SAMSUNG

Submittal Data

AC036FCUPCG/AA (CCG36UPF) R454-B Hylex™ Premium Heat Pump Outdoor Unit

Job Name: _____ Location: _____

Purchaser: _____ Engineer: _____

Submitted to: _____ Reference ☐ Approval ☐ Construction ☐

Unit Designation: _____ Schedule #: _____

Heat Pump Outdoor Unit General Information

- Inverter-driven heat pump condensing unit compatible with air handling units and A-coils with a thermostatic expansion valve (conditions apply, refer to supporting technical documents for details).
- 100% Rated heating capacity at -4°F (-20°C) outside temperature (refer to capacity tables in the outdoor unit technical data book for full capacity details).
- Soft-start compressor minimizing current inrush
- Base pan heater equipped as standard
- The system (outdoor unit with MXD-U001XN AHU Control Unit) shall provide three (3) fan speed control of the indoor unit increasing performance and dehumidification.

Construction

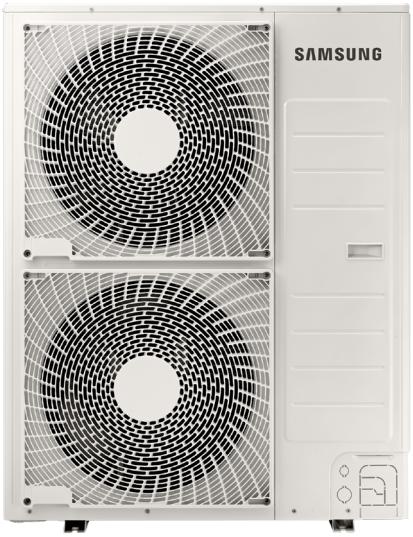
- The unit shall be galvanized steel with a baked-on powder-coated finish for durability
- Refrigerant pipe connections and service ports are located inside the heat pump cabinet. Refrigerant pipes can enter the cabinet on the front, side, back, or bottom.

Controls

- Requires A2L-compatible MXD-U001XN AHU Control Unit (purchased separately) installed near the indoor unit for operation
- Control wiring shall be 2 X 18 AWG (minimum)
- Compatible with standard 24VAC thermostats or Samsung communicating wired controllers connected to the F3/F4 terminal on the MXD-U001XN
- When a Samsung communicating wired controller is connected, dual fuel and external heat configuration options are available to fine tune system operation and harmonization of all components. Options include furnace and AHU aux. heat staging, ambient compressor lockout, ambient furnace/AHU aux. heating lockout, and automatic heat pump to furnace changeover deadband and temperature offset (dual fuel).
- Requires B reversing valve signal (24VAC energized for heating)
- The AHU Control unit shall provide an input for a 0-volt float switch connection to shut the system down and notify the user via SmartThings app (internet connection required) or 2-wire communicating wired controller.
- A field-provided R-454B refrigerant leak detector must be installed in the air handling unit or A-coil cabinet at the location specified by the manufacturer and provide a 24VAC alarm output signal to the AHU Control Kit.
- The AHU Control Kit shall include Wi-Fi connectivity for control and monitoring via Samsung SmartThings. See "AHU Control Unit (MXD-U001XN) General Information" section of this document for more details.

Optional Settings

- Cold air prevention (optional) to delay indoor fan operation until the indoor coil is above a fixed temperature while in heat mode.



- Target low-pressure calibration to increase or decrease indoor coil and discharge air temperature in cooling mode
- Target high-pressure calibration to increase or decrease indoor section coil and discharge air temperature in heating mode
- Snow accumulation prevention option setting to prevent snow drifting against an idle outdoor unit.
- Optional night quiet modes to reduce outdoor unit sound (3 levels) with automatic activation or manual activation (with MIM-B14U accessory).
- System can be set up as heating/cooling, cooling only, or heating only via outdoor unit option setting.
- Maximum Current Control configurable from 50% - 100% in 5% increments via outdoor unit

Refrigerant System

- The compressor shall be hermetically sealed, inverter-controlled BLDC twin rotary type.
- The outdoor unit heat exchanger shall be mechanically bonded aluminum fin to a copper tube.
- Uses traditional unitary line sets (liquid pipe does not require insulation)
- Flexible pipe diameter compatibility (three suction pipe diameter options)
- Refrigerant flow shall be controlled by an electronic expansion valve in the outdoor unit for heating operation. Refrigerant flow for cooling shall be controlled via Thermostatic Expansion Valve (TXV) at the indoor coil (bleed or non-bleed).

Warranty

- 10 Years compressor, 10 years parts. Registration required. Conditions apply.

Intertek

AHRI CERTIFIED® www.ahridirectory.org Unitary Small HP AHRI Standard 210/240 Certification applies only when the complete system is listed with AHRI.

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Specifications AC036FCUPCG/AA (CCG36UPF)

Model	Outdoor Unit Model Number (US Code)		AC036FCUPCG/AA (CCG36UPF)
Performance	Nominal Capacity*	Cooling / Heating (Btu/h)	36,000 / 36,000
	Capacity Range**	Cooling (Btu/h)	15,000 - 42,000
		Heating (Btu/h)	11,000 - 55,000
	AHRI 210-240 2023***	SEER2	Up to 17.5*
		EER2	Up to 12.0*
		HSPF2 (region IV)	Up to 8.5*
		5°F COP	Up to 2.48
Power	Voltage	ø / V / Hz	1 / 208-230 / 60
	Working Voltage Range (VAC)		187 - 253
	Max. Breaker	Amps	40.0
	Min. Circuit Ampacity	Amps	33.3
Dimensions	W X H X D	in.	37 X 55 7/8 X 13
	Weight	lbs.	229.30
Sound Pressure Level	Cooling / Heating (high)		55 / 57
Operating Temperatures	Cooling		-4 - 126°F (-20 - 52°C)
	Heat Pump Heating		-13 - 75°F (-25 - 24°C)
Pipe Connections	Liquid (in.)		3/8
	Suction	Minimum (in.)	3/4
		Standard (in.)	7/8
		Maximum (in.)	1-1/8
	Maximum Length	ft.	164
	Maximum Vertical Separation	ft.	98
Refrigerant	Type		R-454B
	Factory Charge/Max Charge	oz.	158.4 / 228.48
	Charged for	ft.	24.6
	Trim Charge	oz./ft	0.5 oz./foot over 25' oz./foot over 25'
Compressor	Type		Inverter Driven, Twin BLDC Rotary
	RLA	Amps	24.0
Condenser Fan	Type		BLDC With Axial Type Fan (2)
	MOC / Watts / CFM (max.)		1.2A x 2 / 125W x 2 / 4,415
Corrosion Prevention	ISO-9227 - The condenser heat exchanger showed no unusual rust or corrosion development to 3,000 hours.		
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	

*Note: The capacity data in the submittal is based on the AHU combination. Refer to TDB for full list of capacity and efficiency data.
**Connection to different air handling units or A-coils will result in different capacity and efficiency ratings. Refer to AHRIdirectory.org for a complete list of AHRI listed system combinations.
***Performance data certified by AHRI to AHRI 210-240 (2023). Effective January 1st, 2023

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

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Accessories AC036FCUPCG/AA (CCG36UPF)

ACU (AHU Control Kit)		☑ MXD-U001XN
Advanced Wired Controller		☐ MWR-WG01UN
3 Speed indoor fan relay kit (for use with PSC motors)		☐ URK-3A
Wind baffles	Front	☐ WBF-6M
	Back	☐ WBB-4M
Hail guard kit (includes back and side guards)		☐ HGK-5
Wall bracket (for outdoor unit)		☐ CKN-250
External contact control for manual night quiet mode activation		☐ MIM-B14U

*Fan speed relay kit is not compatible with gas furnaces.

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AHU Control Unit (MXD-U001XN)

AHU Control Unit (MXD-U001XN) General Information

- Required for Samsung heat pump models AC0**FCU*CG/AA to operate with non-Samsung air handling units (AHU) and furnaces with A-coils.
- The AHU Control Kit shall include Wi-Fi connectivity for control and monitoring via Samsung SmartThings.
- Allows system operation with two (2) low voltage conductors between the outdoor unit and indoor section.
- MXD-U001XN installs in between the heat pump outdoor unit, thermostat, and AHU/furnace to have full indoor fan control.
- MXD-U001XN shall have four (4) magnets to secure it to metal surfaces during installation.
- Compatible with AC0**FCU*CG/AA outdoor units only.

Optional Settings

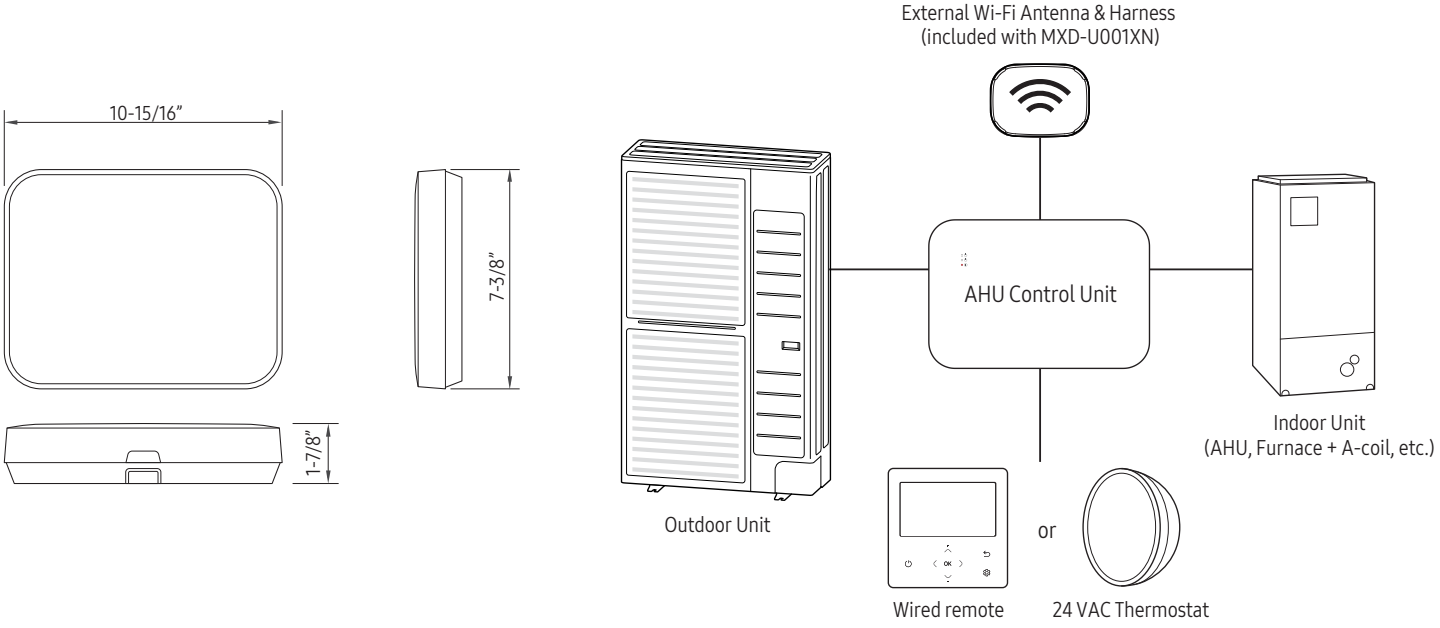
- MXD-U001XN provides three (3) fan speed control capability of most air handling units and furnaces (requires first and second stage cooling input at the AHU or furnace or use of URK-3A relay kit for PSC motor applications).
- MXD-U001XN will stop fan operation during defrost cycles to reduce the need of electric heat kits and to prevent cold drafts in the occupied space.
- Configuration option settings for various applications and equipment.
- Cold air prevention option to warm the indoor evaporator coil before activating the indoor fan while in heating mode.
- Fan off delay and fan delay time for defrost and cold wind prevention option settings
- The manufacturer website shall provide a web-based tool to provide simple configuration instructions.

Connectivity

- The ACU includes Wi-Fi as standard to allow control and monitoring using the Samsung SmartThings app (monitor only with 24VAC thermostat - control of the Hylex™ system is only available when a communicating Samsung wired controller is connected). Below are benefits that SmartThings provides.
  - » Smart forward – Keep the outdoor unit up to date with the latest firmware. A notification will be pushed over the internet to the user. Once notified, the user can approve the outdoor unit firmware update before it is applied.
  - » AI Comfort Mode – When connected to SmartThings and in Auto mode, AI Comfort Mode learns the occupants' patterns and adjust mode and set temperature to optimize comfort (communicating wired controller required).
  - » AI Energy Mode – Reduce outdoor unit energy consumption automatically. While in Auto mode the system will monitor room temperature, set temperature, and outdoor temperature and will adjust the target compressor frequency to reduce energy use (communicating wired controller required).
  - » Error notification – When a potential service issue occurs the system will notify the user.
  - » Energy – View and trend Hylex™ outdoor unit energy use.

Power

- Input voltage: 24VAC
- Maximum power consumption: 3.0W



SYSTEM CONFIGURATION

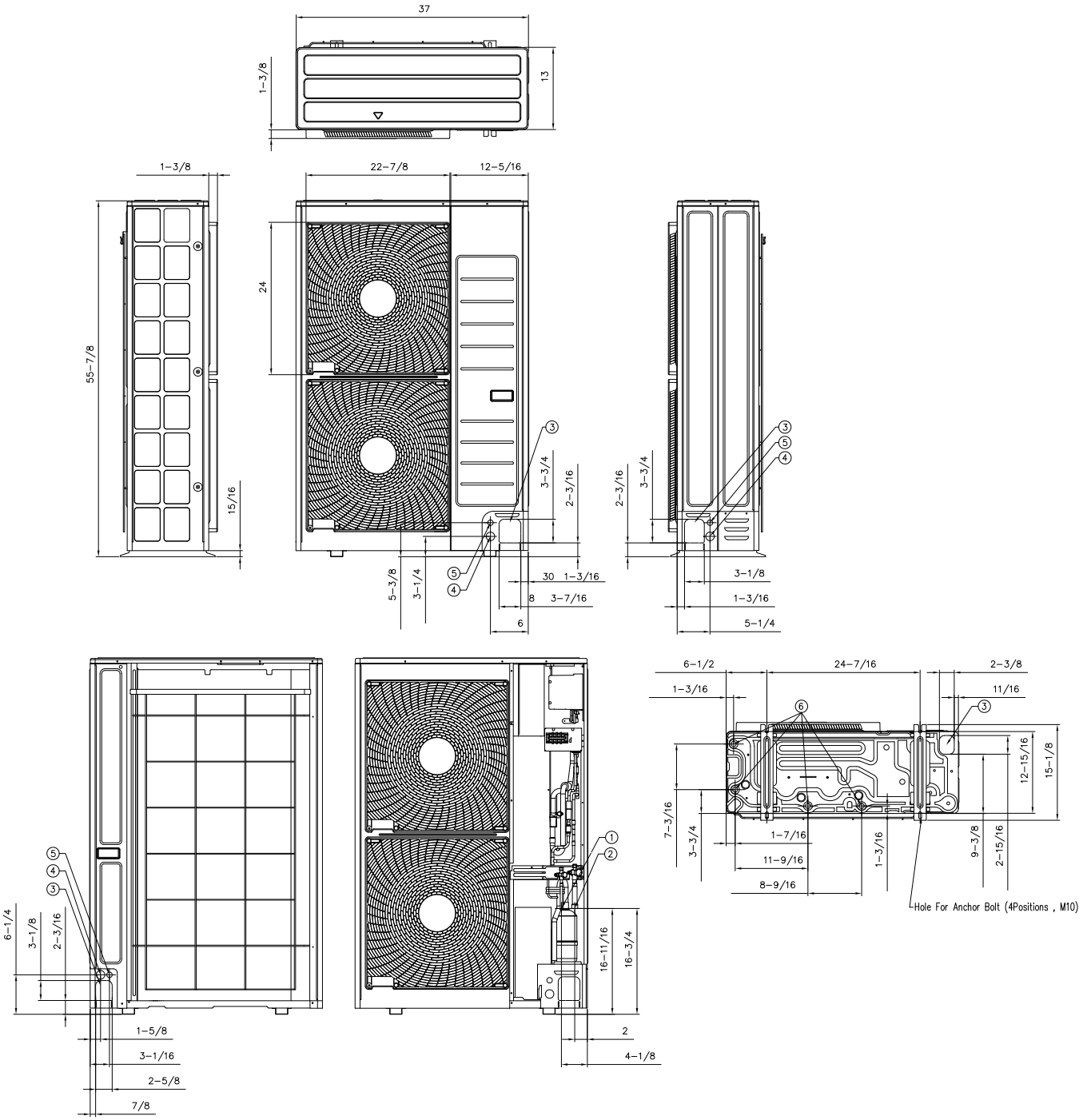
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Dimensional Drawing AC036FCUPCG/AA (CCG36UPF)

Unit: Inches



No.	Name	Description
1	Refrigerant liquid pipe	Φ3/8
2	Refrigerant gas pipe	Φ3/4, 7/8*
3	Knockout hole for pipe intake	Front / Side / Rear / Bottom
4	Power wiring conduit	Front / Side / Rear / Φ1-3/8
5	Communication wiring conduit	Front / Side / Rear / Φ7/8
6	Drain hole	-

*standard pipe diameter

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