Westinghouse

REFRIGERANT **R410A**

**INVERTER**

AIR CONDITIONER

## Wall mounted type

# DESIGN & TECHNICAL MANUAL

INDOOR

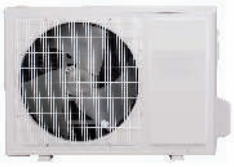


WHP09WMA21S
WHP12WMA21S

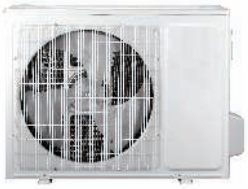
WHP18WMA21S
WHP24WMA21S

OUTDOOR

WHP09SZA21S



WHP12SZA21S



WHP18SZA21S

WHP24SZA21S



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2021.01.18

**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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# CONTENTS (continued)

# Part 1. INDOOR UNIT

**WALL MOUNTED TYPE:**

**WHP09WMA21S**

**WHP12WMA21S**

**WHP18WMA21S**

**WHP24WMA21S**

WALL MOUNTED
WHP09-24WMA

# 1. Specifications

| Type | | | | | Wall mounted | |
|---|---|---|---|---|---|---|
| | | | | | Inverter heat pump | |
| Model name | | | | | WHP09WMA21S | WHP12WMA21S |
| Power supply | | | | | 208/230 V ~ 60 Hz | |
| Power supply intake | | | | | Outdoor unit | |
| Available voltage range | | | | | 198—253 V | |
| Capacity | | Cooling | Rated | kW | 2.64 | 3.51 |
| | | | | Btu/h | 9,000 | 12,000 |
| | | | Min.—Max. | kW | 1.06—2.93 | 1.17—3.96 |
| | | | | Btu/h | 3,600—10,000 | 4,000—13,500 |
| | | Heating | Rated | kW | 2.78 | 3.81 |
| | | | | Btu/h | 9,500 | 13,000 |
| | | | Min.—Max. | kW | 1.05—3.07 | 1.17—4.10 |
| | | | | Btu/h | 3,600—10,500 | 4,000—14,000 |
| Input power | | Cooling | Rated | kW | 0.655 | 0.920 |
| | | | Min.—Max. | | 0.230—1.495 | 0.276—1.610 |
| | | Heating | Rated | | 0.720 | 1.110 |
| | | | Min.—Max. | | 0.230—1.495 | 0.276—1.610 |
| Current | | Cooling | Rated | A | 2.9 | 4.3 |
| | | Heating | | | 2.9 | 5.0 |
| EER | | Cooling | | W/W | 4.03 | 3.82 |
| | | | | Btu/hW | 13.74 | 13.04 |
| COP | | Heating | | W/W | 3.87 | 3.43 |
| | | | | Btu/hW | 13.19 | 11.71 |
| SEER | | Cooling | | Btu/hW | 22.5 | 22.0 |
| HSPF | | Heating | | Btu/hW | 10.7 | 10.5 |
| Power factor | | Cooling | | % | 98 | 96 |
| | | Heating | | | 98 | 97 |
| Moisture removal | | | | pints/h (L/h) | 1.9 (0.9) | 2.5 (1.2) |
| Maximum operating current*1 | | Cooling | | A | 6.5 | 7.0 |
| | | Heating | | | 6.5 | 7.0 |
| Fan | Airflow rate | Cooling | HIGHER | CFM ($m^3$/h) | 383 (650) | 394 (670) |
| | | | HIGH | | 341 (580) | 365 (620) |
| | | | MED | | 294 (500) | 312 (530) |
| | | | LOW | | 247 (420) | 253 (430) |
| | | | LOWER | | 224 (380) | |
| | | Heating | HIGHER | | 383 (650) | 394 (670) |
| | | | HIGH | | 341 (580) | 365 (620) |
| | | | MED | | 294 (500) | 312 (530) |
| | | | LOW | | 247 (420) | 253 (430) |
| | | | LOWER | | 224 (380) | |
| | Type × Q'ty | | | | Crossflow fan × 1 | |
| | Motor output | | | W | 25 | |
| Sound pressure level*2 | | Cooling | HIGHER | dB (A) | 42 | |
| | | | HIGH | | 39 | |
| | | | MED | | 32 | |
| | | | LOW | | 29 | |
| | | | LOWER | | 26 | |
| | | Heating | HIGHER | | 42 | |
| | | | HIGH | | 39 | |
| | | | MED | | 32 | |
| | | | LOW | | 29 | |
| | | | LOWER | | 26 | |
| Heat exchanger type | | Dimensions (H × W × D) | | in (mm) | 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 | |
| Enclosure | | Material | | | Polystyrene | |
| | | Color | | | White | |
| Dimensions (H × W × D) | | Net | | in (mm) | 10-5/8 × 33-7/16 × 8-7/16 (270 × 850 × 215) | |
| | | Gross | | | 13-3/16 × 37 × 10-7/16 (335 × 940 × 265) | |
| Weight | | Net | | lb (kg) | 20 (9) | |
| | | Gross | | | 24 (11) | 26 (12) |
| Connection pipe | | Size | Liquid | in (mm) | Ø 1/4 (Ø 6.35) | |
| | | | Gas | | Ø 3/8 (Ø 9.52) | |
| | | 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 | |
| | | Heating | | °F (°C) | 61 to 86 (16 to 30) | |
| 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).
  - 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.

WALL MOUNTED
WHP09-24WMA

| Type | | | | | Wall mounted | |
|---|---|---|---|---|---|---|
| | | | | | Inverter heat pump | |
| **Model name** | | | | | **WHP18WMA21S** | **WHP24WMA21S** |
| Power supply | | | | | 208/230 V ~ 60 Hz | |
| Power supply intake | | | | | Outdoor unit | |
| Available voltage range | | | | | 198—253 V | |
| Capacity | | Cooling | Rated | kW | 5.28 | 6.86 |
| | | | | Btu/h | 18,000 | 23,400 |
| | | | Min.—Max. | kW | 1.905—5.7153 | 2.345—7.767 |
| | | | | Btu/h | 6,500—19,500 | 8,000—26,500 |
| | | Heating | Rated | kW | 5.57 | 7.62 |
| | | | | Btu/h | 19,000 | 26,000 |
| | | | Min.—Max. | kW | 1.905—5.862 | 2.345—7.767 |
| | | | | Btu/h | 6,500—20,000 | 8,000—26,500 |
| Input power | | Cooling | Rated | kW | 1.385 | 1.870 |
| | | | Min.—Max. | | 0.345—2.760 | 0.414—2.990 |
| | | Heating | Rated | | 1.638 | 2.500 |
| | | | Min.—Max. | | 0.345—2.760 | 0.414—2.990 |
| Current | | Cooling | Rated | A | 6.3 | 8.3 |
| | | Heating | | | 7.2 | 11.1 |
| EER | | Cooling | | W/W | 3.81 | 3.67 |
| | | | | Btu/hW | 13.00 | 12.51 |
| COP | | Heating | | W/W | 3.40 | 3.05 |
| | | | | Btu/hW | 11.60 | 10.40 |
| SEER | | Cooling | | Btu/hW | 23.3 | 21.0 |
| HSPF | | Heating | | Btu/hW | 11.6 | 10.5 |
| Power factor | | Cooling | | % | 96 | 98 |
| | | Heating | | | 99 | 98 |
| Moisture removal | | | | pints/h (L/h) | 3.2 (1.5) | 5.1 (2.4) |
| Maximum operating current*2 | | Cooling | | A | 12.0 | 13.0 |
| | | Heating | | | 12.0 | 13.0 |
| Fan | Airflow rate | Cooling | HIGHER | CFM ($m^3$/h) | 647 (1,100) | 706 (1,200) |
| | | | HIGH | | 589 (1,000) | 647 (1,100) |
| | | | MED | | 483 (820) | 559 (950) |
| | | | LOW | | 459 (780) | 441 (750) |
| | | | LOWER | | 383 (650) | 368 (625) |
| | | Heating | HIGHER | | 647 (1,100) | 706 (1,200) |
| | | | HIGH | | 589 (1,000) | 647 (1,100) |
| | | | MED | | 483 (820) | 559 (950) |
| | | | LOW | | 459 (780) | 441 (750) |
| | | | LOWER | | 383 (650) | 368 (625) |
| | Type × Q'ty | | | | Crossflow fan × 1 | |
| | Motor output | | | W | 35 | |
| Sound pressure level*3 | | Cooling | HIGHER | dB (A) | 48 | 50 |
| | | | HIGH | | 45 | 47 |
| | | | MED | | 41 | 42 |
| | | | LOW | | 37 | 36 |
| | | | LOWER | | 34 | 33 |
| | | Heating | HIGHER | | 48 | 50 |
| | | | HIGH | | 45 | 47 |
| | | | MED | | 41 | 42 |
| | | | LOW | | 37 | 36 |
| | | | LOWER | | 34 | 33 |
| Heat exchanger type | | Dimensions (H × W × D) | | in (mm) | 14-7/8 × 33-1/8 × 1-1/16 (378 × 842 × 27.2) | |
| | | Fin pitch | | FPI | 18 | |
| | | Rows × Stages | | | 2 × 18 | |
| | | Pipe type | | | Copper | |
| | | Fin type | | | Aluminum | |
| Enclosure | | Material | | | Polystyrene | |
| | | Color | | | White | |
| Dimensions (H × W × D) | | Net | | in (mm) | 12-3/8 × 44-1/2 × 9-5/16 (315 × 1,130 × 237) | |
| | | Gross | | | 15-3/8 × 47-5/8 × 12-7/16 (390 × 1,210 × 316) | |
| Weight | | Net | | lb (kg) | 32 (14.5) | |
| | | Gross | | | 37 (17) | |
| Connection pipe | | Size | Liquid | in (mm) | Ø 1/4 (Ø 6.35) | Ø 3/8 (Ø 9.52) |
| | | | Gas | | Ø 1/2 (Ø 12.70) | 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 | |
| | | Heating | | °F (°C) | 61 to 86 (16 to 30) | |
| 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).
  - 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.

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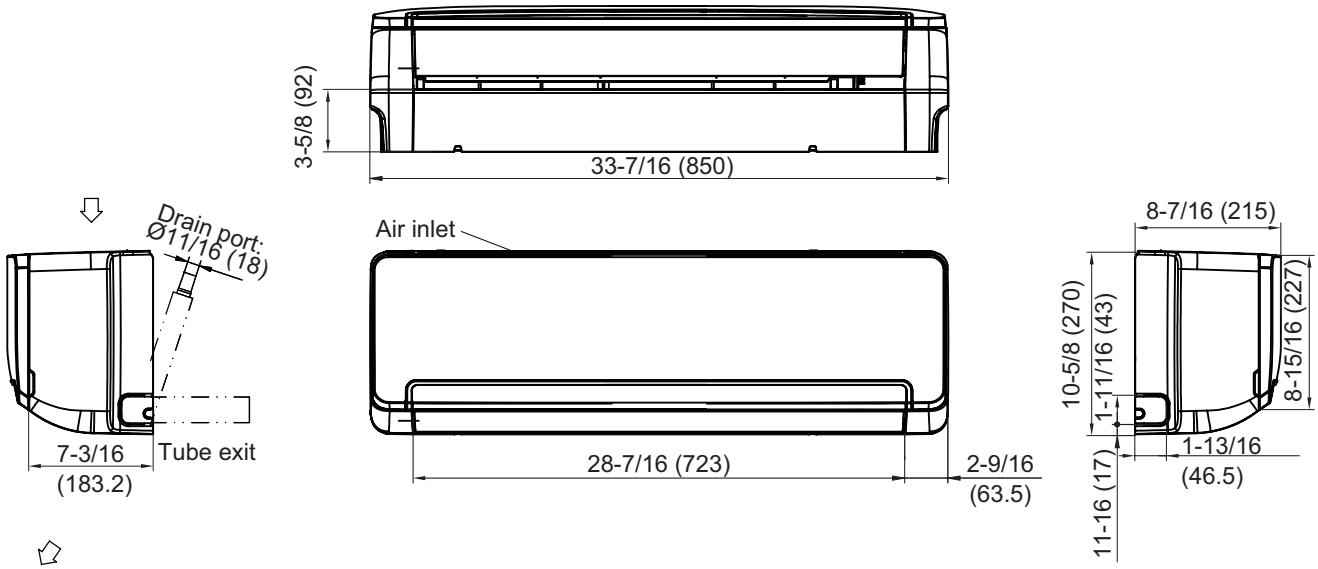
# 2. Dimensions

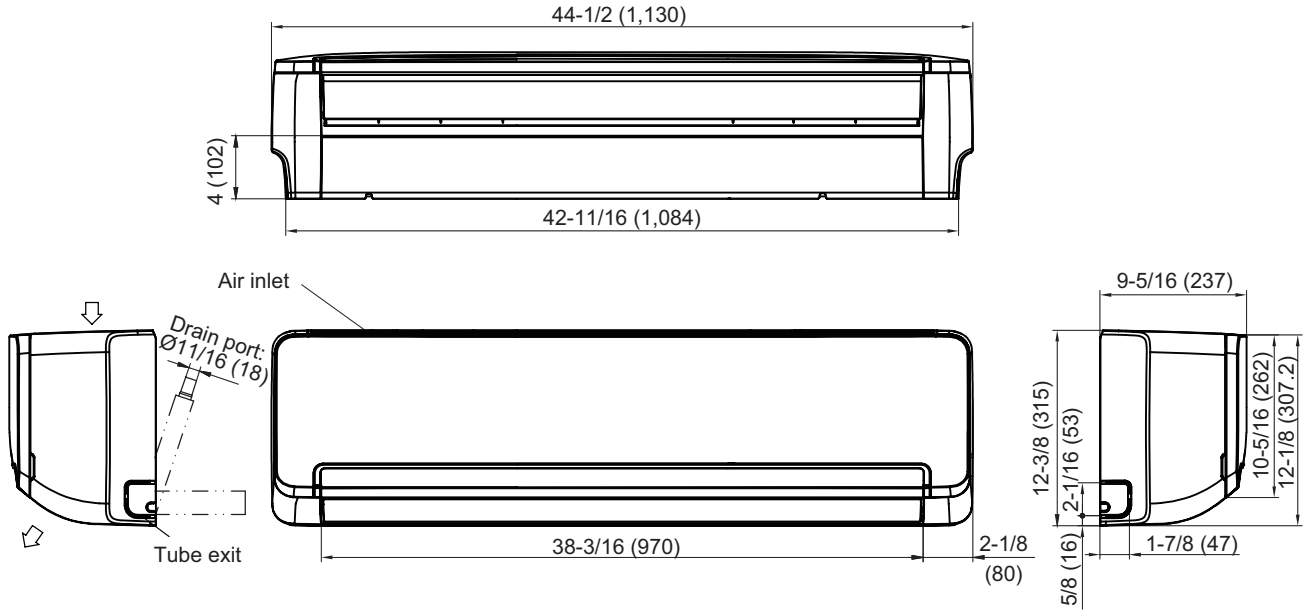
## 2-1. Models: WHP09WMA21S and WHP12WMA21S

Unit: in (mm)




## 2-2. Models: WHP18WMA21S and WHP24WMA21S

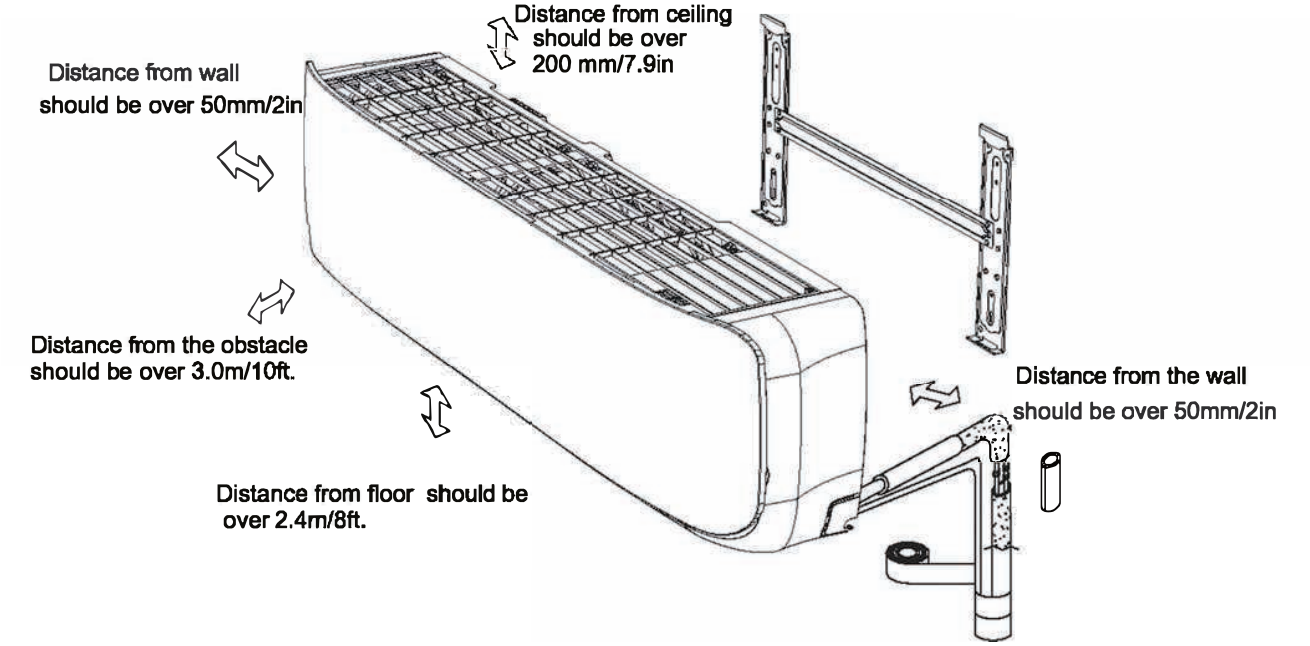
Unit: in (mm)



WALL MOUNTED
WHP09-24WMA

# 2-3. Installation space requirement

Provide sufficient installation space for product safety.



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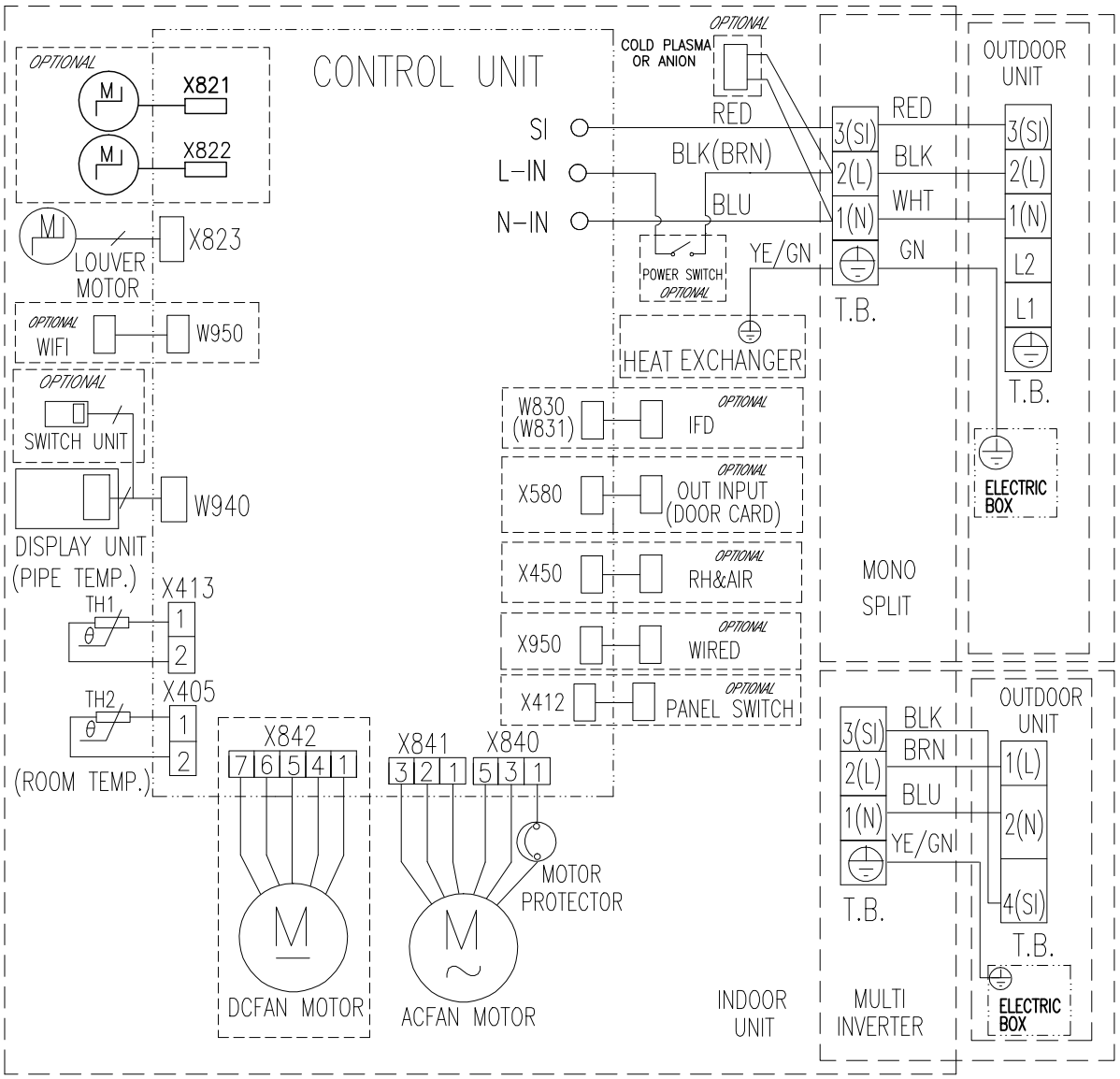
WHP09-24WMA

# 3. Wiring diagrams

## 3-1. Models: WHP09WMA21S, WHP12WMA21S, WHP18WMA21S, and WHP24WMA21S



WALL MOUNTED
WHP09-24WMA

# 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: WHP09WMA21S

| AFR | CFM | 383 |
|---|---|---|

| | | | Indoor temperature | | |
|---|---|---|---|---|---|
| | | °FDB | 80 | | |
| | | °FWB | 67 | | |
| | °FDB | °FWB | TC | SHC | IP |
| | | | Btu/h | | W |
| Outdoor temperature | 5 | 3 | 7,481 | 5,611 | 184 |
| | 14 | 12 | 6,672 | 5,004 | 203 |
| | 23 | 21 | 7,582 | 5,687 | 230 |
| | 32 | 28 | 8,537 | 5,974 | 257 |
| | 41 | 37 | 8,724 | 6,104 | 364 |
| | 50 | 47 | 9,154 | 6,408 | 470 |
| | 59 | 50 | 9,530 | 6,670 | 597 |
| | 67 | 53 | 9,888 | 6,920 | 693 |
| | 77 | 62 | 10,209 | 7,145 | 801 |
| | 87 | 69 | 10,277 | 7,192 | 909 |
| | 95 | 75 | 10,110 | 7,076 | 922 |
| | 104 | 78 | 9,850 | 6,892 | 894 |
| | 115 | 80 | 9,260 | 6,479 | 875 |

### ■ Model: WHP12WMA21S

| AFR | CFM | 394 |
|---|---|---|

| | | | Indoor temperature | | |
|---|---|---|---|---|---|
| | | °FDB | 80 | | |
| | | °FWB | 67 | | |
| | °FDB | °FWB | TC | SHC | IP |
| | | | Btu/h | | W |
| Outdoor temperature | 5 | 3 | 9,807 | 7,355 | 244 |
| | 14 | 12 | 8,746 | 6,560 | 268 |
| | 23 | 21 | 9,939 | 7,454 | 305 |
| | 32 | 28 | 10,663 | 7,462 | 345 |
| | 41 | 37 | 11,386 | 7,967 | 541 |
| | 50 | 47 | 12,085 | 8,458 | 654 |
| | 59 | 50 | 12,734 | 8,912 | 759 |
| | 67 | 53 | 13,129 | 9,189 | 860 |
| | 77 | 62 | 13,624 | 9,537 | 954 |
| | 87 | 69 | 13,846 | 9,690 | 1,148 |
| | 95 | 75 | 13,252 | 9,274 | 1,220 |
| | 104 | 78 | 12,150 | 8,503 | 1,188 |
| | 115 | 80 | 9,813 | 6,868 | 1,098 |

### ■ Model: WHP18WMA21S

| AFR | CFM | 647 |
|---|---|---|

| | | | Indoor temperature | | |
|---|---|---|---|---|---|
| | | °FDB | 80 | | |
| | | °FWB | 67 | | |
| | °FDB | °FWB | TC | SHC | IP |
| | | | Btu/h | | W |
| Outdoor temperature | 5 | 3 | 13,743 | 10,307 | 670 |
| | 14 | 12 | 12,257 | 9,193 | 765 |
| | 23 | 21 | 13,929 | 10,446 | 861 |
| | 32 | 28 | 16,784 | 11,748 | 971 |
| | 41 | 37 | 17,753 | 12,427 | 1,086 |
| | 50 | 47 | 18,398 | 12,877 | 1,218 |
| | 59 | 50 | 18,616 | 13,030 | 1,298 |
| | 67 | 53 | 19,025 | 13,317 | 1,349 |
| | 77 | 62 | 19,312 | 13,518 | 1,414 |
| | 87 | 69 | 19,261 | 13,481 | 1,907 |
| | 95 | 75 | 18,572 | 13,003 | 1,913 |
| | 104 | 78 | 17,272 | 12,089 | 2,109 |
| | 115 | 80 | 15,804 | 11,062 | 2,108 |

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# ■ Model: WHP24WMA21S

| AFR | CFM | 706 |
|---|---|---|

| | | | Indoor temperature | | |
|---|---|---|---|---|---|
| | | °FDB | 80 | | |
| | | °FWB | 67 | | |
| Outdoor temperature | °FDB | °FWB | TC | SHC | IP |
| | | | Btu/h | | W |
| | 5 | 3 | 19,588 | 14,691 | 1,056 |
| | 14 | 12 | 17,470 | 13,103 | 1,207 |
| | 23 | 21 | 19,853 | 14,890 | 1,358 |
| | 32 | 28 | 22,140 | 15,498 | 1,086 |
| | 41 | 37 | 25,054 | 17,538 | 1,465 |
| | 50 | 47 | 26,494 | 18,546 | 1,715 |
| | 59 | 50 | 27,279 | 19,095 | 1,925 |
| | 67 | 53 | 27,514 | 19,260 | 2,127 |
| | 77 | 62 | 27,719 | 19,403 | 2,351 |
| | 87 | 69 | 27,354 | 19,148 | 2,715 |
| | 95 | 75 | 26,470 | 18,529 | 3,017 |
| | 104 | 78 | 22,758 | 15,931 | 2,894 |
| | 115 | 80 | 18,343 | 12,840 | 2,603 |

WALL MOUNTED
WHP09-24WMA

# 4-2. Heating capacity

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

## ■ Model: WHP09WMA21S

| AFR | CFM | 383 |
|---|---|---|

| | | | Indoor temperature | |
|---|---|---|---|---|
| | | °FDB | 70 | |
| | | °FWB | 60 | |
| Outdoor temperature | °FDB | °FWB | TC | IP |
| | | | Btu/h | W |
| | -5 | -7 | 4,947 | 1,140 |
| | 5 | 3 | 6,196 | 1,199 |
| | 14 | 12 | 7,288 | 1,270 |
| | 17 | 15 | 8,591 | 1,343 |
| | 23 | 19 | 9,328 | 1,382 |
| | 32 | 28 | 9,850 | 1,336 |
| | 35 | 33 | 10,233 | 1,191 |
| | 47 | 43 | 11,645 | 1,105 |
| | 59 | 50 | 10,775 | 796 |
| | 68 | 59 | 9,316 | 685 |
| | 75 | 65 | 7,569 | 553 |

## ■ Model: WHP12WMA21S

| AFR | CFM | 394 |
|---|---|---|

| | | | Indoor temperature | |
|---|---|---|---|---|
| | | °FDB | 70 | |
| | | °FWB | 60 | |
| Outdoor temperature | °FDB | °FWB | TC | IP |
| | | | Btu/h | W |
| | -5 | -7 | 8,673 | 1,288 |
| | 5 | 3 | 10,181 | 1,335 |
| | 14 | 12 | 11,403 | 1,441 |
| | 17 | 15 | 12,096 | 1,479 |
| | 23 | 19 | 12,723 | 1,540 |
| | 32 | 28 | 13,457 | 1,564 |
| | 35 | 33 | 13,945 | 1,512 |
| | 47 | 43 | 14,191 | 1,312 |
| | 59 | 50 | 14,013 | 1,102 |
| | 68 | 59 | 11,352 | 813 |
| | 75 | 65 | 9,224 | 656 |

## ■ Model: WHP18WMA21S

| AFR | CFM | 647 |
|---|---|---|

| | | | Indoor temperature | |
|---|---|---|---|---|
| | | °FDB | 70 | |
| | | °FWB | 60 | |
| Outdoor temperature | °FDB | °FWB | TC | IP |
| | | | Btu/h | W |
| | -5 | -7 | 8,571 | 1,169 |
| | 5 | 3 | 10,905 | 1,265 |
| | 14 | 12 | 13,897 | 1,278 |
| | 17 | 15 | 15,429 | 1,485 |
| | 23 | 19 | 16,739 | 1,598 |
| | 32 | 28 | 18,244 | 1,652 |
| | 35 | 33 | 20,919 | 1,798 |
| | 47 | 43 | 21,274 | 1,812 |
| | 59 | 50 | 20,728 | 1,773 |
| | 68 | 59 | 17,019 | 1,123 |
| | 75 | 65 | 13,828 | 906 |

WALL MOUNTED
WHP09-24WMA

# ■ Model: WHP24WMA21S

| AFR | CFM | 706 |
|---|---|---|

| | | | 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 |
| | 17 | 15 | 19,554 | 2,793 |
| | 23 | 19 | 19,312 | 2,760 |
| | 32 | 28 | 20,885 | 2,568 |
| | 35 | 33 | 21,642 | 2,541 |
| | 47 | 43 | 26,777 | 2,522 |
| | 59 | 50 | 26,678 | 2,504 |
| | 68 | 59 | 21,422 | 1,564 |
| | 75 | 65 | 17,405 | 1,261 |

WALL MOUNTED
WHP09-24WMA

# 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.

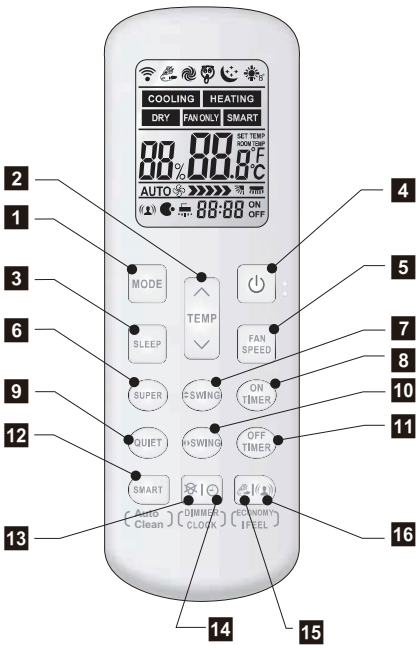
**9** QUIET
Used to set or cancel Quiet Mode operation.

**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.

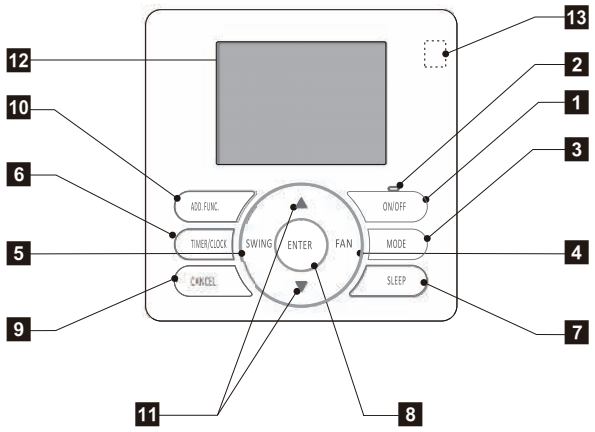
**16** IFEEL
Press to set IFEEL Mode operation. In IFEEL mode,the Air Conditioner operates basis temperature sensor fitted in remote instead of machine, Advice to use IFEEL mode and the remote put where the indoor unit receive signal easily.Press this button above 5 seconds, start or stop IFEEL mode.

**Indication symbols on LCD:**

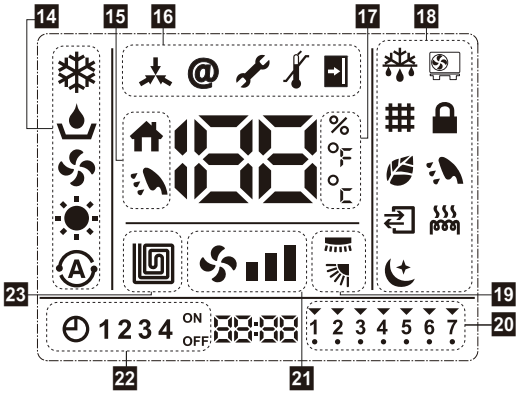
| | | | | |
|---|---|---|---|---|
| COOLING Cooling indicator | DRY Dry indicator | FAN ONLY Fan only indicator | HEATING Heating indicator | SMART Smart indicator |
| Auto Auto fan speed | Higher fan speed | High fan speed | Medium fan speed | Low fan speed |
| Lower fan speed | Quiet indicator | Economy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

WALL MOUNTED
WHP09-24WMA

# 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 ON/OFF button**

Starts and stops operation.

**2 Run indicator**

Indicates the appliance is on.

**3 MODE button**

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

**4 FAN button**

Selects the fan speed in sequence HIGH, AUTO, LOW, MED, HIGH.

**5 SWING button (invalid for some models)**

Stops/Starts adjustment louver swing and sets the airflow direction.

**6 TIMER/CLOCK button**

Sets current time or set timer on/off.

**7 SLEEP button**

Sets/cancels sleep mode operation.

**8 ENTER button**

**9 CANCEL button**

**10 ADD.FUNC. button (invalid for some models)**

Sets filter clean, hot water, fresh air, electric heater, etc.

**11 SET TEMP. (temperature) (▽ / △) button**

Sets desired temperature.

**12 LCD screen**

**13 Built-in infrared signal receiver**

**14 Operation mode**

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

**15 Temperature mode**

: Room temperature, : Hot water temperature

**16 Setting indicator**

: Central control, : Address setting, : Address setting, : Error indicator, : Temperature range limit, : Home leave control

**17 Temperature indicator**

: Relative moisture, : Fahrenheit, : Celsius

**18 Status indicator**

: Defrost, : Compressor run, : Filter clean, : Lock, : Air purge, : Hot water, : Ventilation, : Electric heater, : Sleep

**19 Air direction indicator**

**20 Day of week indicator**

**21 Fan speed indicator**

**22 Timer indicator**

**23 Floor heater indicator**

WALL MOUNTED
WHP09-24WMA

# 6. Accessories

| Part name | Q'ty | Part name | Q'ty |
|---|---|---|---|
| Remote controller instructions | 1 | Drain joint rubber seal | 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<br>18/24 model: 3 |
| Foam insulation | 09-18 model: 1<br>24 mode: 2 | Warranty Card | 1 |
| Drain joint | 1 | | |

WALL MOUNTED
WHP09-24WMA

# Part 2. OUTDOOR UNIT

**SINGLE TYPE:**

**WHP09SZA21S**
**WHP12SZA21S**
**WHP18SZA21S**
**WHP24SZA21S**

# 1. Specifications

| Type | | | | Inverter heat pump | |
|---|---|---|---|---|---|
| **Model name** | | | | **WHP09SZA21S** | **WHP12SZA21S** |
| Power supply | | | | 208/230 V ~ 60 Hz | |
| Available voltage range | | | | 198—253 V | |
| Fan | Airflow rate | | CFM ($m^3$/h) | 971 (1,650) | 1,177 (2,000) |
| | Type × Q'ty | | | Propeller fan × 1 | |
| | Motor output | | W | 30 | |
| Sound pressure level *1 | | | dB (A) | 53 | |
| Heat exchanger type | | Dimensions (H × W × D) | in (mm) | 26-7/8 × 18-3/16 × 11/16 (683 × 462 × 18.2) 25-3/4 × 18-3/16 × 11/16 (654 × 462 × 18.2) | 33-1/16 × 21-1/2 × 11/16 (840 × 546 × 18.19) 33-1/16 × 21-1/2 × 11/16 (840 × 546 × 18.19) |
| | | 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 | 2 lb 2 oz | 2 lb 9 oz |
| | | | g | 950 | 1,160 |
| 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) | 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) | 60 (27) | 73 (33) |
| | Gross | | | 65 (29.5) | 79 (36) |
| 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.

OUTDOOR UNIT
WHP09-24SZA

| Type | | | | Inverter heat pump | |
|---|---|---|---|---|---|
| **Model name** | | | | **WHP18SZA21S** | **WHP24SZA21S** |
| 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 × Q'ty | | | Propeller fan × 1 | |
| | Motor output | | W | 60 | 70 |
| Sound pressure level *1 | | | dB (A) | 55 | 58 |
| Heat exchanger type | | Dimensions (H × W × D) | in (mm) | 35-1/4 × 24-13/16 × 11/16 (895 × 630 × 18.19) 34-1/8 × 24-13/16 × 11/16 (867 × 630 × 18.19) | 35-1/4 × 24-13/16 × 11/16 (895 × 630 × 18.19) 34-1/8 × 24-13/16 × 11/16 (867 × 630 × 18.19) 19-11/16 × 24-13/16 × 11/16 (500 × 630 × 18.19) |
| | | Fin pitch | FPI | 18 | |
| | | Rows × Stages | | 2 × 30 | 3 × 30 |
| | | Pipe type | | Copper | |
| | | Fin type | Type (Material) | Aluminum | |
| | | | Surface treatment | Blue fin | |
| Compressor | Type | | | Rotary | |
| Refrigerant | | Type | | R410A | |
| | | Charge | lb oz | 3 lb 7 oz | 4 lb 12 oz |
| | | | g | 1,550 | 2,150 |
| Refrigerant oil | | Type | | VG74 (POE) | |
| Enclosure | | Material | | Steel sheet | |
| | | Color | | White | |
| 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 | | | 28-3/8 × 39-3/16 × 16-9/16 (720 × 995 × 420) | 35-1/16 × 41-5/16 × 19-11/16 (890 × 1,050 × 500) |
| Weight | Net | | lb (kg) | 99 (45) | 134 (61) |
| | Gross | | | 108 (49) | 144 (65.5) |
| Connection pipe | Size | Liquid | in (mm) | Ø 1/4 (Ø 6.35) | Ø 3/8 (Ø 9.52) |
| | | Gas | | Ø 1/2 (Ø 12.7) | 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) | 5 to 115 (-15 to 46) | |
| | | Heating | | -4 to 75 (-20 to 24) | |

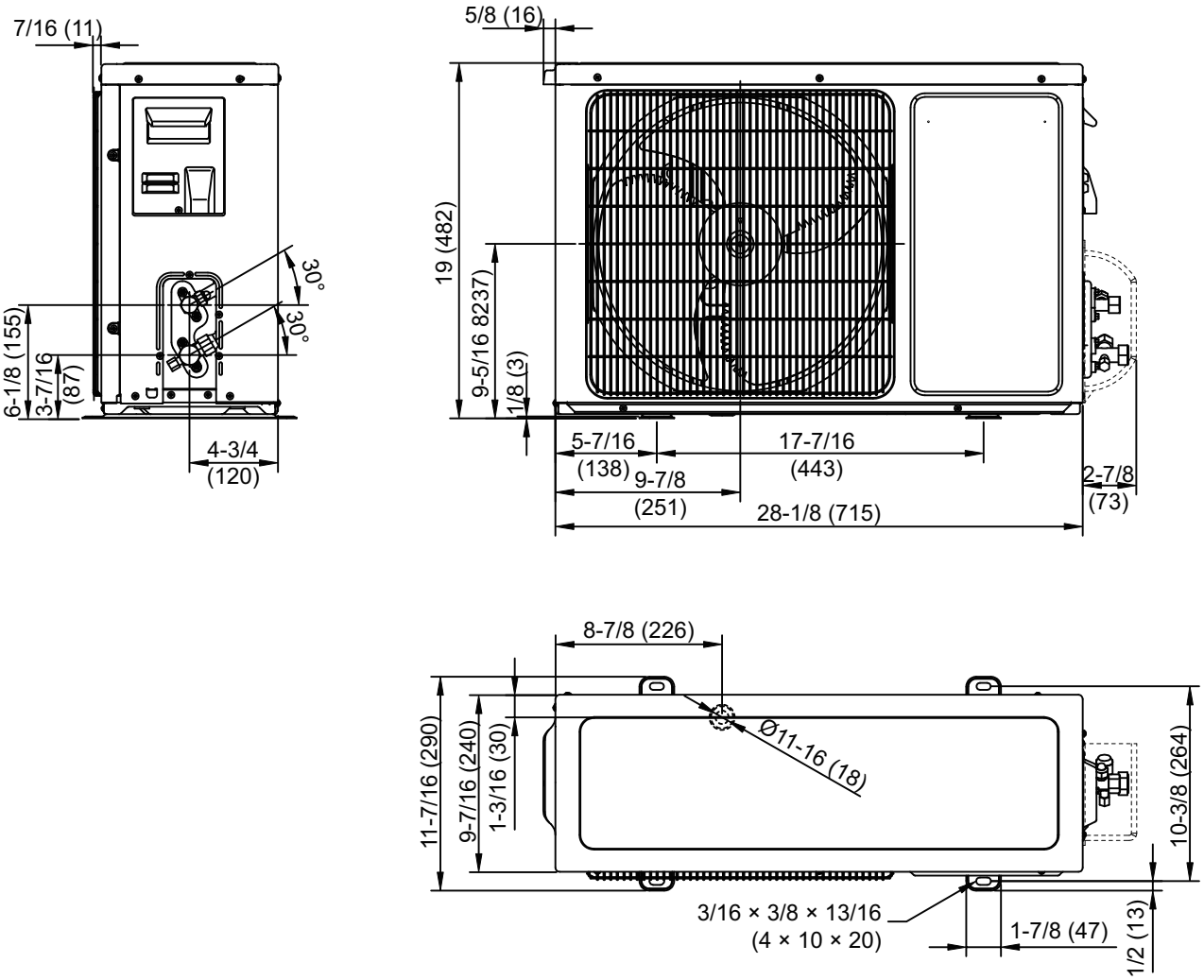
**NOTES:**

- 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

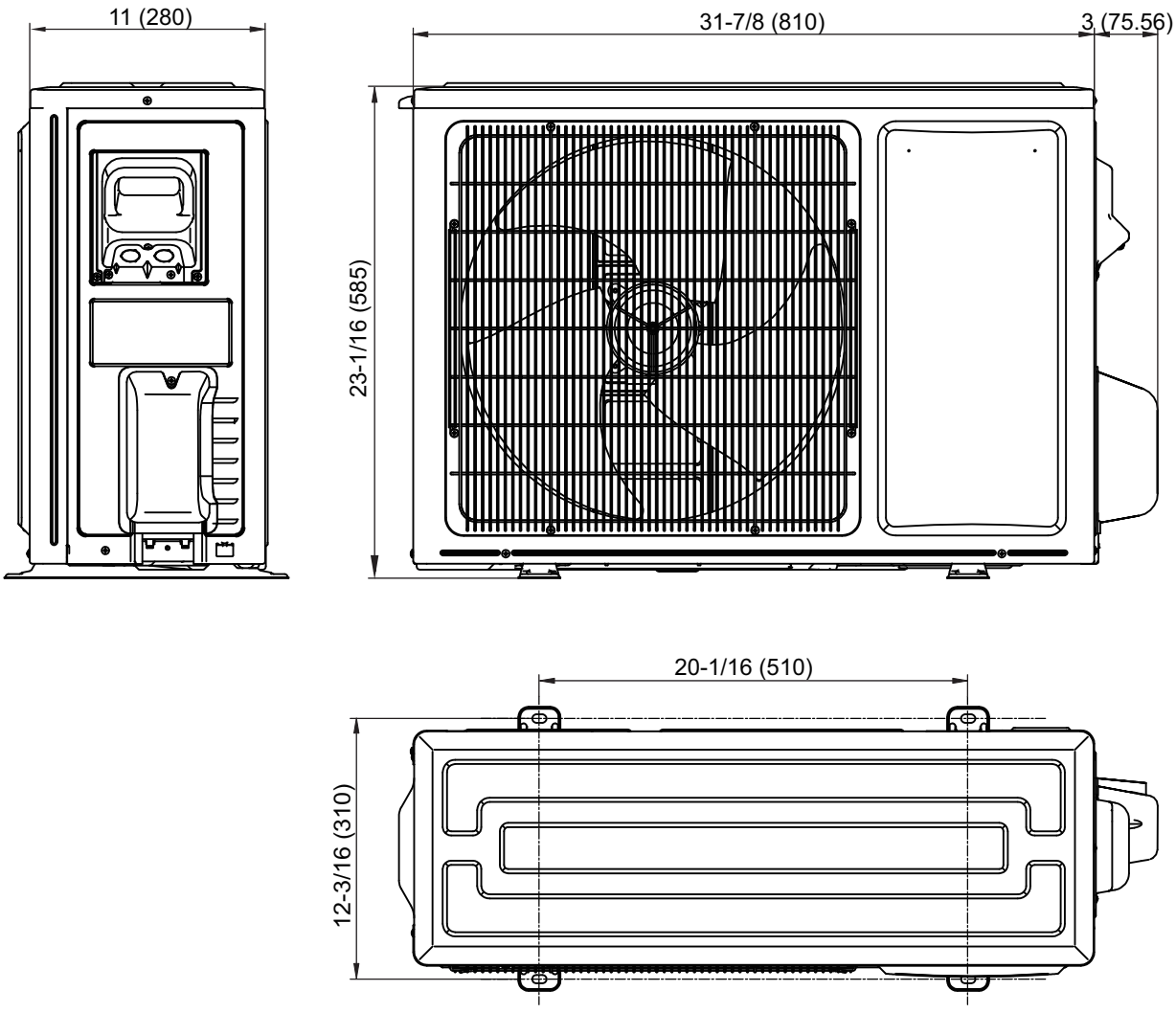
## 2-1. Model: WHP09SZA21S

Unit: in (mm)



# 2-2. Model: WHP12SZA21S

Unit: in (mm)




OUTDOOR UNIT
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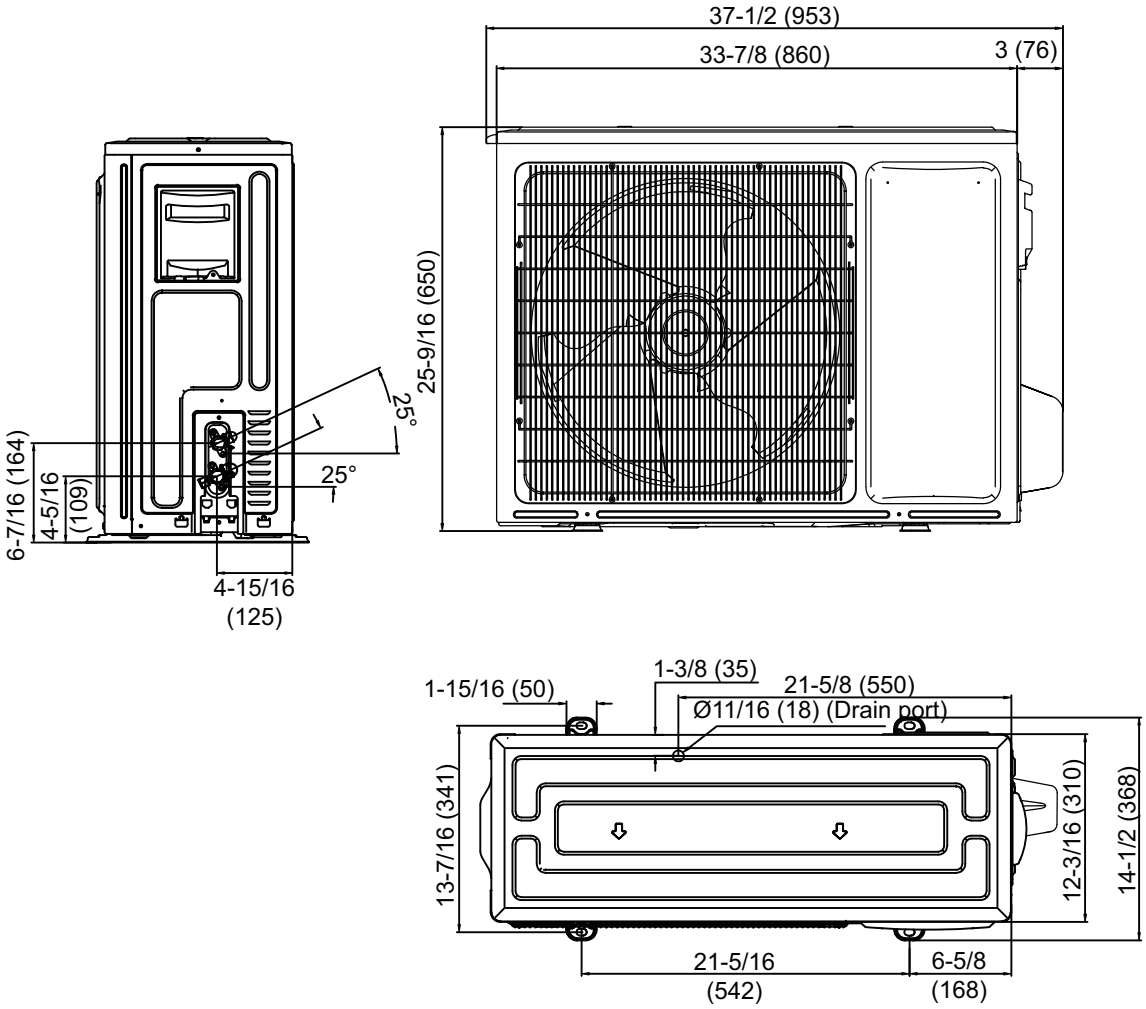
OUTDOOR UNIT
WHP09-24SZA

# 2-3. Model: WHP18SZA21S

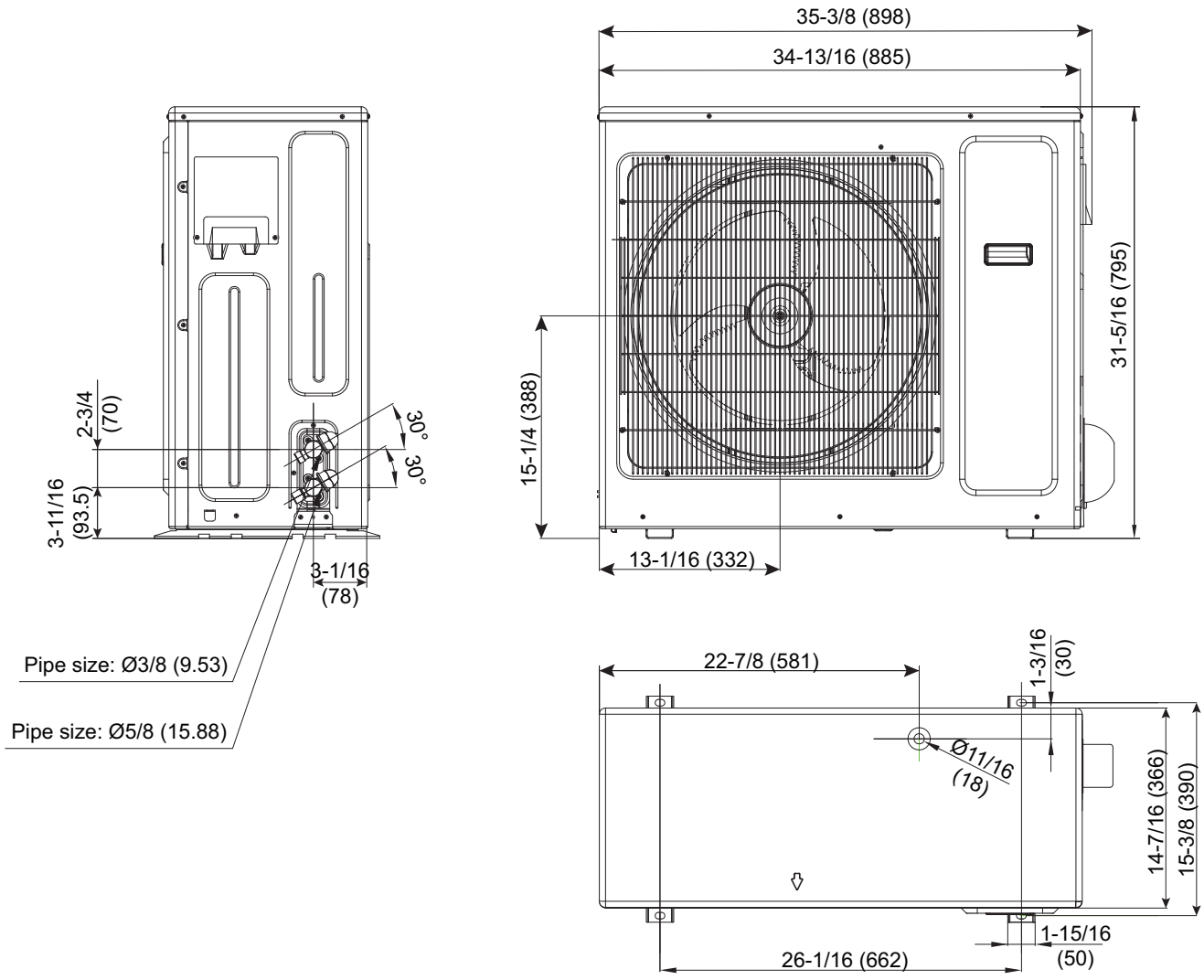
Unit: in (mm)



OUTDOOR UNIT
WHP09-24SZA

# 2-4. Model: WHP24SZA21S

Unit: in (mm)



OUTDOOR UNIT
WHP09-24SZA

# 3. Installation space

## 3-1. Models: WHP09SZA21S, WHP12SZA21S, WHP18SZA21S, and WHP24SZA21S

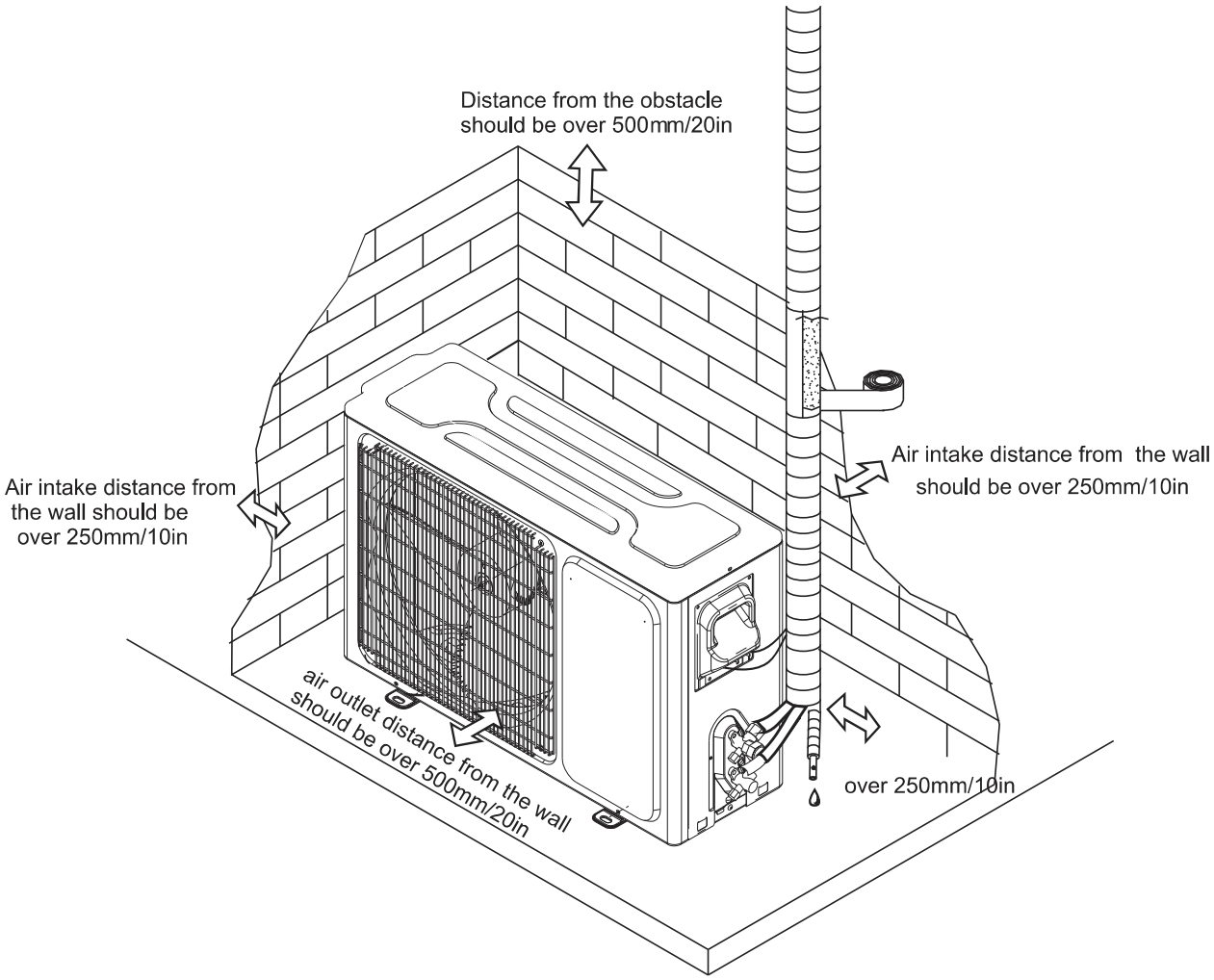
### ■ Space requirement

Provide sufficient installation space for product safety.

**⚠ CAUTION**

Keep the space shown in the installation examples.

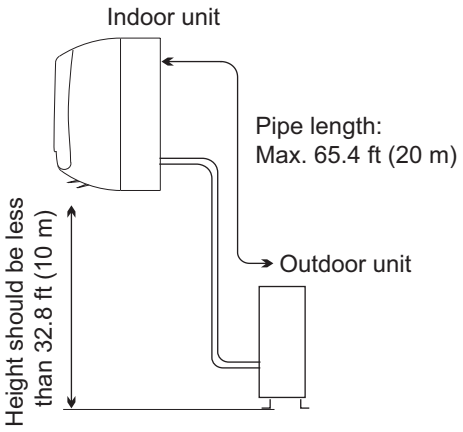
If the installation is not performed accordingly, it could cause a short circuit and result in a lack of operating performance.



OUTDOOR UNIT
WHP09-24SZA

### Site for installing the indoor unit

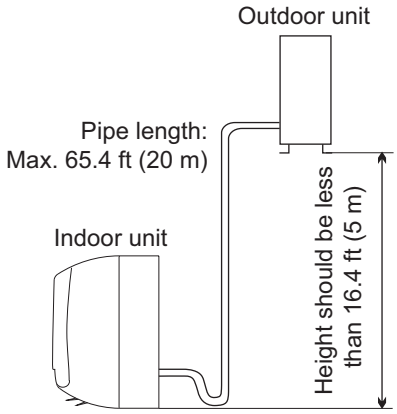
- Where there is no obstruction near the air outlet and air can be easily blown to every corner.
- Where piping and wall hole can be easily arranged.
- Keep the required space from the unit to the ceiling and wall according to the diagram on previous page.
- Where the air filter can be easily removed.
- 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.

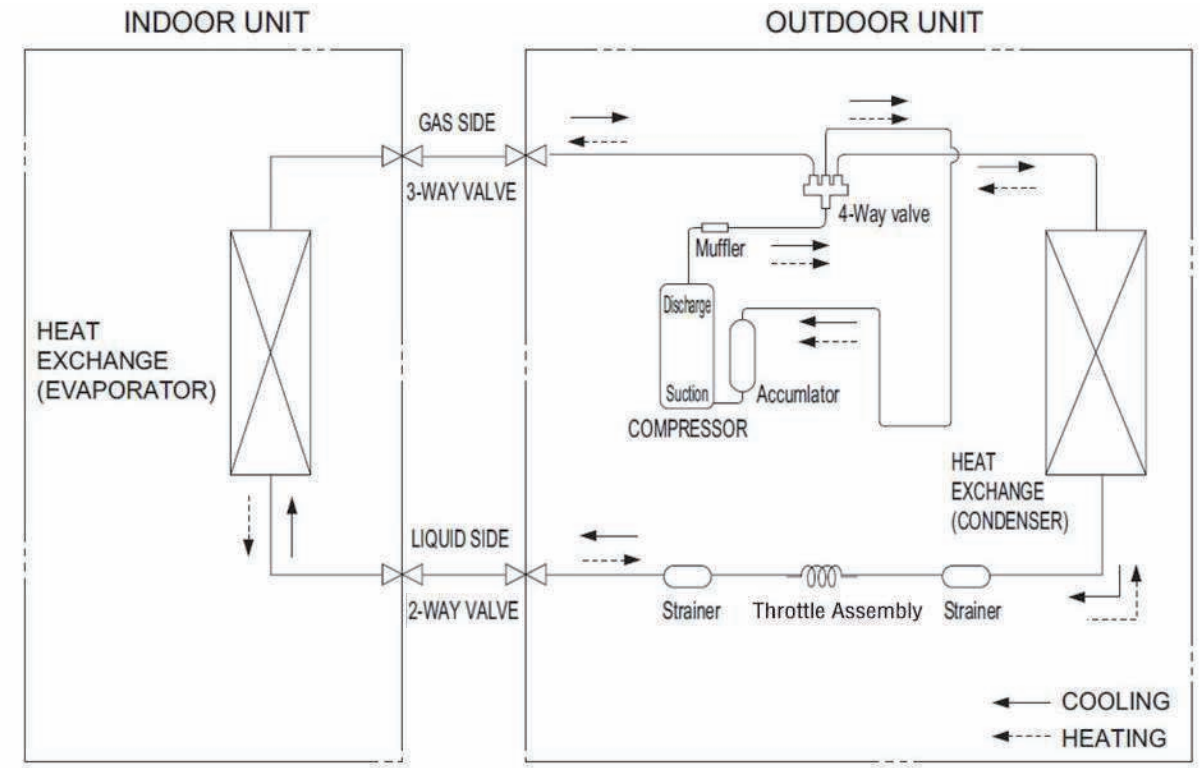



Outdoor unit is higher than indoor unit

| Model | Required amount of additional refrigerant (oz/ft) |
|---|---|
| WHP09SZA21S | 0.215 |
| WHP12SZA21S | |
| WHP18SZA21S | |
| WHP24SZA21S | 0.323 |

# 4. Refrigerant circuit

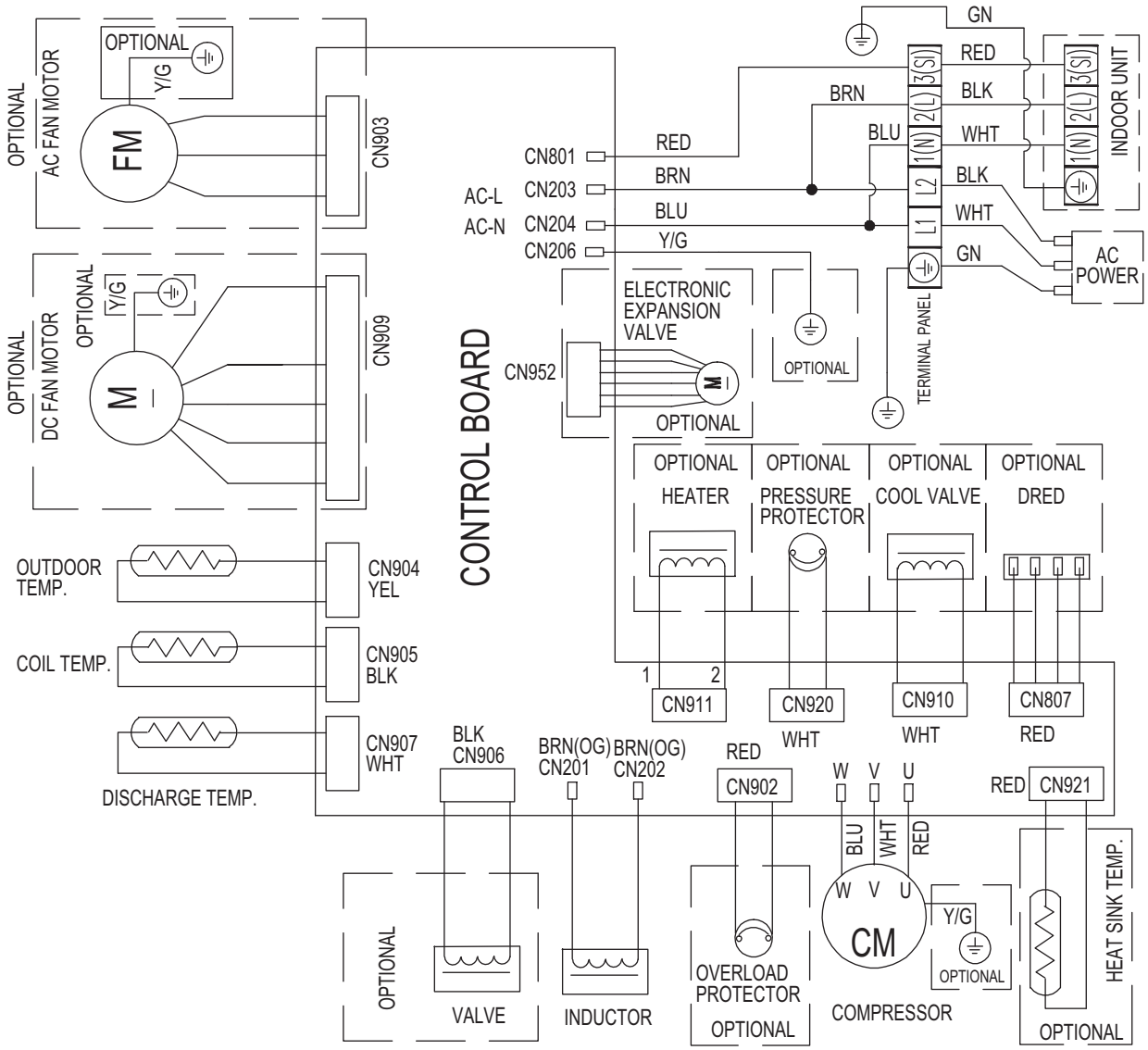
## 4-1. Models: WHP09SZA21S, WHP12SZA21S, WHP18SZA21S, and WHP24SZA21S




OUTDOOR UNIT
WHP09-24SZA

# 5. Wiring diagrams

## 5-1. Models: WHP09SZA21S, WHP12SZA21S, WHP18SZA21S, and WHP24SZA21S



# 6. Electrical characteristics

| Model name | | | | WHP09SZA21S | WHP12SZA21S |
|---|---|---|---|---|---|
| Power supply | Voltage | | V | 208/230 ~ | |
| | Frequency | | Hz | 60 | |
| MCA*1 | | | A | 10 | |
| Wiring spec.*2 | MAX. CKT. BKR*3 | | A | 15 | |
| | Power cable | | AWG | SJTW 3 × 16 | |
| | Connection cable*4 | Size | AWG | SJTW 4 × 18 | |
| | | Limited wiring length | ft (m) | 69 (21) | |

| Model name | | | | WHP18SZA21S | WHP24SZA21S |
|---|---|---|---|---|---|
| Power supply | Voltage | | V | 208/230 ~ | |
| | Frequency | | Hz | 60 | |
| MCA*1 | | | A | 15 | 20 |
| Wiring spec.*2 | MAX. CKT. BKR*3 | | A | 20 | 30 |
| | Power cable | | AWG | SJTW 3 × 14 | SJTW 3 × 12 |
| | Connection cable*4 | Size | AWG | SJTW 4 × 18 | |
| | | Limited wiring length | ft (m) | 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 |
|---|---|---|---|
| Use and installation instructions | 1 | Power wire | 1 |
| Bottom rubber for outdoor unit | 4 | | |

OUTDOOR UNIT
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