

Samsung WindFree™ 1-Way Cassette, Single Zone, Split System

Job Name

Purchaser

Submitted to

Unit Designation

Location

Engineer

Reference

Approval

Construction

Schedule #

Specifications

Model	Indoor Unit Model Number (US Code)		AC012BN1DCH/AA (CNH121DB)
	Outdoor Unit Model Number (US Code)		AC012BXADCH/AA (CXH12ADB)
Performance	Nominal Capacity	Cooling / Heating (Btu/h)	12,000 / 14,000
	Capacity Range	Cooling (Btu/h)	2,900 - 12,900
		Heating (Btu/h)	2,900 - 20,000
	AHRI 210-240 2017 ¹	SEER	19.3
		EER	10.7
		HSPF	9.70
	AHRI 210-240 2023 ²	SEER2	20.0
		EER2	10.7
Power	Voltage	ø / V / Hz	1 / 208-230 / 60
	Working Voltage Range (VAC)		187 - 253
	Operating Current (min. / std. / max.)	Cooling (A)	1.1 / 5.1 / 6.1
		Heating (A)	1.1 / 6.3 / 10.0
	Max. Breaker	Amps	15
Dimensions	W X H X D (in.)	Indoor Unit	38 3/16 X 5 5/16 X 16 1/8
		Outdoor Unit	31 1/8 X 21 9/16 X 11 1/4
	Weight (lbs.)	Indoor Unit	20.5
		Outdoor Unit	74.3
Sound Pressure Level	Indoor Unit dB(A)	L / M / H	29 / 32 / 35
	Outdoor Unit dB(A)	Cooling / Heating (high)	47 / 48
Operating Temperatures	Outdoor	Cooling	23 ~ 122°F (-5 ~ 50°C)
		Heating	0 ~ 122°F (-18 ~ 50°C) W/Baffle
	Indoor	Cooling	-13 - 75°F (-25 - 24°C)
		Heating	61 ~ 90°F (16 ~ 32°C) T ≤ 86°F (30°C)
Pipe Connections	Indoor & Outdoor	High side (flare)	1/4"
		Low side (flare)	3/8"
	Maximum (ft.)		65.6
	Maximum Vertical Separation (ft.)		49.2
Refrigerant	Type		R410A
	Factory Charge	lbs.	2.54
	Charged for		24.6 ft.
Compressor	Manufacturer		Samsung
	Type		Inverter Driven, Twin BLDC Rotary
	RLA	Amps	6
Evaporator Fan	Type		BLDC (1) With Turbo Type Fan (1)
	Air Volume	CFM (L/M/H)	254 / 290 / 318
	Output	Watts	27
Condenser Fan	Motor		BLDC With Axial Type Fan (1)
	FLA / Watts / CFM (max.)		0.42A X 1 / 40W X 1 / 1,060 CFM
Fascia Panel	WindFree™ Type	L X W X H (in.)	19.69 x 47.17 x 1.38
		Weight (lbs.)	9.5
Safety	Certifications	UL 60335-2-40	
	Devices	PCB fuses, indoor unit terminal block thermal fuse, current transformer, over-voltage protection, crankcase heating, temperature limit protection logic, compressor overload sensing	



General Information

- The indoor unit shall feature WindFree™ mode. In cooling mode, as room temperature nears set temperature, the unit will close its louver and will disperse air into the space through thousands of micro-holes on the front of the indoor unit preventing cold air drafts on occupants
- The outdoor unit shall supply power to indoor unit via 14 AWG X 3 power wire
- High-voltage terminal block temperature sensor to disable unit in the event of power connection overheating
- Auto-restart after power loss
- Soft-start compressor minimizing current inrush
- Base pan heater equipped as standard
- All heat exchangers shall be mechanically bonded aluminum fin to copper tube
- The condensing unit heat exchanger salt spray test method: ISO-9227 - The heat exchanger showed no unusual rust or corrosion development to 500 hours
- Integral condensate pump with maximum 29" lift from bottom of the unit with check valve and float switch to disable unit in the event of condensate overflow.

Option settings

- The outdoor unit shall have snow accumulation prevention option setting to prevent snow drifting against an idle outdoor unit.
- Night-time Quiet Mode: reduction of operational sound during evening hours (automatic or manual activation)
- Emergency Temperature Output (ETO) function: when indoor unit is in error status or when room temperature exceeds configurable temperature level, the system outputs a signal to an external source, e.g., backup system, building management system, alert device (ex: status light, warning lamp, buzzer).
- System can be configured as heating/cooling, cooling only, or heating only via outdoor unit option setting
- Maximum Current Control configurable from 50% - 100% via outdoor unit, wired controller or central controls

Indoor Fan

- Indoor fan is a single crossflow type
- Three fan speed settings and auto setting
- Washable filter as standard
- Fascia panel shall have LED display, infrared receiver, and motorized louver(s)
- The WindFree™ function will close the supply air outlet louver while in cooling mode to gently disperse cool air into the space without blowing directly onto occupants. The WindFree™ feature is optional and can be enabled using central or local control options.
- The WindFree™ indoor unit has an integral humidity sensor that will open the louver for standard cool mode when space conditions could potentially cause condensation formation on the chassis surface.

Construction

- Outdoor unit: Galvanized steel with a baked-on powder coated finish for durability
- Indoor unit: Insulated, HIPS chassis and fascia panel certified to UL94 V0

Controls

- Control wiring shall be 2 X 16 AWG
- Wired controllers must be purchased separately
- Dual set temperature support when connected to MWR-WG00UN Advanced Wired Controller or central control options.
- No additional interface modules/adapters are required when connecting to Samsung central control options.
- The unit shall be operated via a wireless or wired remote control with DDC type signal

Refrigerant System

- The compressor shall be hermetically sealed, inverter-controlled BLDC rotary type
- Refrigerant flow shall be controlled by an electronic expansion valve at outdoor unit

Warranty

10 years compressor, 10 years parts, 1-year limited labor (conditions apply)

This publication reflects both the 1987 Appendix M metric (SEER) and the 2023 Appendix M1 metric (SEER2). Efficiency requirements are published at 10 C.F.R. 430.32(c). Please refer to www.AHRInet.org for more information about updated energy metrics.

¹Performance data certified by AHRI to AHRI 210-240 (2017) with Addendum 1.

²Performance data certified by AHRI to AHRI 210-240 (2023). Effective January 1st, 2023.

* The WindFree™ unit delivers an air current that is under 0.15 m/s while in WindFree™ mode. Air velocity that is below 0.15 m/s is considered "still air" as defined by ASHRAE (American Society of Heating, Refrigerating, and Air-Conditioning Engineers)

Samsung HVAC maintains a policy of ongoing development, specifications are subject to change without notice. Refer to www.AHRIdirectory.org for current reference numbers.

Required Accessories

Fascia panel	WindFree™ Type	☒ PC1NWFMUN
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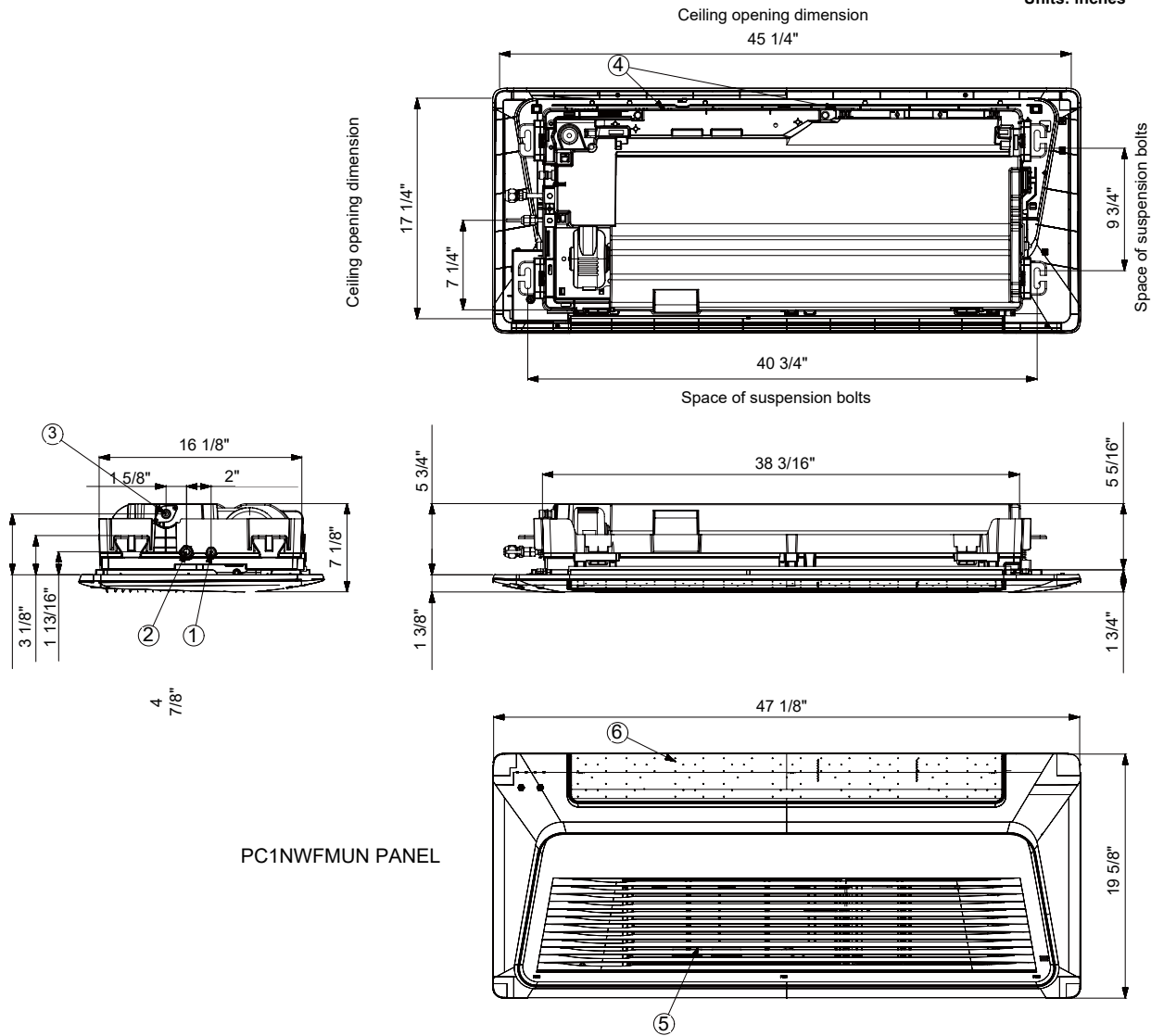
Optional Accessories

Wired controller	Advanced	MWR-WG00UN
	Touchscreen	MWR-SH11UN
Thermostat adapter (24vac)		MIM-A60UN
Wireless controller		AR-EH04U
Wi-Fi adapter	Single indoor unit	MIM-H14UN
	1-16 indoor units	MIM-H05UN
External temperature sensor		MRW-TA
External contact control		MIM-B14
Wall bracket (for outdoor unit)		CKN-250
Wind baffle	Front	WBF-3M
	Back	WBB-5M
Hail guard kit (includes back and side guards)		HGK-1
Line sets - insulated and flared, interconnect cables included	25' - ILS2506	
	50' - ILS5006	

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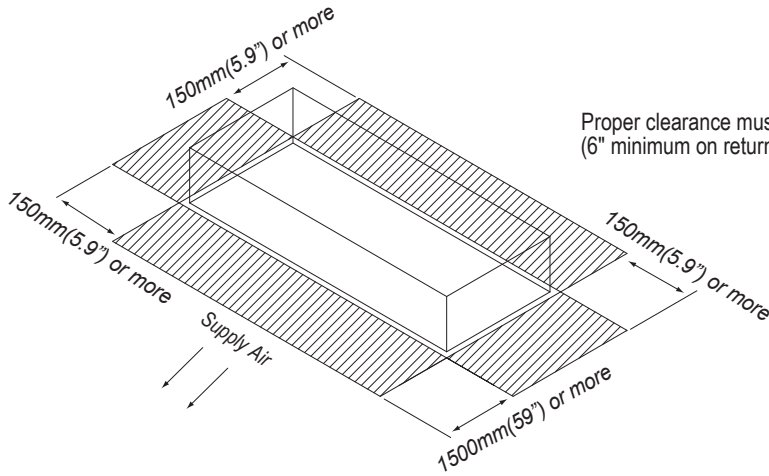
AC012BN1DCH/AA Dimensional Drawing

Units: inches



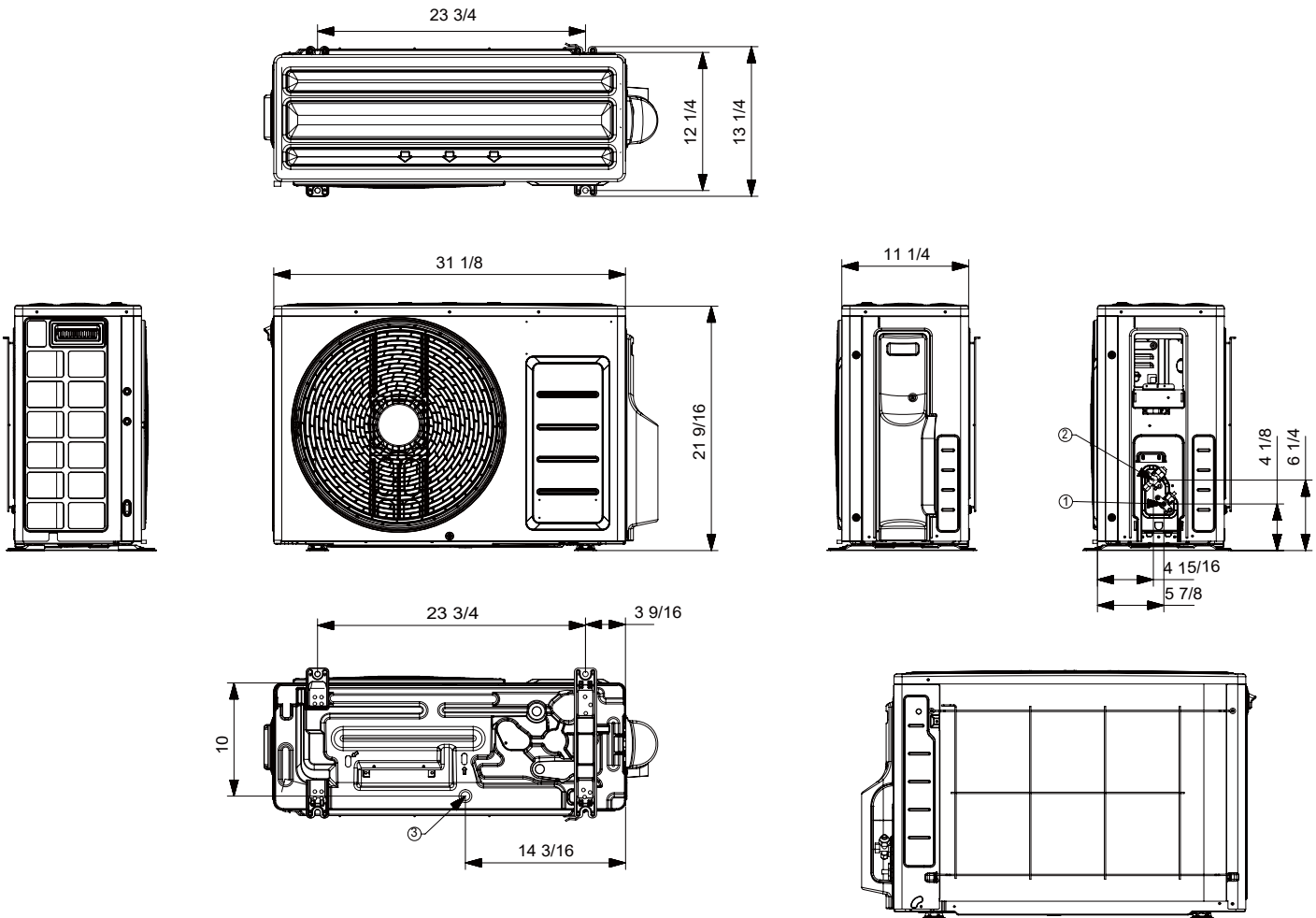
PC1NWFMMUN PANEL

No.	Name	Description
①	Liquid Pipe Connection	Ø 1/4" Flare
②	Gas Pipe Connection	Ø 3/8" Flare
③	Drain Pipe Connection	Quick Lock, OD 1 1/4", ID 1"
④	Conduit for Power & Communication	Wiring
⑤	Air Inlet Grille	-
⑥	Air Outlet Louver	-



Proper clearance must be maintained around unit for proper operation.
(6" minimum on return side)

Units: inches



No.	Name	Description
1	Refrigerant liquid pipe	Ø 1/4
2	Refrigerant gas pipe	Ø 3/8
3	Drain hole	Connect with provided drain plug