Westinghouse

REFRIGERANT **R410A**

INVERTER

AIR CONDITIONER

Wall mounted type

DESIGN & TECHNICAL MANUAL

INDOOR

WHS09WMA21S
WHS09WMA11S

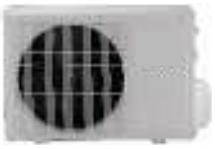
WHS12WMA21S
WHS12WMA11S

WHS18WMA21S

WHS24WMA21S

WHS30WMA21S
WHS36WMA21S

OUTDOOR



WHS09SZA21S
WHS09SZA11S
WHS12SZA21S
WHS12SZA11S

WHS18SZA21S

WHS24SZA21S

WHS30SZA21S
WHS36SZA21S

DR_AS126EW_03
2022.12.27

Notices:

- Product specifications and design are subject to change without notice for future improvement.
- For further details, please check with our authorized dealer.

⚠ WARNING

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.

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WHS09WMA11S
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WALL MOUNTED
WHS09-36WMA

1. Specifications

Type					Wall mounted		
					Inverter, Heat pump		
Model name					**WHS09WMA21S**	**WHS12WMA21S**	**WHS18WMA21S**
Power supply					208/230 V ~ 60 Hz		
Power supply intake					Outdoor unit		
Available voltage range					198—253 V		
Capacity		Cooling	Rated	Btu/h	9,000	12,000	18,000
			Min.—Max.		4,500—10,000	5,500—13,500	6,500—19,500
		Heating	Rated		10,000	12,500	20,000
			Min.—Max.		4,500—10,000	5,500—13,500	6,000—21,500
		Heating (17°F)*1	Rated		4,500	7,500	11,600
		Heating (5°F)*2	Max.		5,019	7,633	10,761
Input power		Cooling	Rated	kW	0.825	1.121	1.70
		Heating			0.88	1.11	2.00
Current		Cooling	Rated	A	3.8	5.0	7.4
		Heating			4.0	5.0	9.0
EER2		Cooling		Btu/hW	10.91	10.70	10.59
COP2		Heating			11.36	11.60	10.00
SEER2					16.0	16.0	17.0
HSPF2						8.0	
Power factor		Cooling		%	98	97	
		Heating			98	97	
Moisture removal				pints/h (L/h)	1.9 (0.9)	2.5 (1.2)	4.2 (2.0)
Maximum operating current*3		Cooling		A	7.0	7.5	12.0
		Heating			7.0	7.5	12.0
Fan	Airflow rate	Cooling	HIGHER	CFM (m^3/h)	400 (680)	412 (700)	592 (1,005)
			HIGH		341 (580)	380 (645)	530 (901)
			MED		283 (480)	351 (596)	441 (750)
			LOW		224 (380)	276 (469)	388 (660)
			LOWER		207 (352)	250 (424)	341 (580)
		Heating	HIGHER		400 (680)	412 (700)	592 (1,005)
			HIGH		341 (580)	380 (645)	530 (901)
			MED		283 (480)	351 (596)	441 (750)
			LOW		224 (380)	276 (469)	388 (660)
			LOWER		207 (352)	250 (424)	341 (580)
	Type × Qty				Crossflow fan × 1		
	Motor output			W	14		35
Sound pressure level*4		Cooling	HIGHER	dB (A)	39	40	45
			HIGH		36		43
			MED		33		40
			LOW		29	30	38
			LOWER		26		35
		Heating	HIGHER		39	40	45
			HIGH		36		43
			MED		33		40
			LOW		29	30	38
			LOWER		26		35
Heat exchanger type		Dimensions (H × W × D)		in (mm)	11-9/16 × 21-5/8 × 1-1/16 (294 × 550 × 27.2)	11-9/16 × 24-7/16 × 1-1/16 (294 × 620 × 27.2)	14-7/8 × 27-3/4 × 1-1/16 (378 × 705 × 27.2)
		Fin pitch		FPI	18		
		Rows × Stages			2 × 14		2 × 18
		Pipe type			Copper		
		Fin type			Aluminum		
Dimensions (H × W × D)		Net		in (mm)	10-5/8 × 29-5/16 × 8-7/16 (270 × 745 × 214)	10-5/8 × 32-1/16 × 8-7/16 (270 × 815 × 214)	12-3/8 × 36 × 9-5/16 (315 × 915 × 236)
		Gross			13-3/16 × 31-1/2 × 10-7/16 (335 × 800 × 265)	13-3/16 × 34-1/4 × 10-7/16 (335 × 870 × 265)	15-3/8 × 39-3/8 × 12-3/8 (390 × 1,000 × 315)
Weight		Net		lb (kg)	19 (8.5)	20 (9)	28 (12.5)
		Gross			22 (10)	24 (11)	32 (14.5)
Connection pipe		Size	Liquid	in (mm)	Ø 1/4 (Ø 6.35)		
			Gas		Ø 3/8 (Ø 9.52)		Ø 1/2 (Ø 12.7)
		Method			Flare		
Remote controller type					Wireless (Wired [option])		

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 (17°F): Indoor temperature of 70°FDB (21.11°CDB) /60°FWB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB) /15°FWB (-9.44°CWB).
  - *2: 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.
- *3: Maximum current is maximum value when operated within the operation range.
- *4: 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.

WALL MOUNTED
WHS09-36WMA

M condition						
Model name				**WHS09WMA21S**	**WHS12WMA21S**	**WHS18WMA21S**
Capacity	Cooling	Rated	Btu/h	9,000	12,000	18,000
		Min.—Max.		4,500—10,000	5,500—13,500	6,500—19,500
	Heating	Rated		10,000	12,500	20,000
		Min.—Max.		4,500—10,000	5,500—13,500	6,000—21,500
	Heating (17°F)*	Rated		4,500	7,500	11,600
Input power	Cooling	Rated	kW	0.857	1.121	1.651
	Heating			0.86	1.121	2.00
Current	Cooling	Rated	A	3.8	5.0	7.4
	Heating			4.0	5.0	9.0
EER	Cooling		Btu/hW	10.50	10.70	10.90
COP	Heating			11.63	11.60	10.00
SEER				16.3	16.7	17.6
HSPF				9.1	9.0	10.1

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).
- *: Heating (17°F): Indoor temperature of 70°FDB (21.11°CDB)/60°FWB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB)/15°FWB (-9.44°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.)

WALL MOUNTED
WHS09-36WMA

Type					Wall mounted		
					Inverter, Heat pump		
Model name					**WHS24WMA21S**	**WHS30WMA21S**	**WHS36WMA21S**
Power supply					208/230 V ~ 60 Hz		
Power supply intake					Outdoor unit		
Available voltage range					198—253 V		
Capacity		Cooling	Rated	Btu/h	24,000	30,000	35,000
			Min.—Max.		8,000—26,500	11,500—33,500	12,000—36,000
		Heating	Rated		24,400	31,000	35,000
			Min.—Max.		8,000—26,500	11,500—33,500	12,000—36,000
		Heating (17°F)*1	Rated		13,000	16,000	17,000
		Heating (5°F)*2	Max.		12,102	17,432	15,361
Input power		Cooling	Rated	kW	2.353	3.00	4.20
			Min.—Max.		0.46—2.99	—	
		Heating	Rated		2.29	2.839	3.50
			Min.—Max.		0.46—2.99	—	
Current		Cooling	Rated	A	10.5	12.8	18.5
		Heating			10.4	12.0	16.0
EER2		Cooling		Btu/hW	10.20	10.00	8.33
COP2		Heating			10.58	10.39	10.00
SEER2					16.5	18.5	16.5
HSPF2					8.0	9.0	7.5
Power factor		Cooling		%	95	98	98
		Heating			95	98	98
Moisture removal				pints/h (L/h)	5.1 (2.4)	6.3 (3.0)	6.8 (3.2)
Maximum operating current*3		Cooling		A	13.0	15.0	19.0
		Heating			13.0	15.0	19.0
Fan	Airflow rate	Cooling	HIGHER	CFM (m^3/h)	636 (1,080)	1,107 (1,880)	1,089 (1,850)
			HIGH		577 (980)	845 (1,435)	853 (1,450)
			MED		483 (820)	706 (1,200)	706 (1,200)
			LOW		447 (760)	589 (1,000)	589 (1,000)
			LOWER		383 (650)	500 (850)	500 (850)
		Heating	HIGHER		636 (1,080)	1,107 (1,880)	1,089 (1,850)
			HIGH		577 (980)	845 (1,435)	853 (1,450)
			MED		483 (820)	706 (1,200)	706 (1,200)
			LOW		447 (760)	589 (1,000)	589 (1,000)
			LOWER		383 (650)	500 (850)	500 (850)
	Type × Qty				Crossflow fan × 1		
	Motor output			W	35	70	50
Sound pressure level*4		Cooling	HIGHER	dB (A)	48	50	
			HIGH		45	45	
			MED		40	43	
			LOW		38	40	
			LOWER		36	38	
		Heating	HIGHER		48	50	
			HIGH		45	45	
			MED		40	43	
			LOW		38	40	
			LOWER		36	38	
Heat exchanger type		Dimensions (H × W × D)		in (mm)	14-7/8 × 33-1/8 × 1-1/16 (378 × 842 × 27.2)	16-9/16 × 38-3/4 × 1-1/16 (420 × 985 × 27.6)	Main: 16-9/16 × 38-3/4 × 1-1/16 (420 × 985 × 27.6) Sub1: 2-9/16 × 38-3/4 × 9/16 (65 × 985 × 13.6) Sub2: 2-9/16 × 38-3/4 × 9/16 (65 × 985 × 13.6)
		Fin pitch		FPI	18		
		Rows × Stages			2 × 18	2 × 22	Main: 2 × 22 Sub1: 1 × 4 Sub2: 1 × 4
		Pipe type			Copper		
		Fin type			Aluminum		
Dimensions (H × W × D)		Net		in (mm)	12-3/8 × 42-11/16 × 9-5/16 (315 × 1,085 × 236)	14-3/16 × 50-3/8 × 10-1/4 (360 × 1,280 × 260)	
		Gross			15-3/8 × 46-1/16 × 12-3/8 (390 × 1,170 × 315)	17-1/8 × 54-1/2 × 12-13/16 (435 × 1,385 × 325)	
Weight		Net		lb (kg)	31 (14)	40 (18)	41 (18.5)
		Gross			37 (17)	47 (21.5)	49 (22)
Connection pipe		Size	Liquid	in (mm)	Ø 3/8 (Ø 9.52)		
			Gas		Ø 5/8 (Ø 15.88)		
		Method			Flare		
Remote controller type					Wireless (Wired [option])		

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 (17°F): Indoor temperature of 70°FDB (21.11°CDB) /60°FWB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB) /15°FWB (-9.44°CWB).
  - *2: 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.
- *3: Maximum current is maximum value when operated within the operation range.
- *4: 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.

WALL MOUNTED
WHS09-36WMA

M condition						
Model name				**WHS24WMA21S**	**WHS30WMA21S**	**WHS36WMA21S**
Capacity	Cooling	Rated	Btu/h	24,000	30,000	35,000
		Min.—Max.		8,000—26,500	11,500—33,500	12,000—36,000
	Heating	Rated		24,400	31,000	35,000
		Min.—Max.		8,000—26,500	11,500—33,500	12,000—36,000
	Heating (17 °F)*	Rated		13,000	16,000	17,000
Input power	Cooling	Rated	kW	2.286	2.90	4.20
		Min.—Max.		0.46—2.99	—	
	Heating	Rated		2.271	2.70	3.50
		Min.—Max.		0.46—2.99	—	
Current	Cooling	Rated	A	10.5	12.8	18.5
	Heating			10.4	12.0	16.0
EER	Cooling		Btu/hW	10.50	10.34	8.33
COP	Heating			10.74	11.48	10.00
SEER				17.6	18.8	16.4
HSPF				9.8	12.3	8.8

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).
- *: Heating (17°F): Indoor temperature of 70°FDB (21.11°CDB)/60°FWB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB)/15°FWB (-9.44°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.)

WALL MOUNTED
WHS09-36WMA

Type					Wall mounted	
					Inverter heat pump	
Model name					WHS09WMA11S	WHS12WMA11S
Power supply					115 V ~ 60 Hz	
Power supply intake					Outdoor unit	
Available voltage range					103.5—126.5 V	
Capacity		Cooling	Rated	Btu/h	9,000	12,000
			Min.—Max.		1,200—10,000	2,500—13,500
		Heating	Rated		9,500	13,000
			Min.—Max.		1,200—10,000	2,500—14,500
		Heating (17°F)*1	Rated		5,000	7,200
		Heating (5°F)*2	Max.		6,299	7,622
Input power		Cooling	Rated	kW	0.818	1.20
			Min.—Max.		0.230—1.380	0.287—1.725
		Heating	Rated		0.837	1.179
			Min.—Max.		0.230—1.380	0.287—1.725
Current		Cooling	Rated	A	7.4	10.8
		Heating			7.4	10.6
EER2		Cooling		Btu/hW	11.00	10.00
COP2		Heating			12.28	11.20
SEER2					18.5	17.5
HSPF2					8.0	
Power factor		Cooling		%	96	97
		Heating			98	97
Moisture removal				pints/h (L/h)	1.9 (0.9)	2.5 (1.2)
Maximum operating current*3		Cooling		A	12.0	15.0
		Heating			12.0	15.0
Fan	Airflow rate	Cooling	HIGHER	CFM (m^3/h)	400 (680)	412 (700)
			HIGH		341 (580)	380 (645)
			MED		283 (480)	351 (596)
			LOW		224 (380)	276 (469)
			LOWER		207 (352)	250 (424)
		Heating	HIGHER		400 (680)	412 (700)
			HIGH		341 (580)	380 (645)
			MED		283 (480)	351 (596)
			LOW		224 (380)	276 (469)
			LOWER		207 (352)	250 (424)
	Type × Qty				Crossflow fan × 1	
	Motor output			W	39	
Sound pressure level*4		Cooling	HIGHER	dB (A)	39	40
			HIGH		36	
			MED		33	
			LOW		30	
			LOWER		26	
		Heating	HIGHER		39	40
			HIGH		36	
			MED		33	
			LOW		30	
			LOWER		26	
Heat exchanger type		Dimensions (H × W × D)		in (mm)	11-9/16 × 21-5/8 × 1-1/16 (294 × 550 × 27.2)	11-9/16 × 24-7/16 × 1-1/16 (294 × 620 × 27.2)
		Fin pitch		FPI	18	
		Rows × Stages			2 × 14	
		Pipe type			Copper	
		Fin type			Aluminum	
Dimensions (H × W × D)		Net		in (mm)	10-5/8 × 29-5/16 × 8-7/16 (270 × 745 × 214)	10-5/8 × 32-1/16 × 8-7/16 (270 × 815 × 214)
		Gross			13-3/16 × 31-1/2 × 10-7/16 (335 × 800 × 265)	13-3/16 × 34-1/4 × 10-7/16 (335 × 870 × 265)
Weight		Net		lb (kg)	19 (8.5)	20 (9)
		Gross			22 (10)	24 (11)
Connection pipe		Size	Liquid	in (mm)	Ø 1/4 (Ø 6.35)	
			Gas		Ø 3/8 (Ø 9.52)	
		Method			Flare	
Remote controller type					Wireless (Wired [option])	

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 (17°F): Indoor temperature of 70°FDB (21.11°CDB) /60°FWB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB) /15°FWB (-9.44°CWB).
  - *2: 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.
- *3: Maximum current is maximum value when operated within the operation range.
- *4: 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.

WALL MOUNTED
WHS09-36WMA

M condition					
Model name				**WHS09WMA11S**	**WHS12WMA11S**
Capacity	Cooling	Rated	Btu/h	9,000	12,000
		Min.—Max.		1,200—10,000	2,500—13,500
	Heating	Rated		9,500	13,000
		Min.—Max.		1,200—10,000	2,500—14,500
	Heating (17 °F)*	Rated		5,000	7,200
Input power	Cooling	Rated	kW	0.818	1.20
		Min.—Max.		0.230—1.380	0.287—1.725
	Heating	Rated		0.837	1.179
		Min.—Max.		0.230—1.380	0.287—1.725
Current	Cooling	Rated	A	7.4	10.8
	Heating			7.4	10.6
EER	Cooling		Btu/hW	11.00	10.00
COP	Heating			11.95	11.20
SEER				19.3	17.9
HSPF				10.5	9.35

NOTES:
Specifications are based on the following conditions:

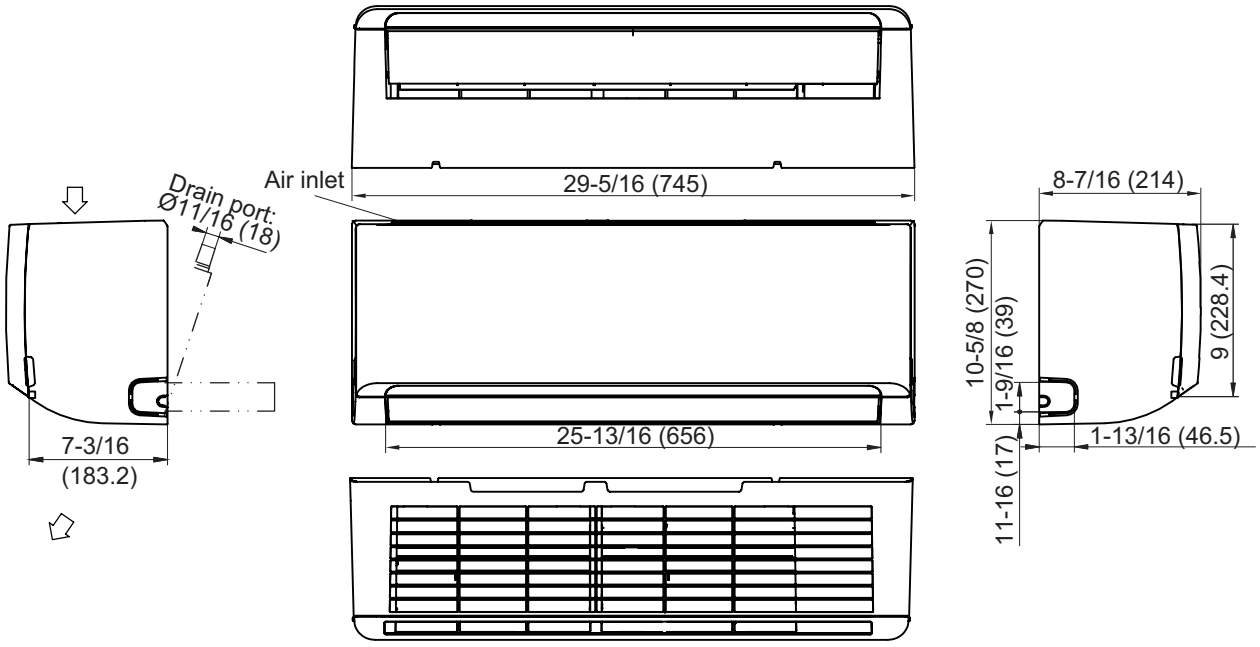
- Cooling: Indoor temperature of 80°FDB (26.67°CDB)/67°FWB (19.44°CWB), and outdoor temperature of 95°FDB (35°CDB)/75°FWB (23.9°CWB).
- Heating: Indoor temperature of 70°FDB (21.11°CDB)/59°FWB (15.56°CWB), and outdoor temperature of 47°FDB (8.33°CDB)/43°FWB (6.11°CWB).
- *: Heating (17°F): Indoor temperature of 70°FDB (21.11°CDB)/60°FWB (15.56°CWB), and outdoor temperature of 17°FDB (-8.33°CDB)/15°FWB (-9.44°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.)

WALL MOUNTED
WHS09-36WMA

2. Dimensions

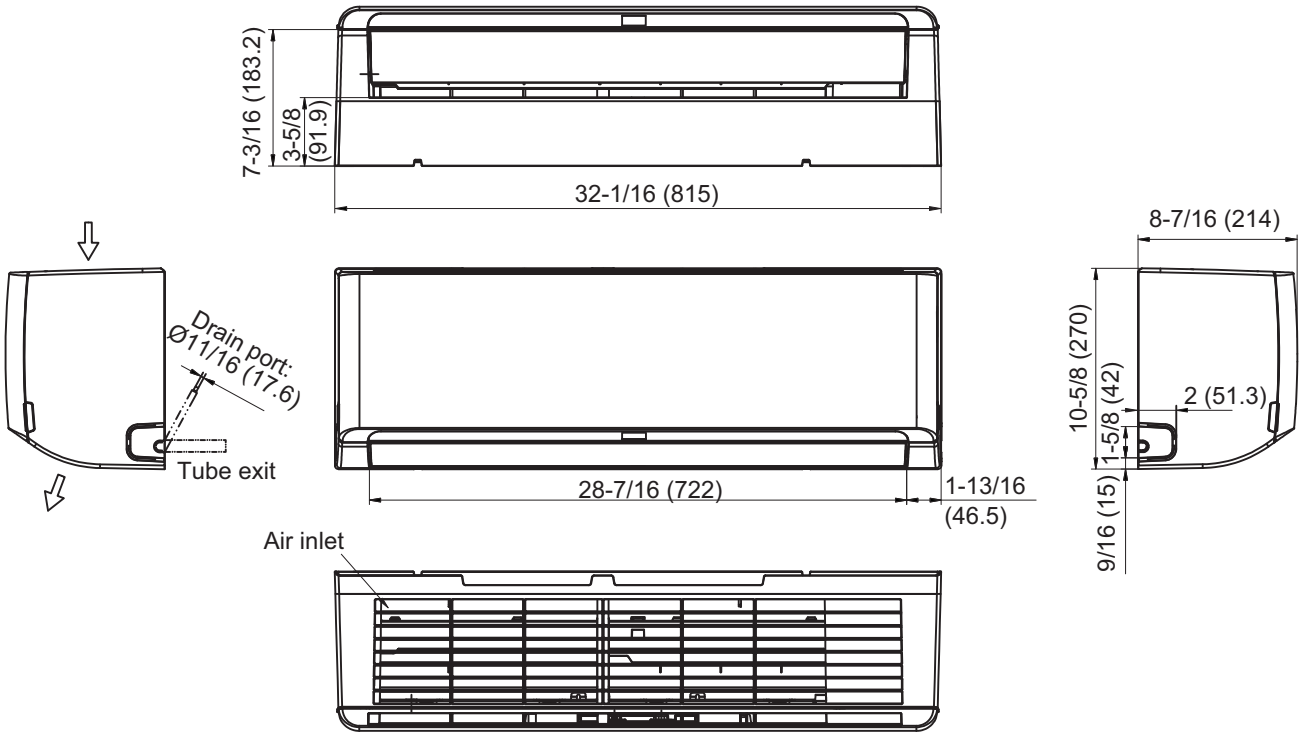
2-1. Models: WHS09WMA21S and WHS09WMA11S

Unit: in (mm)



2-2. Models: WHS12WMA21S and WHS12WMA11S

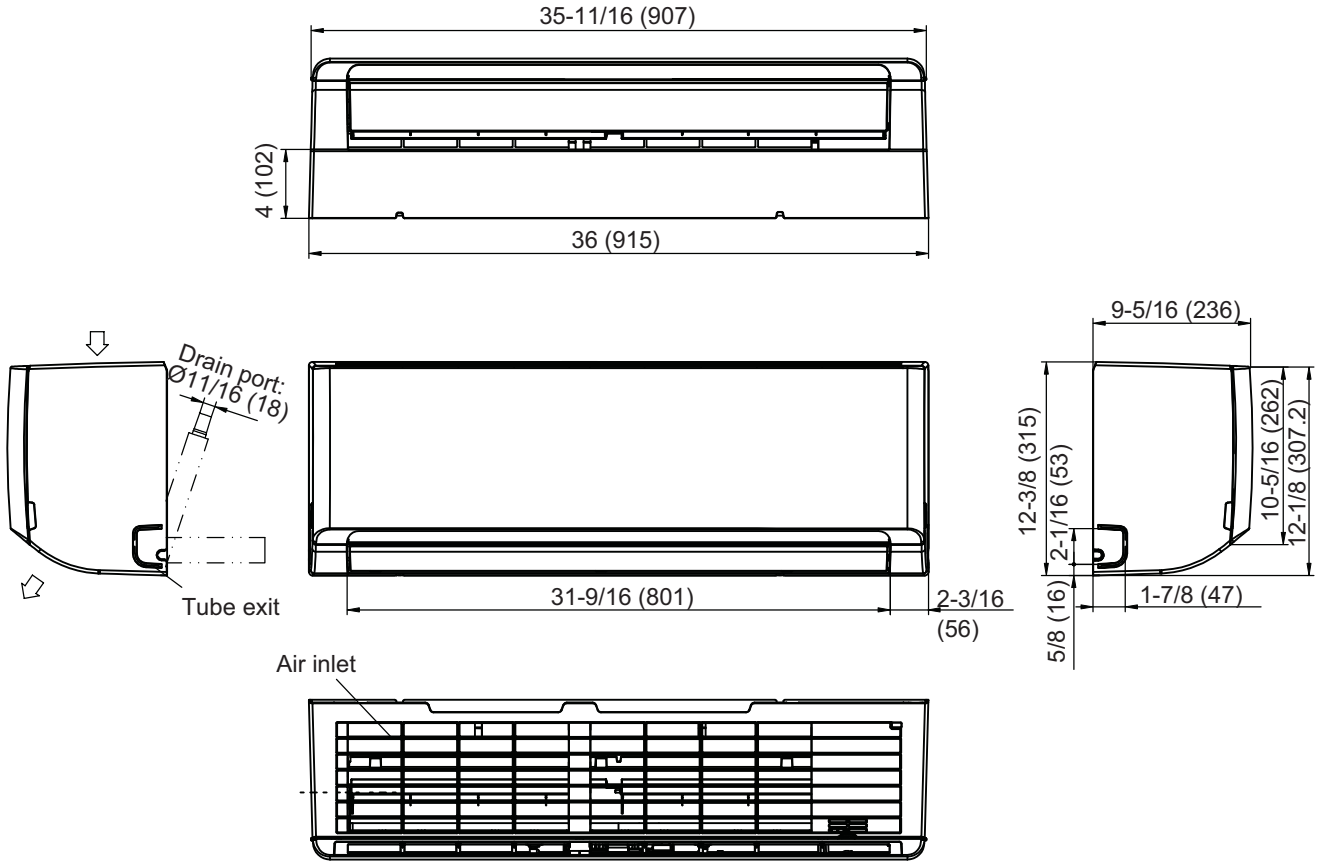
Unit: in (mm)



WALL MOUNTED
WHS09-36WMA

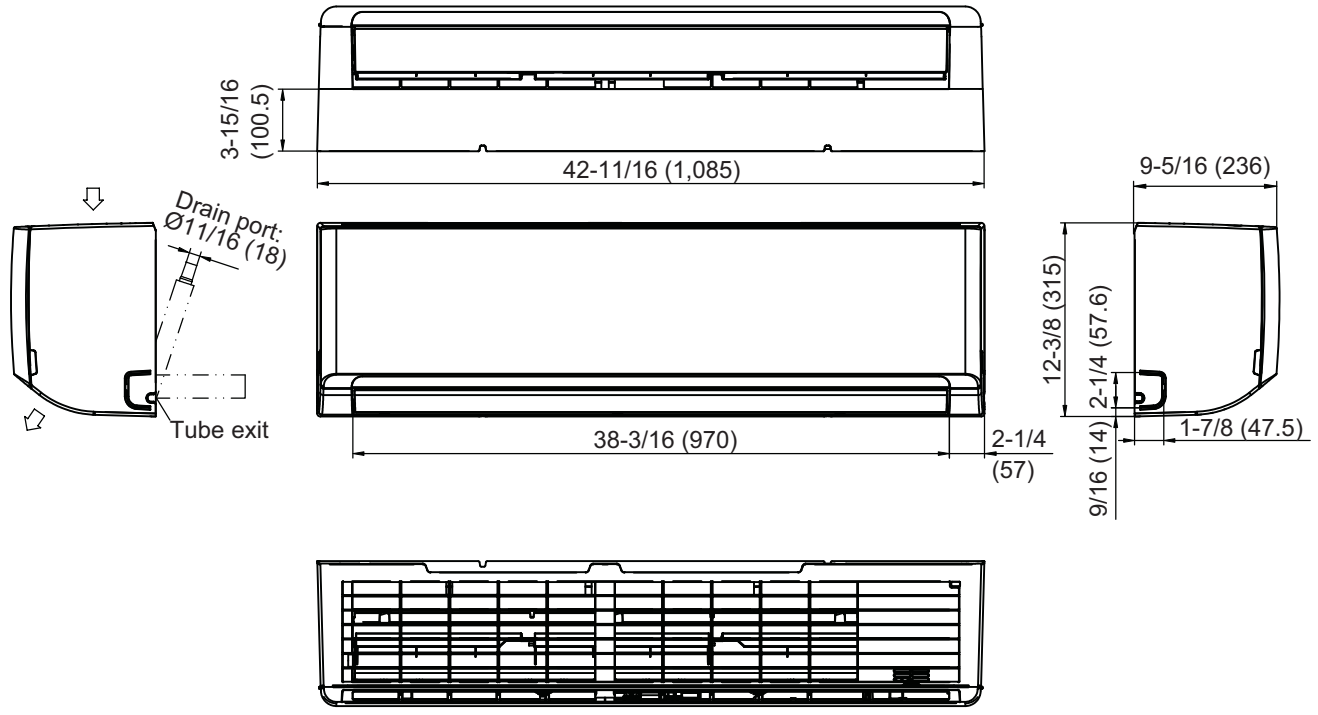
2-3. Model: WHS18WMA21S

Unit: in (mm)



2-4. Model: WHS24WMA21S

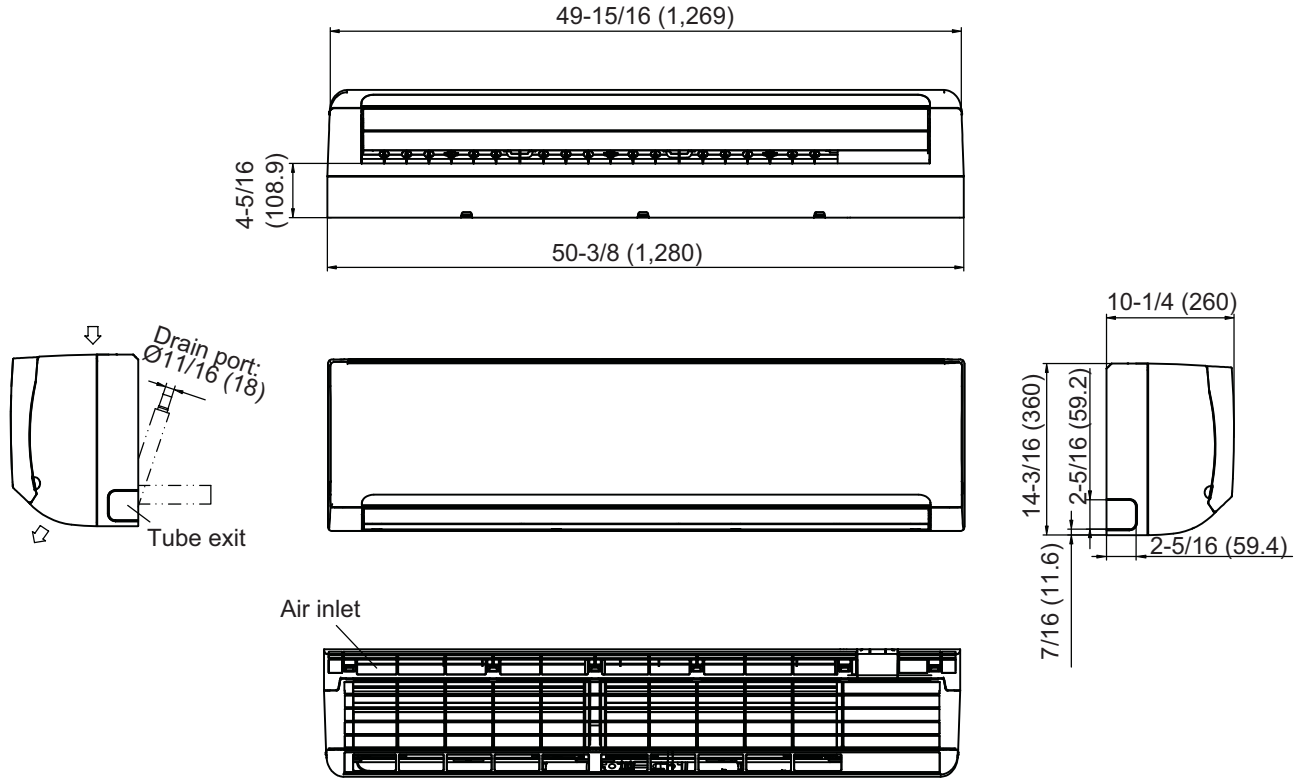
Unit: in (mm)



WALL MOUNTED
WHS09-36WMA

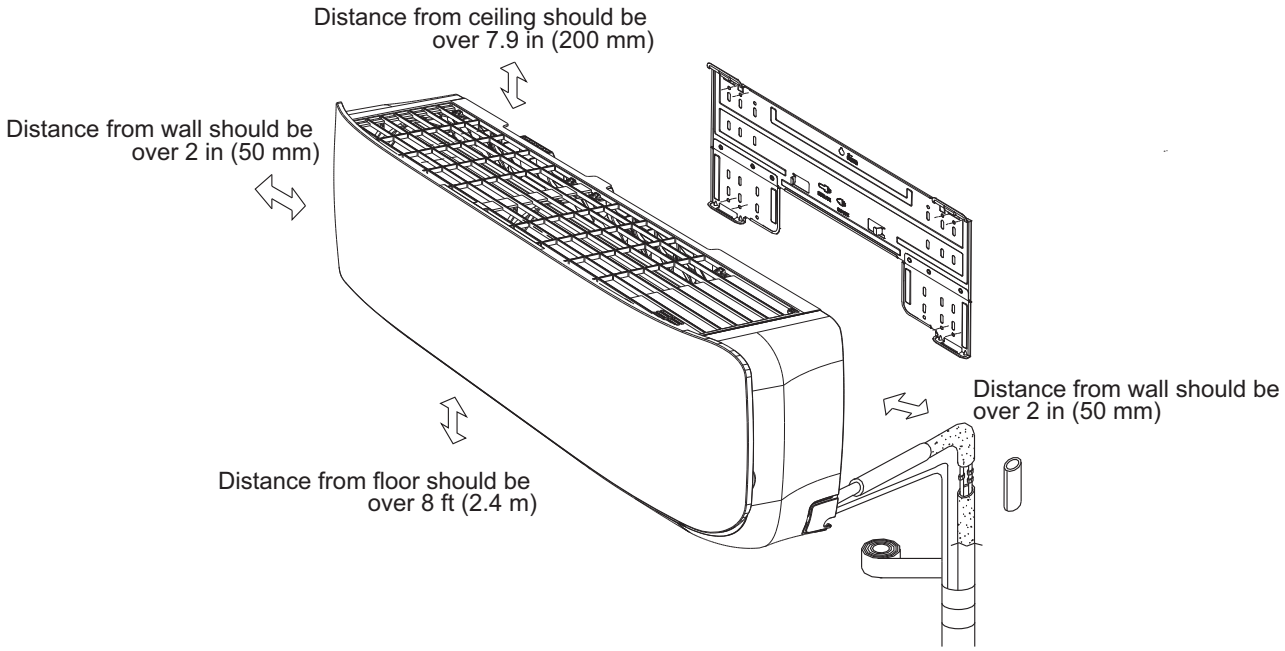
2-5. Models: WHS30WMA21S and WHS36WMA21S

Unit: in (mm)



2-6. Installation space requirement

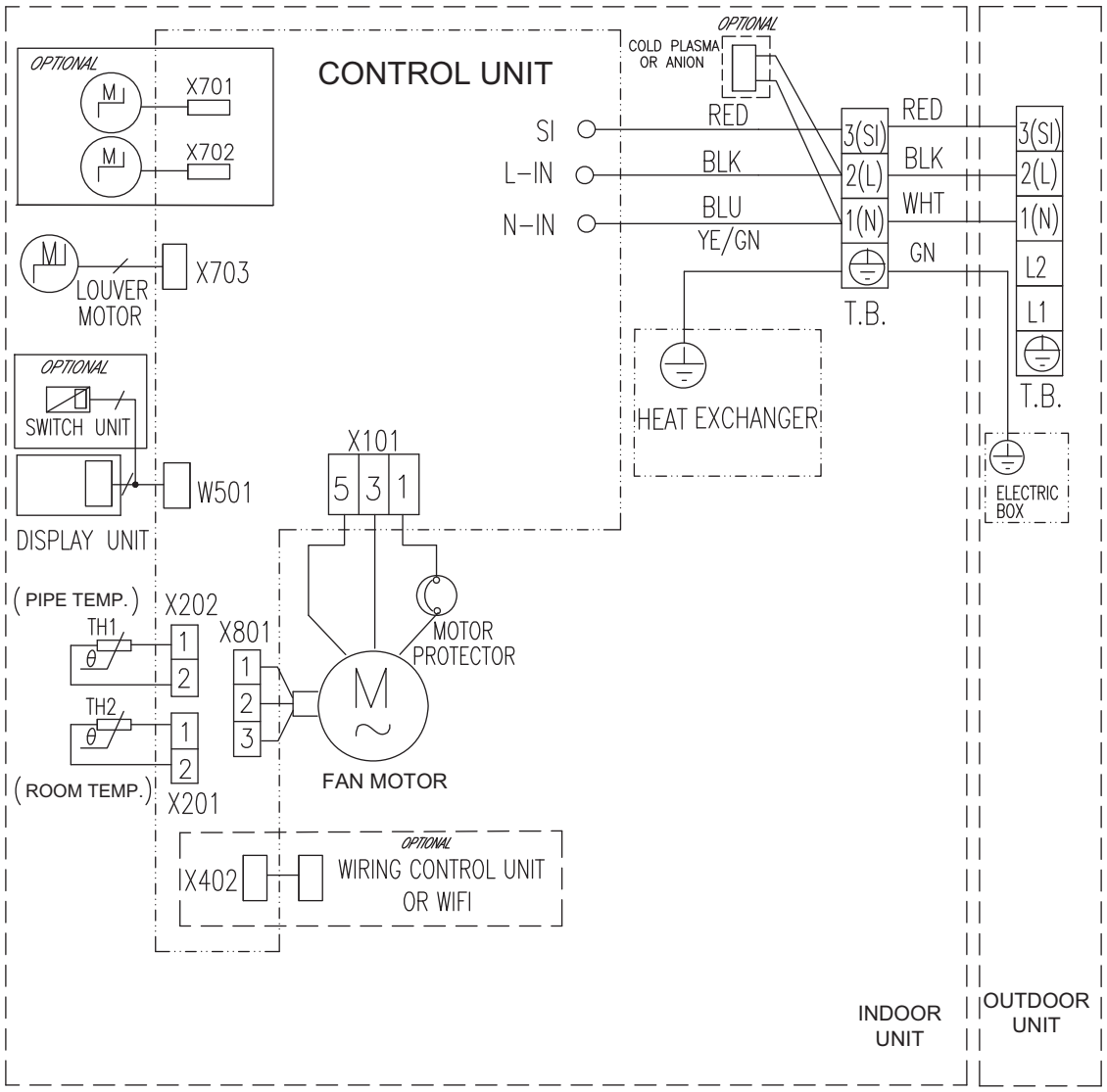
Provide sufficient installation space for product safety.



WALL MOUNTED
WHS09-36WMA

3. Wiring diagrams

3-1. Models: WHS09WMA21S, WHS12WMA21S, and WHS18WMA21S

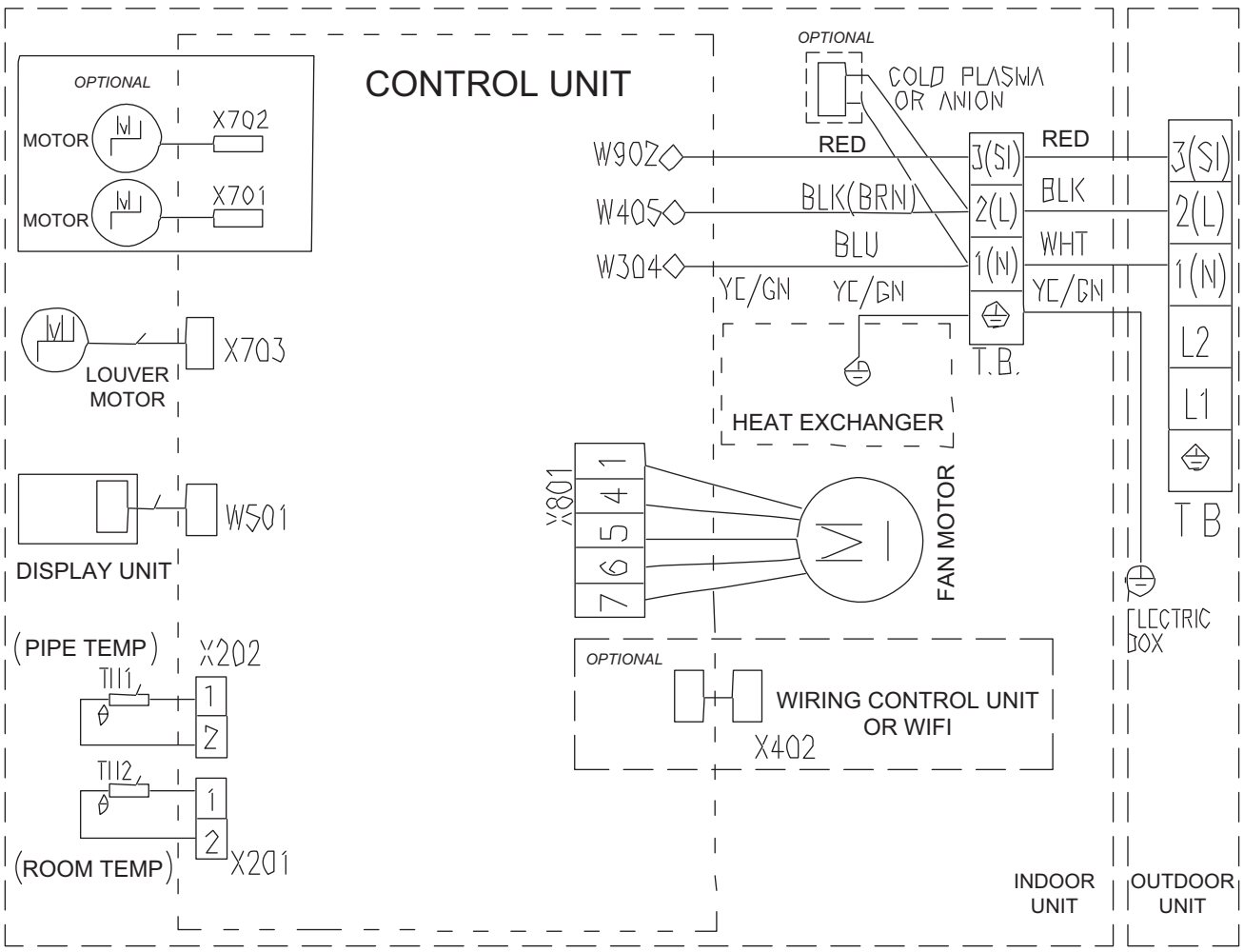


Temperature	0℃ 32°F	20℃ 68°F	30℃ 86°F
Thermistor (Pipe temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V
Thermistor (Room temp.)	15 kΩ 1.3 V	6.5 kΩ 2.2 V	4.5 kΩ 2.7 V

Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	R	Running coil	Black
2	——	———	——
3	S	Starting coil	Red
4	——	———	——
5	C	COM	White

3-2. Model: WHS24WMA21S



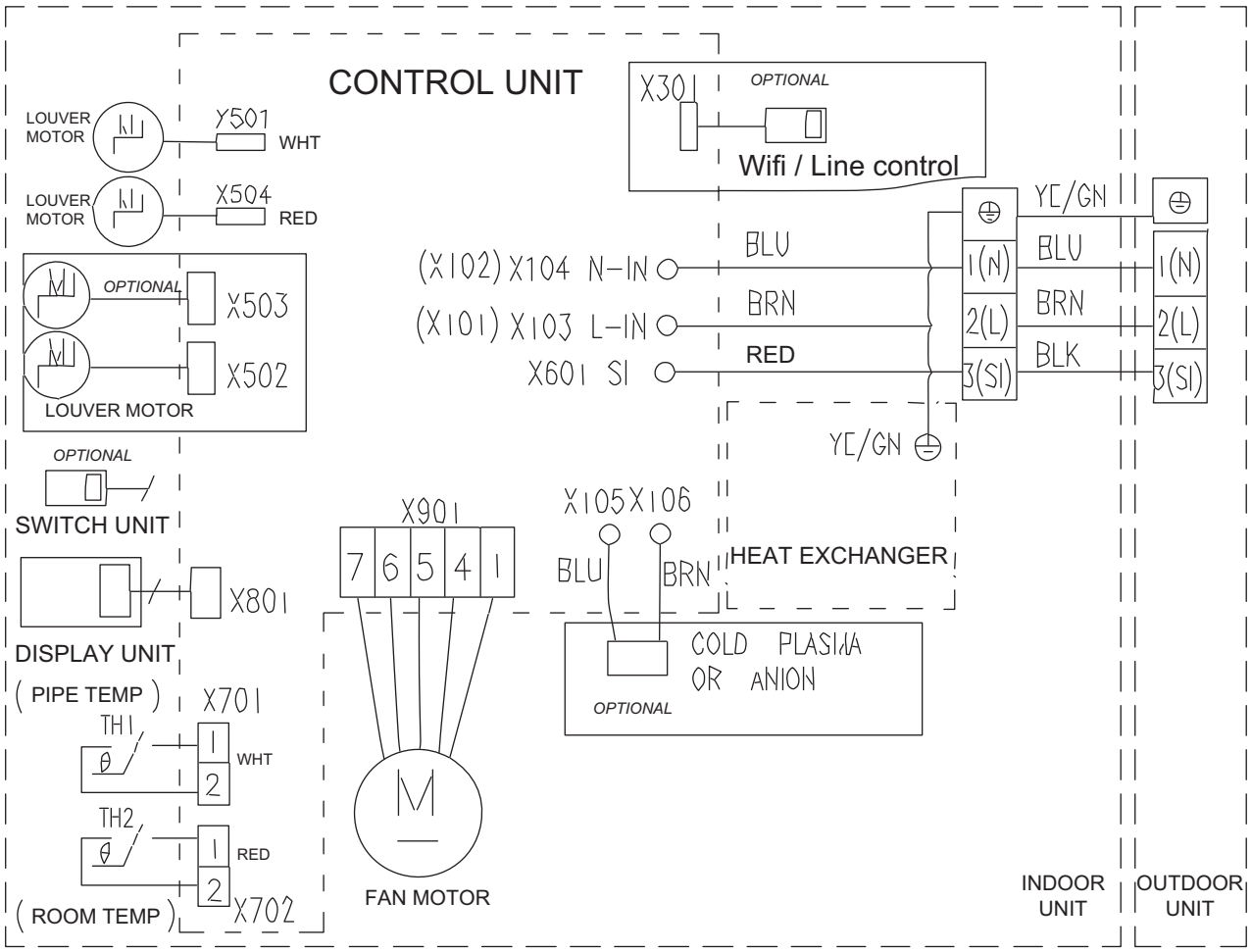
Temperature	0℃ 32°F	20℃ 68°F	30℃ 86°F
Thermistor (Pipe temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V
Thermistor (Room temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V

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	FG	Revolution pulse output	Blue
7	Vsp	Speed control voltage input	Yellow

WALL MOUNTED
WHS09-36WMA

3-3. Model: WHS30WMA21S



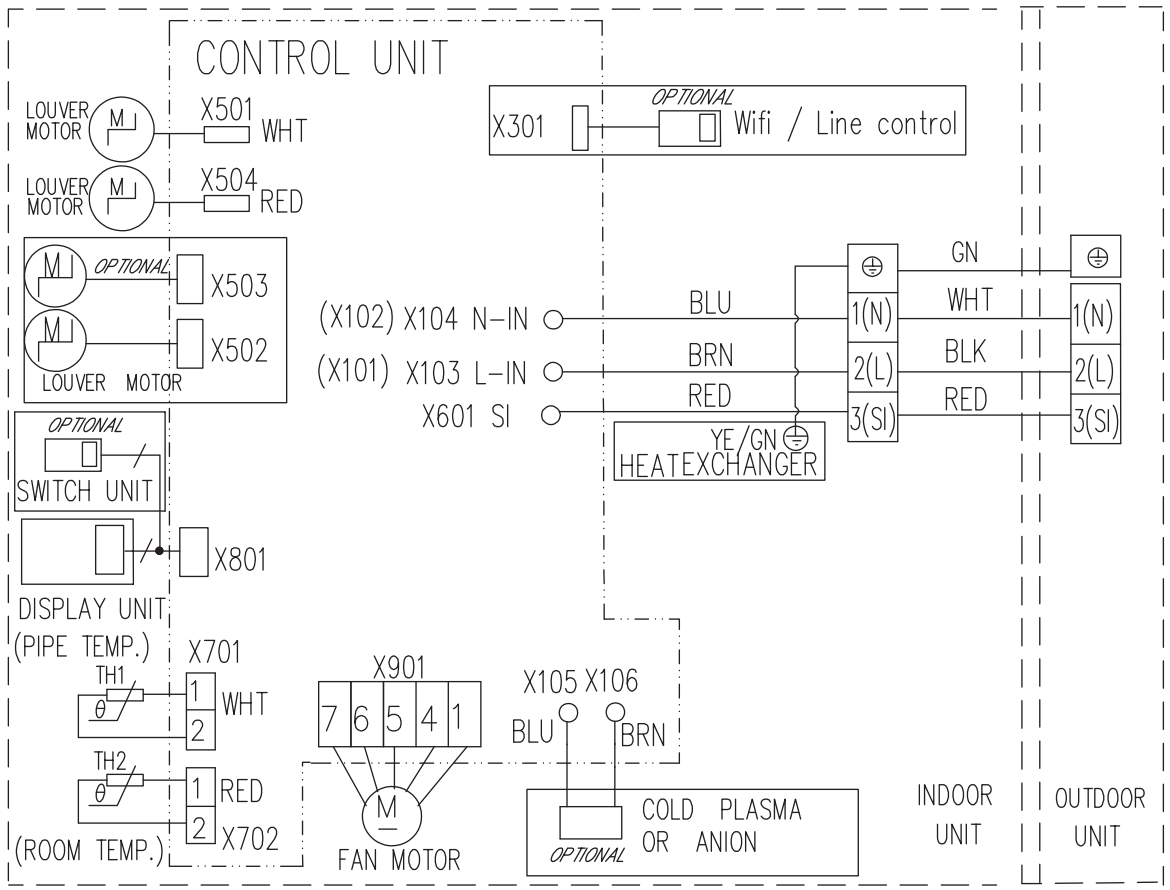
Temperature	0℃ 32°F	20℃ 68°F	30℃ 86°F
Thermistor (Pipe temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V
Thermistor (Room temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V

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	FG	Revolution pulse output	Blue
7	Vsp	Speed control voltage input	Yellow

WALL MOUNTED
WHS09-36WMA

3-4. Model: WHS36WMA21S

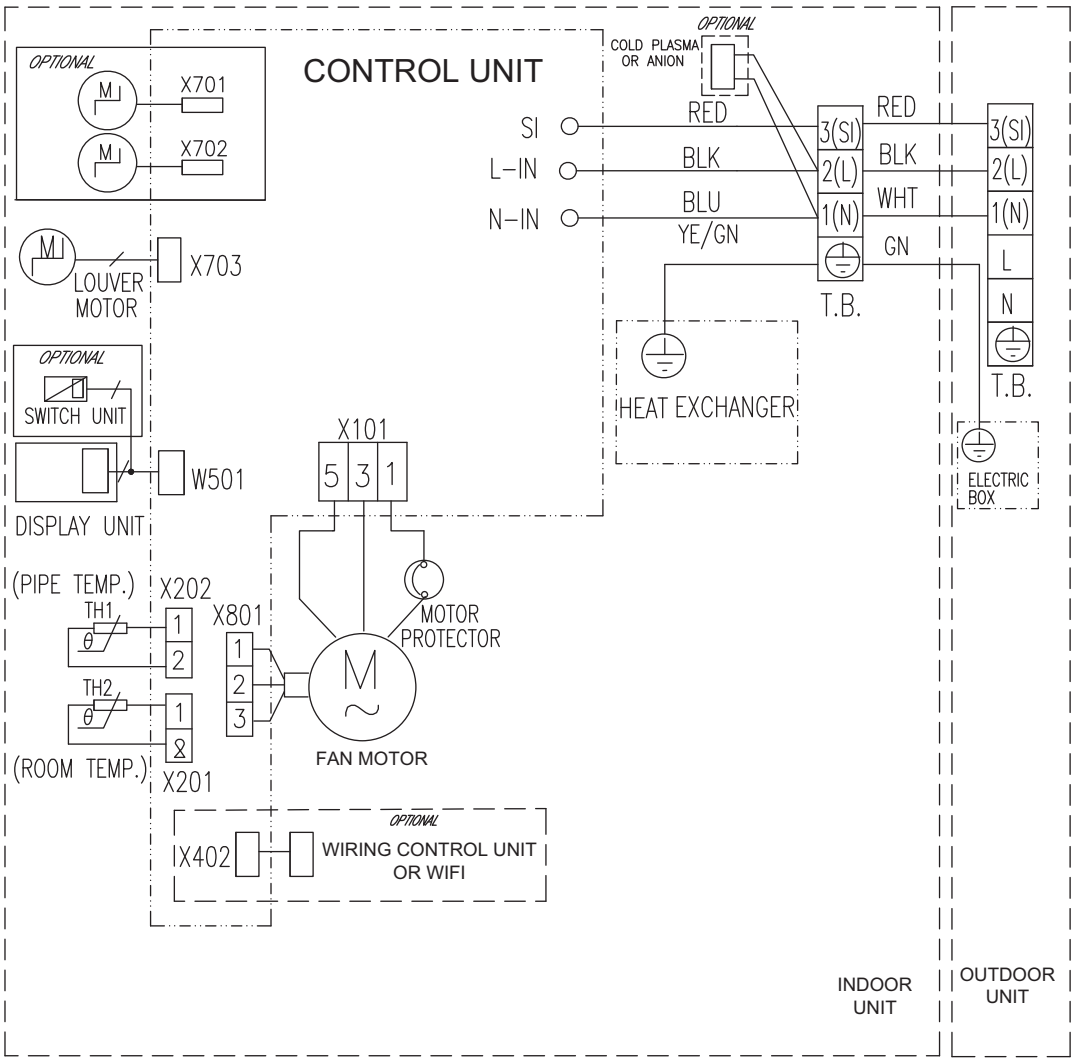


Temperature	0℃ 32°F	20℃ 68°F	30℃ 86°F
Thermistor (Pipe temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V
Thermistor (Room temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V

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	FG	Revolution pulse output	Blue
7	Vsp	Speed control voltage input	Yellow

3-5. Models: WHS09WMA11S and WHS12WMA11S



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

Fan motor

Pin No.	Terminal code	Function of terminal	Lead wire color
1	R	Running coil	Black
2	——	———	——
3	S	Starting coil	Red
4	——	———	——
5	C	COM	White

WALL MOUNTED
WHS09-36WMA

4. Capacity table

Capacity tables show each of following values calculated based on the outdoor temperature and the indoor temperature, under given Airflow Rate (AFR):

For cooling capacity: Total Capacity (TC), Sensible Heat Capacity (SHC), and Input Power (IP)

For heating capacity: Total Capacity (TC) and Input Power (IP)

4-1. Cooling capacity

■ Model: WHS09WMA21S

AFR	CFM	400

			Indoor temperature		
		°FDB	80		
		°FWB	67		
	°FDB	°FWB	TC	SHC	IP
			Btu/h		W
Outdoor temperature	32	28	9,775	6,339	580
	41	37	10,229	6,797	591
	50	47	10,761	7,431	598
	59	50	10,775	7,575	670
	67	53	10,932	7,800	737
	77	62	11,103	7,902	877
	87	69	11,406	8,107	1,092
	95	75	11,130	7,998	1,171
	104	78	10,666	7,800	1,266
	115	80	9,666	7,387	1,320

■ Model: WHS12WMA21S

AFR	CFM	412

			Indoor temperature		
		°FDB	80		
		°FWB	67		
	°FDB	°FWB	TC	SHC	IP
			Btu/h		W
Outdoor temperature	32	28	13,071	8,861	775
	41	37	14,313	9,557	868
	50	47	13,276	9,144	691
	59	50	13,419	9,240	773
	67	53	13,184	9,127	848
	77	62	12,931	9,045	949
	87	69	13,802	9,380	1,399
	95	75	14,221	9,751	1,533
	104	78	12,549	9,052	1,344
	115	80	11,632	8,687	1,466

■ Model: WHS18WMA21S

AFR	CFM	592

			Indoor temperature		
		°FDB	80		
		°FWB	67		
	°FDB	°FWB	TC	SHC	IP
			Btu/h		W
Outdoor temperature	32	28	16,784	11,560	971
	41	37	18,094	12,369	1,086
	50	47	18,739	12,822	1,218
	59	50	19,128	13,102	1,361
	67	53	18,002	12,730	1,169
	77	62	17,947	12,764	1,314
	87	69	18,920	13,170	1,857
	95	75	18,572	13,003	2,016
	104	78	17,954	12,754	2,209
	115	80	15,804	11,877	2,108

WALL MOUNTED
WHS09-36WMA

■ Model: WHS24WMA21S

AFR	CFM	636

			Indoor temperature		
		°FDB	80		
		°FWB	67		
Outdoor temperature	°FDB	°FWB	TC	SHC	IP
			Btu/h		W
	32	28	22,140	15,293	1,286
	41	37	29,149	19,319	1,665
	50	47	29,906	19,646	1,915
	59	50	30,350	19,841	2,125
	67	53	29,903	19,646	2,327
	77	62	28,401	18,940	2,551
	87	69	27,354	18,363	2,915
	95	75	26,470	18,302	3,217
	104	78	22,758	16,879	3,094
	115	80	18,343	14,750	2,803

■ Model: WHS30WMA21S

AFR	CFM	1,107

			Indoor temperature		
		°FDB	80		
		°FWB	67		
Outdoor temperature	°FDB	°FWB	TC	SHC	IP
			Btu/h		W
	5	3	22,588	16,941	708
	14	12	20,146	15,109	814
	23	21	22,893	17,170	991
	32	28	25,706	19,732	1,133
	41	37	28,835	20,912	1,277
	50	47	32,247	22,297	1,750
	59	50	32,547	22,407	1,955
	67	53	30,087	21,345	1,931
	77	62	30,947	21,721	2,542
	87	69	31,500	21,926	3,239
	95	75	30,524	21,182	3,541
	104	78	28,801	20,602	3,928
	115	80	25,648	19,483	3,843

■ Model: WHS36WMA21S

AFR	CFM	1,089

			Indoor temperature		
		°FDB	80		
		°FWB	67		
Outdoor temperature	°FDB	°FWB	TC	SHC	IP
			Btu/h		W
	5	3	23,721	18,041	1,099
	14	12	22,925	17,194	1,230
	23	21	24,558	18,419	1,345
	32	28	27,745	20,722	1,512
	41	37	30,933	22,552	1,661
	50	47	32,941	23,397	1,843
	59	50	33,122	24,720	2,135
	67	53	33,559	25,169	2,641
	77	62	34,980	26,585	3,020
	87	69	38,422	29,585	3,665
	95	75	35,027	27,321	4,198
	104	78	30,931	24,435	4,082
	115	80	27,590	22,072	3,950

■ Model: WHS09WMA11S

AFR	CFM	400

			Indoor temperature		
		°FDB	80		
		°FWB	67		
Outdoor temperature	°FDB	°FWB	TC	SHC	IP
			Btu/h		W
	5	3	8,261	6,196	205
	14	12	7,368	5,526	216
	23	21	8,373	6,280	228
	32	28	9,015	7,121	255
	41	37	9,595	7,336	346
	50	47	9,868	7,493	436
	59	50	10,260	7,588	489
	67	53	10,942	7,861	684
	77	62	11,144	7,902	813
	87	69	11,533	8,124	1,051
	95	75	11,164	7,957	1,138
	104	78	10,413	7,643	1,197
	115	80	8,585	6,920	1,130

WALL MOUNTED
WHS09-36WMA

■ Model: WHS12WMA11S

AFR	CFM	412

			Indoor temperature		
		°FDB	80		
		°FWB	67		
Outdoor temperature	°FDB	°FWB	TC	SHC	IP
			Btu/h		W
	5	3	9,935	7,452	273
	14	12	8,861	6,646	288
	23	21	10,070	7,552	303
	32	28	11,792	8,738	379
	41	37	11,952	8,977	519
	50	47	12,416	9,148	563
	59	50	12,836	9,294	721
	67	53	13,331	9,339	983
	77	62	13,242	9,441	1,030
	87	69	14,119	9,697	1,456
	95	75	13,426	9,403	1,516
	104	78	11,069	8,441	1,303
	115	80	7,247	6,756	998

WALL MOUNTED
WHS09-36WMA

4-2. Heating capacity

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

■ Model: WHS09WMA21S

AFR	CFM	400

		Indoor temperature		
		°FDB	70	
		°FWB	60	
Outdoor temperature	°FDB	°FWB	TC	IP
			Btu/h	W
	-5	-7	3,845	939
	5	3	4,599	913
	14	12	7,046	1,079
	23	19	7,561	1,137
	32	28	7,871	931
	47	43	11,116	1,091
	59	50	10,768	862
	68	59	8,115	796
	75	65	5,892	578

■ Model: WHS12WMA21S

AFR	CFM	412

		Indoor temperature		
		°FDB	70	
		°FWB	60	
Outdoor temperature	°FDB	°FWB	TC	IP
			Btu/h	W
	-5	-7	5,254	1,080
	5	3	6,589	1,140
	14	12	8,452	1,267
	23	19	10,137	1,358
	32	28	10,065	1,237
	47	43	14,811	1,557
	59	50	12,201	969
	68	59	10,812	1,137
	75	65	7,850	825

■ Model: WHS18WMA21S

AFR	CFM	592

		Indoor temperature		
		°FDB	70	
		°FWB	60	
Outdoor temperature	°FDB	°FWB	TC	IP
			Btu/h	W
	-5	-7	8,571	1,669
	5	3	10,905	1,800
	14	12	13,897	1,976
	23	19	15,429	2,062
	32	28	16,197	1,931
	47	43	21,752	2,216
	59	50	19,363	1,563
	68	59	15,879	1,618
	75	65	11,528	1,174

■ Model: WHS24WMA21S

AFR	CFM	636

		Indoor temperature		
		°FDB	70	
		°FWB	60	
Outdoor temperature	°FDB	°FWB	TC	IP
			Btu/h	W
	-5	-7	11,567	2,345
	5	3	15,606	2,617
	14	12	17,077	2,613
	23	19	19,312	2,760
	32	28	20,885	2,568
	47	43	23,365	2,522
	59	50	26,678	2,504
	68	59	17,057	1,841
	75	65	12,384	1,337

WALL MOUNTED
WHS09-36WMA

■ Model: WHS30WMA21S

AFR	CFM	1,107

			Indoor temperature	
		°FDB	70	
		°FWB	60	
Outdoor temperature	°FDB	°FWB	TC	IP
			Btu/h	W
	-5	-7	15,347	2,897
	5	3	18,155	2,826
	14	12	20,315	2,979
	23	19	24,167	3,221
	32	28	27,272	3,175
	47	43	32,431	3,401
	59	50	28,340	2,365
	68	59	23,675	2,483
	75	65	17,188	1,803

■ Model: WHS36WMA21S

AFR	CFM	1,089

			Indoor temperature	
		°FDB	70	
		°FWB	60	
Outdoor temperature	°FDB	°FWB	TC	IP
			Btu/h	W
	-5	-7	16,030	2,982
	5	3	19,387	3,025
	14	12	21,580	3,188
	23	19	26,205	3,425
	32	28	29,560	3,381
	47	43	37,634	3,587
	59	50	35,870	3,354
	68	59	30,271	3,120
	75	65	24,805	2,852

■ Model: WHS09WMA11S

AFR	CFM	400

			Indoor temperature	
		°FDB	70	
		°FWB	60	
Outdoor temperature	°FDB	°FWB	TC	IP
			Btu/h	W
	-5	-7	4,947	1,140
	5	3	5,452	1,069
	14	12	7,080	1,170
	23	19	9,165	1,310
	32	28	9,455	1,318
	47	43	12,491	1,259
	59	50	11,191	892
	68	59	9,119	919
	75	65	6,620	667

■ Model: WHS12WMA11S

AFR	CFM	412

			Indoor temperature	
		°FDB	70	
		°FWB	60	
Outdoor temperature	°FDB	°FWB	TC	IP
			Btu/h	W
	-5	-7	5,695	1,141
	5	3	6,889	1,199
	14	12	8,356	1,283
	23	19	10,680	1,442
	32	28	10,666	1,455
	47	43	13,239	1,289
	59	50	13,334	1,195
	68	59	9,664	941
	75	65	7,016	683

WALL MOUNTED
WHS09-36WMA

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℃(61°F) set temp automatically ; Fast heating operates at auto fan speed with 30℃(86°F) set temp automatically)

8 ON TIMER
Used to set or cancel the timer operation.

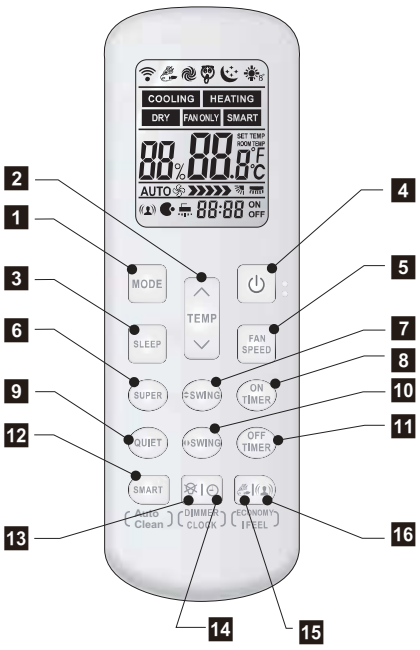
9 QUIET
Used to set or cancel Quiet Mode operation.

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℃ HEAT(optional)
Used to start or stop 8℃ 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.

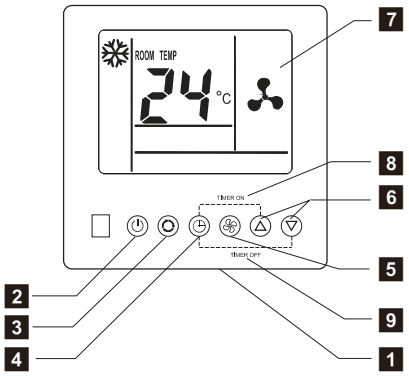
16 IFEEL
Press to set IFEEL Mode operation. In IFEEL mode,the Air Conditioner operates basis temperature sensor fitted in remote instead of machine, Advice to use IFEEL mode and the remote put where the indoor unit receive signal easily.Press this button above 5 seconds, start or stop IFEEL mode.

Indication symbols on LCD:

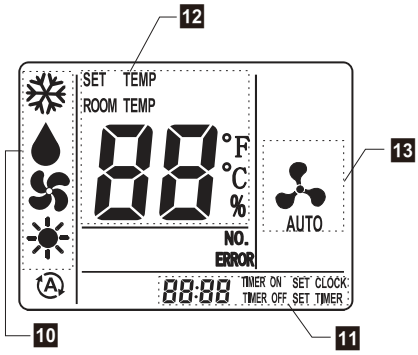
COOLING Cooling indicator	DRY Dry indicator	FAN ONLY Fan only indicator	HEATING Heating indicator	SMART Smart indicator
Auto Auto fan speed	Higher fan speed	High fan speed	Medium fan speed	Low fan speed
Lower fan speed	Quiet indicator	Economy indicator	Super indicator	Sleep indicator
IFEEL	Display temperature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

WALL MOUNTED
WHS09-36WMA

5-2. Wired remote controller



LCD screen



NOTE: Functions may differ by type of the indoor unit. For details, refer to the operation manual.

1 Room temperature sensor

A temperature sensor inside the wired remote control switch is set to sense room temperature.

2 ON/OFF button

Starts and stops operation.

3 MODE selection button

Switches operation mode (COOL, DRY, and HEAT).

4 CLOCK button

Activates clock mode (the time flashes on the display) Press ▽ or △ button to adjust the time.

5 FAN speed button

Selects the fan speed (AUTO, HIGH, MED, and LOW).

6 SET TEMP. (temperature) (▽ / △) button

- Sets desired temperature.
- Sets remote controller custom code.

7 LCD screen

8 Timer on

Press the ◷ button and the △ button at the same time to activate the timer on mode. (“on” flashes on the LCD screen.) Press the ▽ or △ button to adjust the time until desired time displayed on LCD screen. Press the ◷ button and △ button again to confirm it (“on” stops flashing.)

9 Timer off

Press the ◷ button and the ▽ button at the same time to activate the timer off mode. (“off” flashes on the LCD screen.) Press the ▽ or △ button to adjust the time until desired time displayed on LCD screen. Press the ◷ button and △ button again to confirm it (“off” stops flashing.)

10 Operation mode

: Cooling mode, : Dry mode, : Fan mode, : Heating mode, Ⓐ: Auto mode

11 Display timer setting

12 Display room temperature and setting temperature

13 Fan speed display

AUTO: AUTO, : HIGH, : MED, : LOW

WALL MOUNTED
WHS09-36WMA

6. Accessories

Part name	Q'ty	Part name	Q'ty
Remote controller instructions	1	Drain connector for outdoor unit	1
Use and installation instructions	1	Flare nuts	4
Remote controller	1	Bag of wall anchors and screws	1
Remote controller holder	1	Screw for installations	5
AAA battery	2	Screw cover	09/12 model: 1 18/24 model: 3 30/36 model: 4
Foam insulation	1	Warranty Card	1

WALL MOUNTED
WHS09-36WMA

Part 2. OUTDOOR UNIT

SINGLE TYPE:

WHS09SZA21S
WHS12SZA21S
WHS18SZA21S
WHS24SZA21S
WHS30SZA21S
WHS36SZA21S
WHS09SZA11S
WHS12SZA11S

1. Specifications

Type				Inverter heat pump		
Model name				**WHS09SZA21S**	**WHS12SZA21S**	**WHS18SZA21S**
Power supply				208/230 V ~ 60 Hz		
Available voltage range				198—253 V		
Fan	Airflow rate		CFM (m^3/h)	942 (1,600)	942 (1,600)	1,177 (2,000)
	Type × Qty			Propeller fan × 1		
	Motor output		W	28		41
Sound pressure level*			dB (A)	54		56
Heat exchanger type		Dimensions (H × W × D)	in (mm)	18-3/16 × 27-3/8 × 1- 7/16 (462 × 695 × 36.4)	18-3/16 × 26-15/16 × 11/16 (462 × 684 × 18.2) 18-3/16 × 25-13/16 × 11/16 (462 × 655 × 18.2)	21-1/2 × 33-1/8 × 11/16 (546 × 842 × 18.2) 21-1/2 × 32 × 11/16 (546 × 813 × 18.2)
		Fin pitch	FPI	18		
		Rows × Stages		2 × 22		2 × 26
		Pipe type		Copper		
		Fin type	Type (Material)	Aluminum		
Compressor	Type			DC rotary		
Refrigerant		Type		R410A		
		Charge	lb oz	1 lb 13 oz	2 lb 3 oz	3 lb 1 oz
			g	830	1,000	1,400
Dimensions (H × W × D)	Net		in (mm)	19 × 28-1/8 × 9-7/16 (482 × 715 × 240)		23-1/16 × 31-7/8 × 11 (585 × 810 × 280)
	Gross			20-7/8 × 32-11/16 × 13-3/8 (530 × 830 × 340)		25-3/16 × 37 × 15-3/16 (640 × 940 × 385)
Weight	Net		lb (kg)	55 (25)	60 (27)	86 (39)
	Gross			60 (27)	66 (30)	93 (42)
Connection pipe	Size	Liquid	in (mm)	Ø 1/4 (Ø 6.35)		
		Gas		Ø 3/8 (Ø 9.52)		Ø 1/2 (Ø 12.7)
	Method			Flare		
	Pre-charge length		ft (m)	25 (7.5)		
	Max. length			66 (20)		
Operation range		Cooling	°F (°C)	32 to 115 (0 to 46)		
		Heating		-4 to 75 (-20 to 24)		

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°CWB), and outdoor temperature of 47°FDB (8.33°CDB) / 43°FWB (6.11°CWB).
  - Pipe length: 24 ft 6 in (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.
- *: 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.

OUTDOOR UNIT
WHS09-36SZA

Type				Inverter heat pump		
Model name				**WHS24SZA21S**	**WHS30SZA21S**	**WHS36SZA21S**
Power supply				208/230 V ~ 60 Hz		
Available voltage range				198—253 V		
Fan	Airflow rate		CFM (m^3/h)	1,648 (2,800)	2,354 (4,000)	
	Type × Qty			Propeller fan × 1		
	Motor output		W	61	70	102
Sound pressure level*			dB (A)	58	60	
Heat exchanger type		Dimensions (H × W × D)	in (mm)	24-13/16 × 35-1/4 × 11/16 (630 × 895 × 18.19) 24-13/16 × 34-1/8 × 11/16 (630 ×867 × 18.19)	29-3/4 × 38-3/16× 11/16 (756 × 970 × 18.19) 29-3/4 × 37-1/16 × 11/16 (756 × 942 × 18.19) 29-3/4 × 37-1/16 × 11/16 (756 × 942 × 18.19)	29-3/4 × 38-3/16× 11/16 (756 × 970 × 18.19) 29-3/4 × 37-1/16 × 11/16 (756 × 942 × 18.19) 29-3/4 × 37-1/16 × 11/16 (756 × 942 × 18.19)
		Fin pitch	FPI	18	16	
		Rows × Stages		2 × 30	2 × 36	3 × 36
		Pipe type		Copper		
		Fin type	Type (Material)	Aluminum		
Compressor	Type			DC rotary		
Refrigerant		Type		R410A		
		Charge	lb oz	3 lb 9 oz	4 lb 9 oz	5 lb 1 oz
			g	1,630	2,070	2,300
Dimensions (H × W × D)	Net		in (mm)	25-9/16 × 33-7/8 × 12-3/16 (650 × 860 × 310)	31-5/16 × 34-13/16 × 14-7/16 (795 × 885 × 366)	
	Gross			28-3/4 × 39-3/16 × 17-1/2 (730 × 995 × 445)	35-1/16 × 41-5/16 × 19-11/16 (890 × 1,050 × 500)	
Weight	Net		lb (kg)	110 (50)	128 (58)	141 (64)
	Gross			119 (54)	139 (63)	152 (69)
Connection pipe	Size	Liquid	in (mm)	Ø 3/8 (Ø 9.52)		
		Gas		Ø 5/8 (Ø 15.88)		
	Method			Flare		
	Pre-charge length		ft (m)	25 (7.5)		
	Max. length			66 (20)		
Operation range		Cooling	°F (°C)	32 to 115 (0 to 46)	5 to 115 (-15 to 46)	
		Heating		-4 to 75 (-20 to 24)		

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°CWB), and outdoor temperature of 47°FDB (8.33°CDB) / 43°FWB (6.11°CWB).
  - Pipe length: 24 ft 6 in (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.
- *: 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.

OUTDOOR UNIT
WHS09-36SZA

Type				Inverter heat pump	
Model name				**WHS09SZA11S**	**WHS12SZA11S**
Power supply				115 V ~ 60 Hz	
Available voltage range				103.5—126.5 V	
Fan	Airflow rate		CFM (m^3/h)	942 (1,600)	
	Type × Qty			Propeller fan × 1	
	Motor output		W	30	
Sound pressure level*			dB (A)	53	
Heat exchanger type		Dimensions (H × W × D)	in (mm)	18-3/16 × 27-3/8 × 11/16 (462 × 695 × 18.2) 18-3/16 × 15-3/4 × 11/16 (462 × 400 × 18.2)	18-3/16 × 27-3/8 × 1-7/16 (462 × 695 × 36.4)
		Fin pitch	FPI	18	
		Rows × Stages		1.5 × 22	2 × 22
		Pipe type		Copper	
		Fin type	Type (Material)	Aluminum	
Compressor	Type			DC rotary	
Refrigerant		Type		R410A	
		Charge	lb oz	1 lb 14 oz	2 lb 3 oz
			g	840	1,000
Dimensions (H × W × D)	Net		in (mm)	19 × 28-1/8 × 9-7/16 (482 × 715 × 240)	
	Gross			20-7/8 × 32-11/16 × 13-3/8 (530 × 830 × 340)	
Weight	Gross		lb (kg)	66 (30)	71 (32)
Connection pipe	Size	Liquid	in (mm)	Ø 1/4 (Ø 6.35)	
		Gas		Ø 3/8 (Ø 9.52)	
	Method			Flare	
	Pre-charge length		ft (m)	25 (7.5)	
	Max. length			66 (20)	
Operation range		Cooling	°F (°C)	5 to 115 (-15 to 46)	
		Heating		-4 to 75 (-20 to 24)	

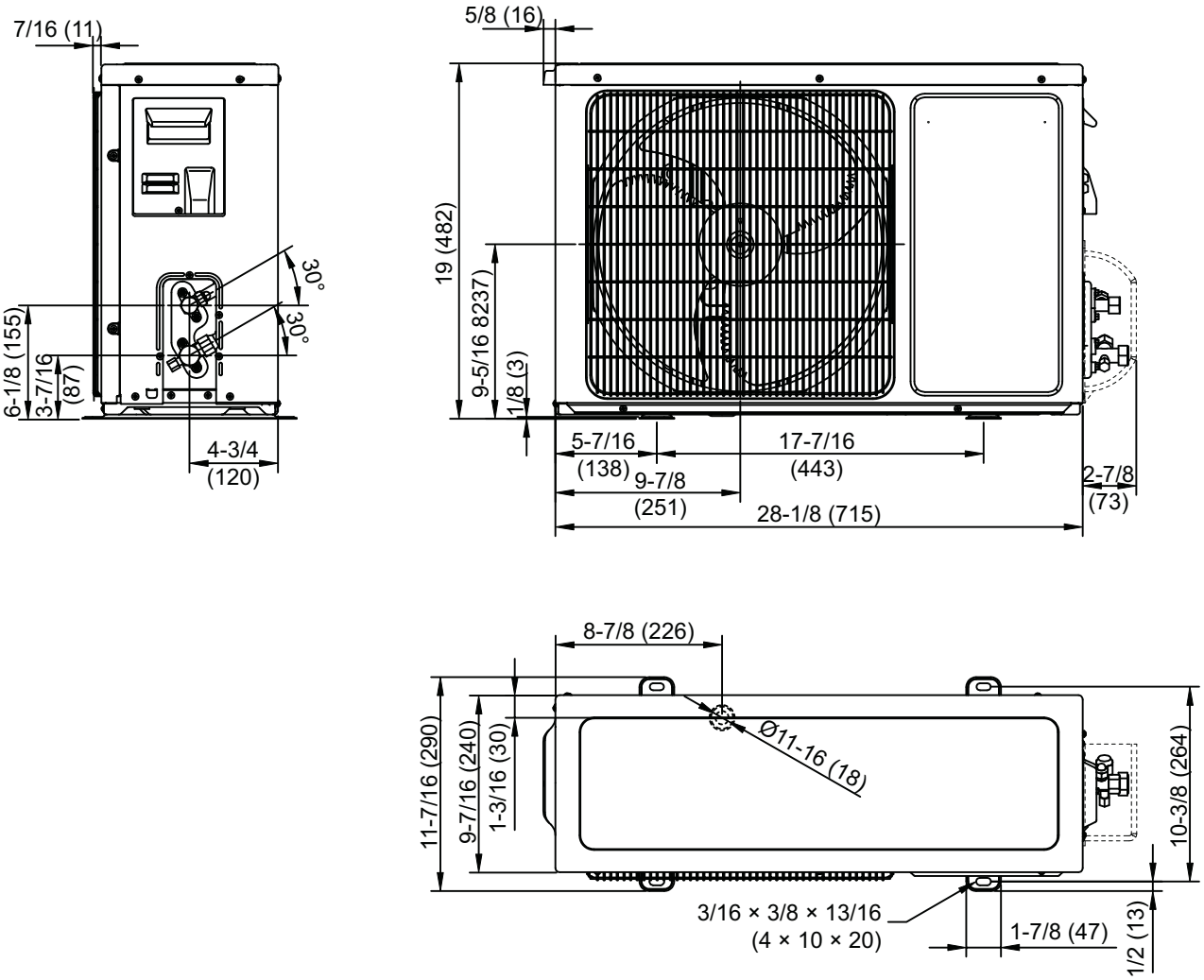
NOTES:

- 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°CWB), and outdoor temperature of 47°FDB (8.33°CDB) / 43°FWB (6.11°CWB).
  - Pipe length: 24 ft 6 in (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.
- *: 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.

2. Dimensions

2-1. Models: WHS09SZA21S, WHS12SZA21S, WHS09SZA11S, and WHS12SZA11S

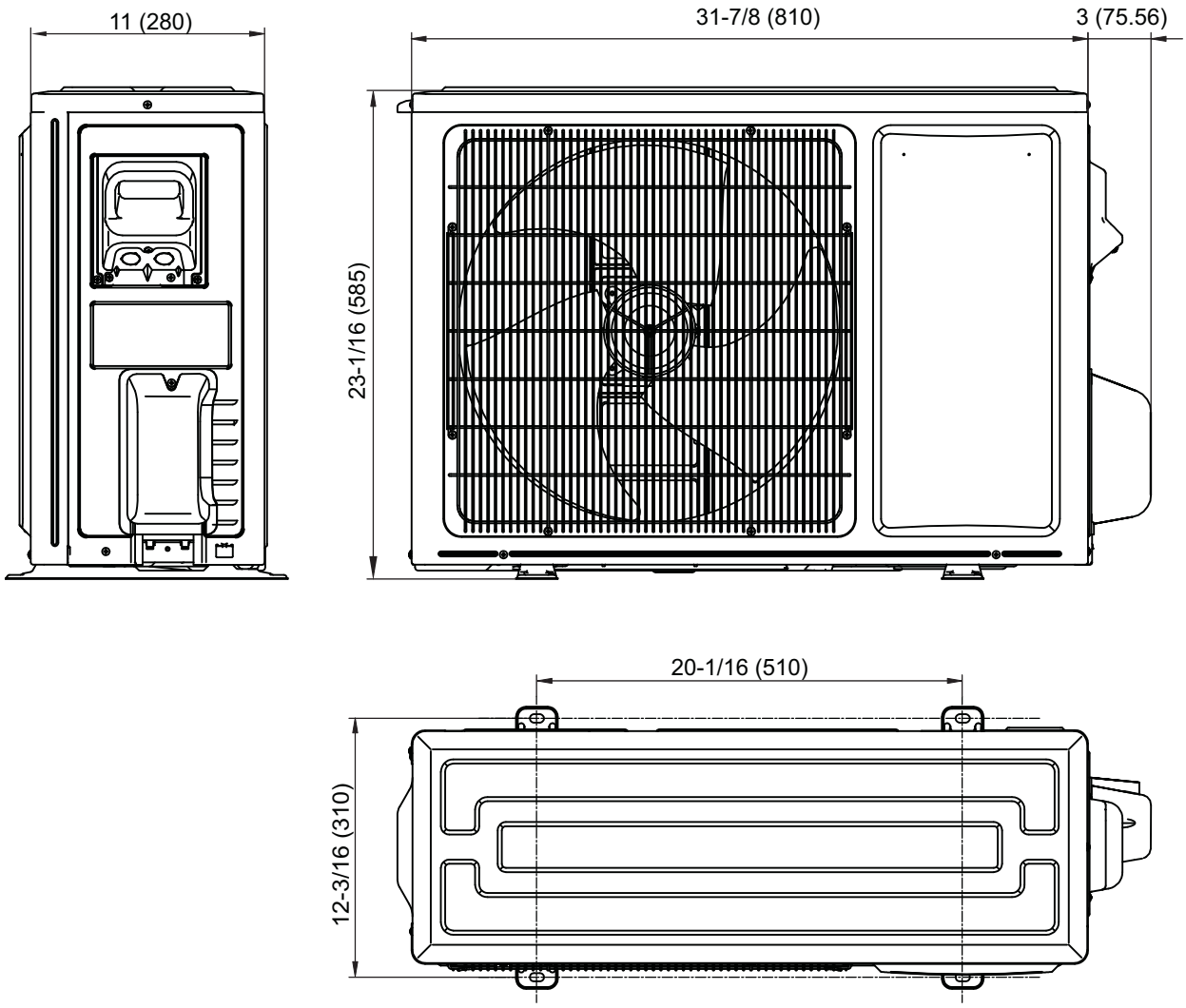
Unit: in (mm)



OUTDOOR UNIT
WHS09-36SZA

2-2. Model: WHS18SZA21S

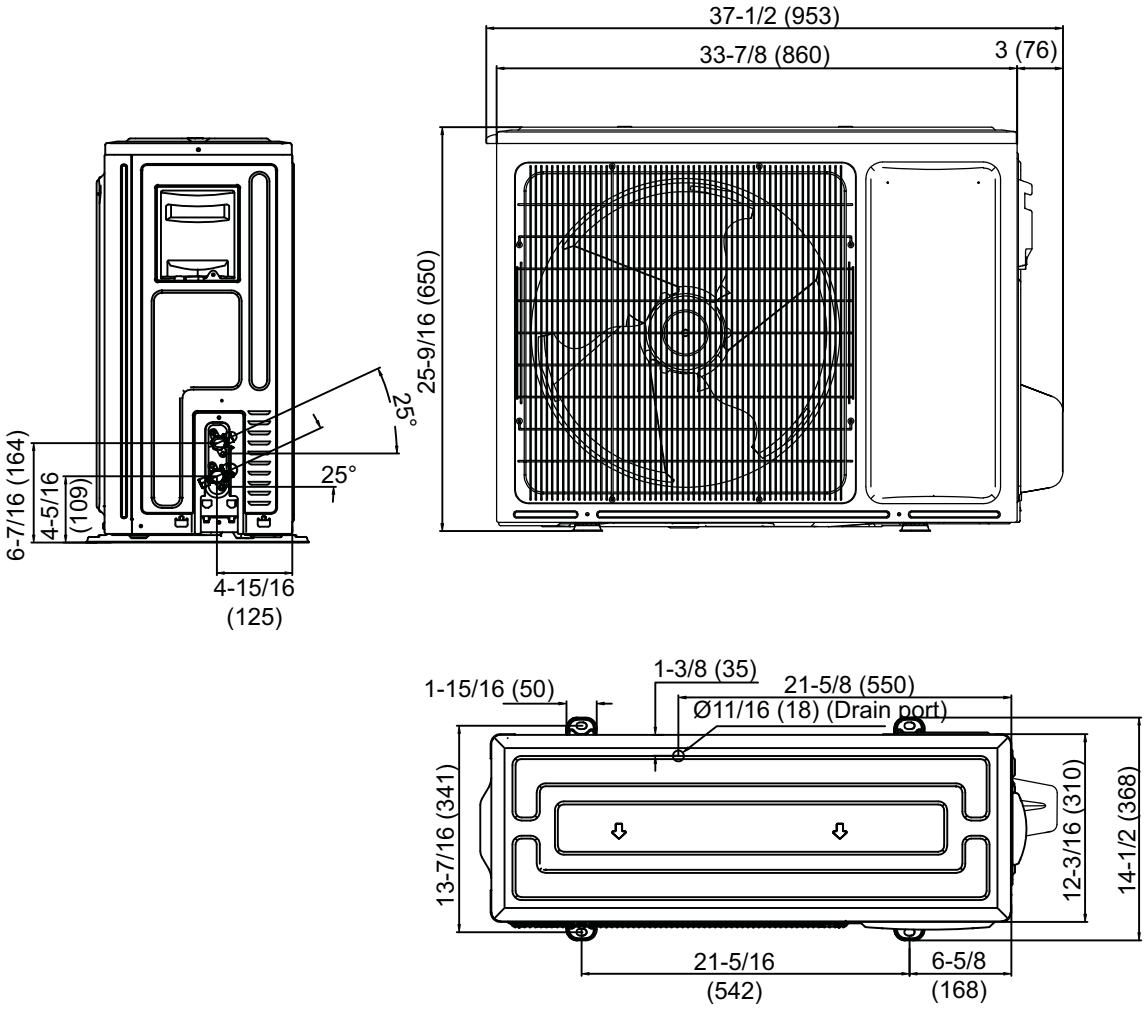
Unit: in (mm)



OUTDOOR UNIT
WHS09-36SZA

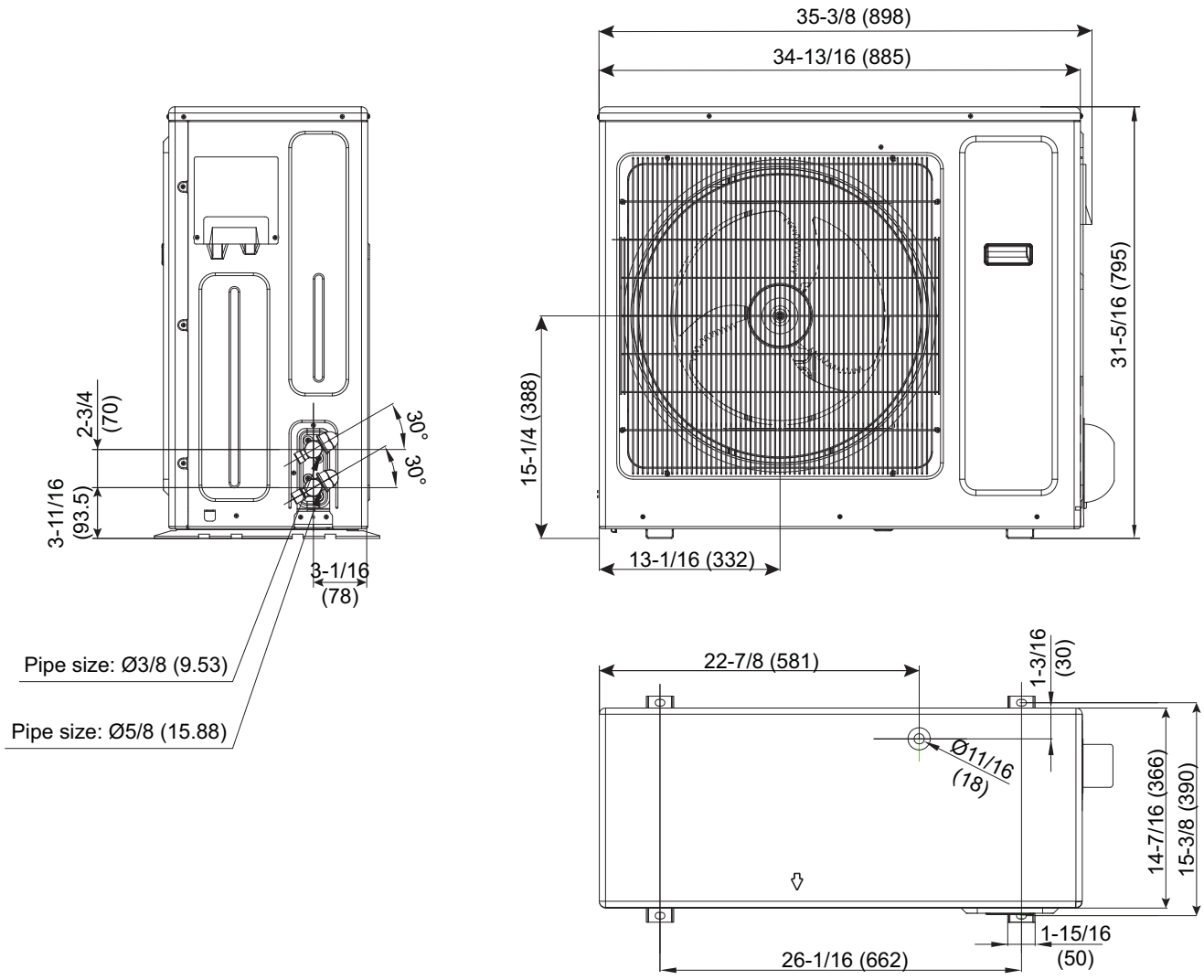
2-3. Model: WHS24SZA21S

Unit: in (mm)



2-4. Models: WHS30SZA21S and WHS36SZA21S

Unit: in (mm)



OUTDOOR UNIT
WHS09-36SZA

OUTDOOR UNIT
WHS09-36SZA

3. Installation space

3-1. Models: WHS09SZA21S, WHS12SZA21S, WHS18SZA21S, WHS24SZA21S, WHS30SZA21S, WHS36SZA21S, WHS09SZA11S, and WHS12SZA11S

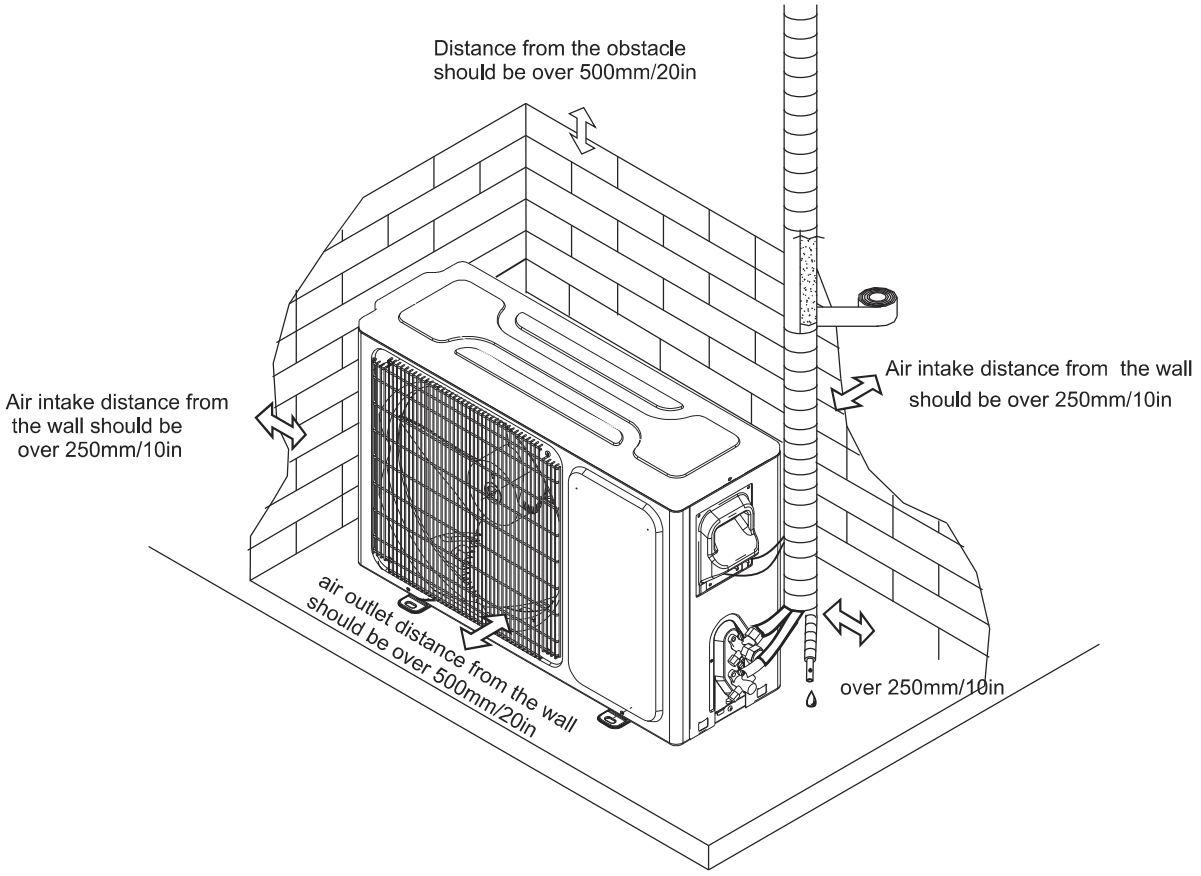
■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

Keep the space shown in the installation examples.

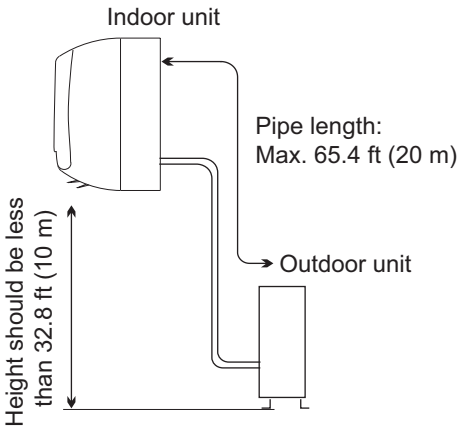
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.



OUTDOOR UNIT
WHS09-36SZA

Site for installing the indoor unit

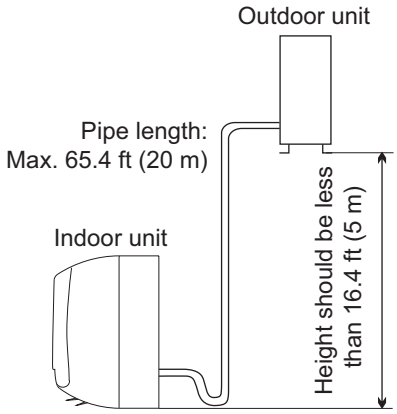
- Where there is no obstruction near the air outlet and air can be easily blown to every corner.
- Where piping and wall hole can be easily arranged.
- Keep the required space from the unit to the ceiling and wall according to the diagram on previous page.
- Where the air filter can be easily removed.
- Keep the unit and remote controller 3.28 ft (1 m) or more apart from television, radio etc.
- Keep as far as possible from fluorescent lamps.
- Do not put anything near the air inlet to obstruct it from air absorption.
- Install on a wall that is strong enough to bear the weight of the unit.
- Install in a place that will not increase operation noise and vibration.
- Keep away from direct sunlight and heating sources. Do not place flammable materials or combustion apparatuses on the top of the unit.



Indoor unit is higher than outdoor unit

Site for installing the outdoor unit

- Where it is convenient to install and well ventilated.
- Avoid installing it where flammable gas could leak.
- Keep the required distance apart from the wall.
- Keep the outdoor unit away from greasy dirt, vulcanization gas exit.
- Avoid installing it by the roadside where there is a risk of muddy water.
- A fixed base where it is not subject to increased operation noise.
- Where there is not any blockage of the air outlet.
- Avoid installing under direct sunlight, in an aisle or sideway, or near heat sources and ventilation fans. Keep away from flammable materials, thick oil fog, and wet or uneven places.
- In case the pipe length is more than 24.6 ft (7.5 m), the refrigerant should be charged additionally, according to the table below.

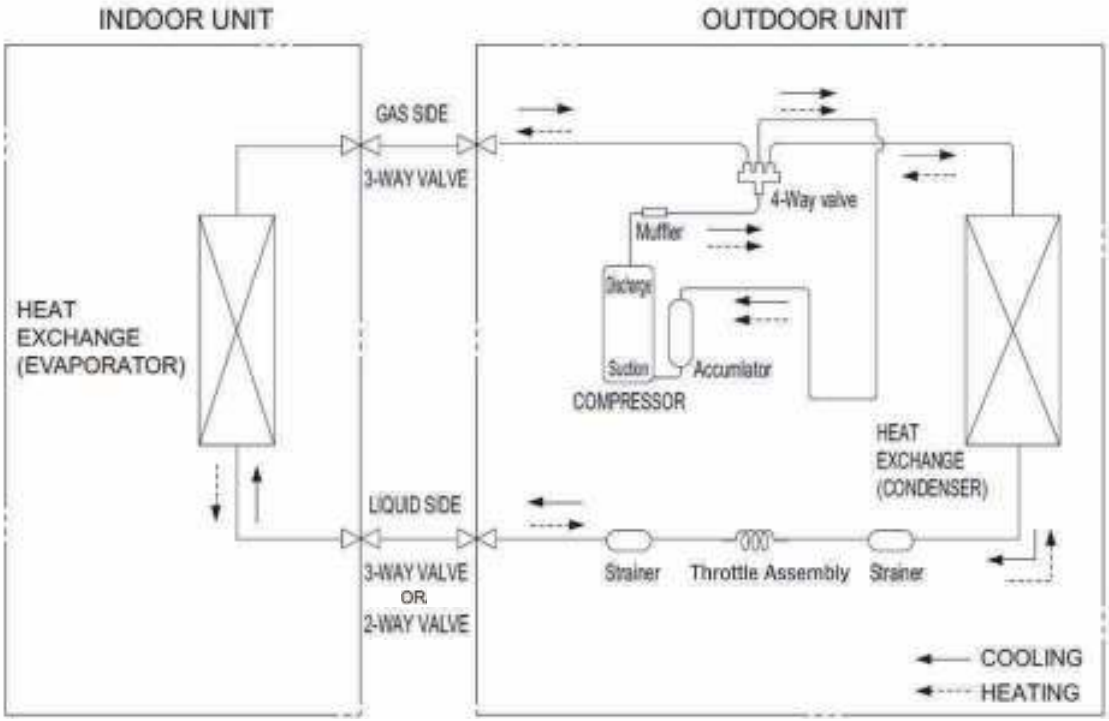


Outdoor unit is higher than indoor unit

Model	Required amount of additional refrigerant (oz/ft)
WHS09SZA21S	0.215
WHS12SZA21S	
WHS18SZA21S	
WHS24SZA21S	0.323
WHS30SZA21S	0.430
WHS36SZA21S	

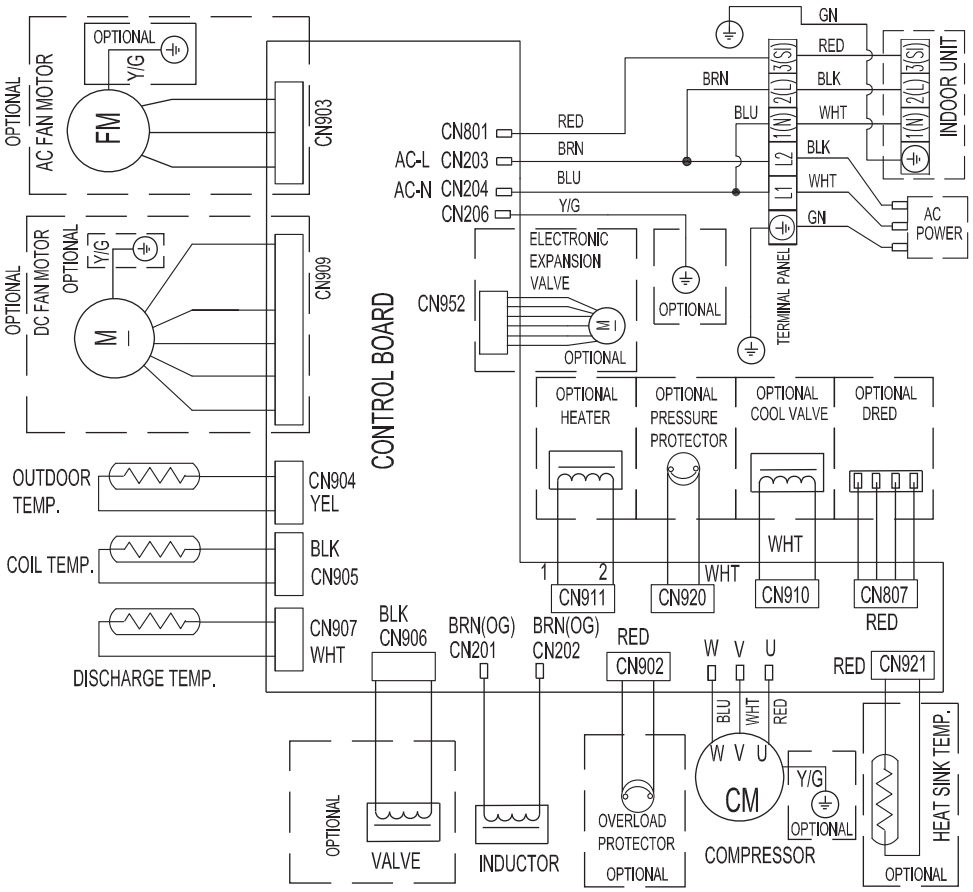
4. Refrigerant circuit

4-1. Models: WHS09SZA21S, WHS12SZA21S, WHS18SZA21S, WHS24SZA21S, WHS30SZA21S, WHS36SZA21S, WHS09SZA11S, and WHS12SZA11S



5. Wiring diagrams

5-1. Models: WHS09SZA21S, WHS12SZA21S, WHS18SZA21S, WHS24SZA21S, WHS30SZA21S, and WHS36SZA21S



Compressor
09 model: 2.35Ω
12 model: 1.7 Ω
18 model: 1.87Ω
24 model: 0.75Ω
30 model: 0.932Ω
36 model: 0.65Ω
(20℃ 68°F)

Fan motor (09-24 model)

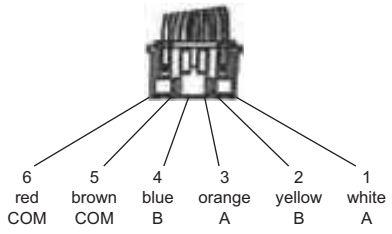
Pin No.	Terminal code	Function of terminal	Lead wire color
1	S	Starting coil	Blue
2	——	———	——
3	R	Running coil	Black
4	——	———	——
5	C	COM	Red

Fan motor (30-36 model)

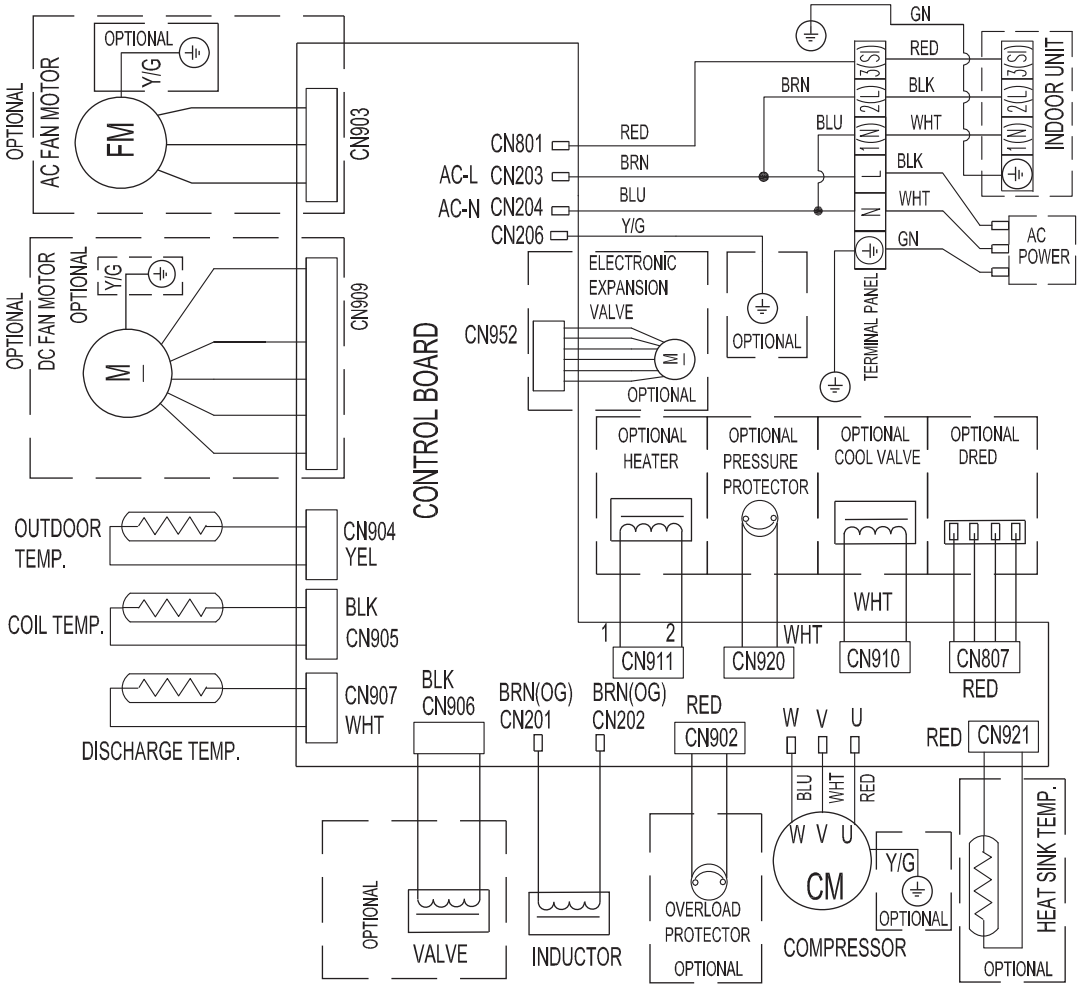
Pin No.	Terminal code	Function of terminal	Lead wire color
1	FG	Revolution pulse output	Blue
2	Vsp	Speed control voltage input	Yellow
3	Vcc	Control power voltage input	White
4	GND	GND	Black
5	——	———	——
6	Vm	Motor power voltage input	Red

Temperature	0℃ 32°F	20℃ 68°F	30℃ 86°F
Thermistor (ODU temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.4 k Ω 2.7 V
Thermistor (Pipe temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.4 k Ω 2.7 V
Thermistor (Discharge temp.)	186 k Ω 0.18 V	71.7 k Ω 0.43 V	46.3 k Ω 0.64 V

EEV (36 model)
Coil resistance : 46Ω (20℃ 68°F)



5-2. Models: WHS09SZA11S and WHS12SZA11S



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: 2.35 Ω
12 model: 1.7 Ω
(20℃ 68°F)

Temperature	0℃ 32°F	20℃ 68°F	30℃ 86°F
Thermistor (ODU temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.4 k Ω 2.7 V
Thermistor (Pipe temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.4 k Ω 2.7 V
Thermistor (Discharge temp.)	186 k Ω 0.18 V	71.7 k Ω 0.43 V	46.3 k Ω 0.64 V

6. Electrical characteristics

Model name				WHS09SZA21S	WHS12SZA21S	WHS18SZA21S
Power supply	Voltage		V	208/230 ~		
	Frequency		Hz	60		
MCA*1			A	10.0		15.0
Wiring spec.*2	MAX. CKT. BKR*3		A	15		20
	Power cable		AWG	SJTW 3 × 16		SJTW 3 × 14
	Connection cable*4	Size	AWG	SJTW 4 × 18		

Model name				WHS24SZA21S	WHS30SZA21S	WHS36SZA21S
Power supply	Voltage		V	208/230 ~		
	Frequency		Hz	60		
MCA*1			A	20.0	25.0	30.0
Wiring spec.*2	MAX. CKT. BKR*3		A	30	35	
	Power cable		AWG	SJTW 3 × 12		
	Connection cable*4	Size	AWG	SJTW 4 × 18		

Model name				WHS09SZA11S	WHS12SZA11S
Power supply	Voltage		V	115 ~	
	Frequency		Hz	60	
MCA*1			A	13.5	16.5
Wiring spec.*2	MAX. CKT. BKR*3		A	20	25
	Power cable		AWG	SJTW 3 × 14	
	Connection cable*4	Size	AWG	SJTW 4 × 18	

*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
Bottom rubber for outdoor unit	4	Power wire	1

OUTDOOR UNIT
WHS09-36SZA