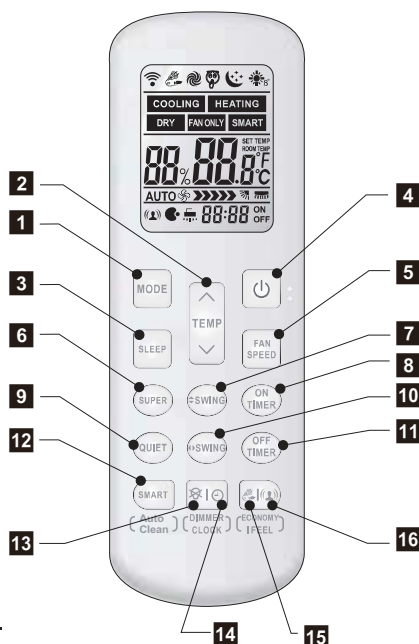
### 12 SMART (invalid for multi system)

Used to enter logic operation directly when the units is on.

Auto Clean (invalid for multi system) will be activated by pressing SMART button more than 5 seconds under Cooling or Dry mode and be canceled by pressing SMART, POWER or MODE button. (Icon " " will appear on LCD and disappear after around 30 minutes)

### 13 DIMMER

When you press this button, all the display of indoor unit will be closed. Press any button to resume display.



### 14 CLOCK

Used to set the current time.

### 15 ECONOMY

Used to set or cancel Economy Mode operation.

### 2 + 7 8°C HEAT (optional)

Used to start or stop 8°C HEAT mode.

### 2 TEMP

Used to adjust the room temperature and the timer, also real time.

### 4 POWER

The appliance will be started when it is energized or will be stopped when it is in operation, if you press this button.

### 5 FAN SPEED

Used to select fan speed in sequence auto, higher, high, medium, low and lower.

### 7 SWING

Used to stop or start vertical adjustment louver swinging and set the desired up/downairflow direction.

### 10 SWING

Used to stop or start Horizontal adjustment louver swinging and set the desired left/right airflow direction.

### 16 IFEEL

Press to set IFEEL Mode operation. In IFEEL mode, the Air Conditioner operates basis temperature sensor fitted in remote instead of machine, Advice to use IFEEL mode and the remote put where the indoor unit receive signal easily. Press this button above 5 seconds, start or stop IFEEL mode.

### Indication symbols on LCD:

COOLING	Cooling indicator	DRY	Dry indicator	FAN ONLY	Fan only indicator	HEATING	Heating indicator	SMART	Smart indicator
Auto	Auto fan speed		Higher fan speed		High fan speed		Medium fan speed		Low fan speed
	Lower fan speed		Quiet indicator		Economy indicator		Super indicator		Sleep indicator
	IFEEL		Display temperature		Display set timer		Display current time		8°C Heat indicator

## 6. Accessories

Part name	Q'ty	Part name	Q'ty
Use and installation instructions	1	Built-in type drain pump	1
Dry battery	2	Wireless remote controller	1
Indoor installation accessory kit (For 18, 24, 36 models)	1	Wireless remote controller operation manual	1
Union nut (Gas)	1	Wireless remote controller holder	1
Union nut (Liquid)	1	Warranty card	1





# **Part 2. OUTDOOR UNIT**

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**SINGLE TYPE:**

**WHU09SZA21S**

**WHU12SZA21S**

**WHU18SZA21S**

**WHU24SZA21S**

**WHU36SZA21S**

# 1. Specifications

OUTDOOR UNIT  
WHU09-12SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S

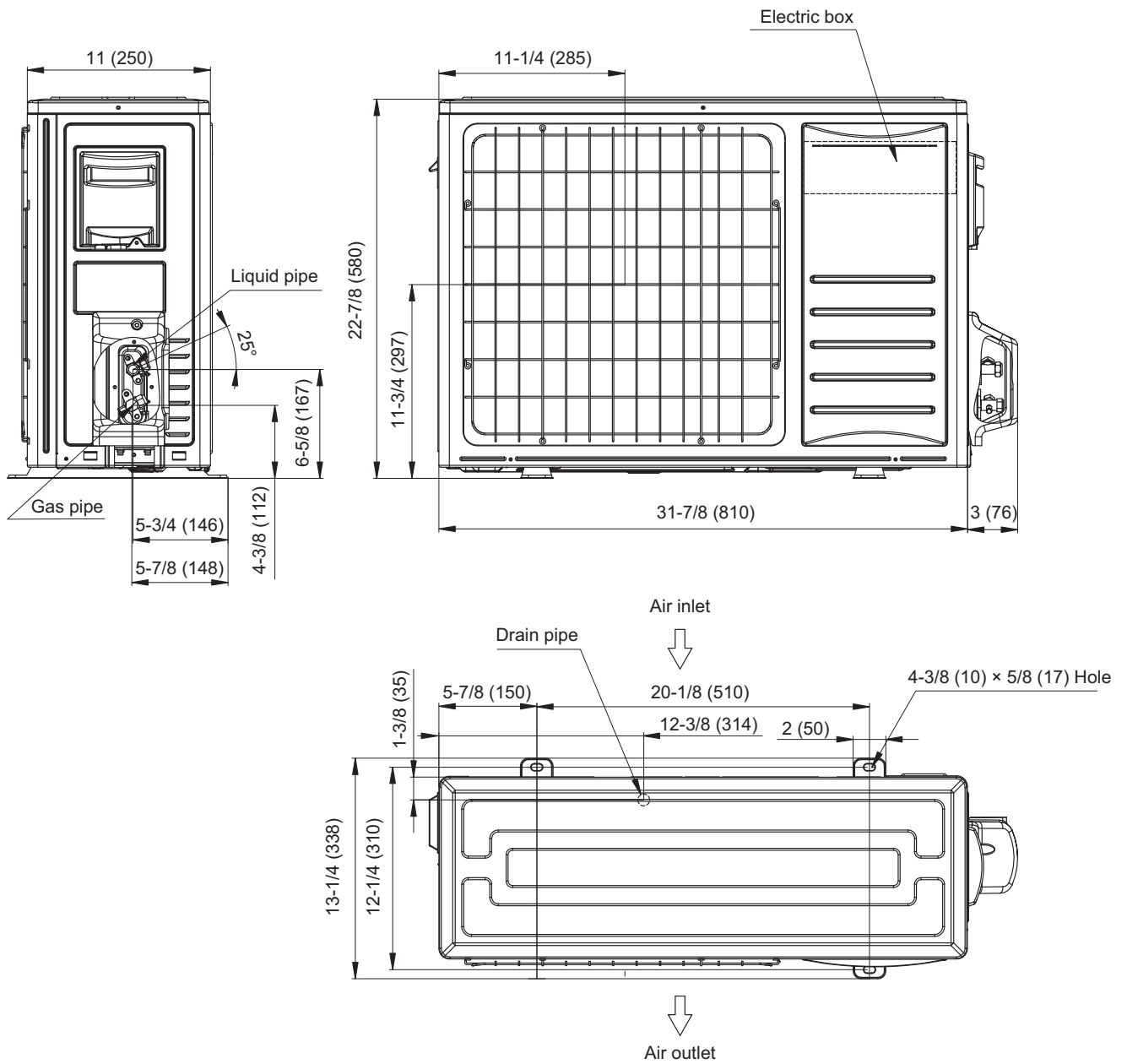
Type			Inverter heat pump			
Model name			WHU09SZA21S	WHU12SZA21S	WHU18SZA21S	WHU24SZA21S
Power supply			208/230 V ~ 60 Hz			
Available voltage range			198—253 V			176—253 V
Fan	Airflow rate	CFM (m <sup>3</sup> /h)	1,355 (2,300)		1,853 (3,150)	2,235 (3,800)
	Type × Q'ty		Propeller fan × 1			
	Motor output	W	30		60	121
Sound pressure level *1			52		55	
Heat exchanger type	Dimensions (H × W × D)	in (mm)	21-1/2 × 33-1/16 × 1-7/16 (546 × 840 × 36.4)	21-1/2 × 33-1/16 × 1-11/16 (546 × 840 × 43.3)	24-13/16 × 35-7/16 × 1-11/16 (630 × 900 × 43.3)	31-7/16 × 38-3/16 × 1-11/16 (798 × 970 × 43.3)
	Fin pitch	FPI	17		18	20
	Rows × Stages		2 × 26		2 × 30	2 × 38
	Pipe type		Copper			
	Fin type	Type (Material)	Aluminum			
		Surface treatment	Blue fin			
Compressor	Type		Rotary			
			R410A			
Refrigerant	Type		R410A			
	Charge	lb oz	2 lb 2 oz	2 lb 14 oz	3 lb 8 oz	5 lb 12 oz
		g	950	1,300	1,600	2,600
Refrigerant oil	Type		VG74			VG74 (POE)
Enclosure	Material		Steel sheet			
	Color		White			
Dimensions (H × W × D)	Net	in (mm)	22-7/8 × 31-7/8 × 11 (580 × 810 × 280)		26-3/8 × 33-7/8 × 12-1/4 (670 × 860 × 310)	33-1/8 × 37-3/8 × 13-3/8 (840 × 950 × 340)
	Gross		25-1/4 × 37 × 16-1/2 (640 × 940 × 420)		28-3/4 × 39 × 17-3/4 (730 × 990 × 450)	36-1/4 × 43-3/4 × 18-1/8 (920 × 1,110 × 460)
Weight	Net	lb (kg)	75 (34)	79 (36)	106 (48)	155 (71)
	Gross		84 (38)	88 (40)	115 (52)	166 (76)
Connection pipe	Size	Liquid	Ø1/4 (Ø6.35)		Ø1/4 (Ø6.35)	Ø3/8 (Ø9.52)
		Gas	Ø3/8 (Ø9.52)		Ø1/2 (Ø12.7)	Ø5/8 (Ø15.88)
	Method		Flare			
	Pre-charge length		24.6 (7.5)			
Max. length			82 (25)		98 (30)	164 (50)
	Max. height difference	ft (m)	Indoor unit higher than outdoor unit: 33 (10) Outdoor unit higher than indoor unit: 33 (10)	Indoor unit higher than outdoor unit: 49 (15) Outdoor unit higher than indoor unit: 49 (15)		Indoor unit higher than outdoor unit: 98 (30) Outdoor unit higher than indoor unit: 98 (30)
Operation range	Cooling	°F (°C)	5 to 118 (-15 to 48)			
	Heating		-4 to 75 (-20 to 24)			
<b>NOTES:</b>						
<ul style="list-style-type: none"> <li>Specifications are based on the following conditions: <ul style="list-style-type: none"> <li>Cooling: Indoor temperature of 80 °FDB (26.67 °CDB)/67 °FWB (19.44 °CWB), and outdoor temperature of 95 °FDB (35 °CDB)/75 °FWB (23.9 °CWB).</li> <li>Heating: Indoor temperature of 70 °FDB (21.11 °CDB)/59 °FWB (15 °CWB), and outdoor temperature of 47 °FDB (8.33 °CDB)/43 °FWB (6.11 °CWB).</li> <li>Pipe length: 24 ft 6 in (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)</li> </ul> </li> <li>Protective function might work when using it outside the operation range.</li> <li>*1: Sound pressure level <ul style="list-style-type: none"> <li>Measured values in manufacturer's anechoic chamber.</li> <li>Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li> </ul> </li> </ul>						

Type			Inverter heat pump	
Model name			WHU36SZA21S	
Power supply			208/230 V ~ 60 Hz	
Available voltage range			176—253 V	
Fan	Airflow rate	CFM (m <sup>3</sup> /h)	3,416 (5,800)	
	Type × Q'ty		Propeller fan × 1	
	Motor output	W	138	
Sound pressure level *1			dB (A)	61
Heat exchanger type	Dimensions (H × W × D)	in (mm)	37-15/16 × 39-11/16 × 1-11/16 (964 × 1,008 × 43.3)	
	Fin pitch	FPI	16	
	Rows × Stages		2 × 38	
	Pipe type		Copper	
	Fin type	Type (Material) Surface treatment	Aluminum Blue fin	
Compressor	Type		Rotary	
Refrigerant	Type		R410A	
	Charge	lb oz	6 lb 15 oz	
		g	3,150	
Refrigerant oil	Type		VG74 (POE)	
Enclosure	Material		Steel sheet	
	Color		White	
Dimensions (H × W × D)	Net	in (mm)	41-3/8 × 37-3/8 × 13-3/8 (1,050 × 950 × 340)	
	Gross		47-1/4 × 43-3/4 × 18-1/8 (1,200 × 1,110 × 460)	
Weight	Net	lb (kg)	192 (87)	
	Gross		215 (97)	
Connection pipe	Size	Liquid	in (mm)	Ø3/8 (Ø9.52)
		Gas		Ø3/4 (Ø19.05)
	Method			Flare
	Pre-charge length	ft (m)		24.6 (7.5)
	Max. length			164 (50)
	Max. height difference			Indoor unit higher than outdoor unit: 98 (30) Outdoor unit higher than indoor unit: 98 (30)
Operation range	Cooling	°F (°C)		5 to 118 (-15 to 48)
	Heating			-4 to 75 (-20 to 24)
<b>NOTES:</b>				
<ul style="list-style-type: none"> <li>• Specifications are based on the following conditions: <ul style="list-style-type: none"> <li>– Cooling: Indoor temperature of 80 °FDB (26.67 °CDB)/67 °FWB (19.44 °CWB), and outdoor temperature of 95 °FDB (35 °CDB)/75 °FWB (23.9 °CWB).</li> <li>– Heating: Indoor temperature of 70 °FDB (21.11 °CDB)/59 °FWB (15 °CWB), and outdoor temperature of 47 °FDB (8.33 °CDB)/43 °FWB (6.11 °CWB).</li> <li>– Pipe length: 24 ft 6 in (7.5 m), Height difference: 0 ft (0 m). (Between outdoor unit and indoor unit.)</li> </ul> </li> <li>• Protective function might work when using it outside the operation range.</li> <li>• *1: Sound pressure level <ul style="list-style-type: none"> <li>– Measured values in manufacturer's anechoic chamber.</li> <li>– Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.</li> </ul> </li> </ul>				

## 2. Dimensions

### 2-1. Models: WHU09SZA21S and WHU12SZA21S

Unit: in (mm)

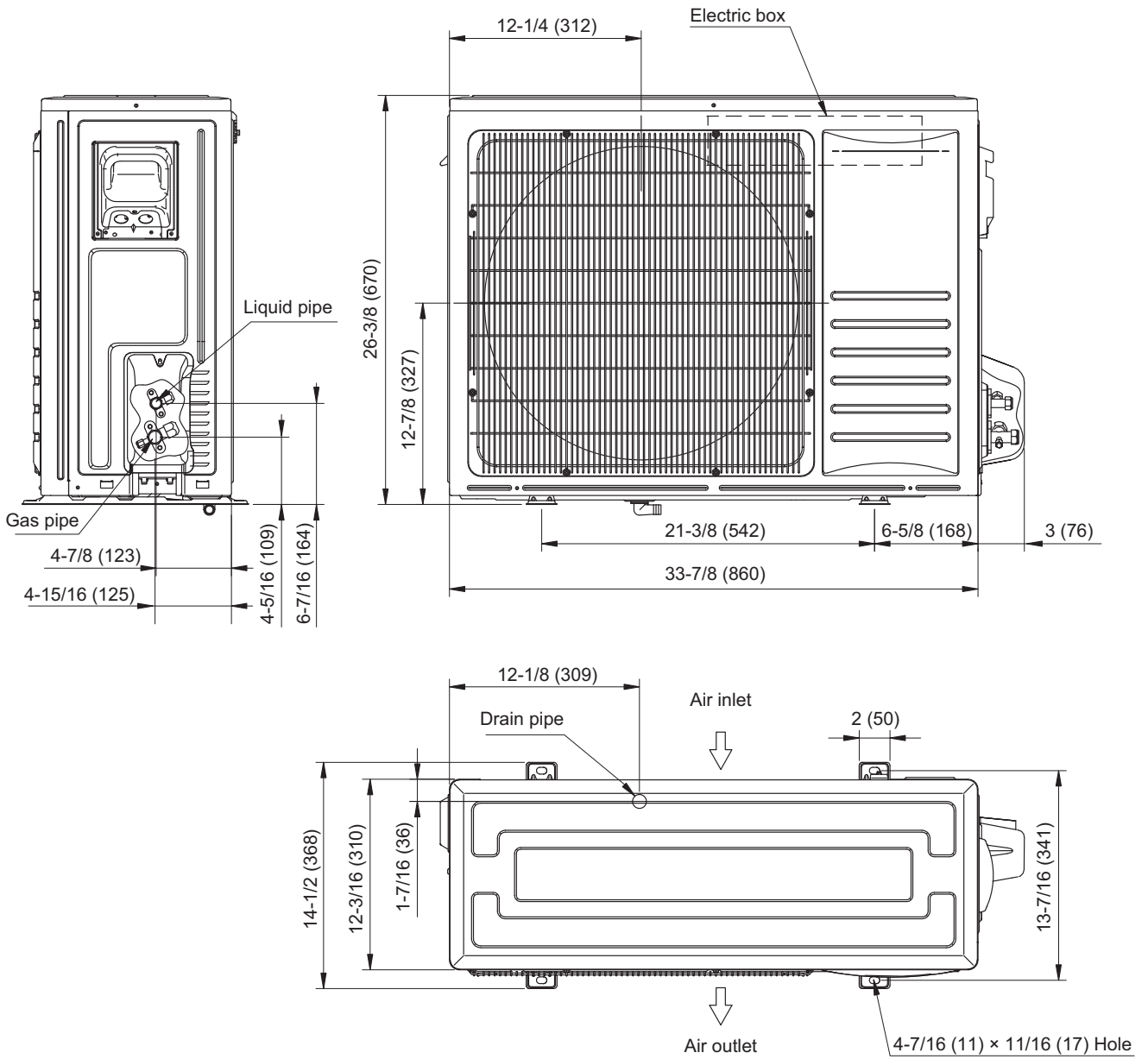


# 2-2. Model: WHU18SZA21S

Unit: in (mm)

OUTDOOR UNIT  
WHU09-12SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S

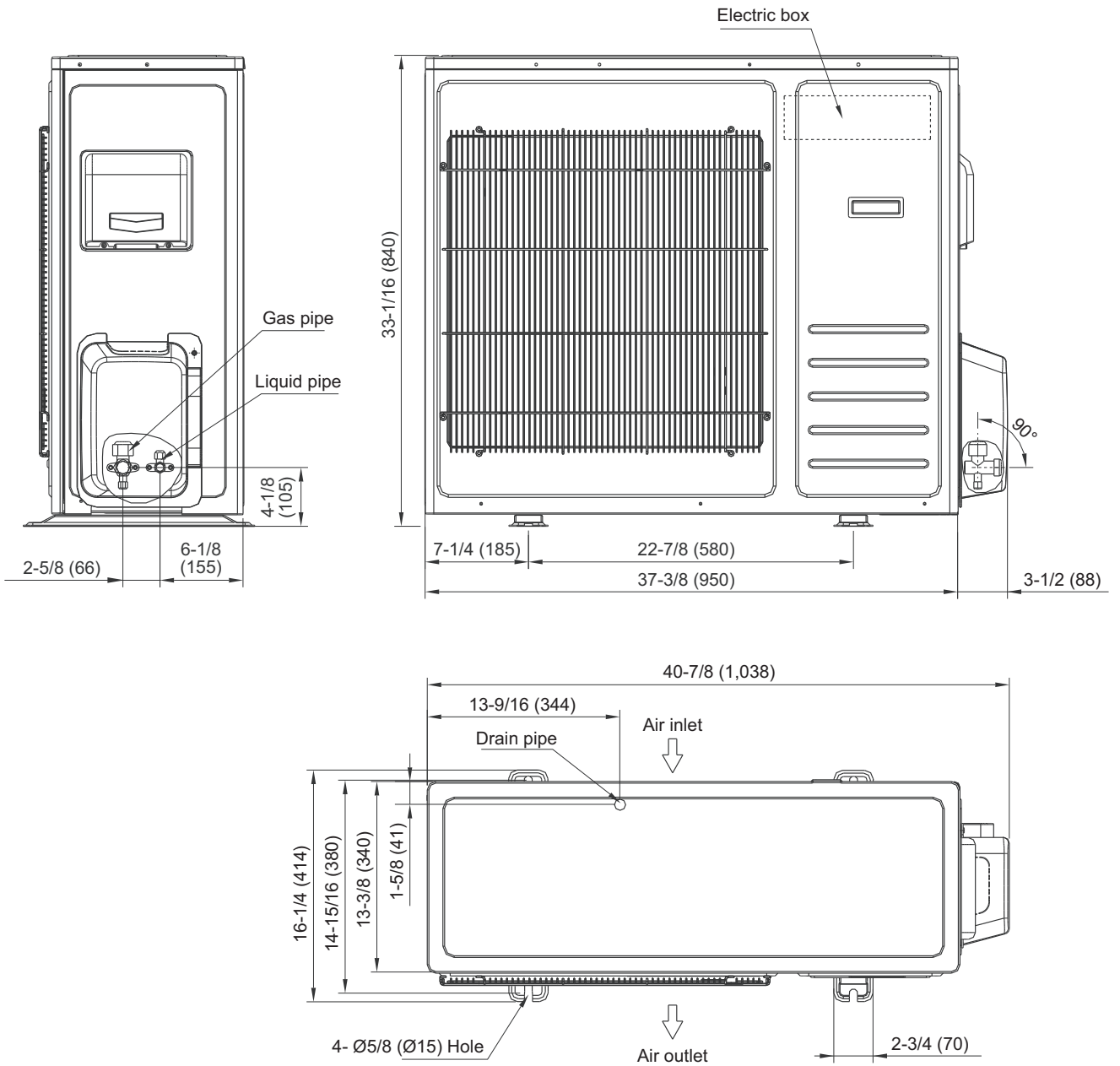


## 2-3. Model: WHU24SZA21S

Unit: in (mm)

OUTDOOR UNIT  
WHU09-12SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S

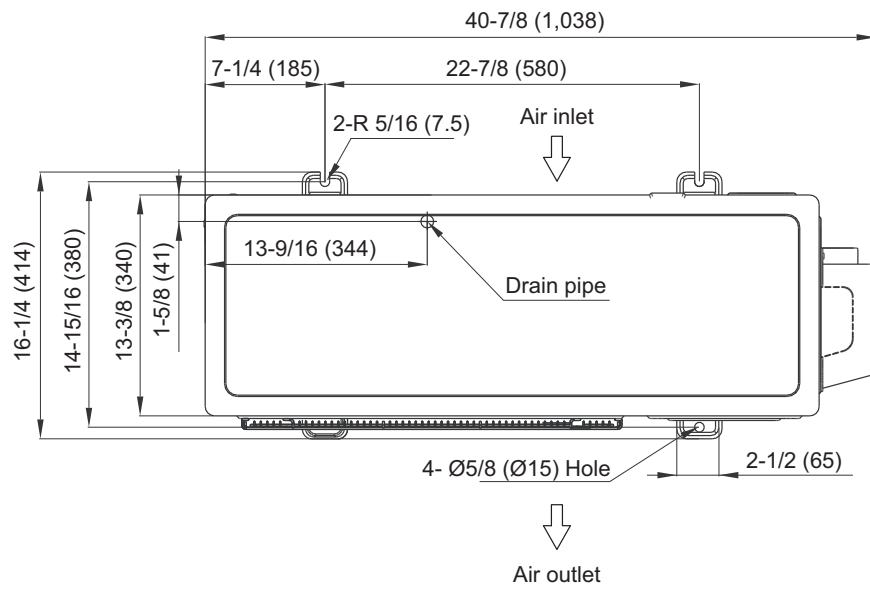
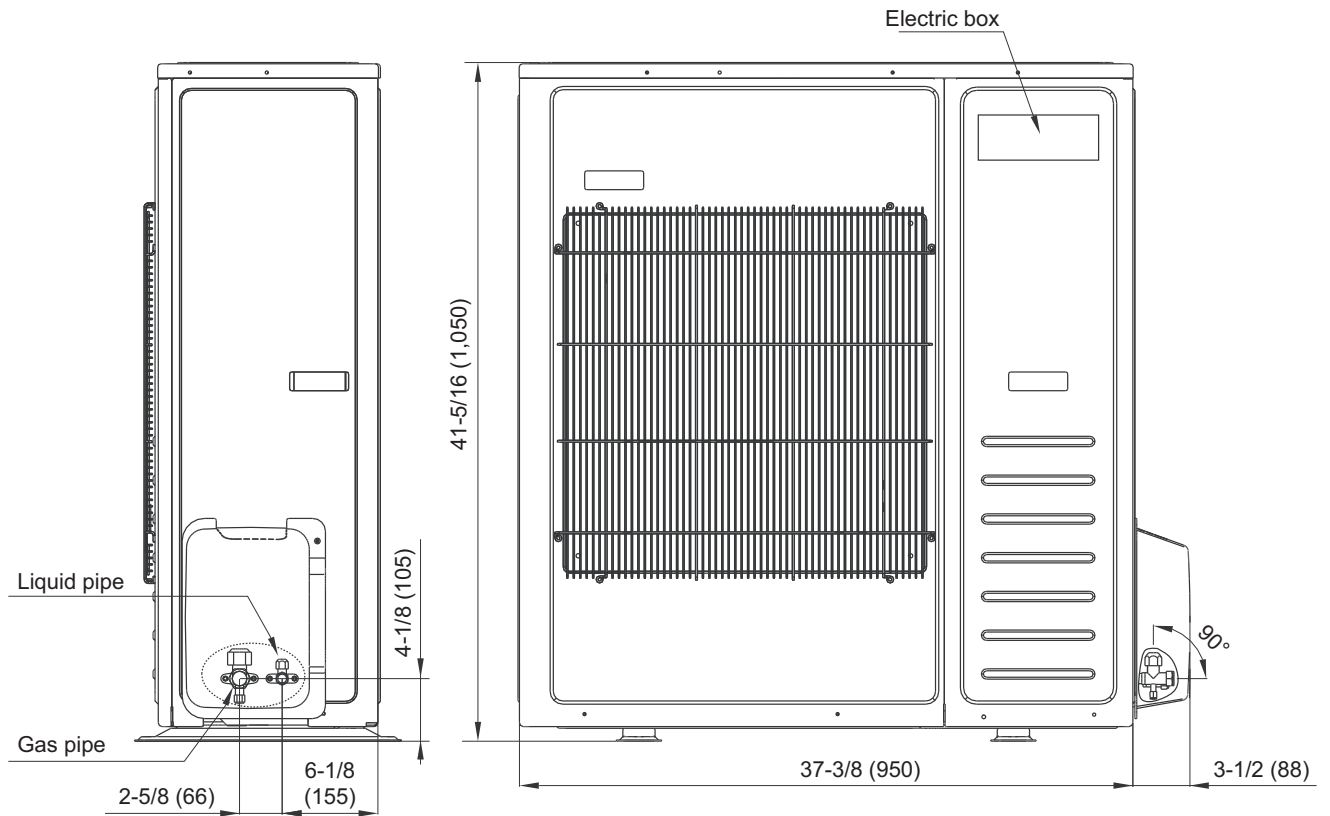


# 2-4. Model: WHU36SZA21S

Unit: in (mm)

OUTDOOR UNIT  
WHU09-12SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S



### 3. Installation space

#### 3-1. Models: WHU09SZA21S, WHU12SZA21S, WHU18SZA21S, WHU24SZA21S, and WHU36SZA21S

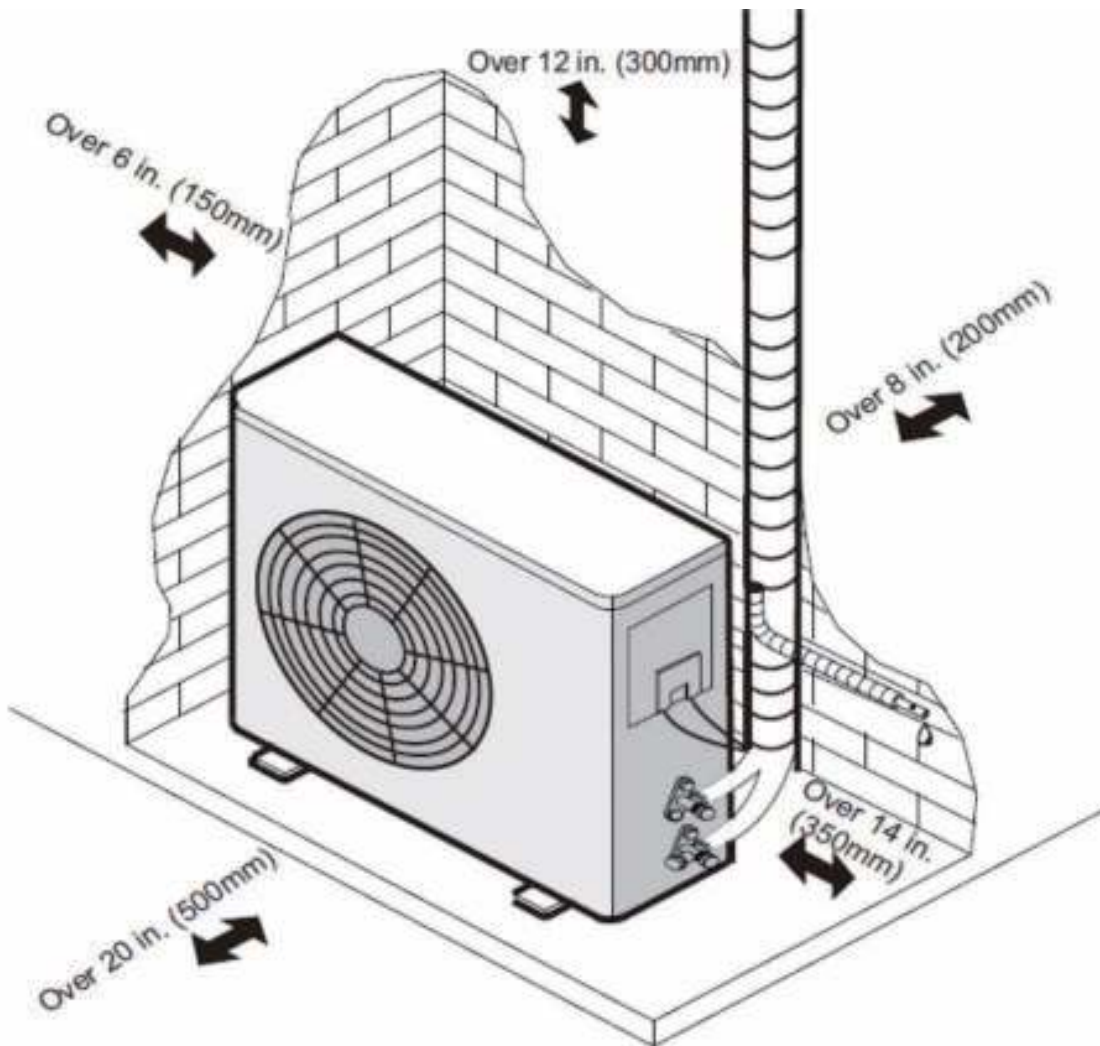
##### ■ Space requirement

Provide sufficient installation space for product safety.

##### ⚠ CAUTION

Keep the space shown in the installation examples.

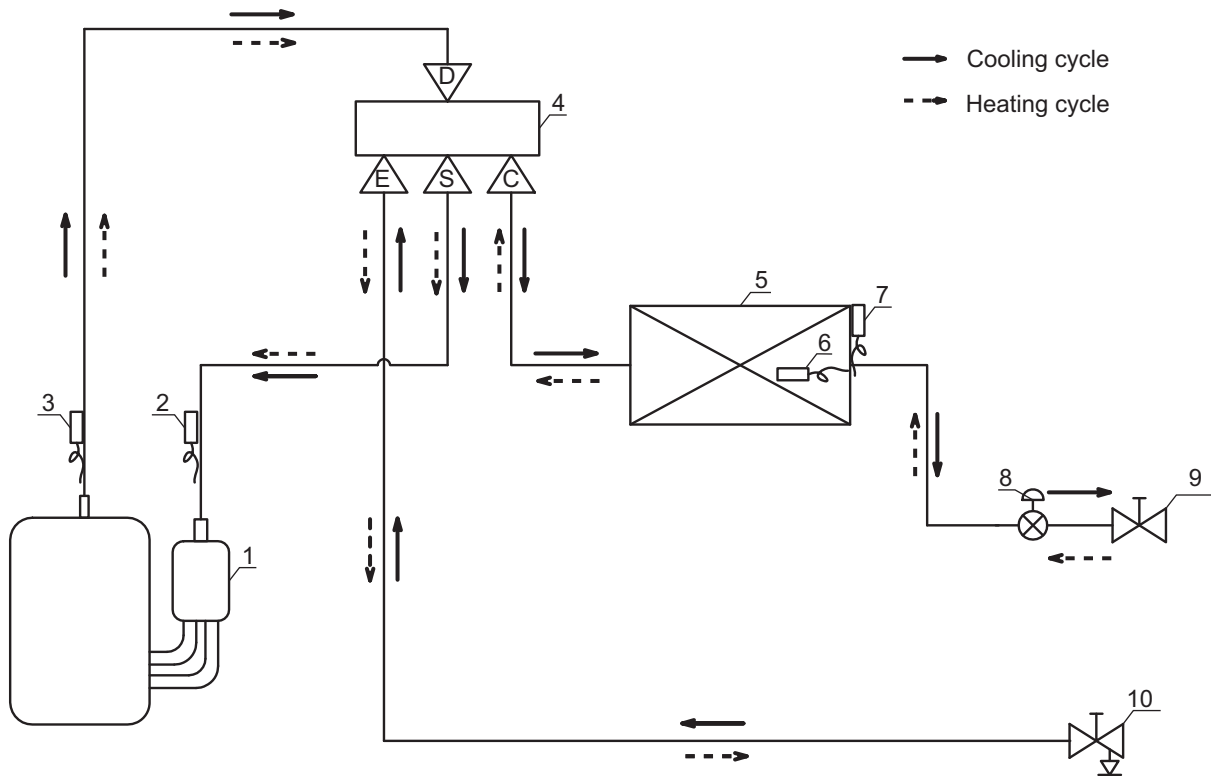
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.





## 4. Refrigerant circuit

### 4-1. Models: WHU09SZA21S, WHU12SZA21S, and WHU18SZA21S



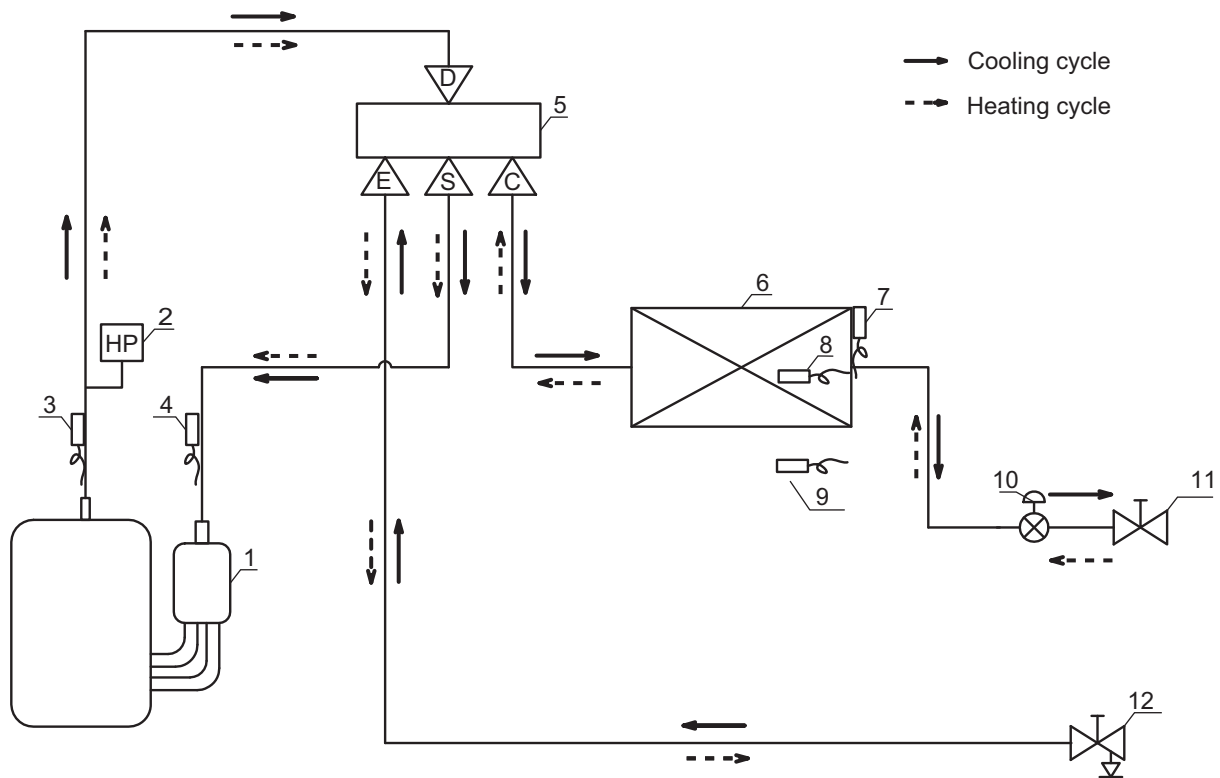
List of components

List of components	
1	Compressor
2	Suction temperature sensor
3	Discharge temperature sensor
4	4-way valve
5	Outdoor heat exchanger
6	Ambient temperature sensor
7	Coil temperature sensor
8	Electric expansion valve
9	Stop valve (Liquid)
10	Stop valve (Gas)

## 4-2. Model: WHU24SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S

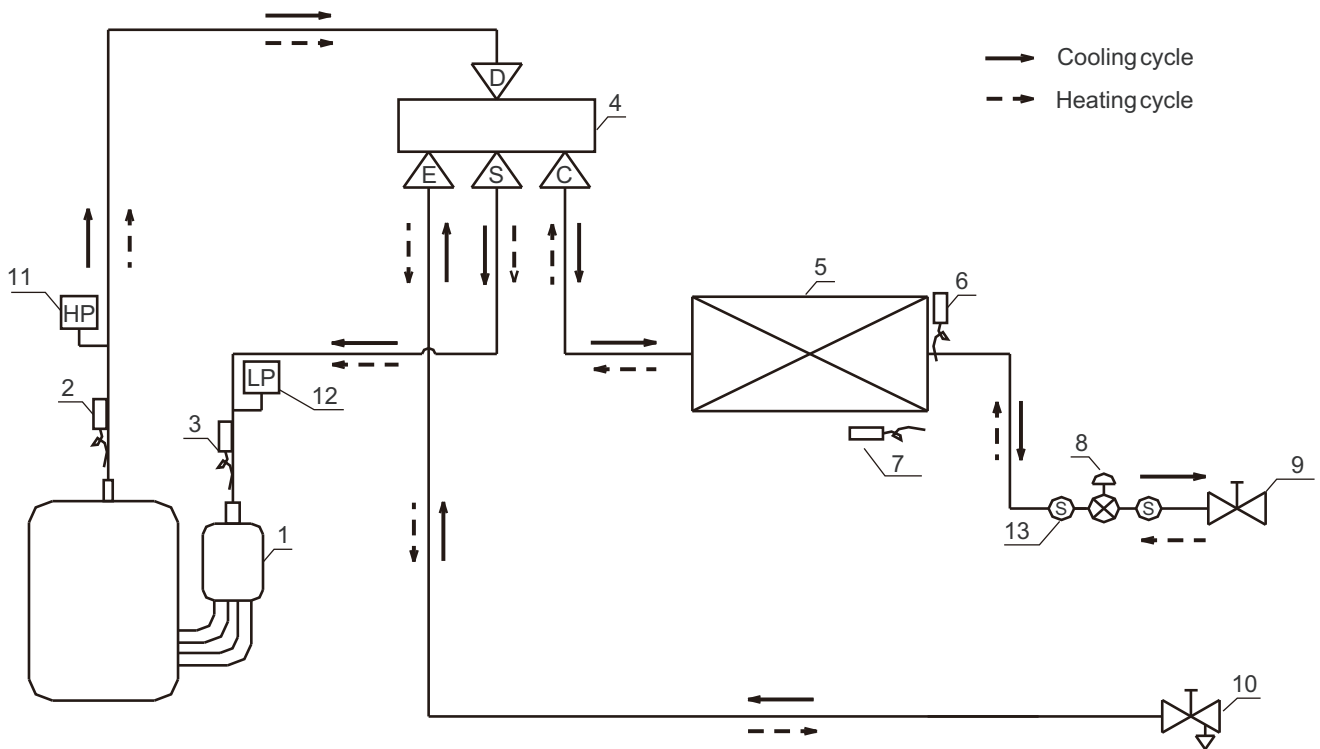
OUTDOOR UNIT  
WHU09-12SZA21S



List of components

List of components	
1	Compressor
2	High pressure switch
3	Discharge temperature sensor
4	Suction temperature sensor
5	4-way valve
6	Outdoor heat exchanger
7	Coil temperature sensor
8	Defrost temperature sensor
9	Ambient temperature sensor
10	Electric expansion valve
11	Stop valve (Liquid)
12	Stop valve (Gas)

## 4-3. Model: WHU36SZA21S



**List of components**

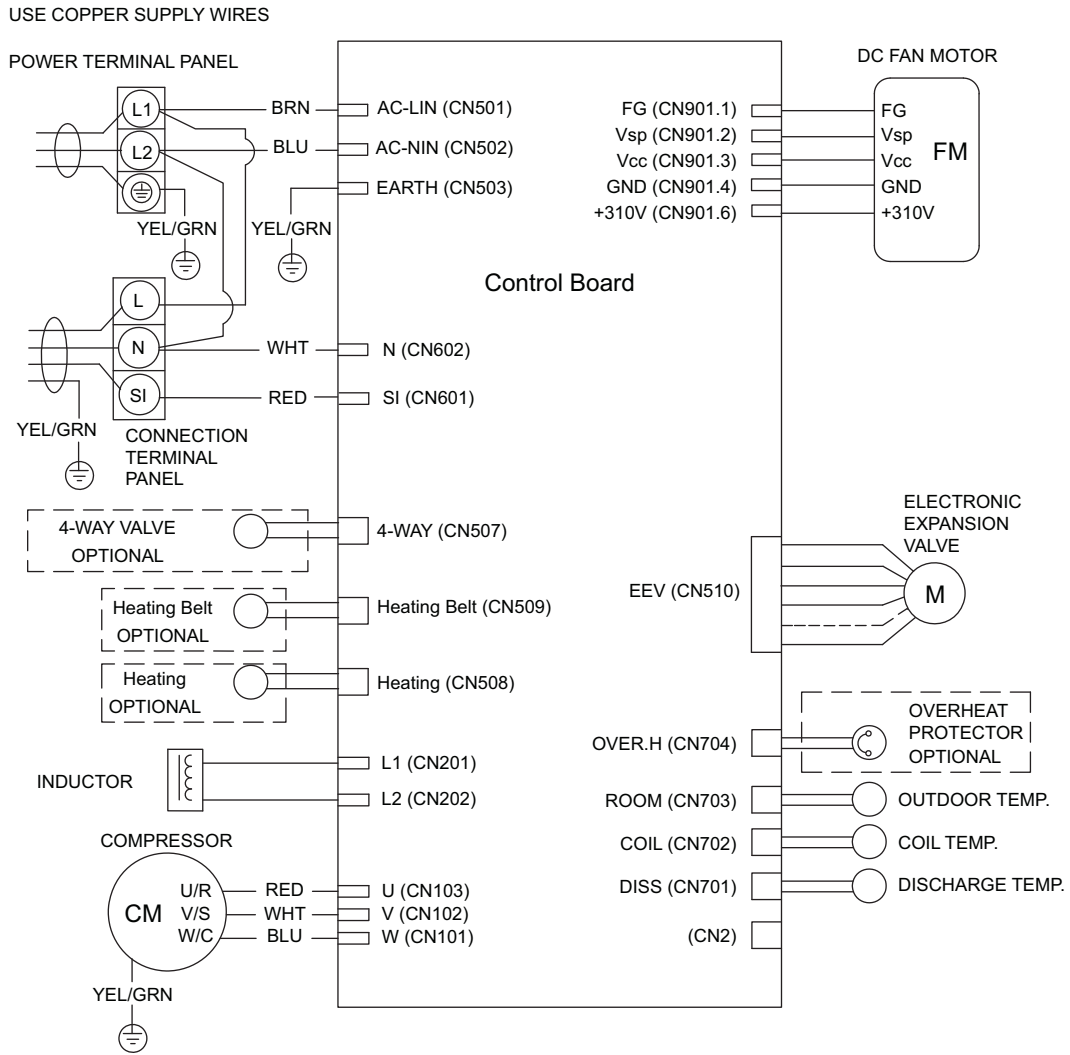
List of components	
1	Compressor
2	Discharge temperature sensor
3	Suction temperature sensor
4	4-way valve
5	Outdoor heat exchanger
6	Coil temperature sensor
7	Ambient temperature sensor
8	Electric expansion valve
9	Stop valve (Liquid)
10	Stop valve (Gas)
11	High pressure switch
12	Low pressure switch
13	Strainer

# 5. Wiring diagrams

## 5-1. Models: WHU09SZA21S, WHU12SZA21S, and WHU18SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S



Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	FG	Revolution pulse output	Blue
2	Vsp	Speed control voltage input	Yellow
3	Vcc	Control power voltage input	White
4	GND	GND	Black
5	—	—	—
6	Vm	Motor power voltage input	Red

Compressor

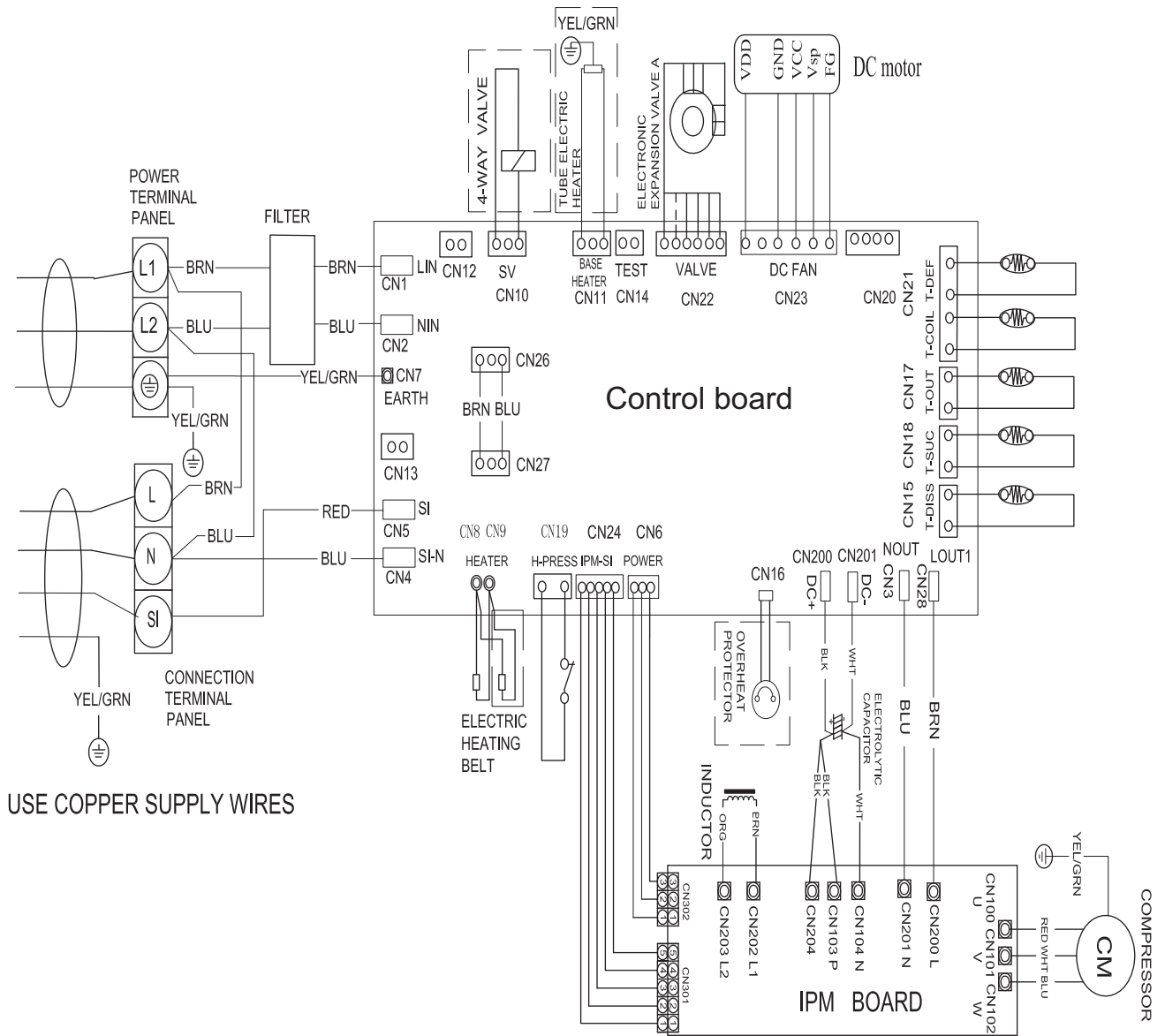
09 model: 2.08 Ω  
12 model: 2.08 Ω  
18 model: 1.72 Ω  
(20°C 68°F)

Temperature	0°C 32°F	20°C 68°F	30°C 86°F
Thermistor (Outdoor temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Coil temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Discharge temp.)	187 kΩ 0.18 V	72.1 kΩ 0.43 V	46.5 kΩ 0.64 V

# 5-2. Model: WHU24SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S



USE COPPER SUPPLY WIRES

Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	FG	Revolution pulse output	Blue
2	Vsp	Speed control voltage input	Yellow
3	Vcc	Control power voltage input	White
4	GND	GND	Black
5	—	—	—
6	Vm	Motor power voltage input	Red

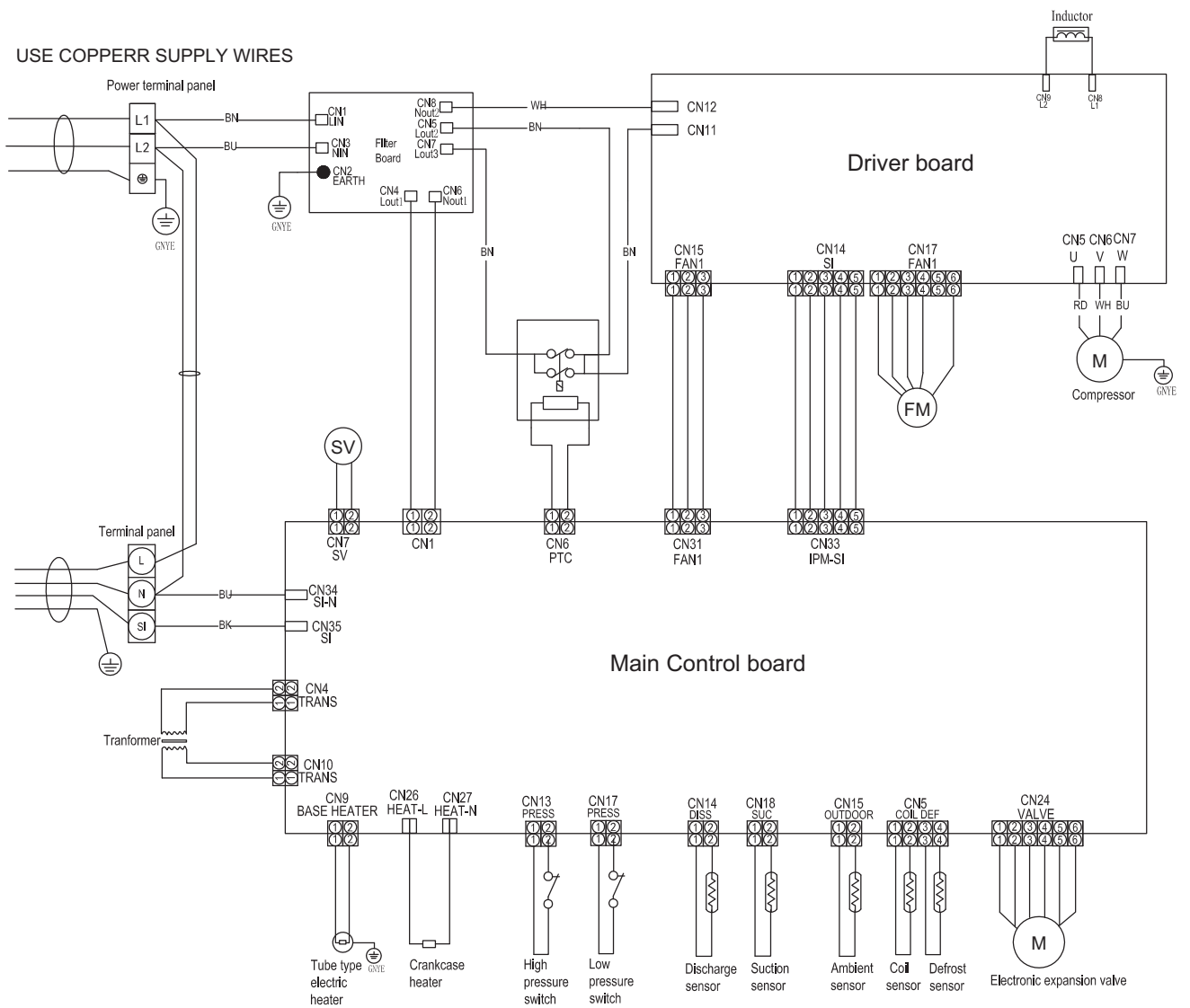
Compressor  
24 model: 0.75 Ω  
(20°C 68°F)

Temperature	0°C 32°F	20°C 68°F	30°C 86°F
Thermistor (Outdoor temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Coil & Defrost temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Discharge temp.)	187 kΩ 0.18 V	72.1 kΩ 0.43 V	46.5 kΩ 0.64 V
Thermistor (Suction temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V

# 5-3. Model: WHU36SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S

OUTDOOR UNIT  
WHU09-12SZA21S



### Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	FG	Revolution pulse output	Blue
2	Vsp	Speed control voltage input	Yellow
3	Vcc	Control power voltage input	White
4	GND	GND	Black
5	—	—	—
6	Vm	Motor power voltage input	Red

Compressor  
36 model: 0.65 Ω  
(20 °C 68 °F)

Temperature	0 °C 32 °F	20 °C 68 °F	30 °C 86 °F
Thermistor (Outdoor temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Coil & Defrost temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Discharge temp.)	187 kΩ 0.18 V	72.1 kΩ 0.43 V	46.5 kΩ 0.64 V
Thermistor (Suction temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V

## 6. Electrical characteristics

Model name			WHU09SZA21S	WHU12SZA21S	
Power supply	Voltage	V	208/230 ~		
	Frequency	Hz	60		
MCA*1		A	7.3	12	
Wiring spec.*2	MAX. CKT. BKR*3		A	15	20
	Power cable		AWG	3 × 12	3 × 14
	Connection cable*4	Size	AWG	4 × 16	
		Limited wiring length	ft (m)	85 (26)	

Model name			WHU18SZA21S	WHU24SZA21S	WHU36SZA21S	
Power supply	Voltage	V	208/230 ~			
	Frequency	Hz	60			
MCA*1		A	15	23	25	
Wiring spec.*2	MAX. CKT. BKR*3		A	20	35	45
	Power cable		AWG	3 × 12		3 × 10
	Connection cable*4	Size	AWG	4 × 16		
		Limited wiring length	ft (m)	101 (31)	167 (51)	

\*1: Minimum Circuit Ampacity (Calculation based on UL60335-2-40)

\*2: Selected sample based on Japan Electrotechnical Standards and Codes Committee E0005. As the regulations of wire size and circuit breaker differ in each country or region, select appropriate devices complied to the regional standard.

\*3: Maximum Circuit Breaker

\*4: Limit voltage drop to less than 2%. If voltage drop is 2% or more, increase cable conductor size.

## 7. Accessories

Part name	Q'ty	Part name	Q'ty
Installation and operation manual	1	Drain hose	1
Rubber cushion	1		