Job Name/Location: Tag No:

Mech:

Date:		For:	File	Resubmit
PO No.:			Approval	Other
Architect:	GC:			

1 LG

Rep:

Engr:

(Project Manager)

KUMXB481A

R32 Multi F Max Outdoor Unit

Outdoor Unit (ODU) - KUMXB481A

Performance:

Cooling Capacity (MinRated-Max., Btu/h)	10,800~48,000~58,000
Heating Capacity (MinRated-Max., Btu/h)	12,420~54,000~59,000
Max. Heating Capacity at 17°F (Btu/h)	46,500
Max. Heating Capacity at 5°F (Btu/h)	39,600
Max. Heating Capacity at -4°F (Btu/h)	34,500
Cooling COP @95°F (Rated)	3.75
Heating COP @47°F (Rated)	3.50

Cooling Nominal Test Conditions: Indoor: 80°F DB / 67°F WB Outdoor: 95°F DB / 75°F WB

Heating Nominal Test Conditions: Indoor: 70°F DB / 60°F WB Outdoor: 47°F DB / 43°F WB

Electrical:

Power Supply (V/Hz/Ø) ^{1,2}	208-230V, 60, 1
MOP (A)	40
MCA (A)	33.3
Cooling Rated Amps (A)	24.3
Heating Rated Amps (A)	24.3
Compressor (A)	23
Fan Motor (A)	0.65 x 2
Locked Rotor Amps (A)	22

MOP - Maximum Overcurrent Protection

MCA - Minimum Circuit Ampacity

Piping:

Refrigerant Charge (lbs.)	7.5
Liquid Line Connection (in., O.D.)	Ø3/8 x 1
Vapor Line Connection (in., O.D.)	Ø3/4 x 1
Maximum Total Piping ³ (ft.)	475.7
Min. / Max. ODU to IDU Piping ⁴ (ft.)	32.8 / 229.6
Piping Length⁵ (no add'l refrigerant, ft.)	180.4
Additional Refrigerant Charge Main Pipe (oz. / ft.)	0.54
Additional Refrigerant Charge Branch Pipe (oz. / ft.)	0.22
Maximum Elevation between ODU and IDU (ft.)	98.4
Maximum Elevation between IDU and IDU (ft.)	49.2

ODU = Outdoor Unit

IDU = Indoor Unit

Features:

- · Scroll (variable speed) compressor
- Auto operation / Auto restart
- Integrated central control connection
 Low ambient cooling down to 14°F
- Self diagnosis
- Defrost / Deicing

- Restart delay (three [3] minutes)
- Soft start

□ 4-Port BD Units -

Computers - PRCTILO

71 ABGP04A x 2

- - (-4°F with Wind Baffle Kit)

PMBD3640ZR / PMBD3641ZR

☐ LG Monitoring View (LGMV) for

☐ Drain Pan Heater - PQSH1200

□ Low Ambient Wind Baffle Kit -

Required Accessories:6

- □ 2-Port BD Unit PMBD3620ZR
- ☐ 3-Port BD Unit PMBD3630ZR
- **Optional Accessories:** □ Power Distribution Indicator
- (PDI) Premium PQNUD1S41 ☐ Mobile LGMV for Android® Smartphones / Tablets or for iOS®

Tablets - PLGMVW100
(Android is a registered trademark of Google LLC. iOS is a registered trademark of Cisco Systems, Inc.)

- **Controller Options:**
- ☐ MultiSITE Communication Mgr. □ AC Smart 5
- \square ACP 5

- □ ACP 5 BACnet® Gateway
- □ LonWorks® Gateway
 BACnet® is a registered trademark of ASHRAE. LonWorks is a registered trademark of Echelon Corp.

Operating Range:

Cooling (°F DB)	14 to 118
Heating (°F WB)	-4 to +64

Unit Data:

Offic Bata.	
Refrigerant Type	R32
Refrigerant Control	EEV
Sound Pressure (Cool / Heat) ±1 dB(A) ⁷	53 / 55
Net / Shipping Weight (lbs.)	194 / 218.3
Power Wiring: ODU→BDU, BDU→IDU (No x AWG) ²	3 x 14, 3 x 14
Comm. Wiring: ODU→BDU, BDU→IDU (No x AWG) ²	2 x 18, 2 x 18
Heat Exchanger Coating	Gold Fin™
Minimum No. of Indoor Units	2
Maximum No. of Indoor Units	8

Compressor:

Туре	Scroll
Quantity	1
Oil / Type	PVE

Fan:

Туре	Propeller
Quantity	2
Motor / Drive	Brushless Digitally Controlled/Direct
Max. Airflow Rate (CFM)	2,295 x 2

Notes:

- 1. Acceptable operating voltage: 187V 253V.
- 2. All power supply wiring to the outdoor unit is field supplied, solid or stranded. The power wiring and the communication wiring from the outdoor unit to the branch distribution unit, and from the branch distri-bution unit to the indoor unit is field supplied and must be stranded, shielded or unshielded (if shielded, it must be grounded to the chassis of the outdoor unit only). All wiring must comply with applicable local and national codes.
- a. Power Supply Wiring to Outdoor Unit (No. x AWG): 3×8 for 48k, 54k, and 60k. b. Power Wiring and Communication Wiring from ODU to BDU (No. x AWG) $3 \times 14 / 2 \times 18$.
- c. Power Wiring and Communication Wiring from BDU to IDU (No. x AWG) 3 x 14 / 2 x 18. 3. Piping lengths are equivalent.
- 4. 180.4 ft. of Main Piping + 49.2 ft. of Branch Piping. 5. 49.2 ft. of Main Piping + 131.2 of Branch Piping.
- 6. At least one branch distribution (BD) unit is required for system operation; a maximum of two can be
- installed per outdoor unit with the use of a Y-branch accessory (ARBLN03321).
 7. Sound pressure levels are tested in an anechoic chamber under ISO Standard 3745.
- See the Engineering Manual Capacity Tables for ODU sensible and latent capacities.
 See the Engineering Manual Combination Tables for allocation of ODU rated capacity to each connected.
- IDU when all are calling for full capacity. Allocation percentages should be applied to ODU capacity at design conditions.
- 10. Capacity is rated 0 ft. above sea level, with a 0 ft. level difference between ODU and IDUs, and the
- following refrigerant pipe lengths: KUMXB481 / 541 / 601A: 16.4 ft. Main + (16.4 ft. Branch x 8) = 147.6 ft. All capacities are net with a combination ratio between 95 - 105%.
- 11. Must follow installation instructions in the applicable LG installation manual.
- 12. See the Engineering Manual Capacity Tables for ODU capacity at design conditions







Proper sizing and installation of equipment is critical to achieve optimal performance. Split system air conditioners and heat pumps (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. (ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection

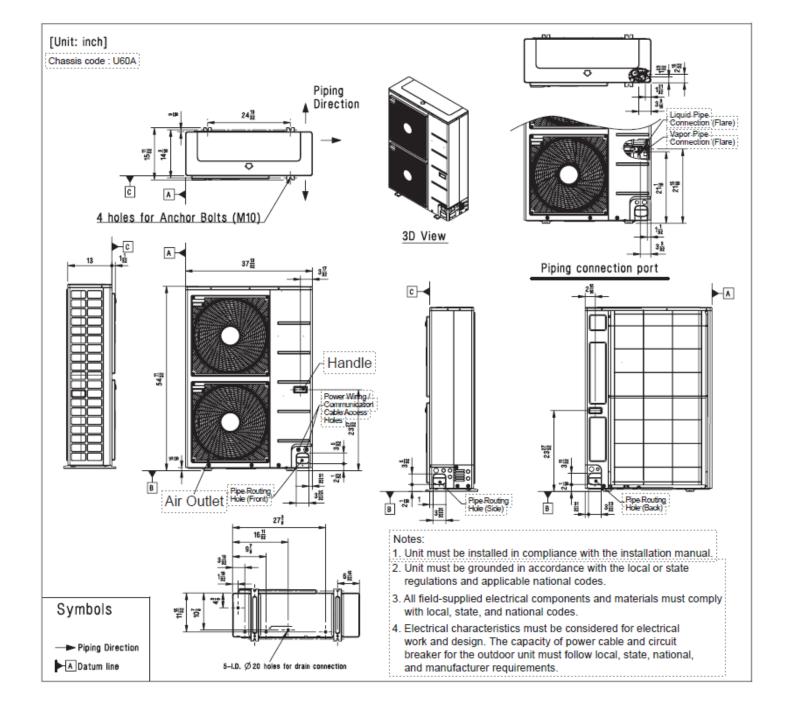
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Example: Outdoor unit with seven (7) indoor units, and two (2) branch distribution units connected. ODU:

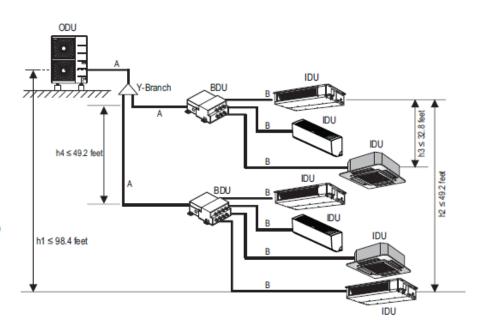
Outdoor Unit. IDU: Indoor Unit.

BD: Branch Distribution Unit(s).

A: Main Pipe.

B: Branch Pipe (Branch Distribution Unit[s] to

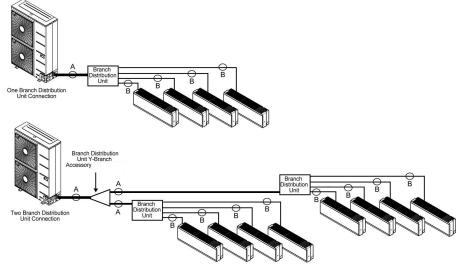
Indoor Unit[s]).



Multi F MAX Outdoor Unit Refrigerant Piping System Limitations.

	Total piping length (ΣA + ΣB)		≤475.7 feet
Pipe Length	Main pipe (Outdoor Unit to Branch Distribution	Minimum for Each (A) Piping Segment	16.4 feet
	Units: A)	Maximum (ΣA)	≤180.4 feet
(ELF = Equivalent Length of pipe in Feet)	Total branch piping length (ΣΒ)		≤295.3 feet
or pipe in reet)	Branch pipe (Branch Distribution Units to Indoor	Minimum	16.4 feet
	Units: B)	Maximum	≤49.2 feet
Elevation Differential	If outdoor unit is above or below indoor unit (h1)		≤98.4 feet
(All Elevation	Between the farthest two indoor units (h2)		≤49.2 feet
Limitations are	Between branch distribution unit and farthest connected indoor unit(s) (h3)		≤32.8 feet
Measured in Actual Feet)	Between branch distribution units (h4)		≤49.2 feet

Installing the Unit



Multi F MAX Piping Sizes.

Piping	Main Pipe A (inch)	Branch Pipe B
Liquid	Ø3/8	Depends on the size of
Vapor	Ø3/4	the indoor unit piping.