SAMSUNG

SUBMITTAL AJ020BXS3CH/AA (JXH20S3B)

Samsung "Max Heat" FJM Series, 3 Port Condensing Unit

Job Name _____ Location _____

Purchaser _____ Engineer _____

Submitted to _____ Reference ☐ Approval ☐ Construction ☐

Unit Designation _____ Schedule # _____

Model	US Code		JXH20S3B
	Model Number		AJ020BXS3CH/AA
Performance	Capacity (min. / standard / max.)	Cooling (Btu/h)	5,500 / 21,000 / 21,000
		Heating (Btu/h)	7,500 / 22,000 / 22,000
	Heating Capacity at 5°F OA, 70°F Indoor DB (Btu/h)		22,000
	Heating Capacity at -13°F OA, 70°F Indoor DB (Btu/h)		15,380
	SEER (Ducted / Mixed / Non-ducted)[1]		15.5 / 16.75 / 18.0
	EER (Ducted / Mixed / Non-ducted)[1]		11.4 / 12.45 / 13.5
	HSPF (Ducted / Mixed / Non-ducted)[1]		9.5 / 9.75 / 10.0
	SEER2 (Ducted / Mixed / Non-ducted)[2]		17.5 / 18.25 / 19.0
	EER2 (Ducted / Mixed / Non-ducted)[2]		11.4 / 12.45 / 13.5
	HSPF2 (Ducted / Mixed / Non-ducted)[2]		8.3 / 8.65 / 9.0
Power	Voltage	(ø/V/Hz)	1 / 208-230 / 60
	Nominal Current[3]	Cooling (A)	7.4
		Heating (A)	7.7
	Max. Breaker	Amps	30
	Minimum Circuit Ampacity (A)		25.5
Dimensions	W X H X D	Inches	37 x 39 5/16 x 13
	Weight	lbs.	170.9
Noise Level	Cooling	dB (A)	54
	Heating	dB (A)	58
Operating Temperatures	Cooling		14 ~ 114.8°F (-10 ~ 46.0°C)
	Heating		-13 ~75°F (-25 ~ 24.0°C)
Pipe Connections	High Side		1/4" X 3
	Low Side (suction)		3/8" X 3
	Maximum Individual Line Set Length		82 ft
	Maximum Line Set Length (total)		164 ft
	Maximum Vertical Separation	Outdoor to Indoor	49 ft
		Highest to lowest indoor	25 ft
	Included Pipe Adapters		1 - 3/8" X 1/2"
Condenser Fan	Motor		BLDC With Propeller Fan (1)
	Output	Watts / FLA	125 / 1.28
		CFM	2,493
Compressor	Type		Twin BLDC Rotary Inverter
	RLA	Amps	18.4
Heat Exchanger	Type		Aluminum Fin - Copper Tube
Refrigerant	Type		R410A
	Control Method		Electronic Expansion Valve
	Factory Charge		119.9 oz
	Charged for		131 ft
	Additional Refrigerant		0.22 oz/ft over 131 ft
Accessories	Wall Bracket		☐ CKN-250
	Wind Baffle	Front	☐ WBF-2M-B
		Back	☐ WBB-11M
Certifications	Safety		ETL (UL 60335-2-40)
	ENERGY STAR® Certification		Applies to AHRI non ducted listing
Warranty	10 Years compressor, 10 year parts, 1 year limited labor (registration required)		

[1]Performance data certified by AHRI to AHRI 210-240 (2017) with Addendum 1.
[2]Performance data certified by AHRI to AHRI 210-240 (2023). Effective January 1st, 2023.
[3]Rated current based on highest combination ratio of non-ducted indoor units.

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 energy metrics.



General Information

- The Samsung Max Heat system shall provide high heating capacity at -13°F outside temperature
- The outdoor unit shall supply power individually to the indoor units via 14 AWG X 3 power wire
- The outdoor unit shall have a base pan heater as standard to ensure optimal defrost cycle water drainage
- Auto-restart after power loss
- Available maximum current setting option to reduce operating current.
- System energy consumption can be viewed using Samsung SmartThings mobile app (not revenue grade, for reference only).
- Soft-start to reduce current demand during compressor start
- Auto or manual addressing of indoor units

Construction

- The outdoor unit shall be galvanized steel with a baked on powder coated finish for durability

Heat Exchanger

- The heat exchanger shall be mechanically bonded fin to copper tube

Controls

- Control signal shall be a DDC type signal
- Interconnect control wire between outdoor and indoor units shall be 16AWG X 2
- Controls shall integrate with a BMS system
- The system shall integrate with the Samsung Controls solution

Refrigerant System

- The refrigerant shall be R410A
- The compressor shall be hermetically sealed, inverter controlled, Twin BLDC Rotary
- Refrigerant flow shall be controlled by 3 separate electronic expansion valves at outdoor unit

Indoor Unit Compatibility

Will only operate with Samsung evaporator model numbers:
AR**TSFABWKNCV (RNS**ABT): 7,000 - 15,000 Btu/h models
AR**BSFCMWKNCV (RNS**CMB): 7,000 - 15,000 Btu/h models
AR**TSFYBWKNCV (RNS**YBT): 7,000 - 15,000 Btu/h models
AC0**BNNDCH/AA (CNH**NDB): 9,000 - 12,000 Btu/h models
AC0**BNJDCH/AA (CNH**JDB): 9,000 - 15,000 Btu/h models
AC0**BNLDCH/AA (CNH**LDB): 9,000 - 12,000 Btu/h models
AC0**BN1DCH/AA (CNH**1DB): 9,000 - 12,000 Btu/h models
AC012BNZDCH/AA (CNH12ZDB)
AJ0**BNHDCH/AA (JNH**HDB): 9,000 - 12,000 Btu/h models

Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and (excluding ductless systems) must be matched with appropriate coil components to meet ENERGY STAR® criteria. Ask your contractor for details or visit www.energystar.gov.

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

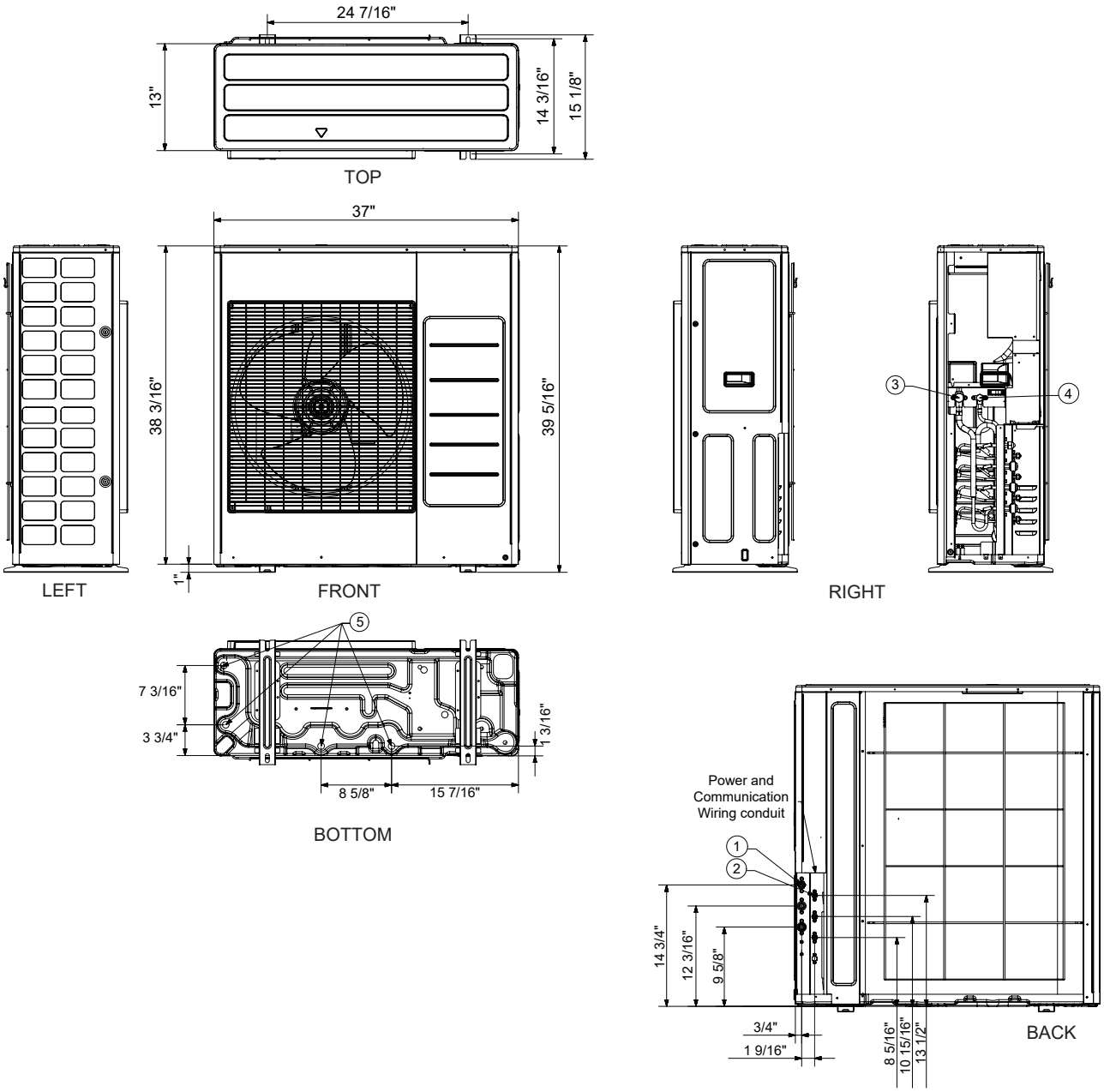
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Samsung "Max Heat" FJM Series, 3 Port Condensing Unit

Dimensional drawing



No.	Name	Description
1	Refrigerant suction pipes	ø3/8" x 3
2	Refrigerant liquid pipes	ø1/4" x 3
3	Service Valve (suction)	5/8"
4	Service Valve (liquid)	3/8"
5	Drain holes	Connection with provided drain fitting

Indoor Unit Connection Options

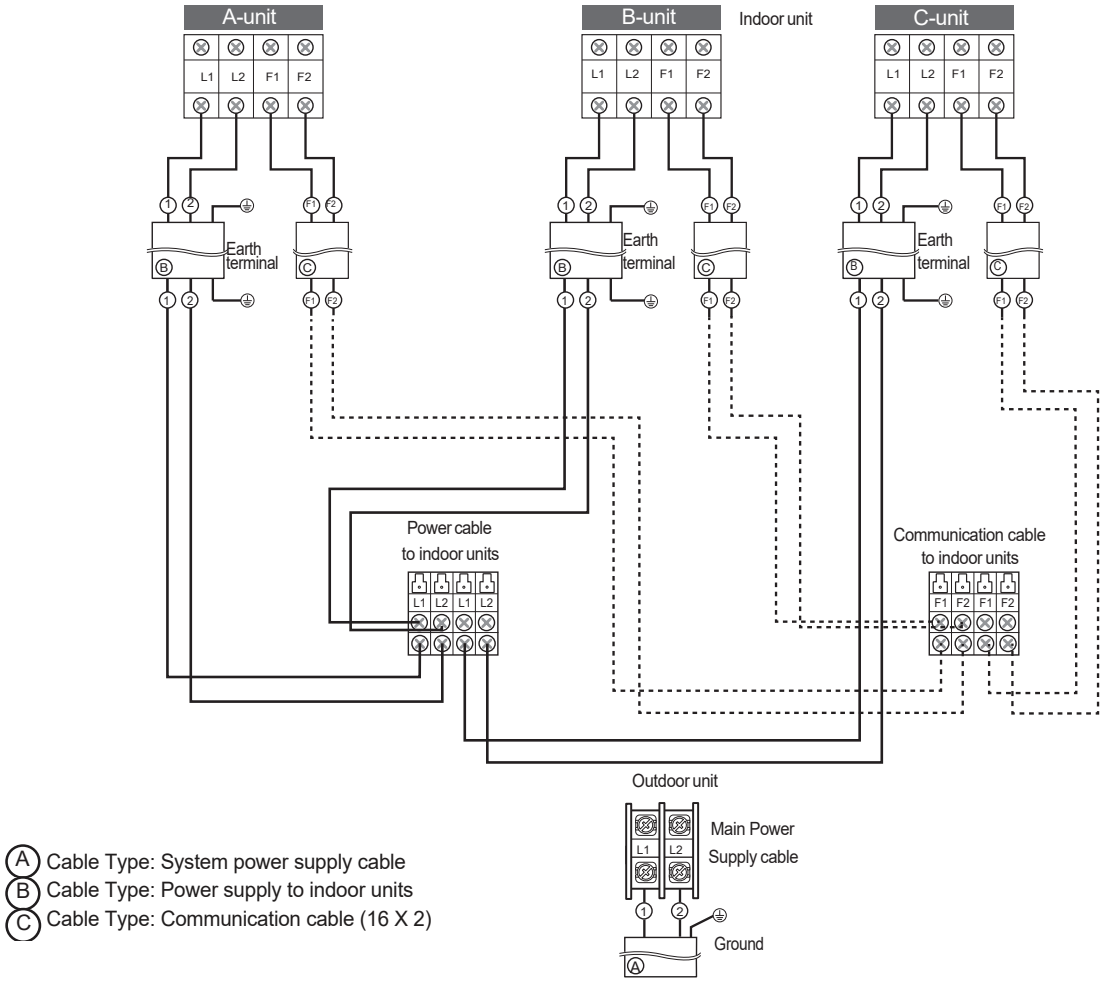
Unit Qty.	Indoor Nominal Capacity (K Btu/h)			Duct S / MPAH Compatibility*		Connected Capacity (K Btu/h)
	A	B	C	Duct S	MPAH	
2	7	7				14
	7	9		•		16
	7	12		•	•	19
	7	15				22
	9	9		•		18
	9	12		•	•	21
	9	15				24
	12	12				24
	12	15				27
3	7	7	7			21
	7	7	9			23
	7	7	12			26
	7	9	9			25
	9	9	9			27

* Combatable combination that includes 1 X MPAH (AC0**BNZDCH/AA) OR 1 X Duct S (AJ0**BNHDCH/AA) unit.

Notes

1. Only 1 X MPAH (AC0**BNZDCH/AA) OR 1 X Duct S (AJ0**BNHDCH/AA) unit can be connected to a single FJM outdoor unit.
2. Applies to outdoor units manufactured after 4/30/2022.
3. Refer to supporting technical data book (TDB) for indoor unit compatibility available at www.SamsungHVAC.com.

Basic Wire Connection Diagram



(A) Cable Type: System power supply cable
(B) Cable Type: Power supply to indoor units
(C) Cable Type: Communication cable (16 X 2)

This simple wiring diagram is for reference only. Please refer to installation manuals for full details and requirements.