

AIR CONDITIONER

Wall mounted type

DESIGN & TECHNICAL MANUAL

INDOORWHS09WMA21S
WHS09WMA11SWHS12WMA21S
WHS12WMA11S

WHS18WMA21S



WHS24WMA21S

WHS30WMA21S
WHS36WMA21S**OUTDOOR**WHS09SZA21S
WHS09SZA11S
WHS12SZA21S
WHS12SZA11S

WHS18SZA21S



WHS24SZA21S

WHS30SZA21S
WHS36SZA21S

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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Part 1. INDOOR UNIT

WALL MOUNTED TYPE:

WHS09WMA21S

WHS12WMA21S

WHS18WMA21S

WHS24WMA21S

WHS30WMA21S

WHS36WMA21S

WHS09WMA11S

WHS12WMA11S

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	kW	2.64	3.52	5.28	
			Btu/h	9,000	12,000	18,000	
		Min.—Max.	kW	1.32—2.93	1.61—3.96	1.90—5.72	
		Btu/h	4,500—10,000	5,500—13,500	6,500—19,500		
	Heating	Rated	kW	2.93	3.81	5.86	
			Btu/h	10,000	13,000	20,000	
Min.—Max.		kW	1.32—2.93	1.61—3.96	1.76—6.30		
		Btu/h	4,500—10,000	5,500—13,500	6,000—21,500		
Input power	Cooling	Rated	kW	0.86	1.12	1.65	
		Min.—Max.		0.299—1.610	0.345—1.725	0.414—2.760	
	Heating	Rated		0.86	1.12	2.00	
		Min.—Max.		0.299—1.610	0.345—1.725	0.414—2.760	
Current	Cooling	Rated	A	3.8	5.0	7.4	
	Heating			4.0	5.0	9.0	
EER	Cooling		W/W	3.08	3.14	3.20	
			Btu/hW	10.50	10.70	10.90	
COP	Heating		W/W	3.41	3.40	2.93	
			Btu/hW	11.63	11.60	10.00	
SEER	Cooling		Btu/hW	16.3	16.7	17.6	
HSPF	Heating		Btu/hW	9.1	9.0	10.1	
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*1		Cooling	A	7.0	7.5	12.0	
		Heating		7.0	7.5	12.0	
Fan	Airflow rate	Cooling	HIGHER	CFM (m³/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 × Q'ty			Crossflow fan × 1			
	Motor output			W	14	35	
Sound pressure level*2	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 × 23-1/4 × 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			
Enclosure	Material			Aluminum			
	Color			Polystyrene			
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 × 34-1/1 × 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)	
Drain hose	Method			Flare			
	Material			PE/PVC			
Operation range	Tip diameter		in (mm)	Ø5/8 (Ø 15.4) (I.D.), Ø7/8 (Ø 23) (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])			

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).
 - 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.
- *1: Maximum current is maximum value when operated within the operation range.
- *2: 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.

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	kW	7.03	8.79	10.26	
			Btu/h	24,000	30,000	35,000	
		Min.—Max.	kW	2.34—7.77	3.37—9.81	3.52—10.55	
			Btu/h	8,000—26,500	11,500—33,500	12,000—36,000	
	Heating	Rated	kW	7.15	9.09	10.26	
			Btu/h	24,400	31,000	35,000	
Min.—Max.		kW	2.34—7.77	3.37—9.81	3.52—10.55		
		Btu/h	8,000—26,500	11,500—33,500	12,000—36,000		
Input power	Cooling	Rated	kW	2.29	2.90	4.20	
		Min.—Max.		0.460—2.990	0.529—3.450	0.520—4.150	
	Heating	Rated		2.27	2.70	3.50	
		Min.—Max.		0.460—2.990	0.529—3.450	0.520—4.150	
Current	Cooling	Rated	A	10.5	12.8	18.5	
	Heating			10.4	12.0	16.0	
EER	Cooling		W/W	3.08	3.03	2.44	
			Btu/hW	10.50	10.34	8.33	
COP	Heating		W/W	3.15	3.37	2.93	
			Btu/hW	10.74	11.48	10.00	
SEER	Cooling		Btu/hW	17.6	18.8	16.4	
HSPF	Heating		Btu/hW	9.8	12.3	8.8	
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*1		Cooling		A	13.0	15.0	19.0
		Heating			13.0	15.0	19.0
Fan	Airflow rate	Cooling	HIGHER	CFM (m³/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 × Q'ty		Crossflow fan × 1				
	Motor output		W	35	50		
Sound pressure level*2	Cooling	HIGHER	dB (A)	48	50		
		HIGH		45	45		
		MED		40	43		
		LOW		38	40		
		LOWER		36	38		
		HIGHER		48	50		
	Heating	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 × 27.2)	16-9/16 × 38-3/4 × 1-1/16 (420 × 985 × 27.6) 2-9/16 × 38-3/4 × 9/16 (65 × 985 × 13.6) 2-9/16 × 38-3/4 × 9/16 (65 × 984 × 13.6)	
	Fin pitch		FPI	18			
	Rows × Stages			2 × 18	2 × 22	2.5 × 22	
	Pipe type			Copper			
	Fin type			Aluminum			
Enclosure	Material			Polystyrene			
	Color			White			
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		
Drain hose	Material			PE/PVC			
	Tip diameter		in (mm)	Ø5/8 (Ø 15.4) (I.D.), Ø7/8 (Ø 23) (O.D.)			
Operation range	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])			

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).
 - 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.
- *1: Maximum current is maximum value when operated within the operation range.
- *2: 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.

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—127 V		
Capacity	Cooling	Rated	kW	2.64	3.52	
			Btu/h	9,000	12,000	
		Min.—Max.	kW	0.35—2.93	0.73—3.96	
			Btu/h	1,200—10,000	2,500—13,500	
	Heating	Rated	kW	2.93	3.87	
			Btu/h	10,000	13,200	
Min.—Max.		kW	0.35—2.93	0.73—4.25		
		Btu/h	1,200—10,000	2,500—14,500		
Input power	Cooling	Rated	kW	0.82	1.20	
		Min.—Max.		0.230—1.380	0.287—1.725	
	Heating	Rated		0.84	1.18	
		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	W/W	3.22	2.93		
		Btu/hW	11.00	10.00		
COP	Heating	W/W	3.50	3.28		
		Btu/hW	11.95	11.20		
SEER	Cooling	Btu/hW	19.3	17.9		
HSPF	Heating	Btu/hW	10.5	9.4		
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*2		Cooling	A	12.0	15.0	
		Heating		12.0	15.0	
Fan	Airflow rate	Cooling	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)	
		Heating	HIGHER	400 (680)	412 (700)	
			HIGH	341 (580)	380 (645)	
			MED	283 (480)	351 (596)	
			LOW	224 (380)	276 (469)	
			LOWER	208 (354)	250 (424)	
	Type × Q'ty		Crossflow fan × 1			
	Motor output		W	39		
	Sound pressure level*3	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 × 23-1/4 × 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		
Enclosure	Fin type			Aluminum		
	Material			Polystyrene		
		Color		White		
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 × 34-1/1 × 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)		
Drain hose	Method			Flare		
	Material			PE/PVC		
Operation range	Tip diameter		in (mm)	Ø5/8 (Ø 15.4) (I.D.), Ø7/8 (Ø 23) (O.D.)		
	Cooling			61 to 86 (16 to 30)		
		%RH		80 or less		
Remote controller type	Heating			61 to 86 (16 to 30)		
				Wireless (Wired [option])		

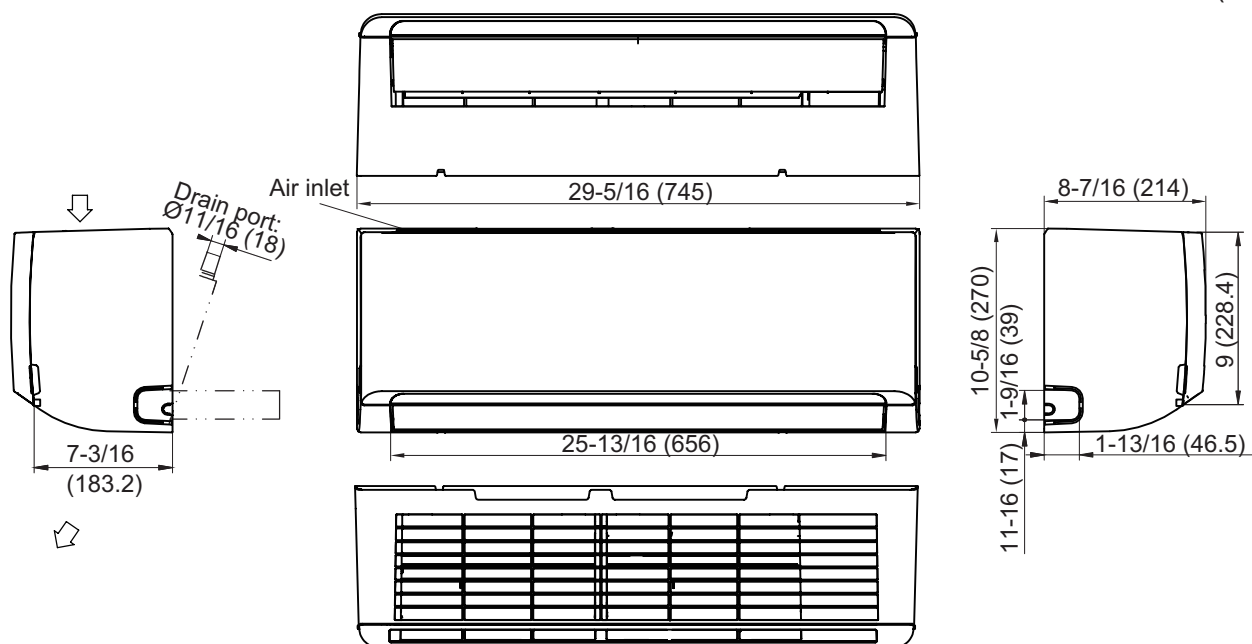
NOTES:

- 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).
 - 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.
- *1: Maximum current is maximum value when operated within the operation range.
- *2: 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

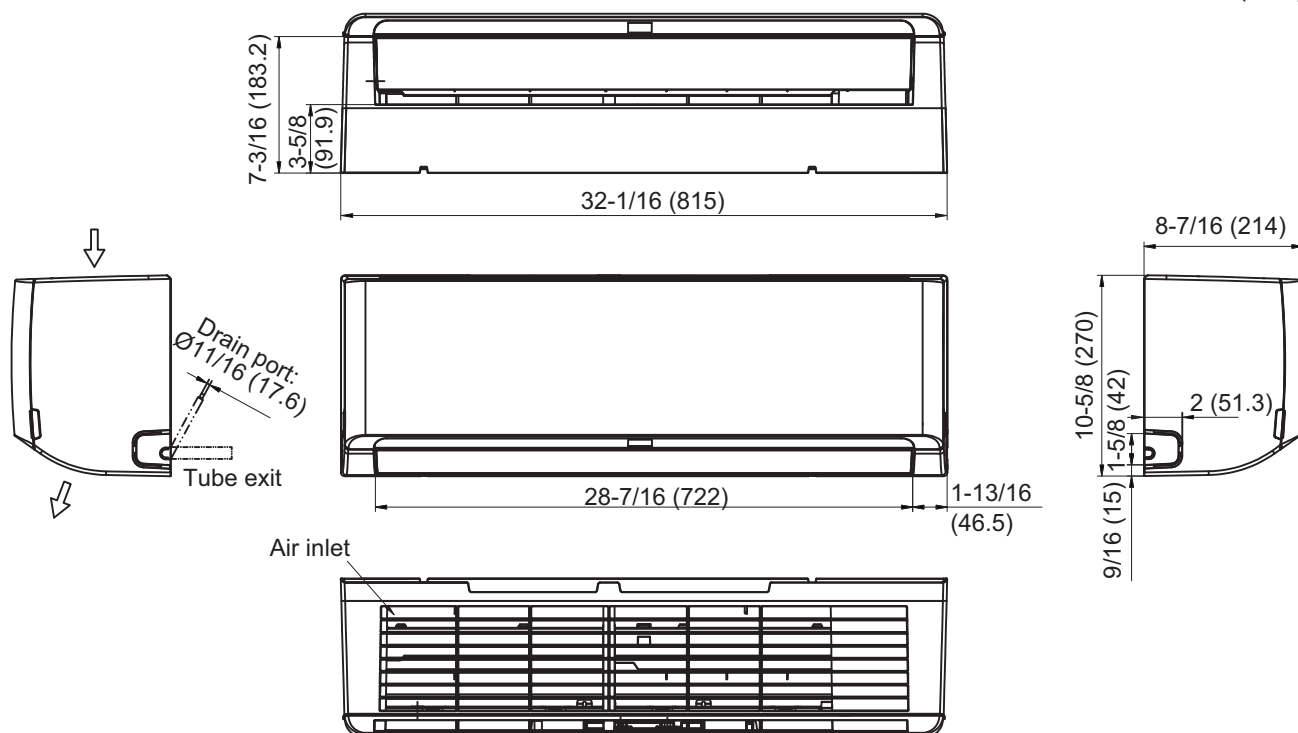
2-1. Models: WHS09WMA21S and WHS09WMA11S

Unit: in (mm)



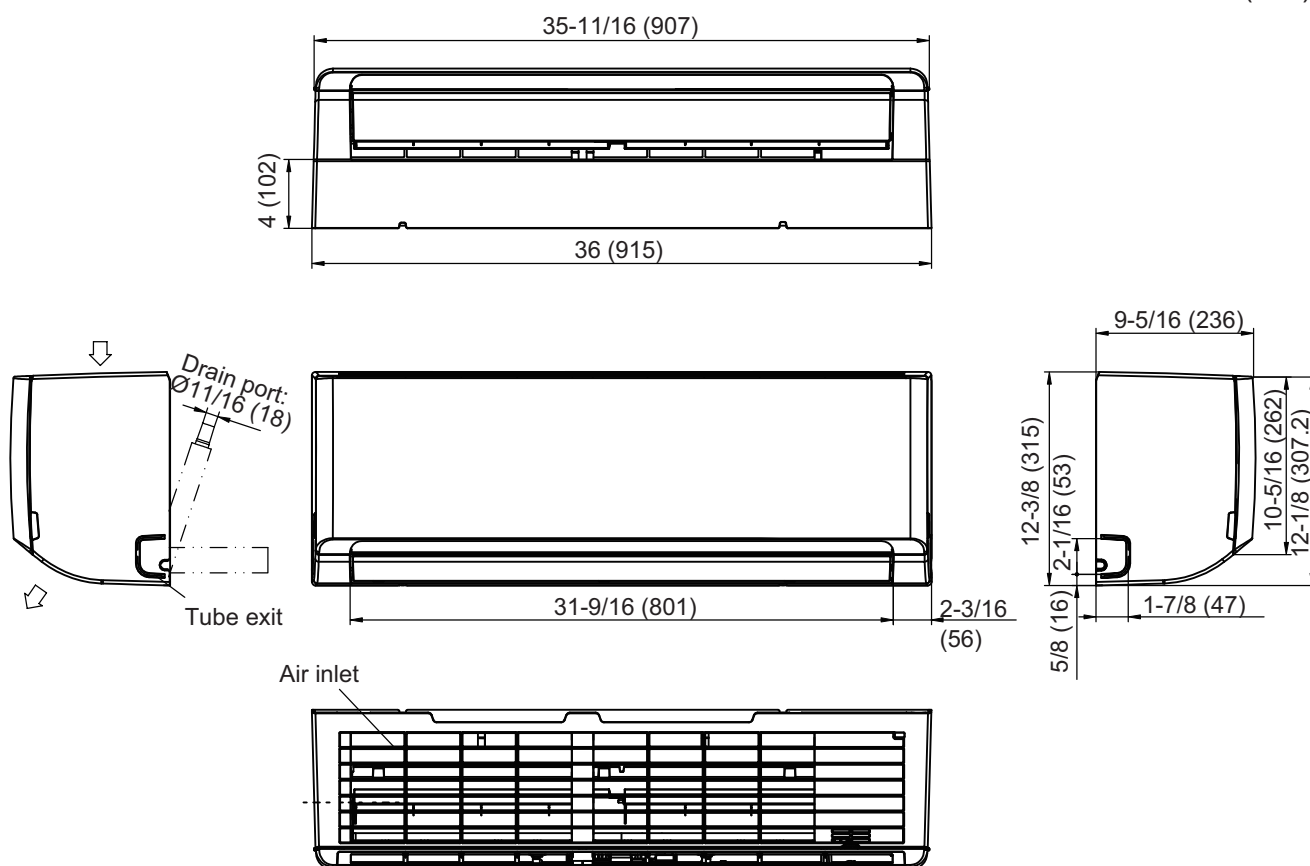
2-2. Models: WHS12WMA21S and WHS12WMA11S

Unit: in (mm)



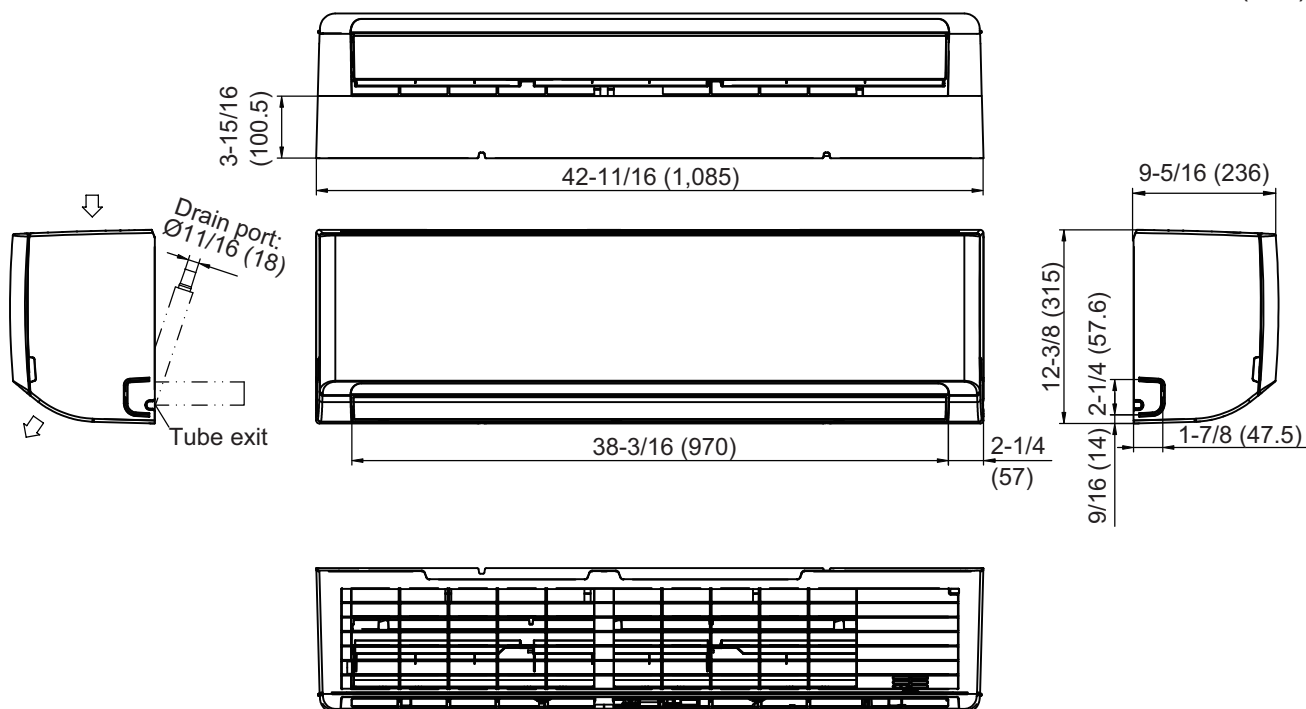
2-3. Model: WHS18WMA21S

Unit: in (mm)



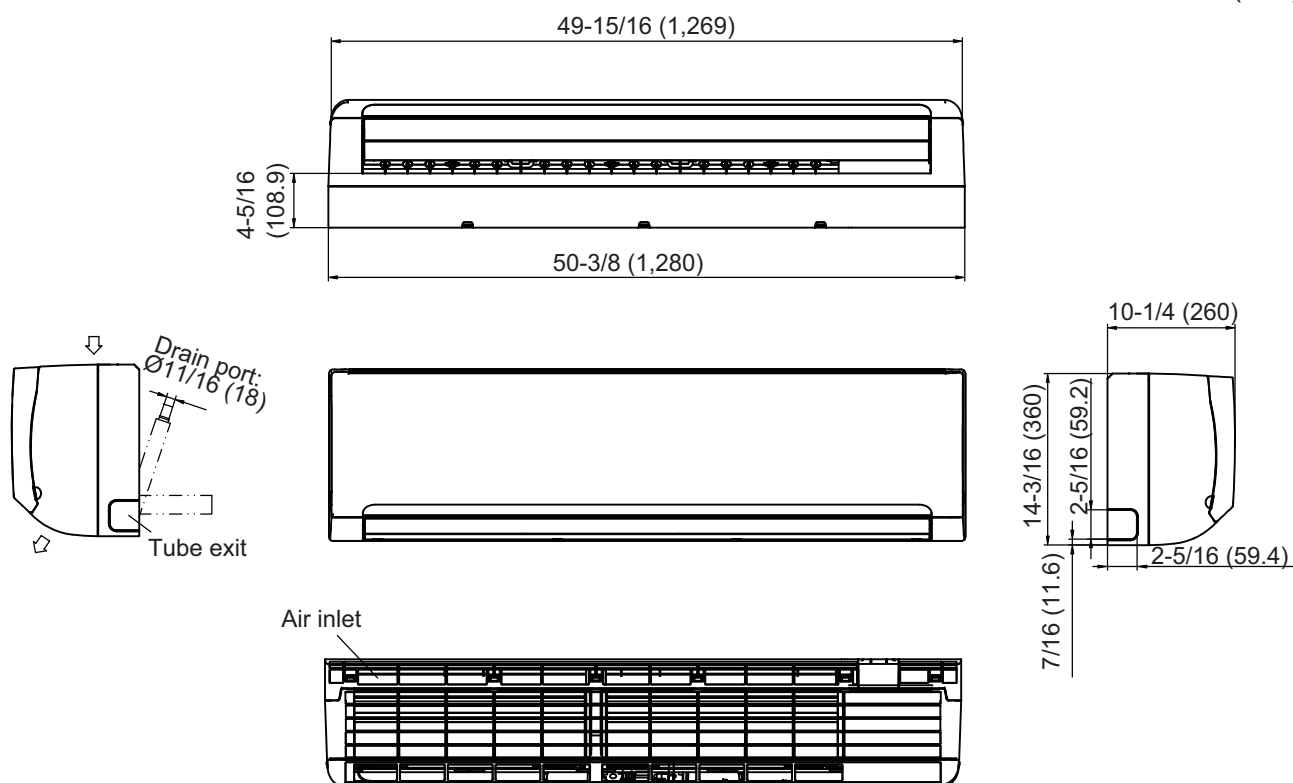
2-4. Model: WHS24WMA21S

Unit: in (mm)



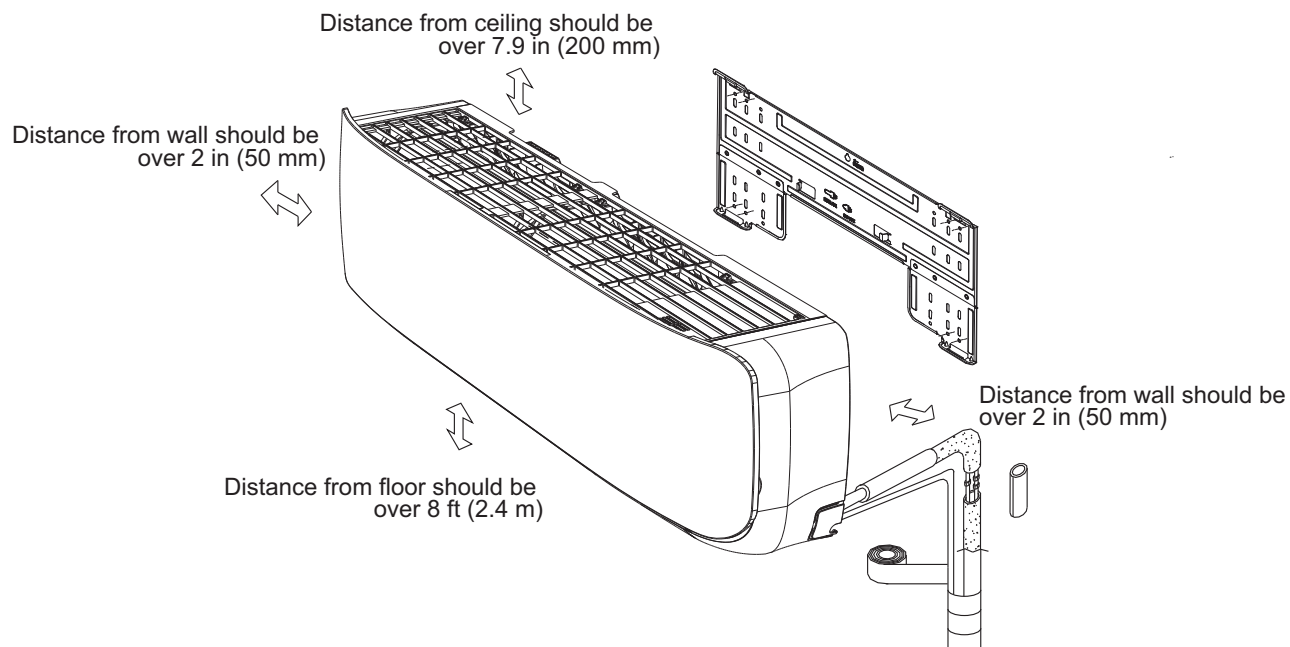
2-5. Models: WHS30WMA21S and WHS36WMA21S

Unit: in (mm)

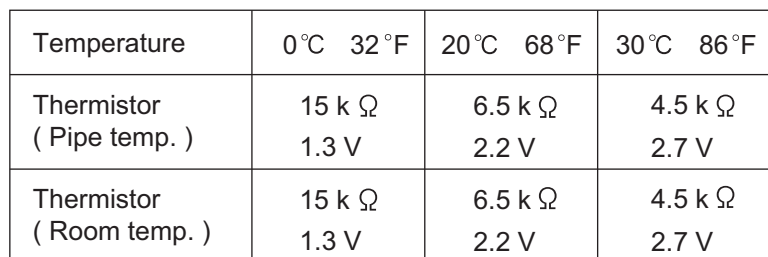


2-6. Installation space requirement

Provide sufficient installation space for product safety.

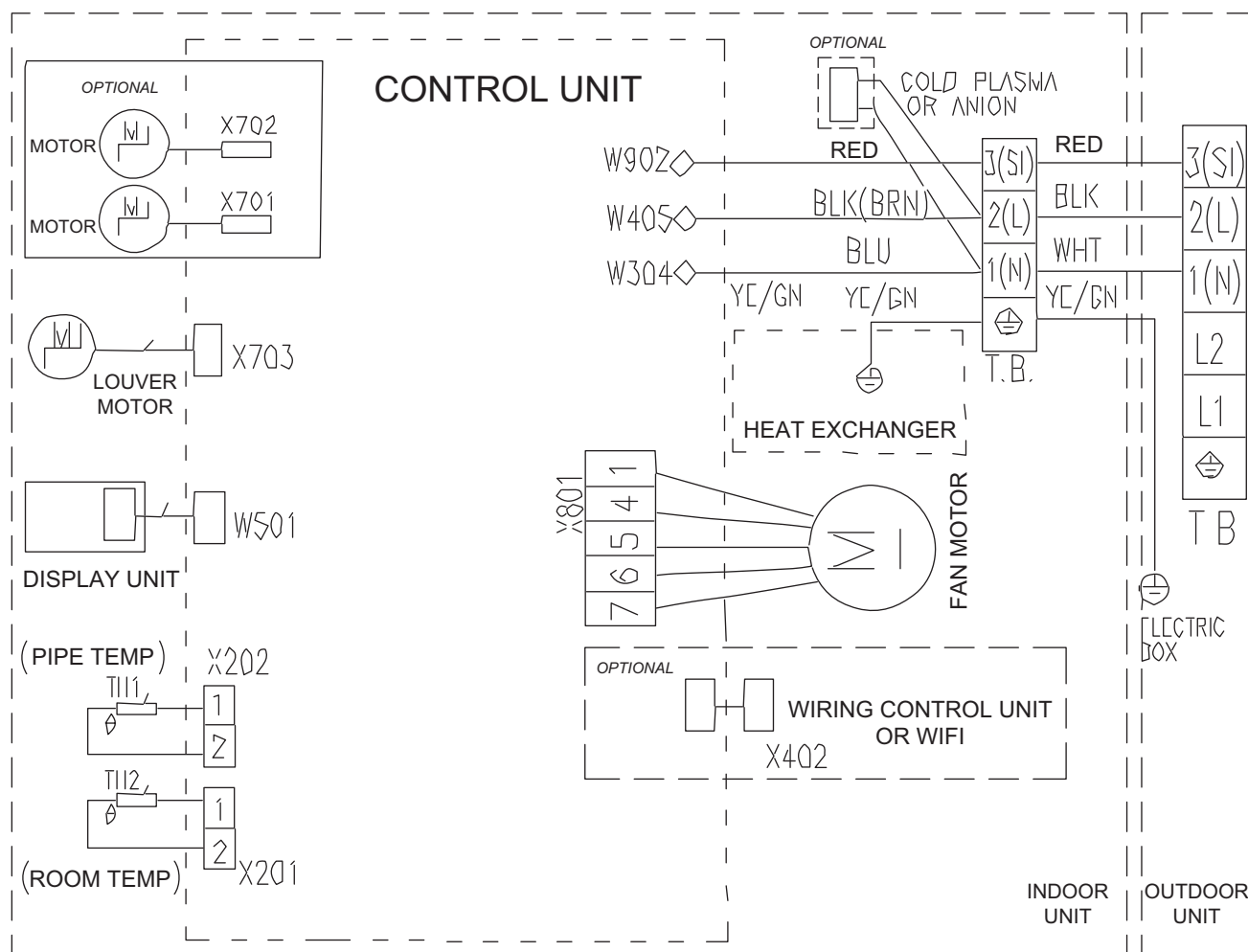


3-1. Models: WHS09WMA21S, WHS12WMA21S, and WHS18WMA21S



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

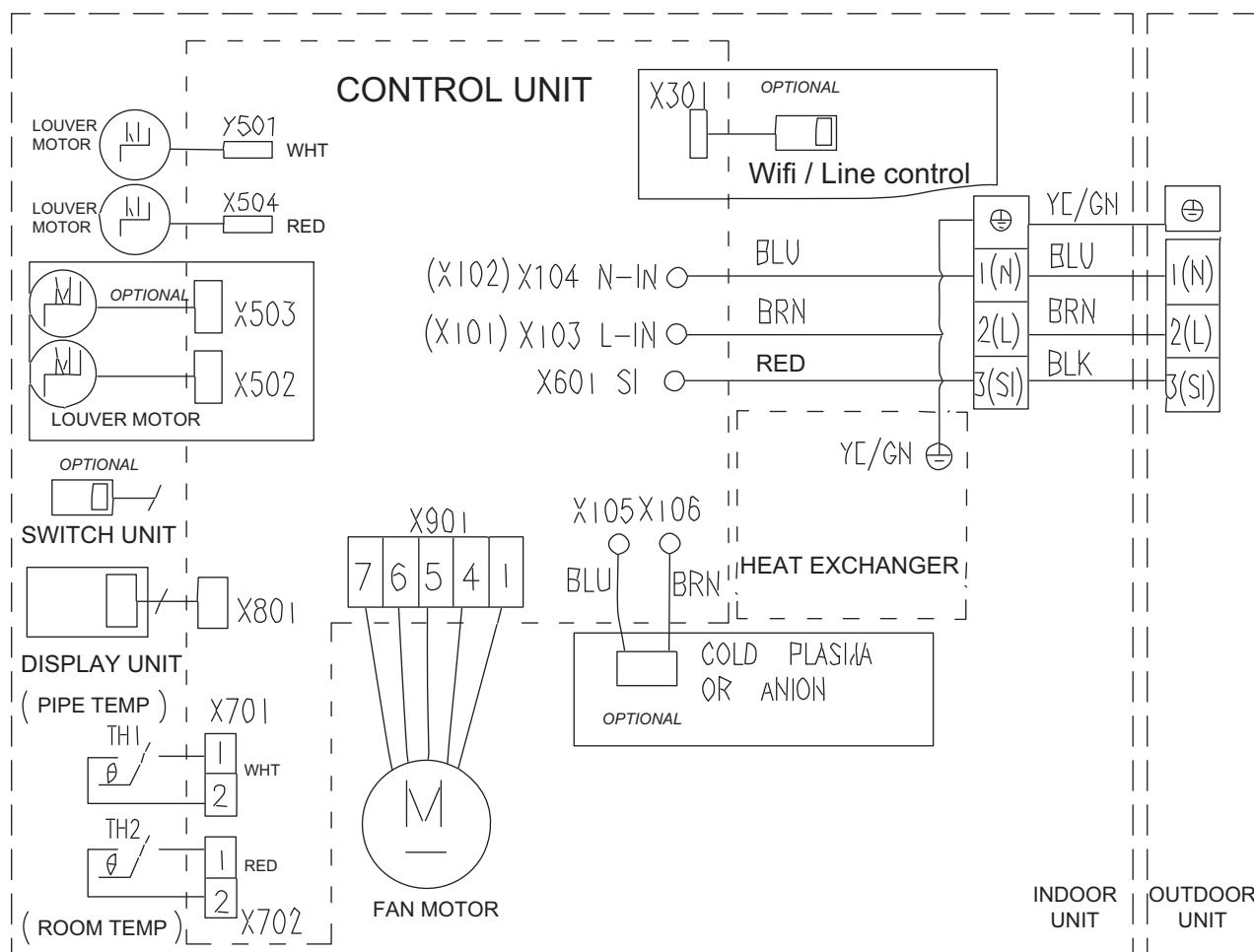


Temperature	0°C 32°F	20°C 68°F	30°C 86°F
Thermistor (Pipe temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V
Thermistor (Room temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V

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

3-3. Model: WHS30WMA21S

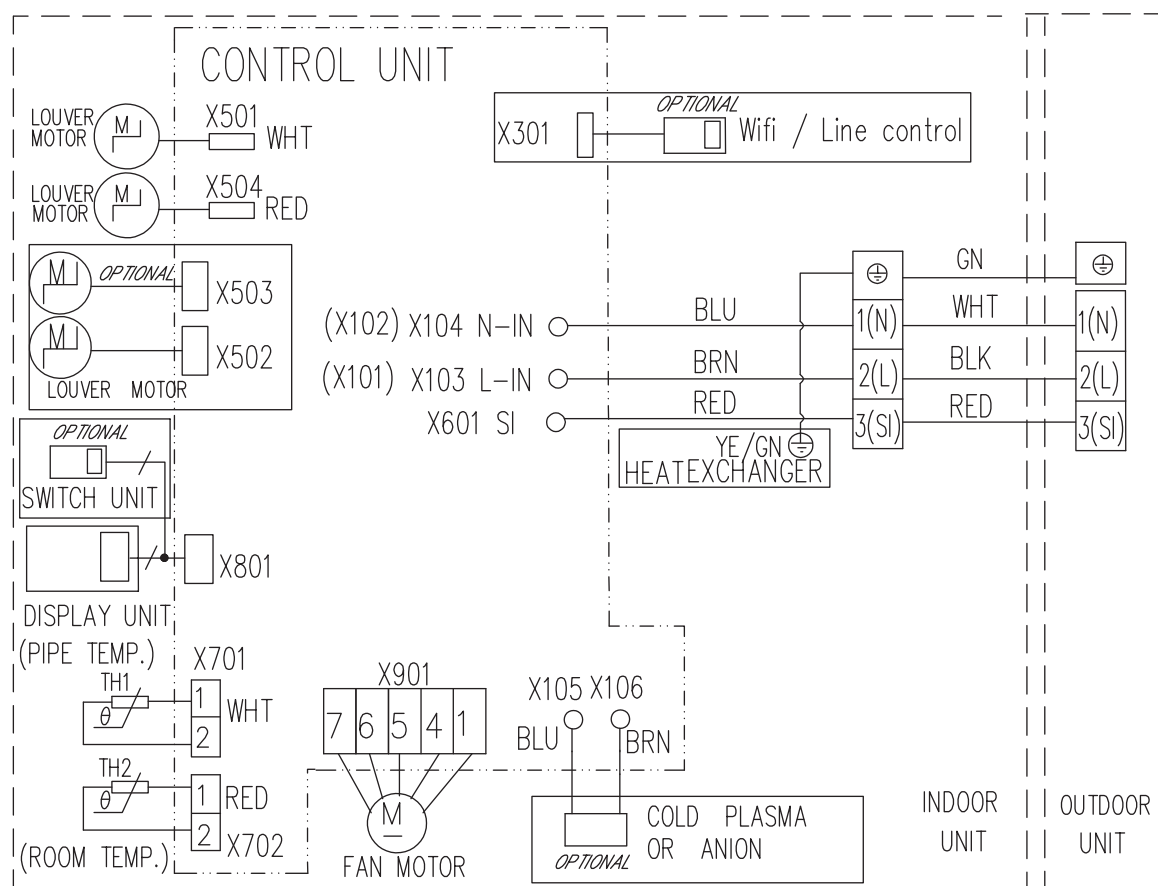


Temperature	0°C 32°F	20°C 68°F	30°C 86°F
Thermistor (Pipe temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V
Thermistor (Room temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V

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

3-4. Model: WHS36WMA21S

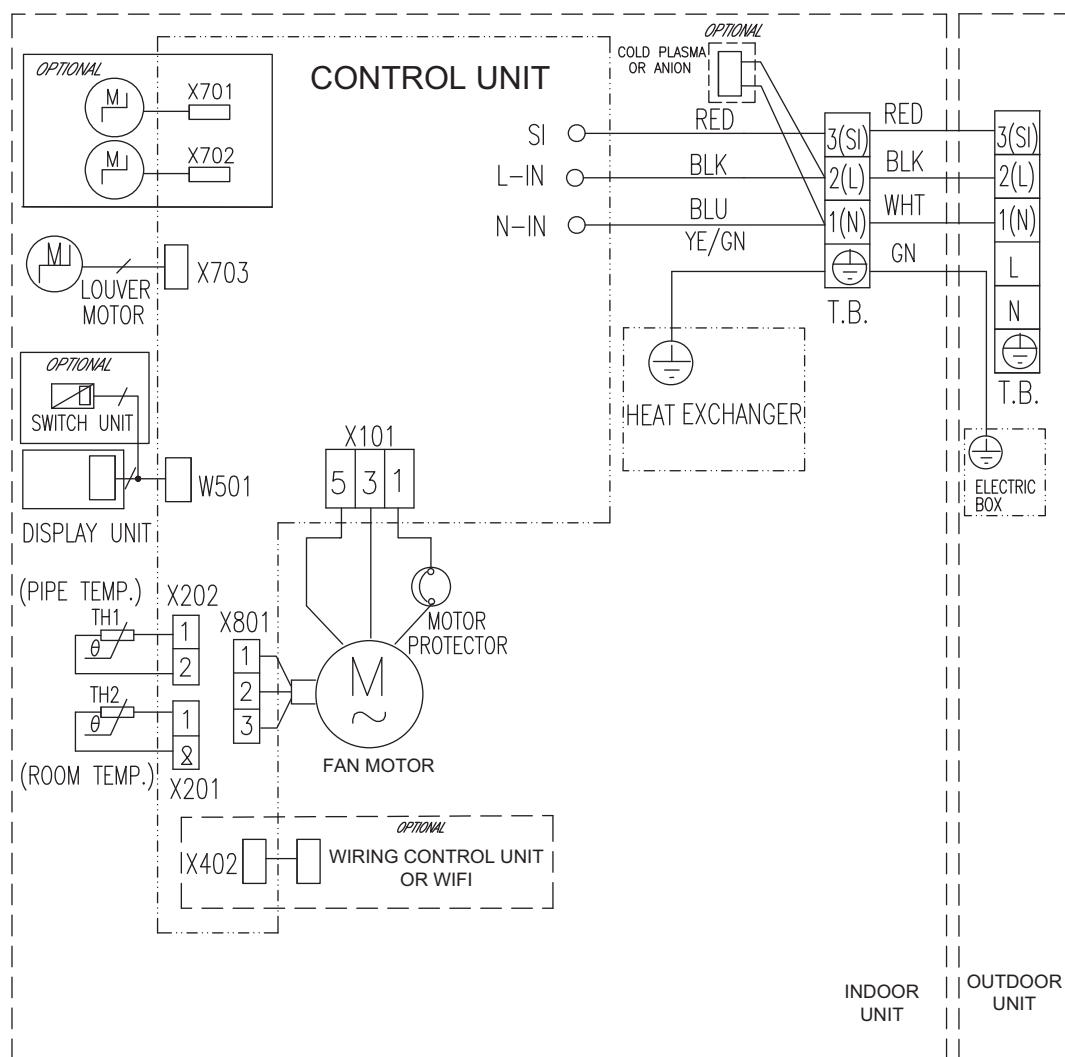


Temperature	0°C 32°F	20°C 68°F	30°C 86°F
Thermistor (Pipe temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V
Thermistor (Room temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.5 k Ω 2.7 V

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	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 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	R	Running coil	Black
2	—	—	—
3	S	Starting coil	Red
4	—	—	—
5	C	COM	White

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		
Outdoor temperature	°FDB	°FWB	Indoor temperature			
			80			
			67			
			TC	SHC	IP	
			Btu/h		W	
	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	
Outdoor temperature	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		
Outdoor temperature	°FDB	°FWB	Indoor temperature			
			80			
			67			
			TC	SHC	IP	
			Btu/h		W	
	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	
Outdoor temperature	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		
Outdoor temperature	°FDB	°FWB	Indoor temperature			
			80			
			67			
			TC	SHC	IP	
			Btu/h		W	
	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	
Outdoor temperature	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	

Model: WHS24WMA21S

AFR		CFM		636		
			Indoor temperature			
			80			
			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		
			80		
			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		
			80		
			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		
			80		
			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	

Model: WHS12WMA11S

AFR	CFM	412
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		Indoor temperature		
		°FDB	80	
		°FWB	67	
Outdoor temperature	°FDB	°FWB	TC	SHC
			Btu/h	
			IP	
			W	
	5	3	9,935	7,452
	14	12	8,861	6,646
	23	21	10,070	7,552
	32	28	11,792	8,738
	41	37	11,952	8,977
	50	47	12,416	9,148
	59	50	12,836	9,294
	67	53	13,331	9,339
	77	62	13,242	9,441
	87	69	14,119	9,697
	95	75	13,426	9,403
	104	78	11,069	8,441
	115	80	7,247	6,756

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	
Outdoor temperature			Indoor temperature		
		°FDB	70		
		°FWB	60		
		°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		

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	

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.

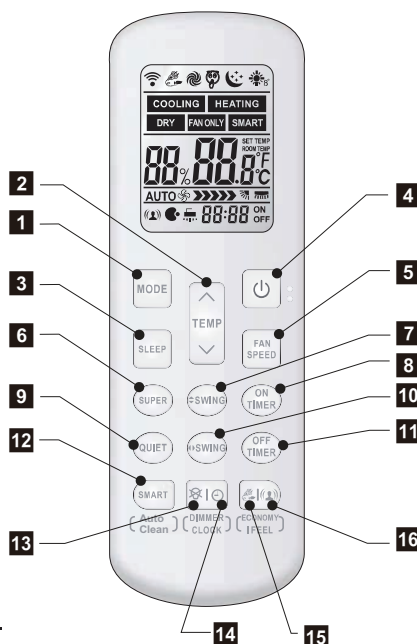
12 SMART(invalid for multi system)

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.

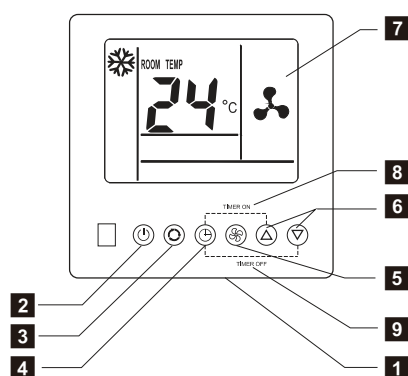
16 IFEEL

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.

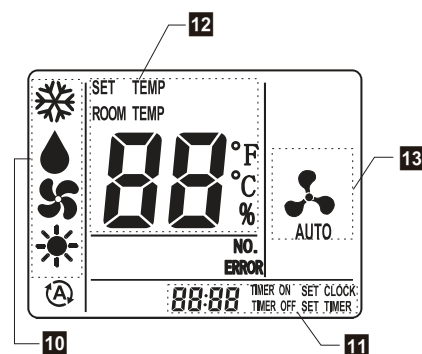
Indication symbols on LCD:

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

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 $\triangle$ button to adjust the time.

5 FAN speed button

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

6 SET TEMP. (temperature) (∇ / $\triangle$) button

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

7 LCD screen

8 Timer on

Press the $\odot$ button and the $\triangle$ button at the same time to activate the timer on mode. ("on" flashes on the LCD screen.) Press the ∇ or $\triangle$ button to adjust the time until desired time displayed on LCD screen. Press the $\odot$ button and $\triangle$ button again to confirm it ("on" stops flashing.)

9 Timer off

Press the $\odot$ button and the ∇ button at the same time to activate the timer off mode. ("off" flashes on the LCD screen.) Press the ∇ or $\triangle$ button to adjust the time until desired time displayed on LCD screen. Press the $\odot$ button and $\triangle$ button again to confirm it ("off" stops flashing.)

10 Operation mode

$\odot$: Cooling mode, ∇ : Dry mode, $\triangle$: Fan mode, ∇ : Heating mode, $\odot$: Auto mode

11 Display timer setting

12 Display room temperature and setting temperature

13 Fan speed display

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

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

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 (m³/h)	942 (1,600)	942 (1,600)	1,177 (2,000)
	Type × Q'ty		Propeller fan × 1		
	Motor output	W	28		41
Sound pressure level *1		dB (A)	54		56
Heat exchanger type	Dimensions (H × W × D)	in (mm)	27-3/8 × 18-3/16 × 11/16 (695 × 462 × 18.2) 27-3/8 × 18-3/16 × 11/16 (695 × 462 × 18.2)	26-15/16 × 18-3/16 × 11/16 (684 × 462 × 18.2) 25-13/16 × 18-3/16 × 11/16 (655 × 462 × 18.2)	33-1/8 × 21-1/2 × 11/16 (842 × 546 × 18.2) 32 × 21-1/2 × 11/16 (813 × 546 × 18.2)
	Fin pitch	FPI	18		
	Rows × Stages		2 × 22		2 × 26
	Pipe type		Copper		
	Fin type	Type (Material)	Aluminum		
		Surface treatment	Blue fin		
Compressor	Type		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
Refrigerant oil	Type		VG74 (POE)		
Enclosure	Material		Steel sheet		
	Color		White		
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 × 33-11/16 × 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)	
	Method			Flare	
	Pre-charge length		ft (m)	24 (7.5)	
	Max. length			65 (20)	
	Max. height difference			Indoor unit higher than outdoor unit: 32 (10) Outdoor unit higher than indoor unit: 16 (5)	
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.					
• *1: 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.					

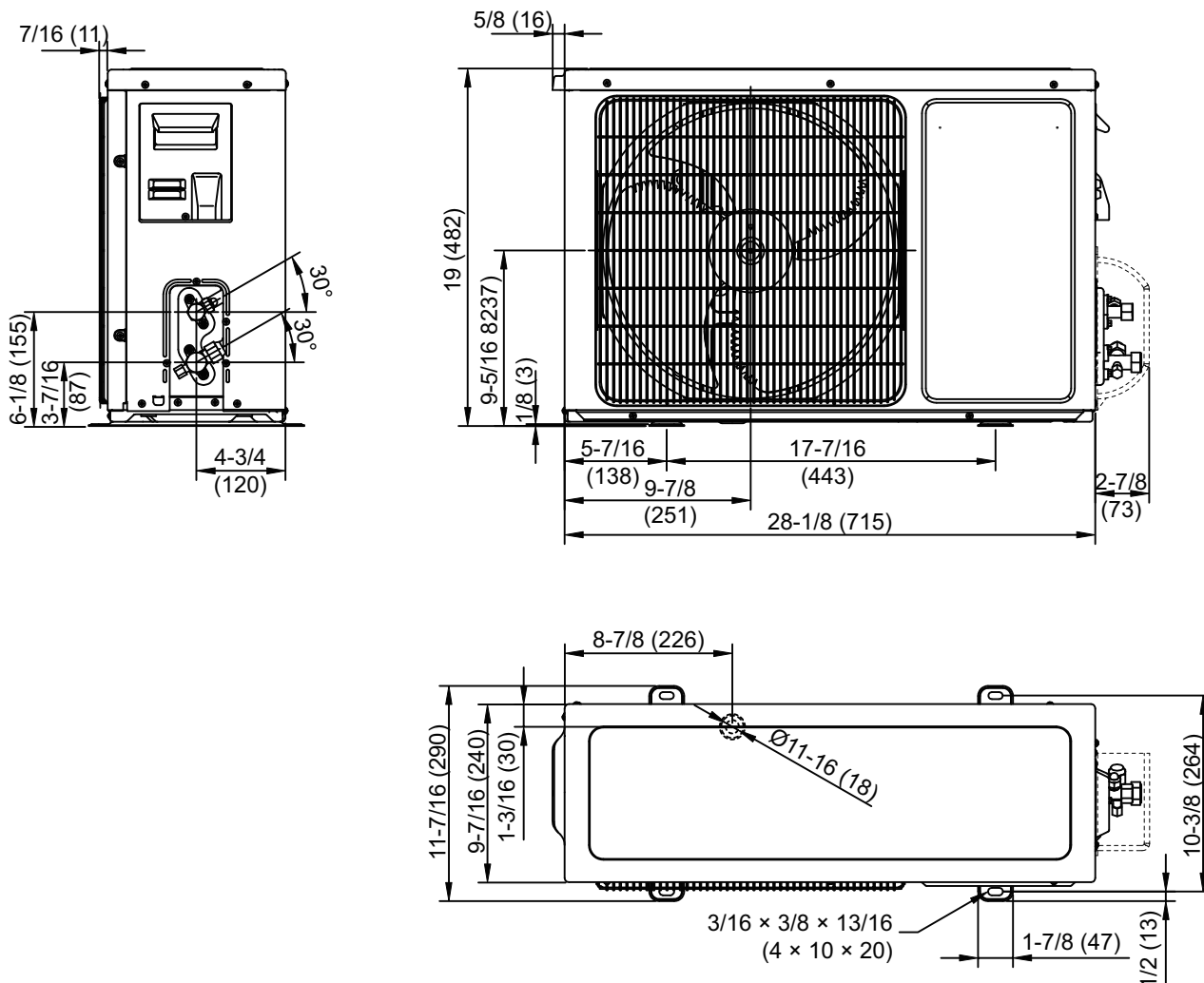
Type				Inverter heat pump		
Model name				WHS24SZA21S	WHS30SZA21S	WHS36SZA21S
Power supply				208/230 V ~ 60 Hz		
Available voltage range				198—253 V		
Fan	Airflow rate	CFM (m³/h)	1,648 (2,800)	2,354 (4,000)	2,354 (4,000)	
	Type × Q'ty		Propeller fan × 1			
	Motor output	W	61	70	102	
Sound pressure level *1		dB (A)	58	60		
Heat exchanger type	Dimensions (H × W × D)	in (mm)	35-1/4 × 24-13/16 × 11/16 (895 × 630 × 18.19)	38-3/16 × 29-3/4 × 11/16 (970 × 756 × 18.19)	38-3/16 × 29-3/4 × 11/16 (970 × 756 × 18.19)	
			34-1/8 × 24-13/16 × 11/16 (867 × 630 × 18.19)	37-1/16 × 29-3/4 × 11/16 (942 × 756 × 18.19)	37-1/16 × 29-3/4 × 11/16 (942 × 756 × 18.19)	
	Fin pitch	FPI	18			
	Rows × Stages		2 × 30	2 × 36		
	Pipe type		Copper			
	Fin type	Type (Material)	Aluminum			
Compressor	Type	Surface treatment	Blue fin			
Refrigerant	Type		Rotary			
	Charge		R410A			
		lb oz	3 lb 9 oz	4 lb 9 oz	5 lb 1 oz	
Refrigerant oil	Type	g	1,630	2,070	2,300	
Enclosure	Material		VG74 (POE)	HAF68D1C	VG74 (POE)	
	Color		Steel sheet			
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)	24 (7.5)			
	Max. length		65 (20)			
	Max. height difference		Indoor unit higher than outdoor unit: 32 (10) Outdoor unit higher than indoor unit: 16 (5)			
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.						
• *1: 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.						

Type				Inverter heat pump	
Model name				WHS09SZA11S	WHS12SZA11S
Power supply				115 V ~ 60 Hz	
Available voltage range				103—127 V	
Fan	Airflow rate		CFM (m³/h)	942 (1,600)	
	Type × Q'ty			Propeller fan × 1	
	Motor output		W	30	
Sound pressure level *1			dB (A)	53	54
Heat exchanger type	Dimensions (H × W × D)	in (mm)	27-3/8 × 18-3/16 × 11/16 (695 × 462 × 18.2)		27-3/8 × 18-3/16 × 11/16 (695 × 462 × 18.2)
			15-3/4 × 18-3/16 × 11/16 (400 × 462 × 18.2)		27-3/8 × 18-3/16 × 11/16 (695 × 462 × 18.2)
	Fin pitch		FPI	18	
	Rows × Stages			2 × 22	
	Pipe type			Copper	
	Fin type	Type (Material)		Aluminum	
		Surface treatment		Blue fin	
Compressor	Type			Rotary	
Refrigerant	Type			R410A	
	Charge	lb oz	1 lb 14 oz	2 lb 3 oz	
		g	840	1,000	
Refrigerant oil	Type		68HES-H	VG74 (POE)	
Enclosure	Material		Steel sheet		
	Color		White		
Dimensions (H × W × D)	Net	in (mm)	19 × 28-1/8 × 9-7/16 (482 × 715 × 240)		
	Gross		20-7/8 × 33-11/16 × 13-3/8 (530 × 830 × 340)		
Weight	Net	lb (kg)	63 (28.5)	65 (29.5)	
	Gross		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)	24 (7.5)	
	Max. length			65 (20)	
	Max. height difference			Indoor unit higher than outdoor unit: 32 (10) Outdoor unit higher than indoor unit: 16 (5)	
	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. *1: 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

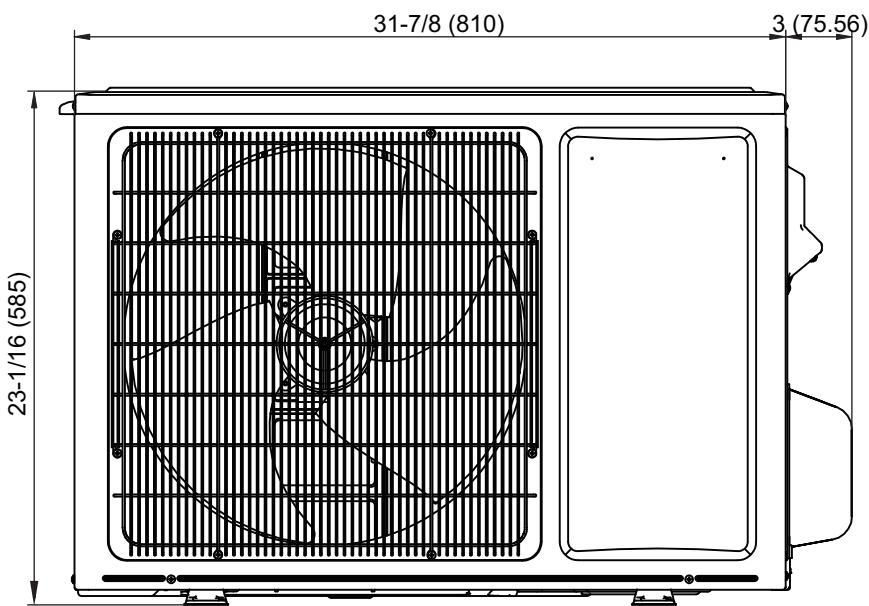
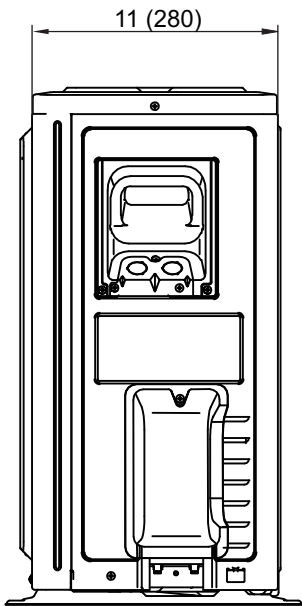
Unit: in (mm)



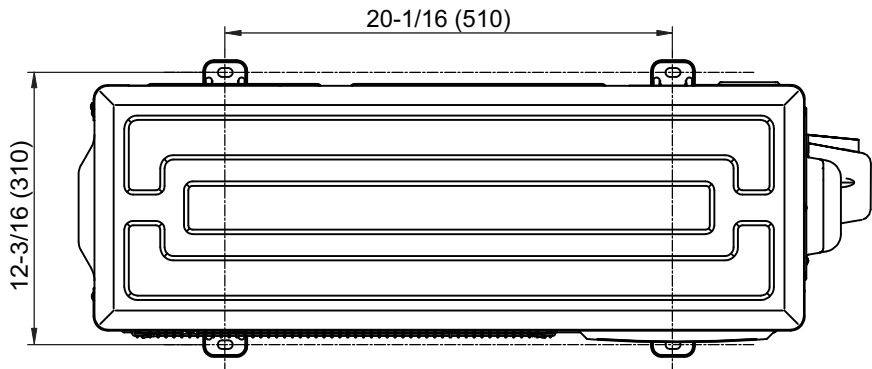
2-2. Model: WHS18SZA21S

Unit: in (mm)

OUTDOOR UNIT
WHS09-36sZA



OUTDOOR UNIT
WHS09-36sZA

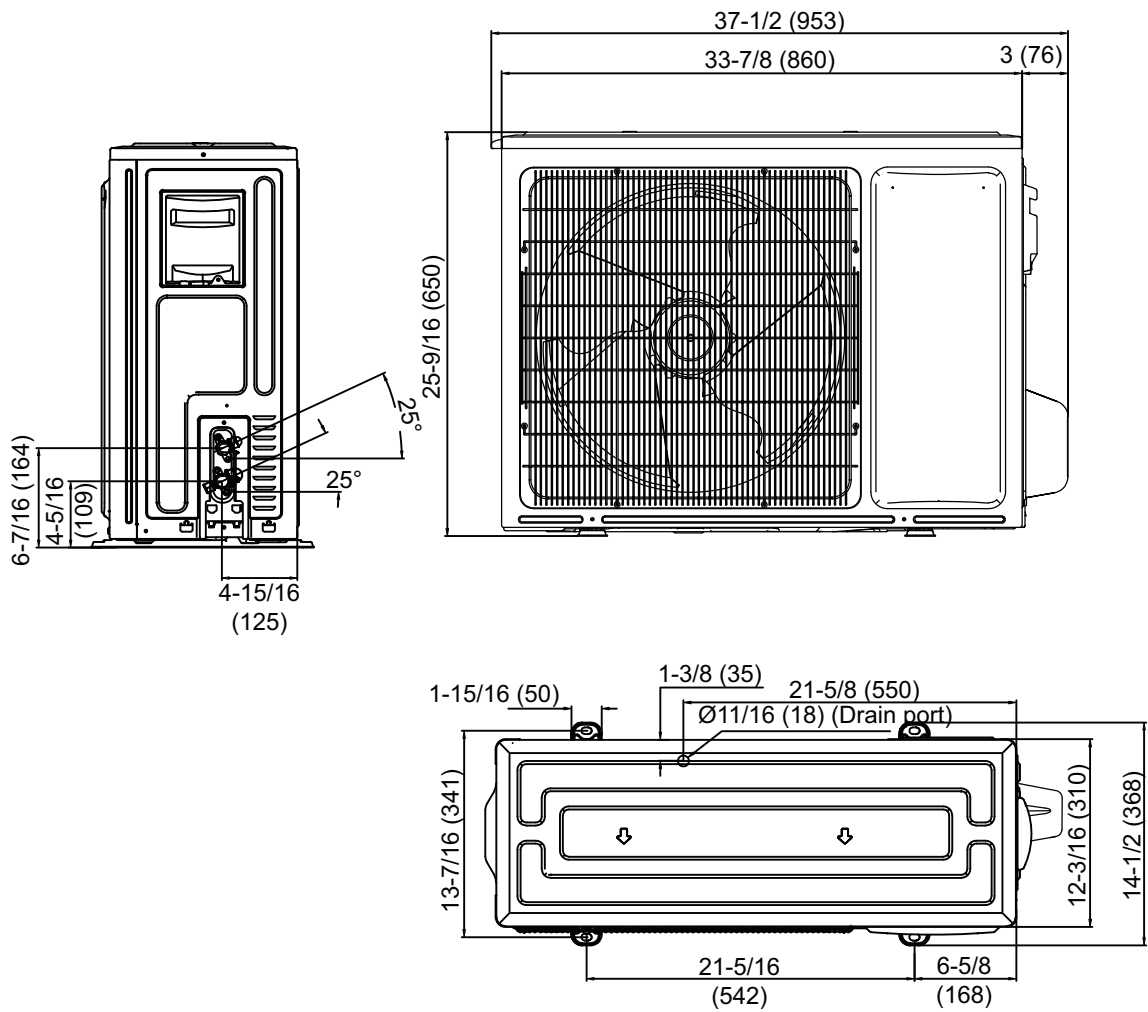


2-3. Model: WHS24SZA21S

Unit: in (mm)

OUTDOOR UNIT
WHS09-36SZA

OUTDOOR UNIT
WHS09-36SZA

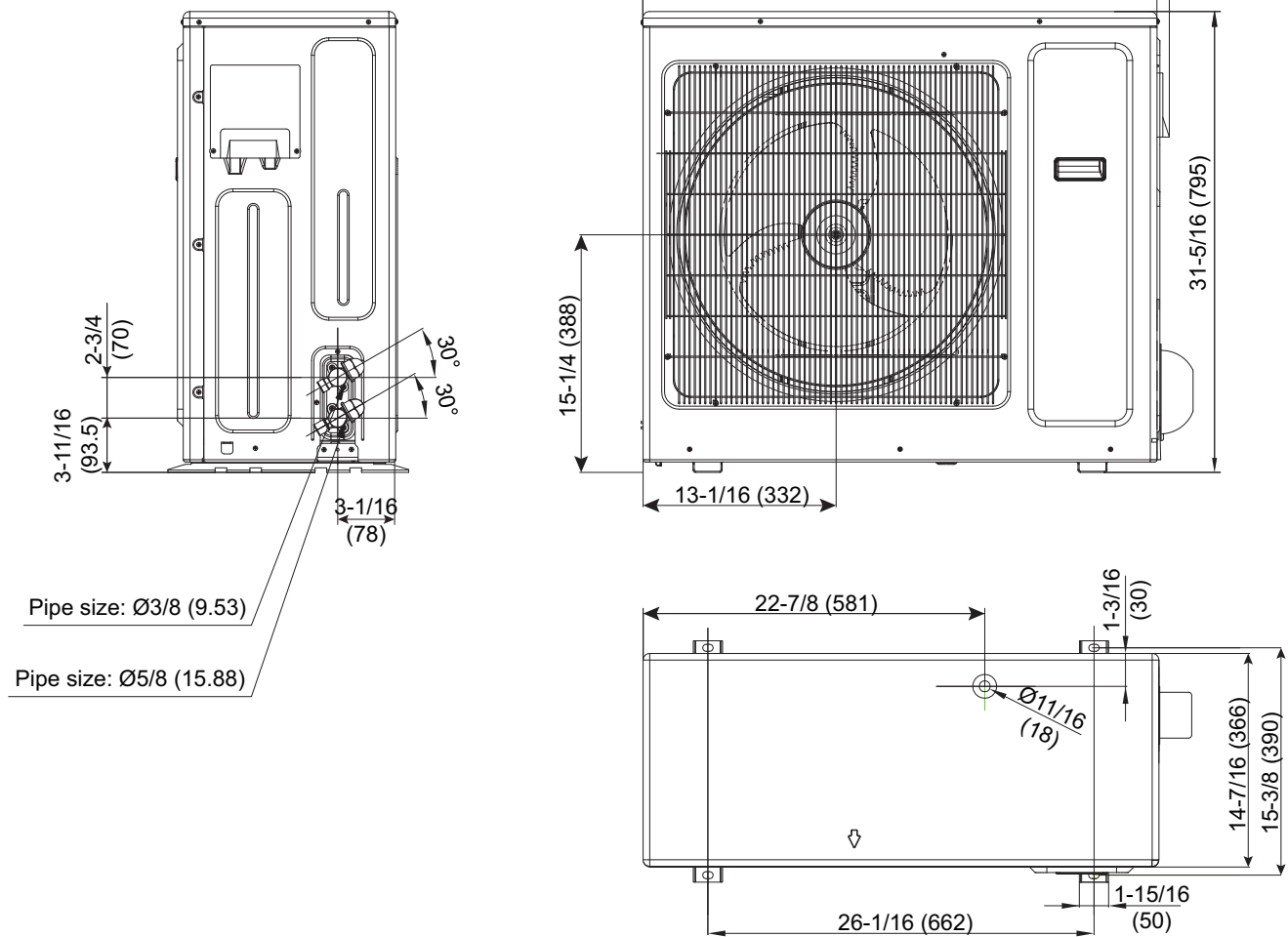


2-4. Models: WHS30SZA21S and WHS36SZA21S

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

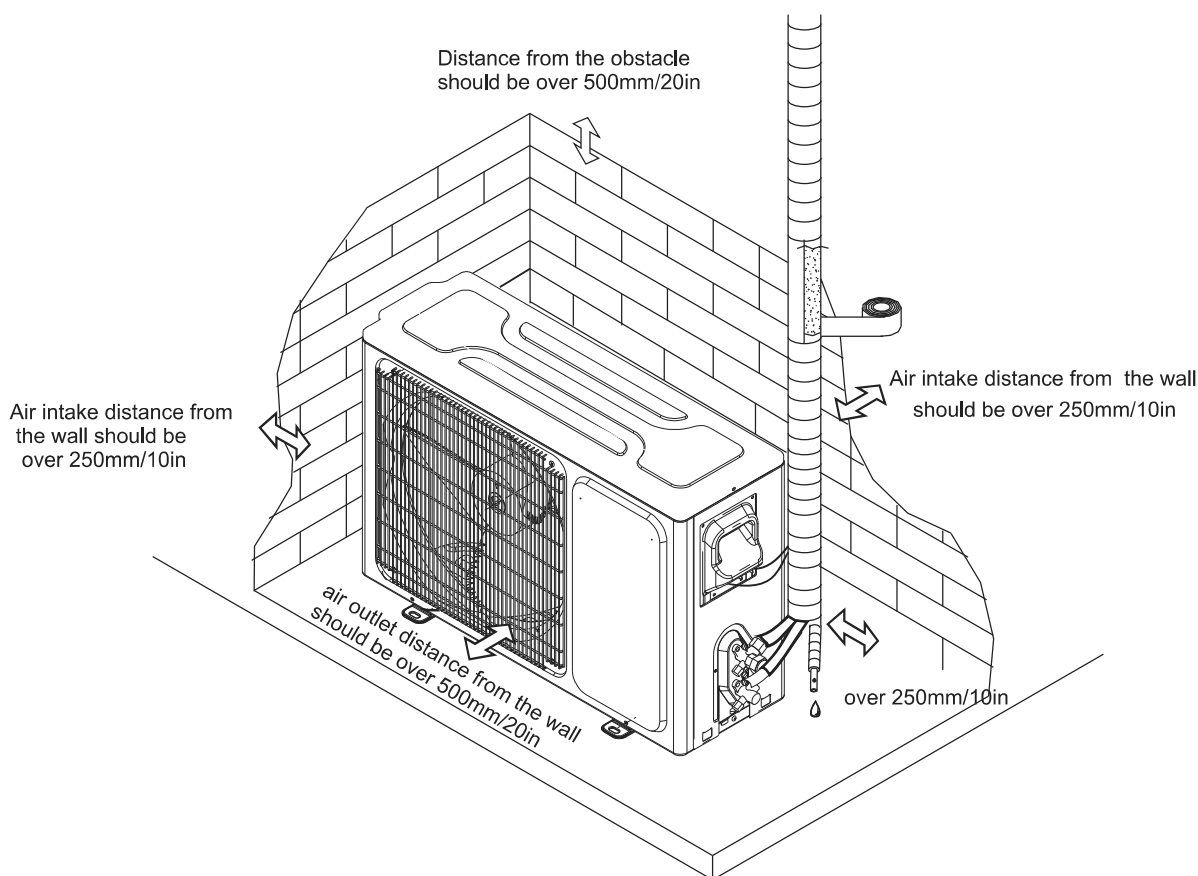
■ Space requirement

Provide sufficient installation space for product safety.

⚠ CAUTION

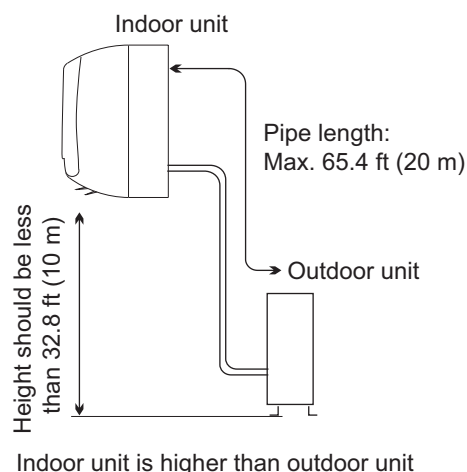
Keep the space shown in the installation examples.

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



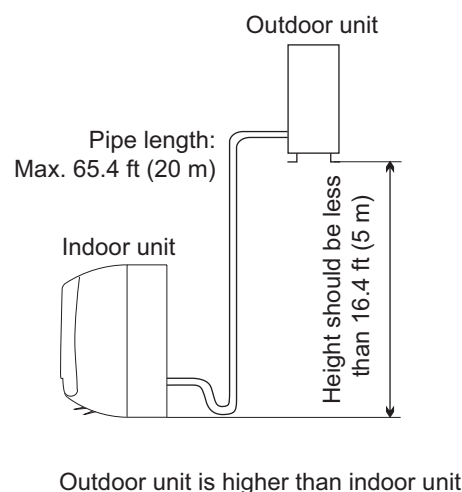
Site for installing the indoor unit

- 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.



Site for installing the outdoor unit

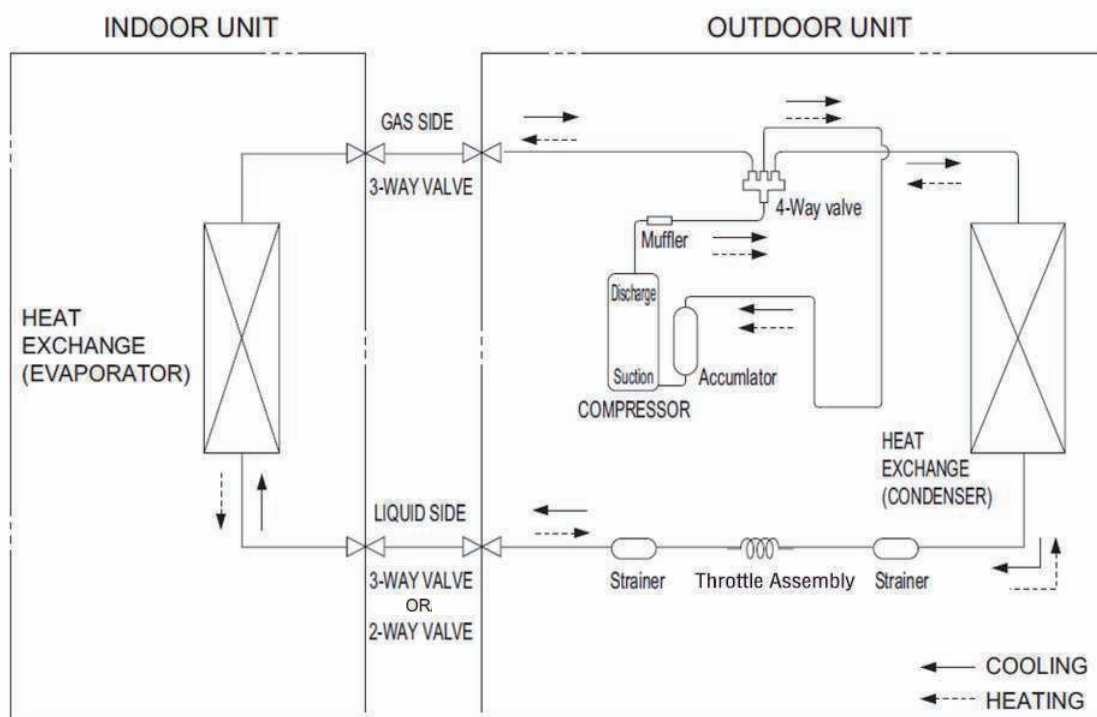
- Where it is convenient to install and well ventilated.
- Avoid installing it where flammable gas could leak.
- Keep the required distance apart from the wall.
- Keep the outdoor unit away from greasy dirt, vulcanization gas exit.
- Avoid installing it by the roadside where there is a risk of muddy 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 side-way, 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.



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

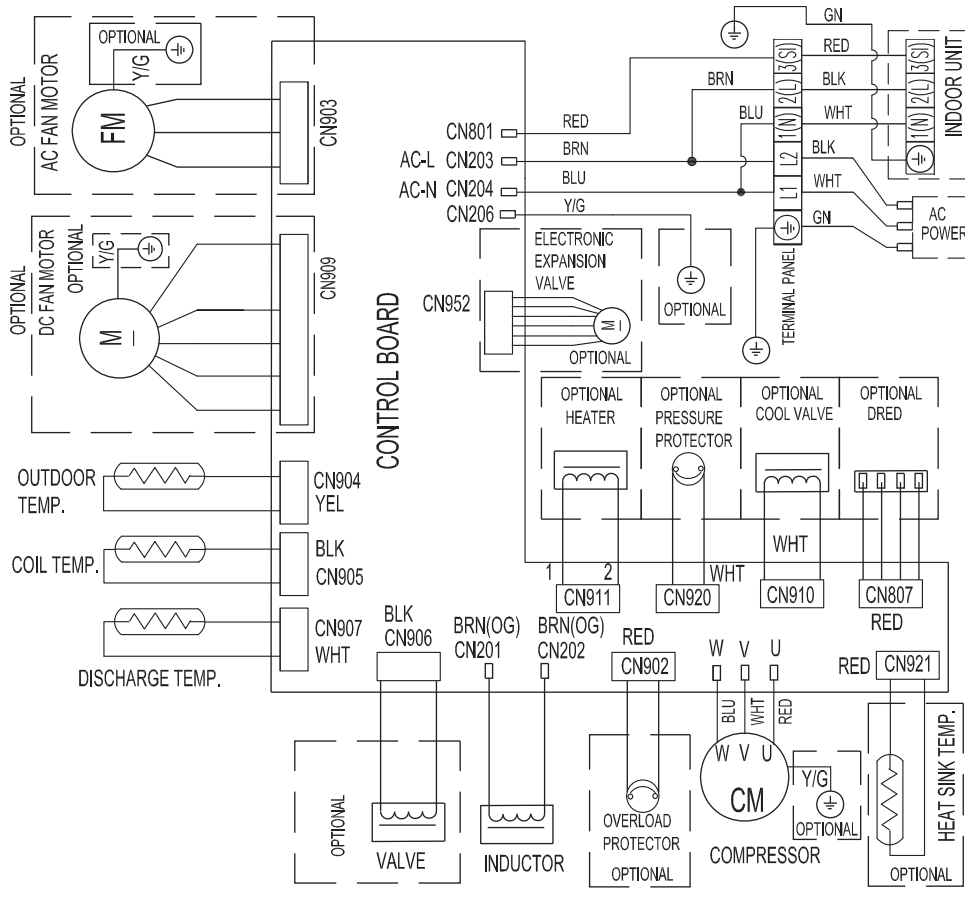
4. Refrigerant circuit

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: 2.35 Ω
 12 model: 1.7 Ω
 18 model: 1.87 Ω
 24 model: 0.75 Ω
 30 model: 0.932 Ω
 36 model: 0.65 Ω
 (20°C 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

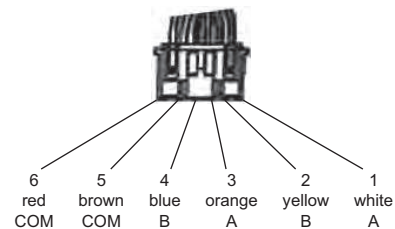
Temperature	0°C 32°F	20°C 68°F	30°C 86°F
Thermistor (ODU temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.4 k Ω 2.7 V
Thermistor (Pipe temp.)	15 k Ω 1.3 V	6.5 k Ω 2.2 V	4.4 k Ω 2.7 V
Thermistor (Discharge temp.)	186 k Ω 0.18 V	71.7 k Ω 0.43 V	46.3 k Ω 0.64 V

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

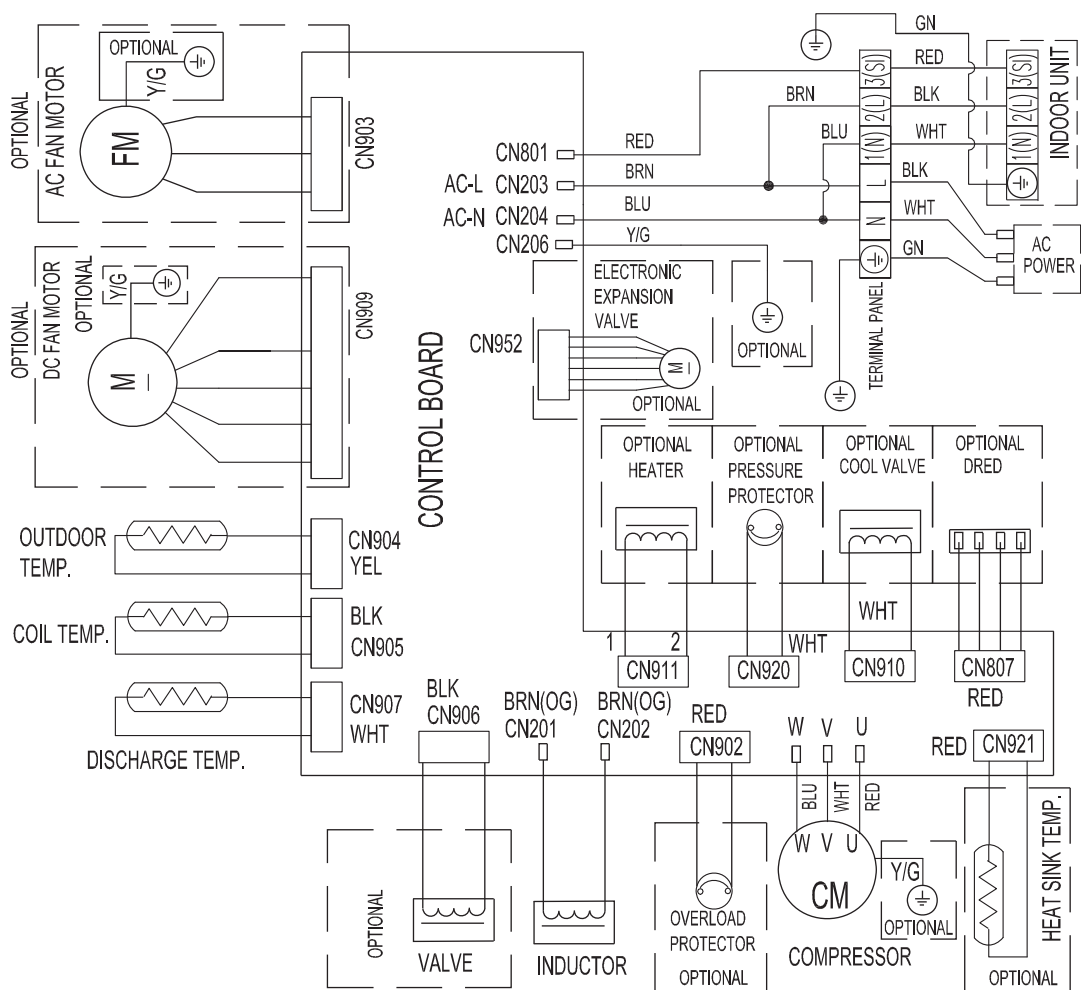
EEV (36 model)

Coil resistance : 46 Ω (20°C 68°F)



5-2. Models: WHS09SZA11S and WHS12SZA11S

OUTDOOR UNIT
WHS09-36SZA



OUTDOOR UNIT
WHS09-36SZA

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		208/230 ~		
	Frequency		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	
		Limited wiring length	ft (m)	69 (21)	

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		
		Limited wiring length	ft (m)	69 (21)		

Model name			WHS09SZA11S	WHS12SZA11S
Power supply	Voltage		115 ~	
	Frequency		60	
MCA*1			13.5	16.5
Wiring spec.*2	MAX. CKT. BKR*3		20	25
	Power cable		SJTW 3 × 14	
	Connection cable*4	Size	SJTW 4 × 18	
		Limited wiring length	69 (21)	

*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