HENDERSON ENGINEERS

☐Approved	Fabrication and/or installation may be undertaken. Approval does not authorize changes to the contract sum or contract time.
☒Approved as Corrected	
☐Revise and Resubmit	Fabrication and/or installation may not be undertaken. In resubmitting, limit corrections to items marked.
☐Rejected	
☐No Action Taken	Submittal either not required for this item or provided for information only. Contract requirements should be followed in all cases.

Review/approval neither extends nor alters any contractual obligations of the Engineer or Contractor. Checking of submittals is only for general conformance with the design concept of the project and general compliance with the information given in the contract documents. Any action shown is subject to the general requirements of the plans and specifications. Contractor is responsible for dimensions, quantities, and coordination between trades and for coordinating approved items and accepted alternates.

HENDERSON ENGINEERS, INC.

SUBMITTAL REVIEW COMMENTS

PROJECT Verdad - The Grove
PROJECT NO 2150004838
DATE 1/6/2023
SUBMITTAL LG VRF Resubmittal
SUBMITTAL NO 230000-1.1
REVIEWER MJW
HENDERSON NO M002R1

ACTION CODES

1	2	3	4	5	6
Approved	Approved as Corrected	Revise & Resubmit Items Noted	Rejected	Not Reviewed	For Information Only

(Action Item Codes 1, 2, 5 or 6 are not to be resubmitted.)

COMMENT #	ACTION CODE	DESCRIPTION	COMMENTS
1	1	FCU-1	-The cooling and heating performance (page 12 of 52) is approved.
2	1	FCU-2	-The cooling and heating performance (page 12 of 52) is approved.
3	1	FCU-3	-The cooling and heating performance (page 12 of 52) is approved.
4	1	FCU-4	-The cooling and heating performance (page 12 of 52) is approved.
5	1	FCU-5	-The cooling and heating performance (page 12 of 52) is approved.
6	2	FCU-6	-The unit model no. is approved. -Per phone with Johnathan Skinner, update supply airflow from 1,110 CFM to 1,310 CFM and update unit capacities accordingly.
7	2	FCU-7	-The unit model no. is approved. -Per phone with Johnathan Skinner, update supply airflow

COMMENT #	ACTION CODE	DESCRIPTION	COMMENTS
			from 1,110 CFM to 1,310 CFM and update unit capacities accordingly.
8	2	FCU-8	-The unit model no. is approved. -Per phone with Johnathan Skinner, update supply airflow from 1,110 CFM to 1,310 CFM and update unit capacities accordingly.
9	1	FCU-9	-The cooling and heating performance (page 12 of 52) is approved.
10	1	FCU-10	-The cooling and heating performance (page 12 of 52) is approved.
11	1	FCU-11	-The cooling and heating performance (page 12 of 52) is approved.
12	1	FCU-12	-The cooling and heating performance (page 12 of 52) is approved.
13	1	FCU-13	-The cooling and heating performance (page 12 of 52) is approved.
14	1	FCU-14	-The cooling and heating performance (page 12 of 52) is approved.
15	1	FCU-15	-The cooling and heating performance (page 12 of 52) is approved.
16	1	AC Smart Controller	-Approved. (Page 30 – 41 of 52)
17	1	Remote Controller	-Approved. (Page 42 – 44 of 52)
18	1	Temperature/Humidity Sensor	-Approved. (Page 45 – 46 of 52)
19	1	Heat Recovery Unit (BS-1A, BS-1B, BS-2)	-Approved. (Page 47 – 50 of 52)
20	1	Filter Box	-Approved. (Page 51 of 52)
21	1	Hailguard Netting	-Approved. (Page 52 of 52)

Note: *Henderson's processing of these submittals does not relieve other members of the design and construction team from reviewing submittals for coordination, compliance and performance or reviewing submittals as outlined in the contract documents or both.*

Submittal Transmittal

Aria Group Architects, Inc. | 830 North Blvd Oak Park IL 60301 United States

PROJECT:	Perrys-Verdad The Grove 214735.000	DATE SENT:	1/3/2023
		RETURN BY:	1/4/2023
SUBJECT:	230000-1.1 LG VRF Resubmittal	SUBMITTAL ID:	021r01
TYPE:	Submittal	TRANSMITTAL ID:	00151
PURPOSE:	For Review	VIA:	Info Exchange
SPEC SECTION:	230000		

FROM

NAME	COMPANY	EMAIL	PHONE
SHELLIE HALKYARD	Aria Group Architects, Inc.	shalkyard@ariainc.com	(708) 445-8400

TO

NAME	COMPANY	EMAIL	PHONE
Rhonda Charlett	Henderson Engineers, Inc.	Rhonda.Charlett@hendersonengineers.com	(913) 742-5367
Coy Macy	Henderson Engineers, Inc.	Coy.Macy@hendersonengineers.com	(913) 742-5611

REMARKS:

Hi Rhonda / Coy,

Please see the enclosed LG VRF Resubmittal for review.

Thank you

DESCRIPTION OF CONTENTS

QTY	DATED	TITLE	NUMBER	NOTES
1	12/28/2022	230000-1-1 - Submittal Form.pdf		
1	12/28/2022	230000-1.1_LG_VRF_Resubmittal.pdf		

COPIES:

BRIAN ZIELINSKI (Aria Group Architects, Inc.)

PAUL NAGTALON	(Aria Group Architects, Inc.)
SHELLIE HALKYARD	(Aria Group Architects, Inc.)

Submittal

International Contractors, Inc.
1 Mid America Plaza, 7th Floor
Oakbrook Terrace, Illinois 60181
Phone: (630) 834-8043
Fax: (630) 834-8046
www.icibuilds.com

Project: 001223 - Verdad the Grove, Austin, TX
2701 Perseverance Drive
Austin, Texas 78731

230000-1.1 LG VRF Resubmittal

SPEC SECTION:	230000 - HVAC	**SUBMITTAL #:**	230000-1
STATUS:	Open	**DATE CREATED:**	12/28/2022
ISSUE DATE:	12/28/2022	**REVISION:**	1
RESPONSIBLE CONTRACTOR:	AiRCO Mechanical	**RECEIVED FROM:**	Matt Carroll
RECEIVED DATE:	12/27/2022	**SUBMIT BY:**	12/28/2022
FINAL DUE DATE:	01/04/2023	**LOCATION:**	
TYPE:	Product Information	**COST CODE:**	01-0011 - Project Engineer - Office
APPROVERS:	Victor Baez **(International Contractors, Inc.)**, Shellie Halkyard **(Aria Group Architects, Inc.)**, Paul Nagtalon **(Aria Group Architects, Inc.)**	**CREATED BY:**	Victor Baez **(International Contractors, Inc.)**

BALL IN COURT:
Shellie Halkyard **(Aria Group Architects, Inc.)**, Paul Nagtalon **(Aria Group Architects, Inc.)**

DISTRIBUTION:
Chris Butler **(International Contractors, Inc.)** , Bob Concannon **(International Contractors, Inc.)** , Austin Darrell **(International Contractors, Inc.)** , Scott Leadbetter **(International Contractors, Inc.)** , Brian Zielinski **(Aria Group Architects, Inc.)**

DESCRIPTION:

ATTACHMENTS:

SUBMITTAL WORKFLOW

#	NAME	SUBMITTER/APPROVER	DUE DATE
1	Matt Carroll	Submitter	12/28/2022
2	Victor Baez	Approver	12/28/2022
3	Shellie Halkyard	Approver	1/4/2023
4	Paul Nagtalon	Approver	1/4/2023

INTERNATIONAL CONTRACTORS, INC.

INTERNATIONAL CONTRACTORS REVIEW OF THIS SUBMITTAL IS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. SUBCONTRACTOR IS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFIRMING AND VERIFYING ALL DIMENSIONS AND QUANTITIES, AND ASSURING COORDINATION WITH RESPECTIVE RELATED TRADES AND WORK.

ICI REVIEWER: VICTOR BAEZ DATE: 11/2/2022

TIME:

Submittal

International Contractors, Inc.
1 Mid America Plaza, 7th Floor
Oakbrook Terrace, Illinois 60181
Phone: (630) 834-8043
Fax: (630) 834-8046
www.icibuilds.com

Project: 001223 - Verdad the Grove, Austin, TX
2701 Perseverance Drive
Austin, Texas 78731

230000-1.1 LG VRF Resubmittal

SPEC SECTION:	230000 - HVAC	**SUBMITTAL #:**	230000-1
STATUS:	Open	**DATE CREATED:**	12/28/2022
ISSUE DATE:	12/28/2022	**REVISION:**	1
RESPONSIBLE CONTRACTOR:	AiRCO Mechanical	**RECEIVED FROM:**	Matt Carroll
RECEIVED DATE:	12/27/2022	**SUBMIT BY:**	12/28/2022
FINAL DUE DATE:	01/04/2023	**LOCATION:**	
TYPE:	Product Information	**COST CODE:**	01-0011 - Project Engineer - Office
APPROVERS:	Victor Baez **(International Contractors, Inc.)**, Shellie Halkyard **(Aria Group Architects, Inc.)**, Paul Nagtalon **(Aria Group Architects, Inc.)**	**CREATED BY:**	Victor Baez **(International Contractors, Inc.)**

BALL IN COURT:
Victor Baez **(International Contractors, Inc.)**

DISTRIBUTION:
Chris Butler **(International Contractors, Inc.)** , Bob Concannon **(International Contractors, Inc.)** , Austin Darrell **(International Contractors, Inc.)** , Scott Leadbetter **(International Contractors, Inc.)** , Brian Zielinski **(Aria Group Architects, Inc.)**

DESCRIPTION:

ATTACHMENTS:

SUBMITTAL WORKFLOW

#	NAME	SUBMITTER/APPROVER	DUE DATE
1	Matt Carroll	Submitter	12/28/2022
2	Victor Baez	Approver	12/28/2022
3	Shellie Halkyard	Approver	1/4/2023
4	Paul Nagtalon	Approver	1/4/2023

INTERNATIONAL CONTRACTORS, INC.

INTERNATIONAL CONTRACTORS REVIEW OF THIS SUBMITTAL IS FOR GENERAL CONFORMANCE WITH THE CONTRACT DOCUMENTS. SUBCONTRACTOR IS RESPONSIBLE FOR DETAILS AND ACCURACY, FOR CONFIRMING AND VERIFYING ALL DIMENSIONS AND QUANTITIES, AND ASSURING COORDINATION WITH RESPECTIVE RELATED TRADES AND WORK.

ICI REVIEWER: VICTOR BAEZ DATE: 11/2/2022

TIME:

SUBMITTAL
FOR REVIEW

LG SUBMITTAL DATA

Variable Refrigerant Flow Systems

FOR

Verdad at the Grove

2701 Perseverance Drive

Austin, TX

Mechanical Engineer:	Henderson Engineers
Mechanical Contractor:	AirCo Mechanical

Date:	11/23/2022
Revision:	Rev#1
Submitted By:	Johnathan Skinner, Texas AirSystems, Inc.
Equipment Manufacturer:	LG
Equipment Type:	VRF System
Unit Tags:	CU-1/FCU1 thru 15

SUBMITTAL
FOR REVIEW

LG VARIABLE REFRIGERANT FLOW SYSTEM
TAG: CU-1; FCU-1 THRU 15
LG VRF <u>Heat Recovery</u> system complete as follows:

- Outdoor Units (**460/3/60)** (Qty. 1)
- Indoor Units **(208/1/60)** (Qty. 15)
- Heat recovery boxes **(208/1/60)** (Qty. 3)
- Y-Branches (Qty. 2)
- R-410A Refrigerant
- Factory Installed Condensate Pumps
- 10 Year Parts Warranty
- 10 Year Compressor Warranty
- Factory Startup and Commissioning (1-2 days)
- Field Mounted Accessories included as follows:
    - Touchscreen T-Stats
    - Remote Temp Sensors
    - Filter Box for 2" Pleated Filters (1 Set of Filters)
    - Hail Guards
    - BACnet Interface to allow for Integration to Bldg. BAS System

Notes:

1. **Piping is NOT included.**
2. **Additional refrigerant is NOT included.**
3. **Multiple outdoor units must be field piped.**
4. **18 Gauge 2 Conductor Control Wiring and Labor for Install is NOT included**
5. **½" Armaflex insulation (minimum) required for hot gas, liquid and suction line**
6. **Field Disconnect must be provided on EACH outdoor unit module**
7. **Each outdoor module weighs 650 lbs and has slots for a fork lift.**

1. General Liability:
UNDER NO CIRCUMSTANCES SHALL TEXAS AIRSYSTEMS, LLC BE LIABLE TO CUSTOMER OR ANY OTHER PERSON OR ENTITY OR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE DAMAGES ARISING OUT OF OR RELATING TO THIS AGREEMENT. THE MAXIMUM LIABLITY (INCLUDING ATTORNEYS FEES) THAT TEXAS AIRSYSTEMS, LLC MAY HAVE TO CUSTOMER IS FOR REFUND OF FEES ACUTALLY PAID PURSUANT TO THIS PURCHASE ORDER.

2. Formicary Corrosion:
WARNING CONCERNING FORMICARY CORROSSION
HVAC systems, including LG manufactured equipment, often utilize copper coils. In some instances, when exposed to volatile organic substances, the copper coils and any other copper components may fail because of formicary corrosion. Complete replacement of your system may be necessary if this occurs. Texas AirSystems, LLC does not warrant, guarantee or bear any liability or responsibility for formicary corrosion or repair or replacement of any equipment because of failure caused by formicary corrosion. Customer should ensure that it has protected itself for such an event or condition.

EXCLUSION OF LIABILITY FOR FORMICARY CORROSSION
Texas AirSystems, LLC excludes all liability or responsibility for formicary corrosion, including the costs of investigation, repair or replacement of any equipment because of failure caused by formicary corrosion. This exclusion is applicable regardless of the cause or causes of the formicary corrosion. This exclusion supersedes all other terms, conditions, guaranty or warranty language that may exist between Texas AirSystems, LLC and any other person or entity.

Model Selection - Summary

Date: 11/23/2022

1. Outdoor Units

No.	Model Name	Quantity	Description
1	ARUM408DTE5		
1.1	ARUM216DTE5	1	MULTI V 5/50,60Hz/R410A/Heat Recovery/MULTI V 5/N.America
1.2	ARUM192DTE5	1	MULTI V 5/50,60Hz/R410A/Heat Recovery/MULTI V 5/N.America
Total		2	

2. Indoor Units

No.	Model Name	Quantity	Description
1	ARNU073M1A4	3	CEILING CONCEALED DUCT - MID STATIC
2	ARNU123M1A4	1	CEILING CONCEALED DUCT - MID STATIC
3	ARNU183M1A4	1	CEILING CONCEALED DUCT - MID STATIC
4	ARNU363M2A4	3	CEILING CONCEALED DUCT - MID STATIC
5	ARNU483M3A4	5	CEILING CONCEALED DUCT - MID STATIC
6	ARNU543M3A4	2	CEILING CONCEALED DUCT - MID STATIC
Total		15	

3. Branch/Header

No.	Model Name	Quantity
1	ARBLB07121	1
2	ARBLB14521	1
3	ARCNB21	1
4	PRHR043A	2
5	PRHR083A	1

4. Pipes

No.	Diameter(Liq:Gas,inch)	Length(ft)
1	1/4 : 1/2	211.0
2	3/8 : 5/8	414.0
3	1/2 : 7/8 : 1+1/8	10.0
4	5/8 : 7/8 : 1+1/8	35.0
5	3/4 : 1+1/8 : 1+3/8	20.0
6	3/4 : 1+1/8 : 1+5/8	65.0

Model Selection - Summary

Date: 11/23/2022

5. Accessories

Model Name	Quantity	Description
PACS5A000	1	AC Smart 5 (up to 128 indoor units)
PREMTBVC4	15	MultiSITE CRC2+Z Remote Controller (Includes Humidity, Motion & ZigBee Onboard)
ZVRCZTRH1	5	Wireless T + RH sensor (MultiSITE CRC2 Accessory)

System Model Selection - ODU

System Name: CU-1

Date: 11/23/2022

System No : 1/1

1. Design conditions - Outdoor

	Cooling			Heating		
	DBT(°F)	WBT(°F)	RH(%)	DBT(°F)	WBT(°F)	RH(%)
OAT	100.0	75.4	32.5	20.0	18.0	72.9
IAT	73.3	60.8	49.1	60.0	58.0	89.3

2. Outdoor Units

Model Name	No. of IDUs (Current / Max.) (EA)	Combination Ratio (Current / Max.) (%)	Corrected Capacity / Block Load (Cooling / Heating) (%)	Pre-charged Ref. amount (lbs)	Additional Ref. Amount (lbs)
ARUM408DTE5	15 / 64	124 / 130	0.0 / 0.0	68.40	60.10

Model Name	Combination
ARUM408DTE5	ARUM192DTE5 + ARUM216DTE5

Nominal/Corrected Capa. (kBtu/h)		Nominal/Corrected PI (kW)	
Cooling	Heating	Cooling	Heating
408.0/376.4	459.0/554.7	29.0/25.2	33.2/47.0

Efficiency(Btu/h/W)		Weight(lbs)	Dimension (WxHxD) (inch)	Electrical Characteristics				
Cooling	Heating			Volt	Phase	Hz	MCA (A)	MOP (A)
14.9	11.8	(659x1)+(666x1)	(48-13/16x66-17/32x29-29/32)x2	460	3	60	35.7+38.3	50+50

3. Pipes

Diameter(Liq:Gas,inch)	Length(ft)
1/4 : 1/2	211.0
3/8 : 5/8	414.0
1/2 : 7/8 : 1+1/8	10.0

4. Branch/Header

Model Name	Quantity
ARBLB07121	1
ARBLB14521	1
ARCNB21	1

#Notes: Correction factor is corrected by such as, but not limited to, indoor unit combination, temperature, and pipe length.
The result can be slightly different from Product Data Book due to simulation.
Pipe lengths are estimations only.
Contractor is responsible for piping take-off and verification of actual pipe routing and pipe lengths.

Verdad - The Grove 11-21-2022(ver 1.8.9.3)

System Model Selection - ODU

System Name: CU-1

Date: 11/23/2022

System No : 1/1

3. Pipes

Diameter(Liq:Gas,inch)	Length(ft)
5/8 : 7/8 : 1+1/8	35.0
3/4 : 1+1/8 : 1+3/8	20.0
3/4 : 1+1/8 : 1+5/8	65.0

4. Branch/Header

Model Name	Quantity
PRHR043A	2
PRHR083A	1
-	-

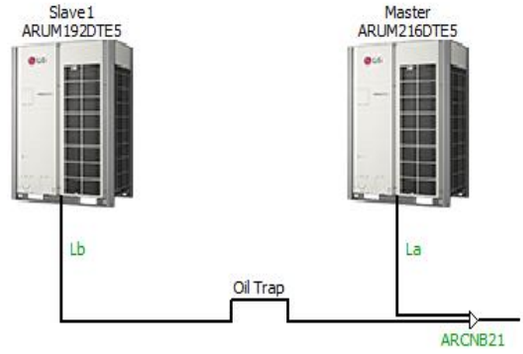
#Notes: Correction factor is corrected by such as, but not limited to, indoor unit combination, temperature, and pipe length.
The result can be slightly different from Product Data Book due to simulation.
Pipe lengths are estimations only.
Contractor is responsible for piping take-off and verification of actual pipe routing and pipe lengths.

System Model Selection - ODU

System Name: CU-1 **Date: 11/23/2022**

System No : 1/1

5. ODU Installation



* Oil Trap : Apply when height difference or distance between the ODUs is over 2m(6.6ft).

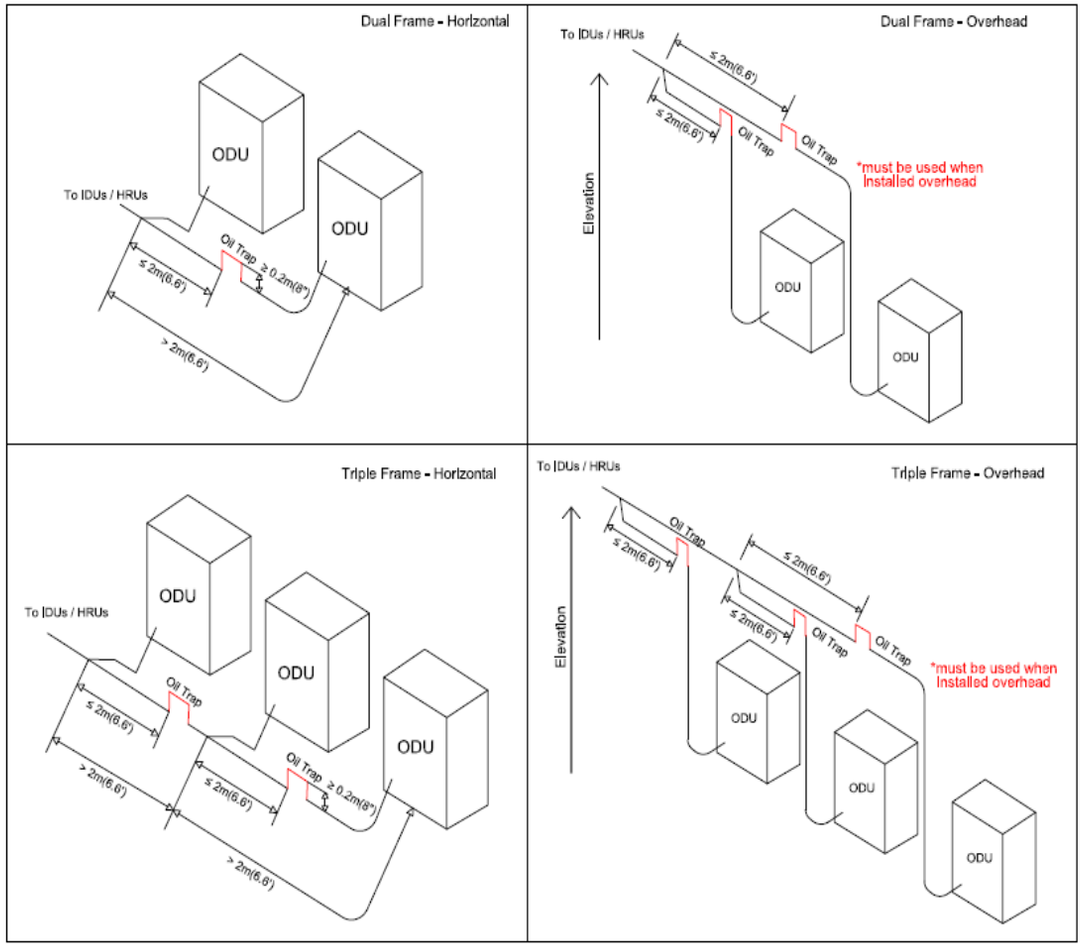
Outdoor Unit-Branch		
Pipe	Diameter(inch)	Length(ft)
La	5/8 : 1+1/8 : 1+1/8	-
Lb	5/8 : 1+1/8 : 1+1/8	-

Height Difference	
Pipe	Length(ft)
Hb (Master-Slave1)	-

#Notes: Height difference is calculated based on master ODU.

Oil Trap Requirement

Date: 11/23/2022



Oil trap required:

- Overhead piping (Water case)
- Horizontal piping when distance between the frame and connecting Y-branch exceeds 2 m (6.6 ft).
- High Gas and Low Gas pipes only
- Oil trap must be minimum 0.2 m (8 inch) high, 0.2 m (8 inch) wide.
- Oil trap must be located close to connecting Y-branch (no farther than 2 m (6.6 ft)).
- Connecting Y-branch must be installed horizontally.

System Model Section - IDU

System Name: CU-1

Date: 11/23/2022

System No : 1/1

7. Indoor Units(2)

Tag	Model Name	Type			Air flow rate (CFM)	Remark
FCU-3	ARNU073M1A4	DUCT MIDDLE STATIC	-	-	160.0	Setting Value: 91 / E.S.P: 0.3000 inchAq
FCU-11	ARNU073M1A4	DUCT MIDDLE STATIC	-	-	315.0	Setting Value: 65 / E.S.P: 0.2000 inchAq
FCU-13	ARNU073M1A4	DUCT MIDDLE STATIC	-	-	315.0	Setting Value: 77 / E.S.P: 0.2000 inchAq
FCU-5	ARNU123M1A4	DUCT MIDDLE STATIC	-	-	300.0	Setting Value: 93 / E.S.P: 0.3000 inchAq
FCU-14	ARNU183M1A4	DUCT MIDDLE STATIC	-	-	600.0	Setting Value: 106 / E.S.P: 0.3000 inchAq
FCU-4	ARNU363M2A4	DUCT MIDDLE STATIC	-	-	750.0	Setting Value: 105 / E.S.P: 0.3000 inchAq
FCU-12	ARNU363M2A4	DUCT MIDDLE STATIC	-	-	1000.0	Setting Value: 99 / E.S.P: 0.1600 inchAq
FCU-15	ARNU363M2A4	DUCT MIDDLE STATIC	-	-	1100.0	Setting Value: 118 / E.S.P: 0.3000 inchAq
FCU-1	ARNU483M3A4	DUCT MIDDLE STATIC	-	-	1050.0	Setting Value: 97 / E.S.P: 0.4000 inchAq
FCU-2	ARNU483M3A4	DUCT MIDDLE STATIC	-	-	1050.0	Setting Value: 97 / E.S.P: 0.4000 inchAq
FCU-6	ARNU483M3A4	DUCT MIDDLE STATIC	-	-	1110.0	Setting Value: 104 / E.S.P: 0.5000 inchAq
FCU-7	ARNU483M3A4	DUCT MIDDLE STATIC	-	-	1110.0	Setting Value: 104 / E.S.P: 0.5000 inchAq
FCU-8	ARNU483M3A4	DUCT MIDDLE STATIC	-	-	1110.0	Setting Value: 104 / E.S.P: 0.5000 inchAq
FCU-9	ARNU543M3A4	DUCT MIDDLE STATIC	-	-	1400.0	Setting Value: 105 / E.S.P: 0.4000 inchAq
FCU-10	ARNU543M3A4	DUCT MIDDLE STATIC	-	-	1400.0	Setting Value: 105 / E.S.P: 0.4000 inchAq

#Notes: Correction factor is corrected by such as, but not limited to, indoor unit combination, temperature, and pipe length.

The result can be slightly different from Product Data Book due to simulation.

Pipe lengths are estimations only.

Contractor is responsible for piping take-off and verification of actual pipe routing and pipe lengths.

EWT=Entering Water Temperature / LWT=Leaving Water Temperature.

System Model Section - IDU

System Name: CU-1

Date: 11/23/2022

System No : 1/1

8. Indoor Units(3)

Tag	Model Name	Weight	Dimension (WxHxD)	Electrical Characteristics				
				Volt	Phase	Hz	MCA (A)	RLA (A)
FCU-3	ARNU073M1A4	56 lbs	35-7/16x10-5/8x27-9/16 inch	208~230	1	60	2.00	1.6
FCU-11	ARNU073M1A4	56 lbs	35-7/16x10-5/8x27-9/16 inch	208~230	1	60	2.00	1.6
FCU-13	ARNU073M1A4	56 lbs	35-7/16x10-5/8x27-9/16 inch	208~230	1	60	2.00	1.6
FCU-5	ARNU123M1A4	56 lbs	35-7/16x10-5/8x27-9/16 inch	208~230	1	60	2.00	1.6
FCU-14	ARNU183M1A4	56 lbs	35-7/16x10-5/8x27-9/16 inch	208~230	1	60	2.00	1.6
FCU-4	ARNU363M2A4	86.2 lbs	49-7/32x10-5/8x27-9/16 inch	208~230	1	60	2.90	2.3
FCU-12	ARNU363M2A4	86.2 lbs	49-7/32x10-5/8x27-9/16 inch	208~230	1	60	2.90	2.3
FCU-15	ARNU363M2A4	86.2 lbs	49-7/32x10-5/8x27-9/16 inch	208~230	1	60	2.90	2.3
FCU-1	ARNU483M3A4	96.1 lbs	49-7/32x14-3/16x27-9/16 inch	208~230	1	60	3.10	2.5
FCU-2	ARNU483M3A4	96.1 lbs	49-7/32x14-3/16x27-9/16 inch	208~230	1	60	3.10	2.5
FCU-6	ARNU483M3A4	96.1 lbs	49-7/32x14-3/16x27-9/16 inch	208~230	1	60	3.10	2.5
FCU-7	ARNU483M3A4	96.1 lbs	49-7/32x14-3/16x27-9/16 inch	208~230	1	60	3.10	2.5
FCU-8	ARNU483M3A4	96.1 lbs	49-7/32x14-3/16x27-9/16 inch	208~230	1	60	3.10	2.5
FCU-9	ARNU543M3A4	96.1 lbs	49-7/32x14-3/16x27-9/16 inch	208~230	1	60	3.10	2.5
FCU-10	ARNU543M3A4	96.1 lbs	49-7/32x14-3/16x27-9/16 inch	208~230	1	60	3.10	2.5

#Notes: Correction factor is corrected by such as, but not limited to, indoor unit combination, temperature, and pipe length.

The result can be slightly different from Product Data Book due to simulation.

Pipe lengths are estimations only.

Contractor is responsible for piping take-off and verification of actual pipe routing and pipe lengths.

EWT=Entering Water Temperature / LWT=Leaving Water Temperature.

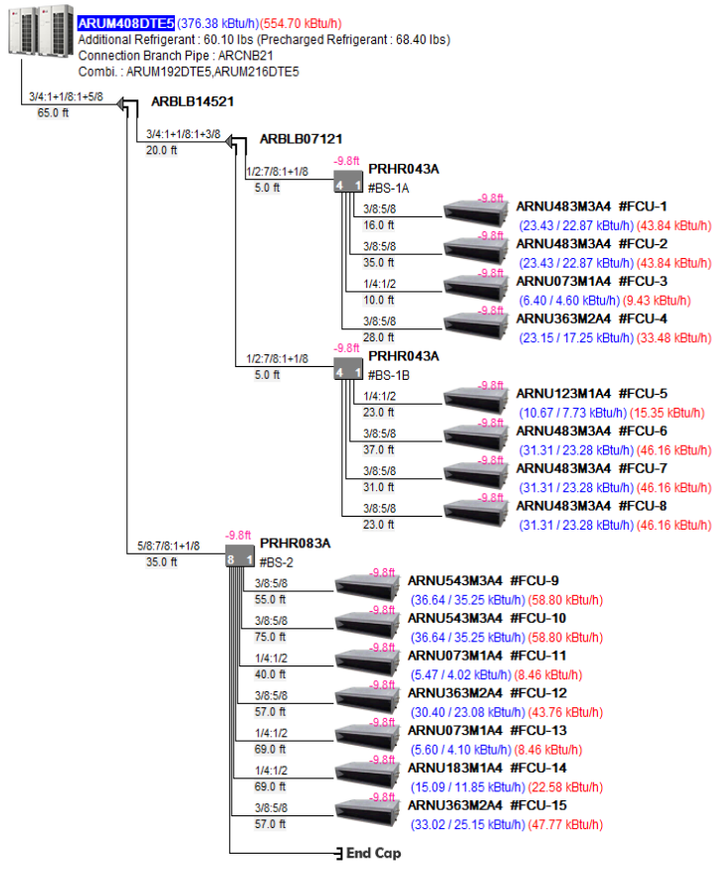
System Tree Diagram

System Name: CU-1

System No : 1/1

Date: 11/23/2022

Texas AirSystems will work with AirCo Mechanical to provide updated pipe sizing based on planned installed lengths as needed



* : Main pipe upsized
** : Conditional Application
Three pipe : Liquid : High Gas : Low Gas
Two pipe : Liquid : Gas

T Thermostat, G Group Control, D Dry Contact
S AHU Comm. Kit [Discharge (supply) air], R AHU Comm. Kit [Return air]
M AHU Comm. Kit [Main module], C AHU Comm. Kit [Communications module]

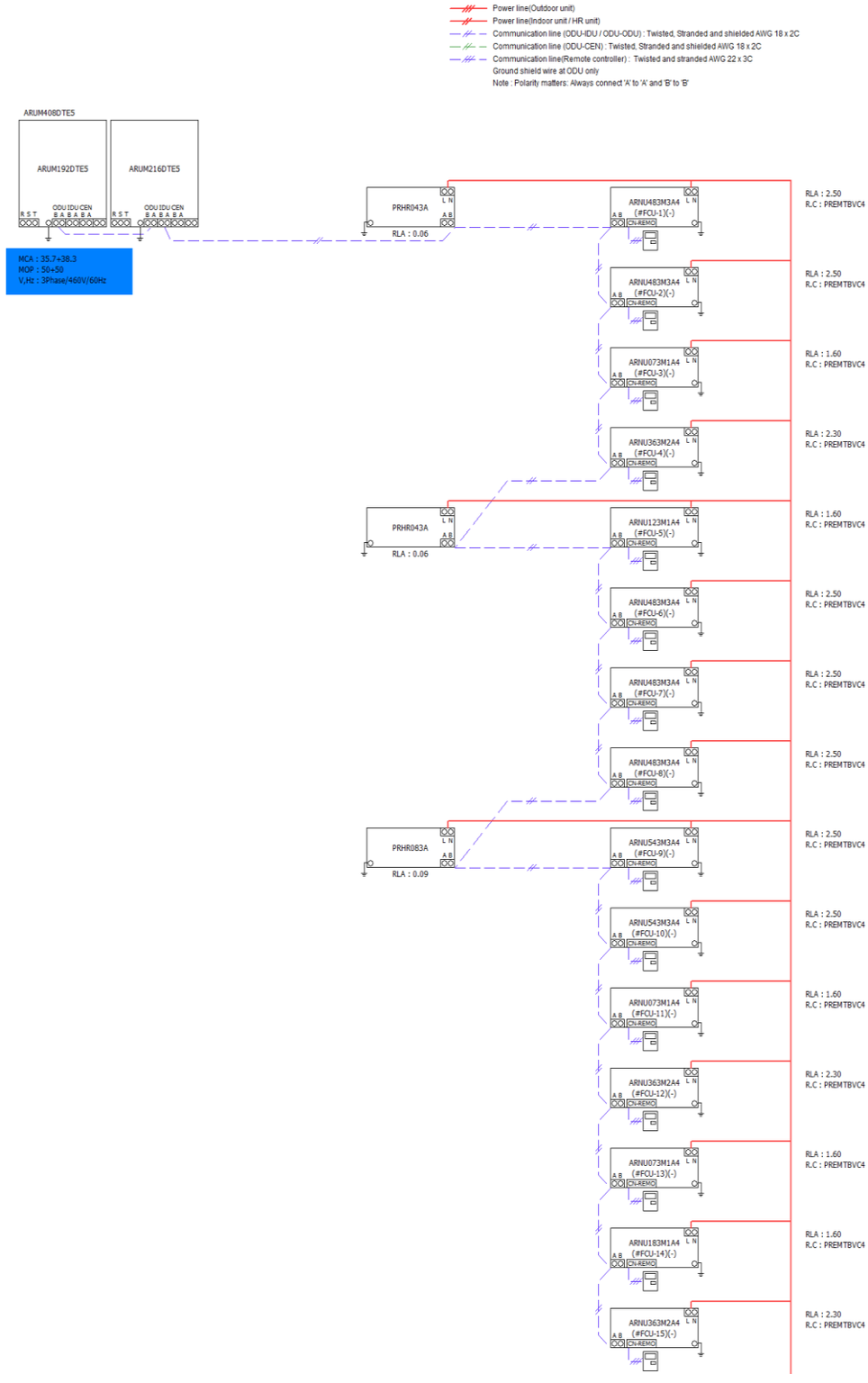
Indoor Units	**: 15 of 64**
Combination Ratio	**: 507.0 of 408.0 (124%)**
Total Pipe	**: 755.0 of 3280.8 ft**
ODU factory charge	**: 68.40 lbs**
Additional Refrigerant	**: 60.10 lbs**
Total refrigerant	**: 128.50 lbs**
Minimum room volume (Based on 26.0 lbs / 1000.0 ft³)	**: 4942.27 ft³**

System Schematic Diagram

System Name: CU-1

Date: 11/23/2022

System No : 1/1



System Schematic Diagram

System Name: CU-1

Date: 11/23/2022

System No : 1/1

Note :
Power wiring, breaker size, and disconnects should follow local code and NEC.
Multi-frame outdoor units require a separate power connection for each frame.
Refer to the most up-to-date submittal sheets for applicable electrical data.

CU-1

ARUM408DTE5

Multi V™ 5 with LGRED° 460V ODU

34 Ton Dual Frame Heat Pump and Heat Recovery

(a) ARUM192DTE5

(b) ARUM216DTE5

Performance:

Cooling Mode:

Nominal Capacity (Btu/h)	408,000
Power Input[1] (kW)	28.98

Heating Mode:

Nominal Capacity (Btu/h)	459,000
Power Input[1] (kW)	33.21

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

Electrical:

Frame	(a) ARUM192DTE5	(b) ARUM216DTE5
Power Supply (V/Hz/Ø)[1]	460/60/3	460/60/3
MOP (A)	50	50
MCA (A)	35.7	38.3
Rated Amps (A)	32.0	34.4
Compressor A (A)	14.8	15.5
Compressor B (B)	12.2	13.9
Fan (A)	5.0	5.0

Piping:[2]

Frame	(a) ARUM192DTE5	(b) ARUM216DTE5
Refrigerant Charge (lbs.)	30.9	37.5
Liquid (in., O.D.)	5/8 Braze	5/8 Braze
High Pressure Vapor (Heat Recovery only; in, O.D.)	1-1/8 Braze	1-1/8 Braze
Low Pressure Vapor (in., O.D.)	1-1/8 Braze	1-1/8 Braze

Standard Features:

- Advanced Smart Load Control
- Intelligent Heating
- HiPOR (High Pressure Oil Return)
- Smart Oil Control
- Night Quiet Operation
- Fault Detection and Diagnosis
- Active Refrigerant Control
- Variable Heat Path Exchanger
- Subcooling and Vapor Injection Control
- Liquid Cooled Inverter Controller
- Advanced Comfort Cooling

Required Accessories:

☐ ARCNB21 (Frame Connector Y-branch, 3 pipe heat recovery)
☐ ARCNN21 (Frame Connector Y-branch, 2 pipe heat pump)

Operating Range:

Cooling (°F DB)**	5 - 122
Heating (°F WB)	-22 - 61
Synchronous	
Cooling Based (°F DB)	14 - 81
Heating Based (°F WB)	14 - 61

Unit Data:

Refrigerant Type		R410A
Refrigerant Control		EEV
Max. Number of Indoor Units[3]		64
Sound Pressure[4] dB(A)		66.0
Weight		
Frame	(a) ARUM192DTE5	(b) ARUM216DTE5
Net (lbs.)	659	666
Shipping (lbs.)	688	694
Communication Cable (No x AWG)[5]		2 x 18
Heat Exchanger Coating		Black Coated Fin™

Compressor:

Type	HSS DC Scroll
Quantity	4
Oil / Type	PVE / FVC68D

Fan:

Type	Propeller
Quantity (a) + (b)	4
Motor Drive	Brushless Digitally Controlled Direct
Air Flow Rate (a) + (b) (rated/max, CFM)	20,600 / 22,600

Notes:

1. Power wiring cable size must comply with the applicable local and national codes. Cables terminate at each frame.
2. For main pipe segment size, refer to the LATS Multi V tree diagram.
3. The combination ratio must be between 50-130%.
4. Sound pressure levels are tested in an anechoic chamber under ISO Standard 3745 for the combination of outdoor units.
5. Communication cable between ODU and IDUs must be 2-conductor, 18 AWG, twisted, stranded, and shielded. Ensure the communication cable shield is properly grounded to the Main ODU chassis only. Do not ground the communication cable at any other point. Wiring must comply with all applicable local and national codes.
6. Acceptable operating voltage: 414-528V
7. The order of these units on the submittal (i.e., a+b) does not represent the installation order. Highest capacity unit is used as the Main, followed by the smaller size as Sub 1.
8. Fan ESP (in wg) selectable range is 0.16 to 0.32.

LGRED° Powerful Heat Technology

Inverter

AHRI CERTIFIED™ www.ahridirectory.org
Variable Refrigerant Flow (VRF) Multi-Split AC and HP
AHRI Standard 1230

+

CU-1

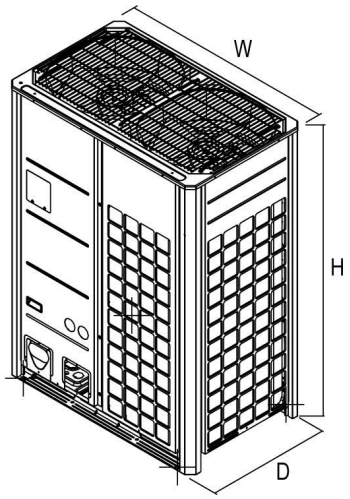
ARUM408DTE5

Multi V™ 5 with LGRED° 460V ODU

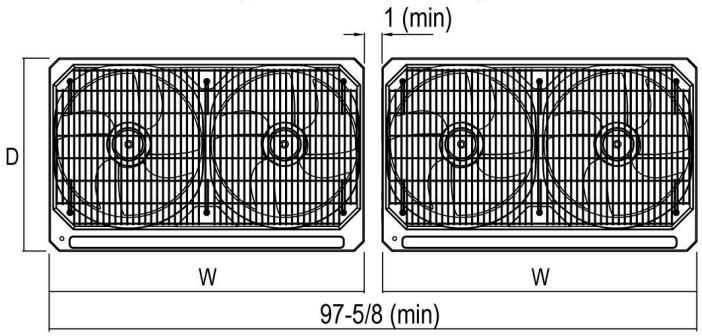
34 Ton Dual Frame Heat Pump and Heat Recovery

(a) ARUM192DTE5

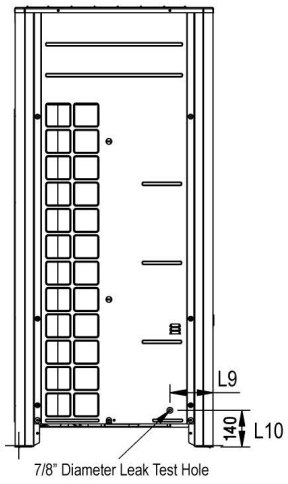
(b) ARUM216DTE5



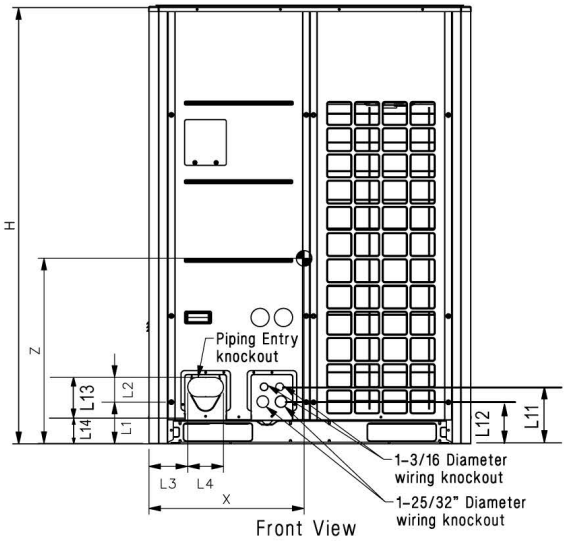
Typical Dual Frame Configuration



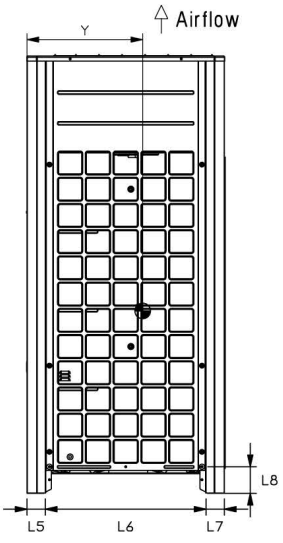
Note: Please refer to multi-frame placement information and piping rules in the Multi V 5 Engineering Manual and the Multi V 5 Installation Manual. Minimum spacing between frames is 1 inch.



Left Side View

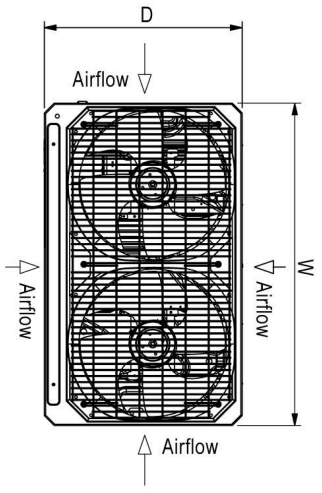


Front View

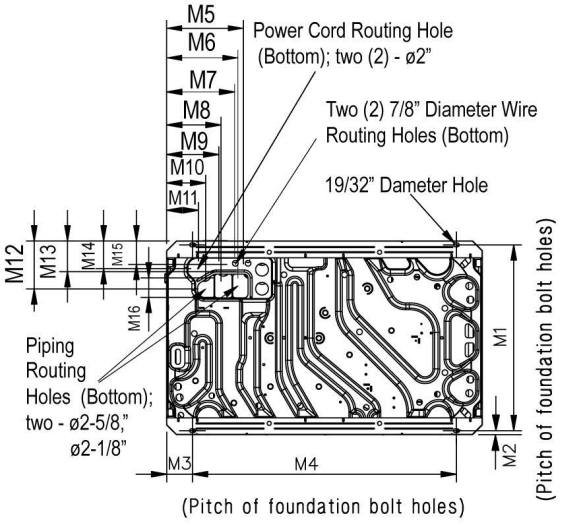


Right Side View

W	48–13/16”
H	66–17/32”
D	29–29/32”
L1	6–5/16”
L2	3–3/4”
L3	5–29/32”
L4	5–13/32”
L5	2–25/32”
L6	24–9/32”
L7	2–25/32”
L8	4–1/32”
L9	6 – 1/2”
L10	5 – 9/16”
L11	8 – 5/8”
L12	6 – 7/16”
L13	9 – 15/16”
L14	3 – 5/8”



Top View



Bottom Mounting Holes

M1	28–25/32”
M2	5/8”
M3	3–15/16”
M4	40–15/16”
M5	11 – 15/16”
M6	11 – 1/16”
M7	10 – 1/2”
M8	8 – 7/16”
M9	8 – 1/8”
M10	6 – 1/16”
M11	4 – 15/16”
M12	7 – 1/2”
M13	4 – 13/16”
M14	4 – 5/16”
M15	3 – 5/8”
M16	3”

Center of Gravity

X	23–7/32”
Y	15–5/8”
Z	25–9/16”

All dimensions have a tolerance of ±0.25 in.

[Unit: inch]

= Center of Gravity

CU-1

ARUM408DTE5

Multi V™ 5 with LGRED° 460V ODU

34 Ton Dual Frame Heat Pump and Heat Recovery

AHRI Data:

Reference Number	Indoor Type	Cooling Capacity (95°F)	EER (95°F)	IEER	SCHE	High Heating Capacity (47°F)	High COP (47°F)	Low Heating Capacity (17°F)	Low COP (17°F)
205281485	Ducted Indoor Units	390,000	9.70	19.00	19.00	434,000	3.22	284,000	2.18
202524567	Non-Ducted Indoor Units	390,000	9.80	18.80	22.00	434,000	3.34	284,000	2.26

FCU-3; 11; 13

ARNU073M1A4

Multi V™ Mid Static Ducted

7,500 Btu/h Indoor Unit

LG Life's Good

Performance:

Total Cooling Capacity (Btu/h)	7500
Heating Capacity (Btu/h)	8500
Max Power Input[1] (W)	190
L/M/H Power Input at Factory Default (W)	25 / 30 / 39

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

Electrical:

Power Supply (V/Hz/Ø)	208-230/60/1
Rated Amps (A)	1.6

Piping:

Refrigerant:

Liquid Line (in, OD)	1/4 Flare
Vapor Line (in, OD)	1/2 Flare

Condensate:

Condensate Pump Drain[2] (in, ID)	1 Plain
Gravity Drain Plugged (in, OD)	1 (3/4 MPT)

Controls Features:

- Auto changeover (Heat Recovery only)
- Auto operation
- Auto restart
- Dual thermistor control
- Wi-Fi compatible
- Dual setpoint control
- Multiple aux heater applications
- Filter life display
- External on/off control
- Auto fan
- Leak detection
- Weekly schedule
- Fan speed control
- Group control
- Hot start
- Self diagnostics
- Timer (on/off)
- Child lock

Entering Mixed Air:

Cooling Max[4] (°F WB)	76
Heating Min (°F DB)	59

Unit Data:

Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Power[5] dB(A) (H/M/L, @0.24 ESP)	44 / 41 / 39
Filter Type	Washable
MERV	N/A
Filter Quantity	2
Filter Dimensions[6] (in)	9-1/16 x 33-7/16 x 3/16
Net Unit Weight (lbs)	56.0
Shipping Weight (lbs)	67.0

Fan:

Type	Sirocco
Fan Quantity	2
Motor/Drive	Brushless Digitally Controlled/Direct
Motor Quantity	1
Standard Mode Airflow Rate H/M/L (CFM)	372 / 315 / 257
Standard Mode External Static Pressure (ESP)[7] (in wg)	0.10
High Mode Airflow Rate H/M/L (CFM)	361 / 279 / 211
High Mode External Static Pressure (ESP)[7] (in wg)	0.24
Airflow Range (CFM)	216 - 906
Minimum ESP (in wg)[8]	0.08
Maximum ESP (in wg)[8]	0.59

Notes:

1. Maximum power input is rated at maximum setting value.
2. Maximum lift is 27 in from bottom of unit. Check valve not included (field supplied).
3. Requires an LG wall controller because ducted units do not have infrared receiver.
4. See Engineering Manual for sensible and latent capacities.
5. Sound Power level is measured using rated conditions, and tested in a reverberation room per ISO 3741 standards.
6. Actual filter sizes may vary.
7. At factory fan speed setting.
8. Maximum static pressure may result in reduced airflow (CFM).
9. All Communication cable between Main outdoor units to indoor units / heat recovery units to be 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the Main outdoor unit chassis only. Do not ground the outdoor unit to indoor units / heat recovery units communication cable at any other point. Wiring must comply with all applicable local and national codes.
10. Power wiring cable size must comply with the applicable local and national code.
11. This unit comes with a dry nitrogen charge.
12. All capacities are net with a combination ratio between 95 – 105%.
13. Must follow installation instructions in the applicable LG installation manual.
14. If a Third-Party Dry Contact and an LG internal heater or an LG Auxiliary Heater Kit is installed, supplemental heat capability cannot be controlled by the Third-Party Thermostat.

C US

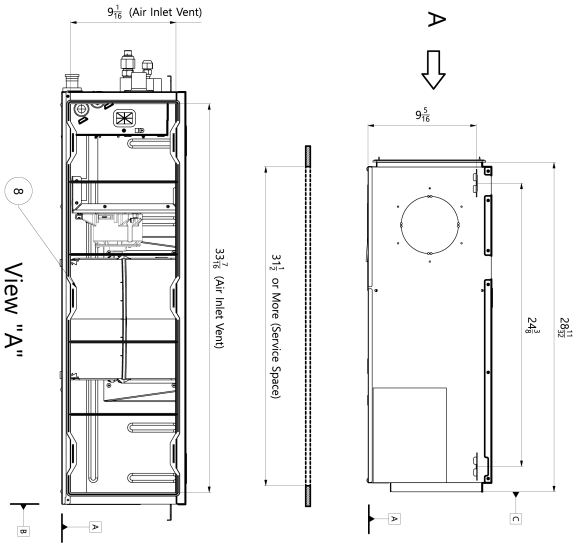
For continual product development, LG reserves the right to change specifications without notice.

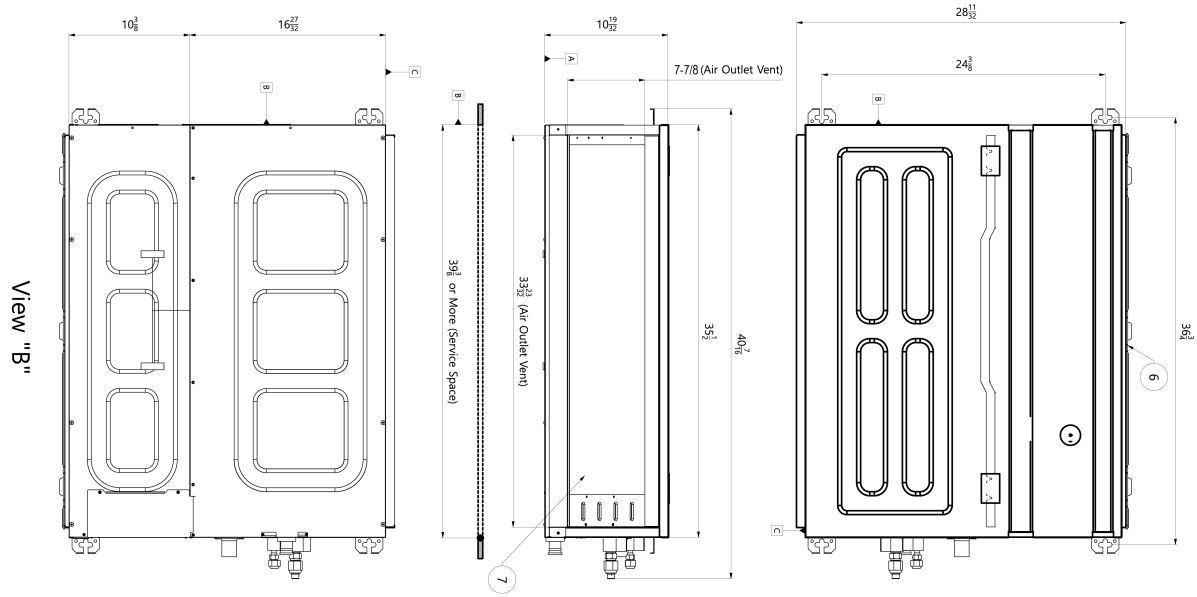
FCU-3; 11; 13

ARNU073M1A4

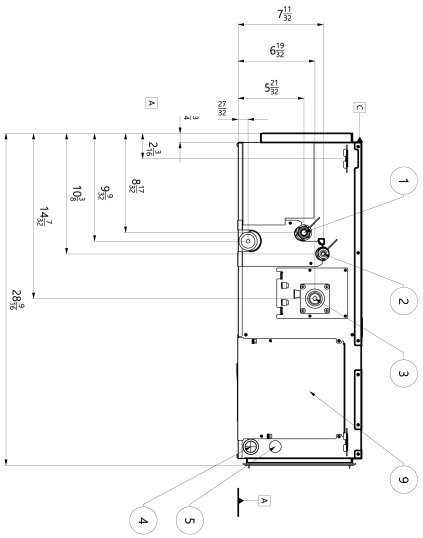
Multi V™ Mid Static Ducted

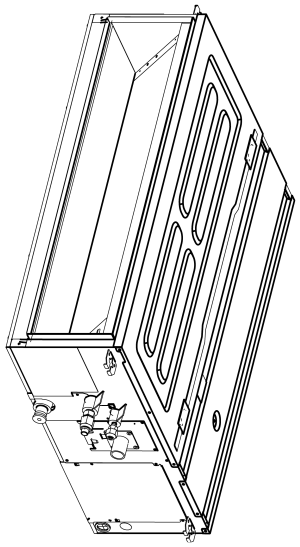
7,500 Btu/h Indoor Unit





No.	Part Name	Description
1	Gas pipe connection	-
2	Liquid pipe connection	-
3	Drain pipe connection	-
4	Remote and Communication Cable Hole	-
5	Power Cable Hole	-
6	Air Inlet	-
7	Air Outlet	-
8	Air Filters	Supplied with Product
9	Control Cover	-





FCU-5

ARNU123M1A4

Multi V™ Mid Static Ducted

12,300 Btu/h Indoor Unit

LG Life's Good

Performance:

Total Cooling Capacity (Btu/h)	12300
Heating Capacity (Btu/h)	13600
Max Power Input[1] (W)	190
L/M/H Power Input at Factory Default (W)	31 / 38 / 46

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

Electrical:

Power Supply (V/Hz/Ø)	208-230/60/1
Rated Amps (A)	1.6

Piping:

Refrigerant:

Liquid Line (in, OD)	1/4 Flare
Vapor Line (in, OD)	1/2 Flare

Condensate:

Condensate Pump Drain[2] (in, ID)	1 Plain
Gravity Drain Plugged (in, OD)	1 (3/4 MPT)

Controls Features:

- Auto changeover (Heat Recovery only)
- Auto operation
- Auto restart
- Dual thermistor control
- Wi-Fi compatible
- Dual setpoint control
- Multiple aux heater applications
- Filter life display
- External on/off control
- Auto fan
- Leak detection
- Weekly schedule
- Fan speed control
- Group control
- Hot start
- Self diagnostics
- Timer (on/off)
- Child lock

Entering Mixed Air:

Cooling Max[4] (°F WB)	76
Heating Min (°F DB)	59

Unit Data:

Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Power[5] dB(A) (H/M/L, @0.24 ESP)	44 / 43 / 40
Filter Type	Washable
MERV	N/A
Filter Quantity	2
Filter Dimensions[6] (in)	9-1/16 x 33-7/16 x 3/16
Net Unit Weight (lbs)	56.0
Shipping Weight (lbs)	67.0

Fan:

Type	Sirocco
Fan Quantity	2
Motor/Drive	Brushless Digitally Controlled/Direct
Motor Quantity	1
Standard Mode Airflow Rate H/M/L (CFM)	399 / 344 / 286
Standard Mode External Static Pressure (ESP)[7] (in wg)	0.10
High Mode Airflow Rate H/M/L (CFM)	392 / 328 / 262
High Mode External Static Pressure (ESP)[7] (in wg)	0.24
Airflow Range (CFM)	216 - 906
Minimum ESP (in wg)[8]	0.08
Maximum ESP (in wg)[8]	0.59

Notes:

1. Maximum power input is rated at maximum setting value.
2. Maximum lift is 27 in from bottom of unit. Check valve not included (field supplied).
3. Requires an LG wall controller because ducted units do not have infrared receiver.
4. See Engineering Manual for sensible and latent capacities.
5. Sound Power level is measured using rated conditions, and tested in a reverberation room per ISO 3741 standards.
6. Actual filter sizes may vary.
7. At factory fan speed setting.
8. Maximum static pressure may result in reduced airflow (CFM).
9. All Communication cable between Main outdoor units to indoor units / heat recovery units to be 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the Main outdoor unit chassis only. Do not ground the outdoor unit to indoor units / heat recovery units communication cable at any other point. Wiring must comply with all applicable local and national codes.
10. Power wiring cable size must comply with the applicable local and national code.
11. This unit comes with a dry nitrogen charge.
12. All capacities are net with a combination ratio between 95 – 105%.
13. Must follow installation instructions in the applicable LG installation manual.
14. If a Third-Party Dry Contact and an LG internal heater or an LG Auxiliary Heater Kit is installed, supplemental heat capability cannot be controlled by the Third-Party Thermostat.

C US

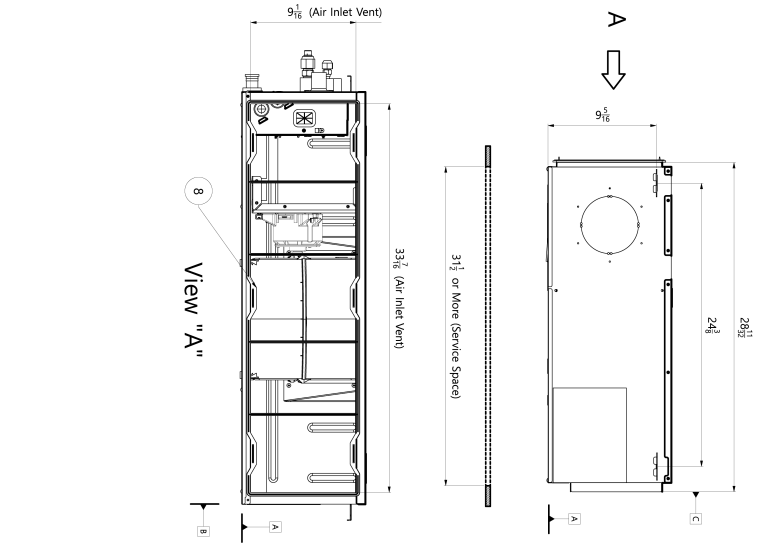
For continual product development, LG reserves the right to change specifications without notice.

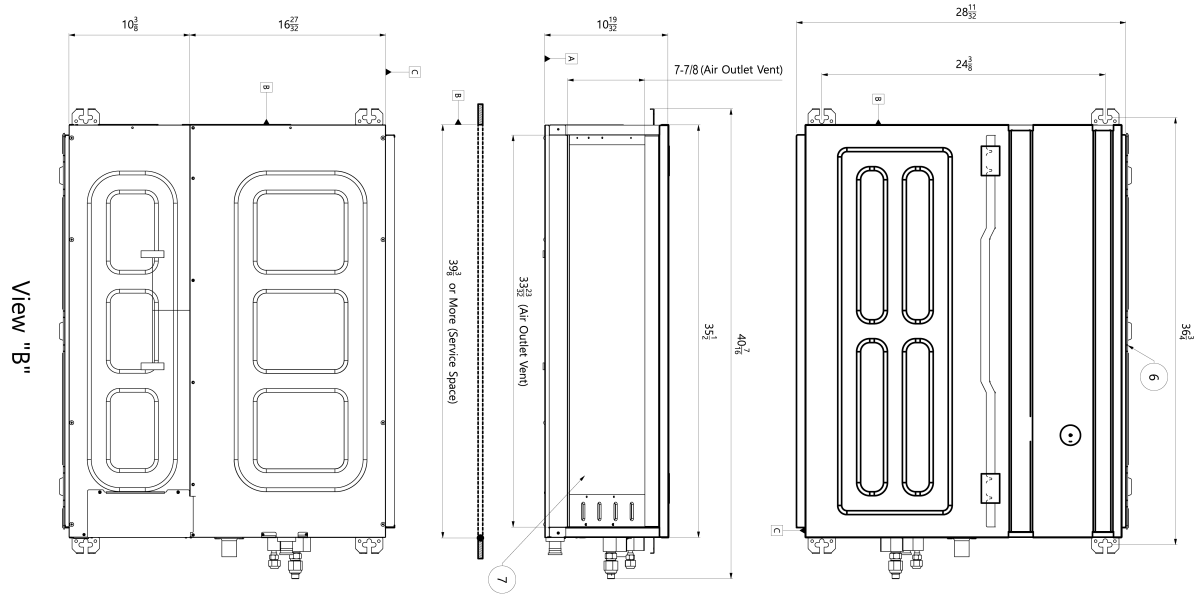
FCU-5

ARNU123M1A4

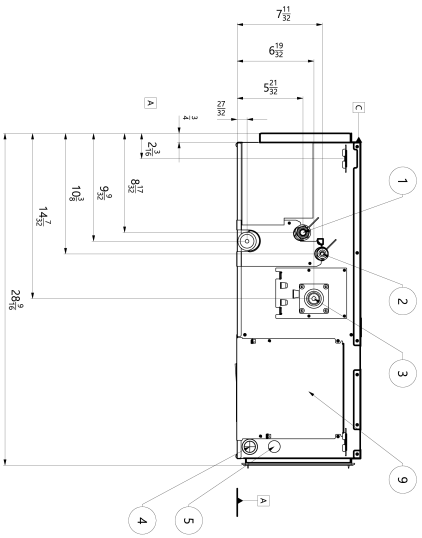
Multi V™ Mid Static Ducted

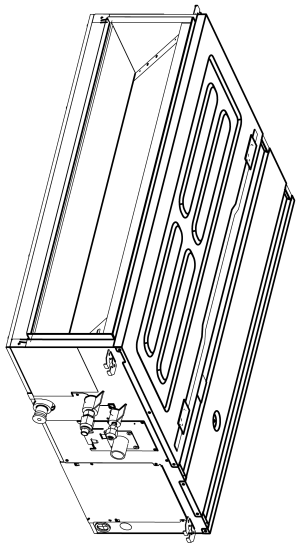
12,300 Btu/h Indoor Unit





No.	Part Name	Description
1	Gas pipe connection	-
2	Liquid pipe connection	-
3	Drain pipe connection	-
4	Remote and Communication Cable Hole	-
5	Power Cable Hole	-
6	Air Inlet	-
7	Air Outlet	-
8	Air Filters	Supplied with Product
9	Control Cover	-





FCU-14

ARNU183M1A4

Multi V™ MId Static Ducted

19,100 Btu/h Indoor Unit

LG Life's Good

Performance:

Total Cooling Capacity (Btu/h)	19100
Heating Capacity (Btu/h)	21500
Max Power Input[1] (W)	190
L/M/H Power Input at Factory Default (W)	55 / 63 / 85

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

Electrical:

Power Supply (V/Hz/Ø)	208-230/60/1
Rated Amps (A)	1.6

Piping:

Refrigerant:

Liquid Line (in, OD)	1/4 Flare
Vapor Line (in, OD)	1/2 Flare

Condensate:

Condensate Pump Drain[2] (in, ID)	1 Plain
Gravity Drain Plugged (in, OD)	1 (3/4 MPT)

Controls Features:

- Auto changeover (Heat Recovery only)
- Auto operation
- Auto restart
- Dual thermistor control
- Wi-Fi compatible
- Dual setpoint control
- Multiple aux heater applications
- Filter life display
- External on/off control
- Auto fan
- Leak detection
- Weekly schedule
- Fan speed control
- Group control
- Hot start
- Self diagnostics
- Timer (on/off)
- Child lock

Entering Mixed Air:

Cooling Max[4] (°F WB)	76
Heating Min (°F DB)	59

Unit Data:

Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Power[5] dB(A) (H/M/L, @0.24 ESP)	49 / 47 / 43
Filter Type	Washable
MERV	N/A
Filter Quantity	2
Filter Dimensions[6] (in)	9-1/16 x 33-7/16 x 3/16
Net Unit Weight (lbs)	56.0
Shipping Weight (lbs)	67.0

Fan:

Type	Sirocco
Fan Quantity	2
Motor/Drive	Brushless Digitally Controlled/Direct
Motor Quantity	1
Standard Mode Airflow Rate H/M/L (CFM)	606 / 493 / 413
Standard Mode External Static Pressure (ESP)[7] (in wg)	0.10
High Mode Airflow Rate H/M/L (CFM)	638 / 556 / 392
High Mode External Static Pressure (ESP)[7] (in wg)	0.24
Airflow Range (CFM)	216 - 906
Minimum ESP (in wg)[8]	0.08
Maximum ESP (in wg)[8]	0.59

Notes:

1. Maximum power input is rated at maximum setting value.
2. Maximum lift is 27 in from bottom of unit. Check valve not included (field supplied).
3. Requires an LG wall controller because ducted units do not have infrared receiver.
4. See Engineering Manual for sensible and latent capacities.
5. Sound Power level is measured using rated conditions, and tested in a reverberation room per ISO 3741 standards.
6. Actual filter sizes may vary.
7. At factory fan speed setting.
8. Maximum static pressure may result in reduced airflow (CFM).
9. All Communication cable between Main outdoor units to indoor units / heat recovery units to be 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the Main outdoor unit chassis only. Do not ground the outdoor unit to indoor units / heat recovery units communication cable at any other point. Wiring must comply with all applicable local and national codes.
10. Power wiring cable size must comply with the applicable local and national code.
11. This unit comes with a dry nitrogen charge.
12. All capacities are net with a combination ratio between 95 – 105%.
13. Must follow installation instructions in the applicable LG installation manual.
14. If a Third-Party Dry Contact and an LG internal heater or an LG Auxiliary Heater Kit is installed, supplemental heat capability cannot be controlled by the Third-Party Thermostat.

C US

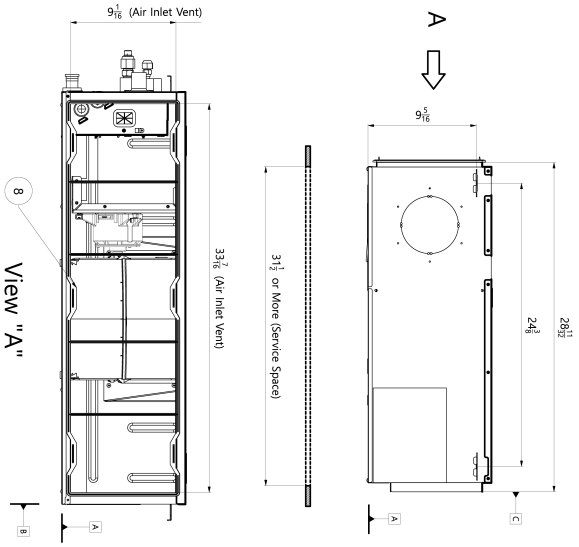
For continual product development, LG reserves the right to change specifications without notice.

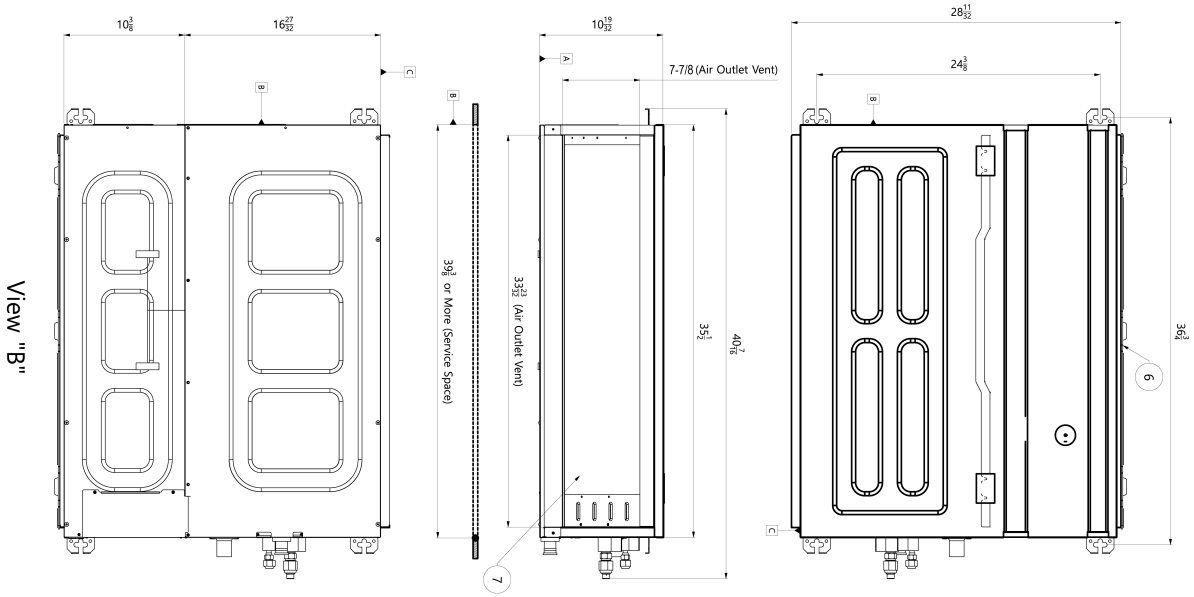
FCU-14

ARNU183M1A4

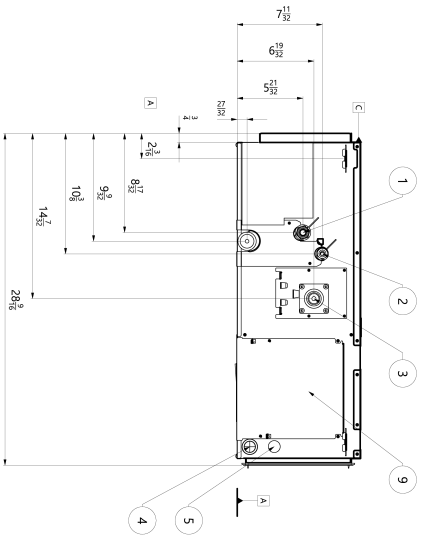
Multi V™ MId Static Ducted

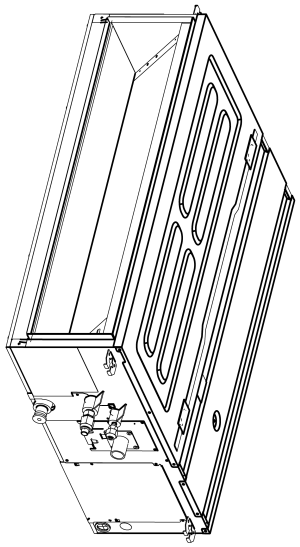
19,100 Btu/h Indoor Unit





No.	Part Name	Description
1	Gas pipe connection	-
2	Liquid pipe connection	-
3	Drain pipe connection	-
4	Remote and Communication Cable Hole	-
5	Power Cable Hole	-
6	Air Inlet	-
7	Air Outlet	-
8	Air Filters	Supplied with Product
9	Control Cover	-





FCU-4; 12; 15

ARNU363M2A4

Multi V™ Mid Static Ducted

36,200 Btu/h Indoor Unit

LG Life's Good

Performance:

Total Cooling Capacity (Btu/h)	36,200
Heating Capacity (Btu/h)	40,600
Max Power Input[1] (W)	430
L/M/H Power Input at Factory Default (W)	88 / 123 / 184

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

Electrical:

Power Supply (V/Hz/Ø)	208-230/60/1
Rated Amps (A)	2.3

Piping:

Refrigerant:

Liquid Line (in, OD)	3/8 Flare
Vapor Line (in, OD)	5/8 Flare

Condensate:

Condensate Pump Drain[2] (in, ID)	1 Plain
Gravity Drain Plugged (in, OD)	1 (3/4 MPT)

Controls Features:

- Auto changeover (Heat Recovery only)
- Auto operation
- Auto restart
- Dual thermistor control
- Wi-Fi compatible
- Dual setpoint control
- Multiple aux heater applications
- Filter life display
- External on/off control
- Auto fan
- Leak detection
- Weekly schedule
- Fan speed control
- Group control
- Hot start
- Self diagnostics
- Timer (on/off)
- Child lock

Entering Mixed Air:

Cooling Max[4] (°F WB)	76
Heating Min (°F DB)	59

Unit Data:

Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Power[5] dB(A) (H/M/L, @0.24 ESP)	65/62/60
Filter Type	Washable
MERV	N/A
Filter Quantity	2
Filter Dimensions[6] (in)	9-11/16 x 23-15/16 x 3/16
Net Unit Weight (lbs)	86.2
Shipping Weight (lbs)	99.2

Fan:

Type	Sirocco
Fan Quantity	2
Motor/Drive	Brushless Digitally Controlled/Direct
Motor Quantity	1
Standard Mode Airflow Rate H/M/L (CFM)	1021 / 844 / 695
Standard Mode External Static Pressure (ESP)[7] (in wg)	0.20
High Mode Airflow Rate H/M/L (CFM)	1031 / 845 / 676
High Mode External Static Pressure (ESP)[7] (in wg)	0.24
Airflow Range (CFM)	676 - 1,554
Minimum ESP (in wg)[8]	0.16
Maximum ESP (in wg)[8]	0.71

Notes:

1. Maximum power input is rated at maximum setting value.
2. Maximum lift is 27 in from bottom of unit. Check valve not included (field supplied).
3. Requires an LG wall controller because ducted units do not have infrared receiver.
4. See Engineering Manual for sensible and latent capacities.
5. Sound Power level is measured using rated conditions, and tested in a reverberation room per ISO 3741 standards.
6. Actual filter sizes may vary.
7. At factory fan speed setting.
8. Maximum static pressure may result in reduced airflow (CFM).
9. All Communication cable between Main outdoor units to indoor units / heat recovery units to be 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the Main outdoor unit chassis only. Do not ground the outdoor unit to indoor units / heat recovery units communication cable at any other point. Wiring must comply with all applicable local and national codes.
10. Power wiring cable size must comply with the applicable local and national code.
11. This unit comes with a dry nitrogen charge.
12. All capacities are net with a combination ratio between 95 – 105%.
13. Must follow installation instructions in the applicable LG installation manual.
14. If a Third-Party Dry Contact and an LG internal heater or an LG Auxiliary Heater Kit is installed, supplemental heat capability cannot be controlled by the Third-Party Thermostat.

C US

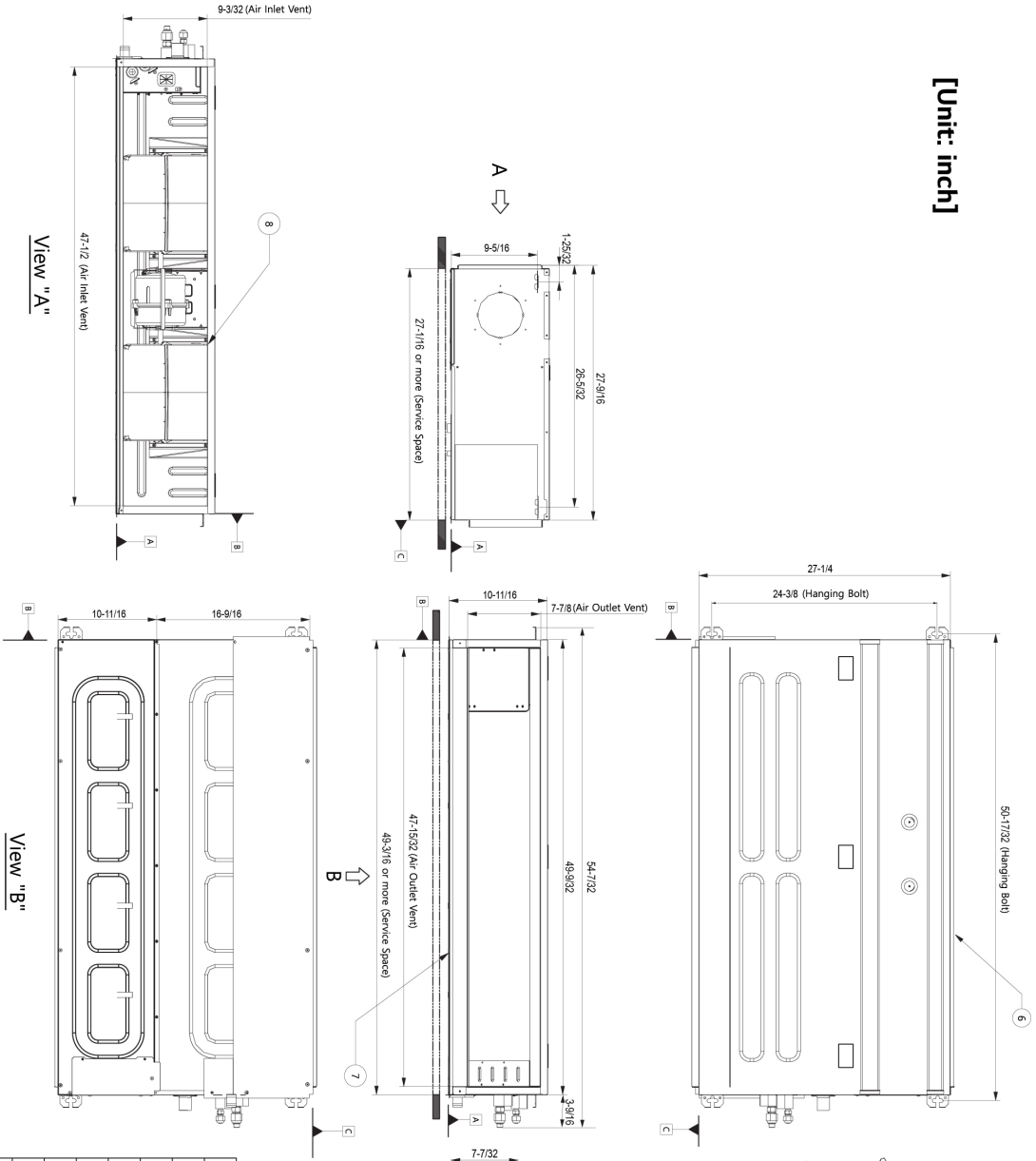
For continual product development, LG reserves the right to change specifications without notice.

ARNU363M2A4

Multi V™ Mid Static Ducted

36,200 Btu/h Indoor Unit

[Unit: inch]



No.	Part Name	Description
1	Gas pipe connection	-
2	Liquid pipe connection	-
3	Drain pipe connection	-
4	Remote and Communication Cable Hole	-
5	Power Cable Hole	-
6	Air Inlet	-
7	Air Outlet	-
8	Air Filters	Supplied with product
9	Control Cover	-

FCU-1; 2; 6; 7; 8

ARNU483M3A4

Multi V™ Mid Static Ducted

48,100 Btu/h Indoor Unit

LG Life's Good

Performance:

Total Cooling Capacity (Btu/h)	48,100
Heating Capacity (Btu/h)	54,200
Max Power Input[1] (W)	650
L/M/H Power Input at Factory Default (W)	75 / 107 / 172

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

Electrical:

Power Supply (V/Hz/Ø)	208-230/60/1
Rated Amps (A)	2.5

Piping:

Refrigerant:

Liquid Line (in, OD)	3/8 Flare
Vapor Line (in, OD)	5/8 Flare

Condensate:

Condensate Pump Drain[2] (in, ID)	1 Plain
Gravity Drain Plugged (in, OD)	1 (3/4 MPT)

Controls Features:

- Auto changeover (Heat Recovery only)
- Auto operation
- Auto restart
- Dual thermistor control
- Wi-Fi compatible
- Dual setpoint control
- Multiple aux heater applications
- Filter life display
- External on/off control
- Auto fan
- Leak detection
- Weekly schedule
- Fan speed control
- Group control
- Hot start
- Self diagnostics
- Timer (on/off)
- Child lock

Entering Mixed Air:

Cooling Max[4] (°F WB)	76
Heating Min (°F DB)	59

Unit Data:

Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Power[5] dB(A) (H/M/L, @0.24 ESP)	67/64/62
Filter Type	Washable
MERV	N/A
Filter Quantity	2
Filter Dimensions[6] (in)	13-1/4 x 23-15/16 x 3/16
Net Unit Weight (lbs)	96.1
Shipping Weight (lbs)	110.0

Fan:

Type	Sirocco
Fan Quantity	2
Motor/Drive	Brushless Digitally Controlled/Direct
Motor Quantity	1
Standard Mode Airflow Rate H/M/L (CFM)	1457 / 1189 / 952
Standard Mode External Static Pressure (ESP)[7] (in wg)	0.19
High Mode Airflow Rate H/M/L (CFM)	1482 / 1191 / 918
High Mode External Static Pressure (ESP)[7] (in wg)	0.23
Airflow Range (CFM)	522 - 2,076
Minimum ESP (in wg)[8]	0.16
Maximum ESP (in wg)[8]	0.79

Notes:

1. Maximum power input is rated at maximum setting value.
2. Maximum lift is 27 in from bottom of unit. Check valve not included (field supplied).
3. Requires an LG wall controller because ducted units do not have infrared receiver.
4. See Engineering Manual for sensible and latent capacities.
5. Sound Power level is measured using rated conditions, and tested in a reverberation room per ISO 3741 standards.
6. Actual filter sizes may vary.
7. At factory fan speed setting.
8. Maximum static pressure may result in reduced airflow (CFM).
9. All Communication cable between Main outdoor units to indoor units / heat recovery units to be 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the Main outdoor unit chassis only. Do not ground the outdoor unit to indoor units / heat recovery units communication cable at any other point. Wiring must comply with all applicable local and national codes.
10. Power wiring cable size must comply with the applicable local and national code.
11. This unit comes with a dry nitrogen charge.
12. All capacities are net with a combination ratio between 95 – 105%.
13. Must follow installation instructions in the applicable LG installation manual.
14. If a Third-Party Dry Contact and an LG internal heater or an LG Auxiliary Heater Kit is installed, supplemental heat capability cannot be controlled by the Third-Party Thermostat.

C US

For continual product development, LG reserves the right to change specifications without notice.

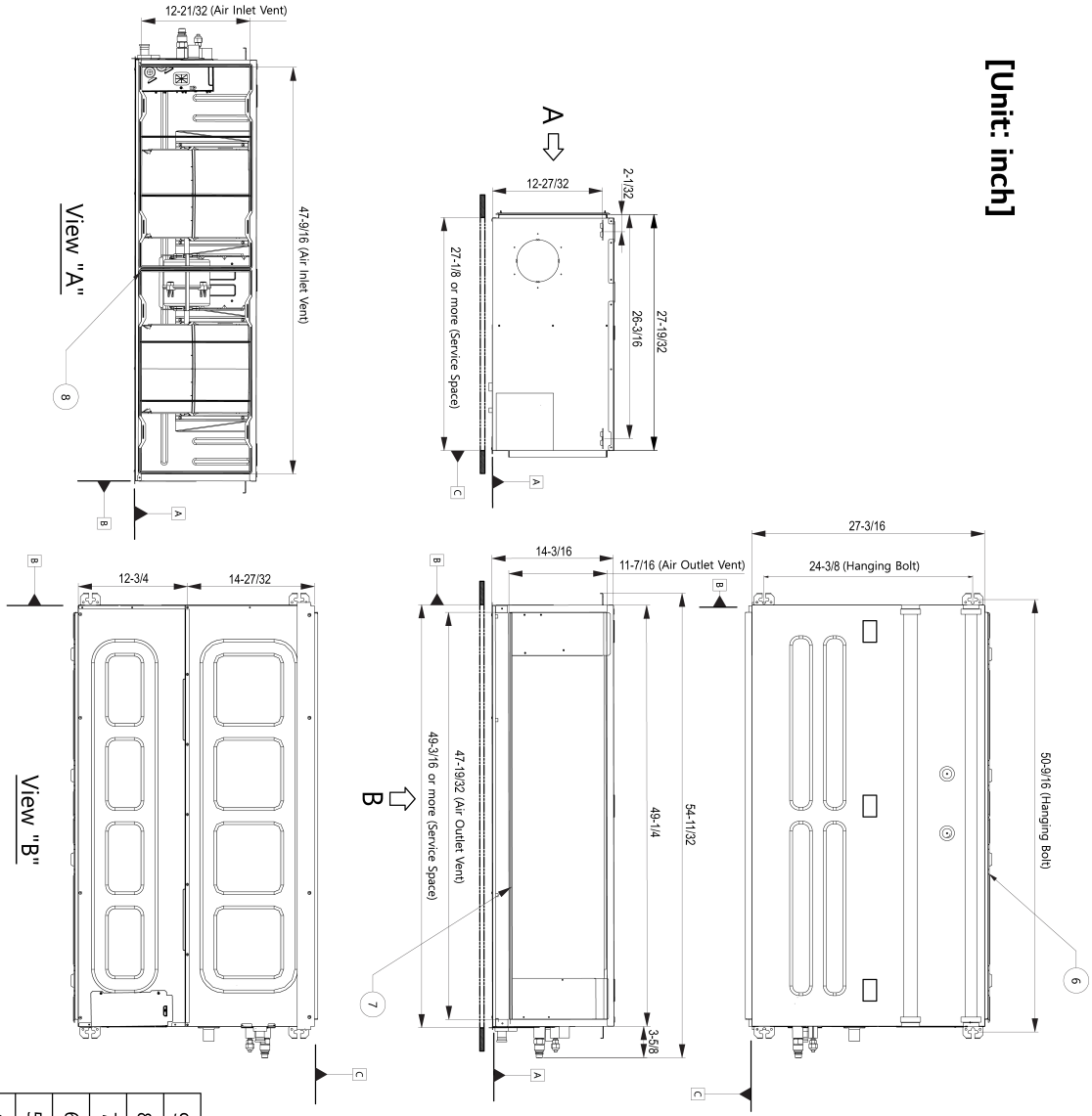
FCU-1; 2; 6; 7; 8

ARNU483M3A4

Multi V™ Mid Static Ducted

48,100 Btu/h Indoor Unit

[Unit: inch]



No.	Part Name	Description
1	Gas pipe connection	-
2	Liquid pipe connection	-
3	Drain pipe connection	-
4	Remote and Communication Cable Hole	-
5	Power Cable Hole	-
6	Air Inlet	-
7	Air Outlet	-
8	Air Filters	Supplied with product
9	Control Cover	-

FCU-9; 10

ARNU543M3A4

Multi V™ Mid Static Ducted

54,000 Btu/h Indoor Unit

LG Life's Good

Performance:

Total Cooling Capacity (Btu/h)	54,000
Heating Capacity (Btu/h)	61,400
Max Power Input[1] (W)	650
L/M/H Power Input at Factory Default (W)	172 / 215 / 260

Rated capacity is certified under AHRI Standard 1230. Ratings are subject to change without notice. Current certified ratings are available at www.ahridirectory.org.

Electrical:

Power Supply (V/Hz/Ø)	208-230/60/1
Rated Amps (A)	2.5

Piping:

Refrigerant:

Liquid Line (in, OD)	3/8 Flare
Vapor Line (in, OD)	5/8 Flare

Condensate:

Condensate Pump Drain[2] (in, ID)	1 Plain
Gravity Drain Plugged (in, OD)	1 (3/4 MPT)

Controls Features:

- Auto changeover (Heat Recovery only)
- Auto operation
- Auto restart
- Dual thermistor control
- Wi-Fi compatible
- Dual setpoint control
- Multiple aux heater applications
- Filter life display
- External on/off control
- Auto fan
- Leak detection
- Weekly schedule
- Fan speed control
- Group control
- Hot start
- Self diagnostics
- Timer (on/off)
- Child lock

Entering Mixed Air:

Cooling Max[4] (°F WB)	76
Heating Min (°F DB)	59

Unit Data:

Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Power[5] dB(A) (H/M/L, @0.24 ESP)	69/68/67
Filter Type	Washable
MERV	N/A
Filter Quantity	2
Filter Dimensions[6] (in)	13-1/4 x 23-15/16 x 3/16
Net Unit Weight (lbs)	96.1
Shipping Weight (lbs)	110.0

Fan:

Type	Sirocco
Fan Quantity	2
Motor/Drive	Brushless Digitally Controlled/Direct
Motor Quantity	1
Standard Mode Airflow Rate H/M/L (CFM)	1720 / 1558 / 1424
Standard Mode External Static Pressure (ESP)[7] (in wg)	0.19
High Mode Airflow Rate H/M/L (CFM)	1744 / 1614 / 1482
High Mode External Static Pressure (ESP)[7] (in wg)	0.23
Airflow Range (CFM)	522 - 2,076
Minimum ESP (in wg)[8]	0.16
Maximum ESP (in wg)[8]	0.79

Notes:

1. Maximum power input is rated at maximum setting value.
2. Maximum lift is 27 in from bottom of unit. Check valve not included (field supplied).
3. Requires an LG wall controller because ducted units do not have infrared receiver.
4. See Engineering Manual for sensible and latent capacities.
5. Sound Power level is measured using rated conditions, and tested in a reverberation room per ISO 3741 standards.
6. Actual filter sizes may vary.
7. At factory fan speed setting.
8. Maximum static pressure may result in reduced airflow (CFM).
9. All Communication cable between Main outdoor units to indoor units / heat recovery units to be 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the Main outdoor unit chassis only. Do not ground the outdoor unit to indoor units / heat recovery units communication cable at any other point. Wiring must comply with all applicable local and national codes.
10. Power wiring cable size must comply with the applicable local and national code.
11. This unit comes with a dry nitrogen charge.
12. All capacities are net with a combination ratio between 95 – 105%.
13. Must follow installation instructions in the applicable LG installation manual.
14. If a Third-Party Dry Contact and an LG internal heater or an LG Auxiliary Heater Kit is installed, supplemental heat capability cannot be controlled by the Third-Party Thermostat.

C US

For continual product development, LG reserves the right to change specifications without notice.

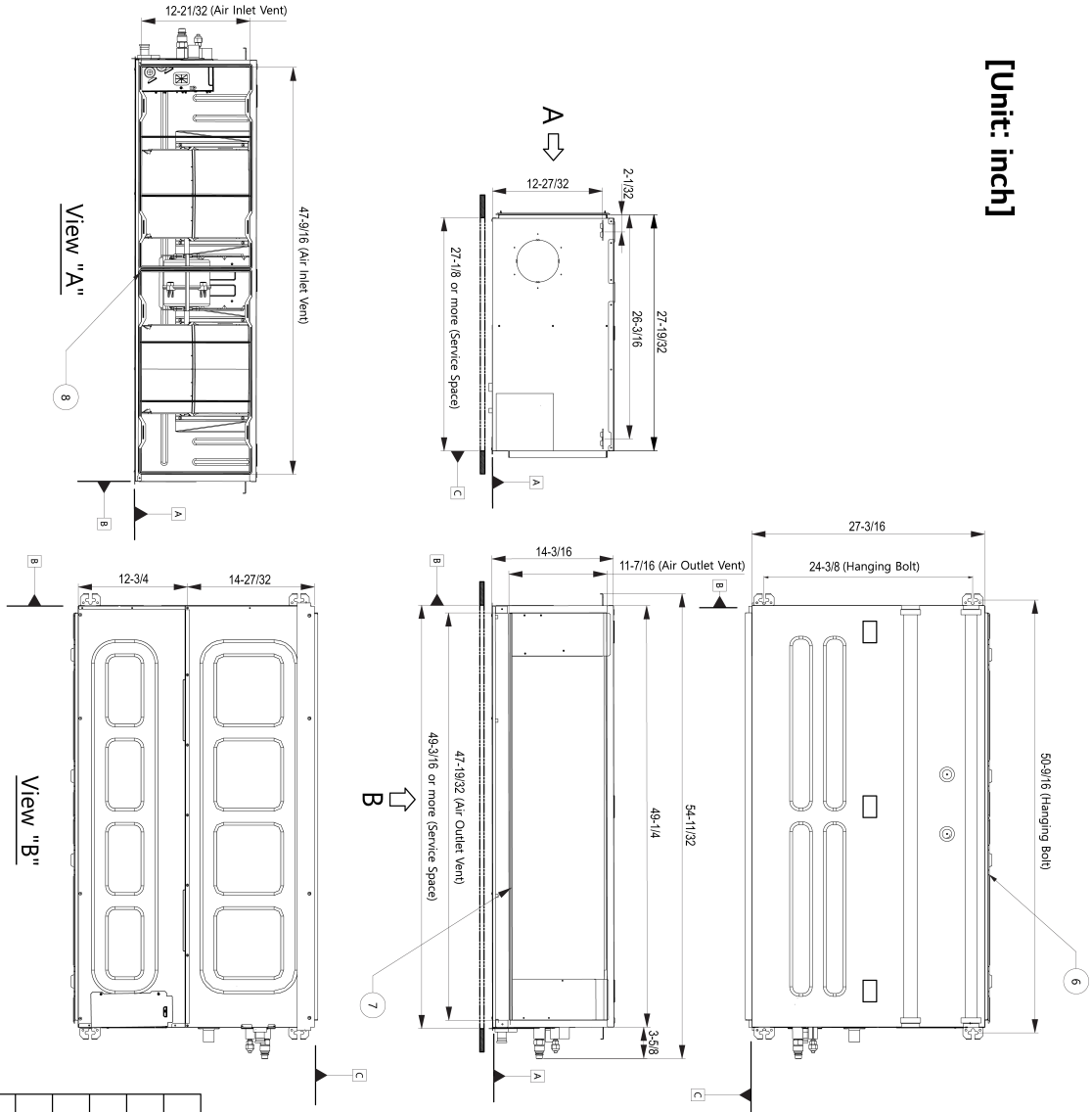
FCU-9; 10

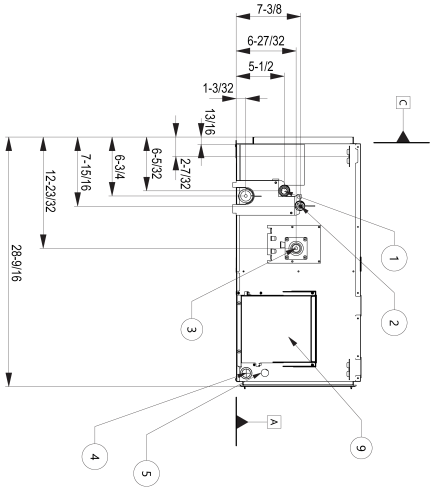
ARNU543M3A4

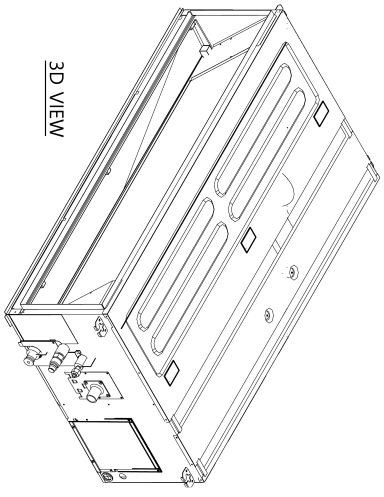
Multi V™ Mid Static Ducted

54,000 Btu/h Indoor Unit

[Unit: inch]





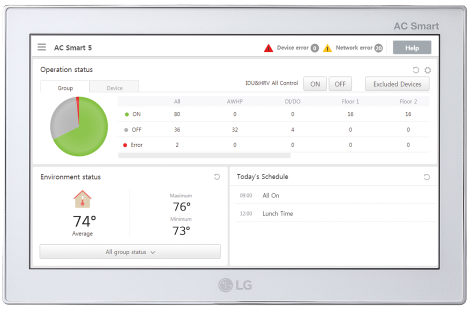


No.	Part Name	Description
1	Gas pipe connection	-
2	Liquid pipe connection	-
3	Drain pipe connection	-
4	Remote and Communication Cable Hole	-
5	Power Cable Hole	-
6	Air Inlet	-
7	Air Outlet	-
8	Air Filters	Supplied with product
9	Control Cover	-

PACS5A000

AC Smart 5 Controller

Central Control/Integration Solutions



Electrical:

Power Consumption	22 VA
Power Supply	24 VAC 60 Hz

40 VA transformer recommended.

Surrounding Conditions:

Operating Temperature	32 to 104°F
Storage Temperature	-4 to 140°F
Humidity	0-98% (non-condensing)

Unit Data:

Dimensions	10”W x 6-5/8”H x 1-3/16”D
Maximum Number of Devices	128
Maximum Number of ODUs	16 per V-net
Maximum Number of Controllers	2 per V-net

Standard Features:

- Configurable Home Screen
- HTML5 supported Graphical User Interface
- Removable micro-SD card with 8GB flash total storage for data backup
- Exportable Trending Logs for Temperature, Event and Operation
- 10 inch class (1024 x 600) TFT LCD Touch Screen
- Indoor Unit Control/Monitoring by Groups/Indoor Units
- Two Digital Input and two Digital Outputs for Device Interlocking

Basic Unit Function:

- Multiple Language Selections
- Operation – On/Off
- Mode – Auto/Cool/Dry/Heat/Fan Only
- Setpoint
- Fan Speed – Auto/Low/Med/High
- Louver Swing

Advanced Unit Function:

- Two Setpoint Auto-changeover
- Two Setpoint Setback
- 200 Programmable Schedule Events with control of Setpoint, On/Off, Mode, Fan Speed, Controller Lock, and Louver Swing
- Temperature Setpoint Range Limit
- Remote Controller Lock (All, Setpoint, Mode, Fan Speed)
- Run Time Limit (Unoccupied Override)
- Software Device Interlocking
- Manual Control and Scheduling of IO Module
- Peak/Demand Control
- Visual Floor plan Navigation
- Error E-mail Notification
- Power Distribution Indicator (PDI) (optional)
- Energy Reporting with appropriate accessories

Supported Network Protocols:

BACnet TCP/IP
Modus TCP

Connectivity:

LG Communications	2 Channel/RS-485 V-Net*
Ethernet	10/100 BASE-T

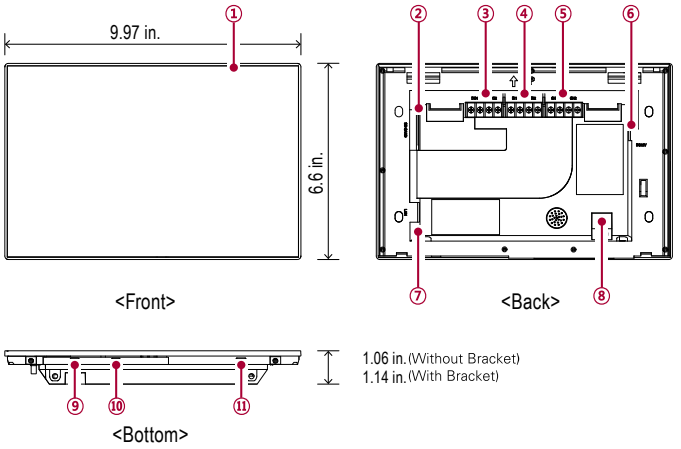
*Channel 1 is configurable for RS-485 or V-Net.
Channel 2 is for V-Net communication only.

Communications Cabling Specifications (V-Net):

Type	2-conductor, stranded, twisted, shielded copper cable/PVC or vinyl jacket
Size	AWG 18 x 2
Maximum Length	3,280 ft (end to end)

AWG - American Wire Gauge

Dimensions:



1. Touch Screen
2. SD Card Slot
3. Digital Outputs
4. Digital Inputs
5. V-Net Ports
6. 12 VDC Input
7. Ethernet Port
8. 24 VAC Input
9. Micro USB Port
10. Mini USB Port
11. Power Button

Notes:

Must follow installation instructions in the applicable LG installation manual.
Available functions/features may differ based on the connected system.

For a complete list of available accessories, contact your LG representative.
For continual product development, LG reserves the right to change specifications without notice.

BACnet® is a registered trademark of ASHRAE.

IDU Points

Name	Object Name (XXX : Unit Address Number)	Object Type
On/Off (Setting)	StartStopCommand_XXX	BO
On/Off (Status)	StartStopStatus_XXX	BI
Lock (Setting)	LockCommand_XXX	BO
Lock (Status)	LockStatus_XXX	BI
Filter Sign	FilterSign_XXX	BI
Filter Sign reset	FilterSignReset_XXX	BV
Operation Mode (Setting)	AirConModeCommand_XXX	MO
Operation Mode (Status)	AirConModeStatus_XXX	MI
Swing (Setting)	SwingCommand_XXX	BO
Swing (Status)	SwingStatus_XXX	BI
Fan Speed (Setting)	FanSpeedCommand_XXX	MO
Fan Speed (Status)	FanSpeedStatus_XXX	MI
Set Room Temperature	SetRoomTemp_XXX	AV
Room Temperature	RoomTemp_XXX	AI
Alarm	Alarm_XXX	BI
Error Code	MalfunctionCode_XXX	AI
Set Temperature (Status)	SetTempStatus_XXX	AI
Accumulated Power Distribution (Status)	Accumulated power(100 Watt)_XXX	AI
Set Upper Temperature (Setting)	TempRangeUpperLimitCommand_XXX	AV
Set Lower Temperature (Setting)	TempRangeLowerLimitCommand_XXX	AV
Set Upper Temperature (Status)	TempRangeUpperLimitStatus_XXX	AI
Set Lower Temperature (Status)	TempRangeLowerLimitStatus_XXX	AI
Mode Lock (Setting)	ModeLockCommand_XXX	BO
Mode Lock (Status)	ModeLockStatus_XXX	BI
Fan Lock (Setting)	FanLockCommand_XXX	BO
Fan Lock (Status)	FanLockStatus_XXX	BI

IDU Points, continued.

Name	Object Name (XXX : Unit Address Number)	Object Type
Occupancy (Setting)	OccupancyCommand_XXX	BO
Occupancy (Status)	OccupancyStatus_XXX	BI
2Set Cooling Set Temperature (Setting)	2SetCoolingTempCommand_XXX	AV
2Set Cooling Set Temperature (Status)	2SetCoolingTempStatus_XXX	AI
2Set Heating Set Temperature (Setting)	2SetHeatingTempCommand_XXX	AV
2Set Heating Set Temperature (Status)	2SetHeatingTempStatus_XXX	AI
2Set Cooling Upper Temperature (Setting)	2SetCoolingUpperLimitCommand_XXX	AV
2Set Cooling Upper Temperature (Status)	2SetCoolingUpperLimitStatus_XXX	AI
2Set Heating Upper Temperature (Setting)	2SetHeatingUpperLimitCommand_XXX	AV
2Set Heating Upper Temperature (Status)	2SetHeatingUpperLimitStatus_XXX	AI
2Set Cooling Lower Temperature (Setting)	2SetCoolingLowerLimitCommand_XXX	AV
2Set Heating Lower Temperature (Setting)	2SetHeatingLowerLimitCommand_XXX	AV
2Set Heating Lower Temperature (Status)	2SetHeatingLowerLimitStatus_XXX	AI
Thermo Status (Status)	ThermoStatus_XXX	BI
Accumulated Gas Distribution (Status)	AccumulatedGas(100 Watt)_XXX	AI
Dust Sensor Available (Status)	DustSensorAvail_XXX	BI
Air Cleaning Opereration (Setting)	AirCleaningOperCommand_XXX	BO
Air Cleaning Opereration (Status)	AirCleaningOperStatus_XXX	BI
Fine Dust (Status)	FineDustStatus_XXX	AI
Ultra Fine Dust (Status)	UltraFineDustStatus_XXX	AI
Super Ultra Fine Dust (Status)	SuperUltraFineDustStatus_XXX	AI
Humidity (Status)	HumidityStatus_XXX	AI
Comfort Cooling Available (Status)	ComfortCoolingAvail_XXX	BI
Comfort Cooling Opereration (Setting)	ComfortCoolingOperCommand_XXX	BO
Comfort Cooling Opereration (Status)	ComfortCoolingOperStatus_XXX	BI
Comfort Cooling Step (Setting)	ComfortCoolingStepCommand_XXX	AV
Comfort Cooling Step (Status)	ComfortCoolingStepStatus_XXX	AI
Human Detection Available (Status)	HumanDetectionAvail_XXX	BI
Human Detection Opereration (Setting)	HumanDetectionOperCommand_XXX	MO
Human Detection Opereration (Status)	HumanDetectionOperStatus_XXX	MI
Human Detection Wind (Setting)	HumanDetectionWindCommand_XXX	MO
Human Detection Wind (Status)	HumanDetectionWindStatus_XXX	MI
Human Detection Time (Setting)	HumanDetectionTimeCommand_XXX	MO
Human Detection Time (Status)	HumanDetectionTimeStatus_XXX	MI

Vent Points

Name	Object Name (XXX : Unit Address Number)	Object Type
On/Off (Setting)	StartStopCommand_XXX	BO
On/Off (Status)	StartStopStatus_XXX	BI
Lock (Setting)	LockCommand_XXX	BO
Lock (Status)	LockStatus_XXX	BI
Filter Sign	FilterSign_XXX	BI
Filter Sign reset	FilterSignReset_XXX	BV
Operation Mode (Setting)	AirConModeCommand_XXX	MO
Operation Mode (Status)	AirConModeStatus_XXX	MI
Fan Speed (Setting)	FanSpeedCommand_XXX	MO
Fan Speed (Status)	FanSpeedStatus_XXX	MI
Set Room Temperature	SetRoomTemp_XXX	AV
Alarm	Alarm_XXX	BI
Error Code	MalfunctionCode_XXX	AI
User Mode (Setting)	UserModeCommand_XXX	MO
User Mode (Status)	UserModeStatus_XXX	MI
Set Temperature (Status)	SetTempStatus_XXX	AI
Accumulated Power Distribution (Status)	Accumulated power(100 Watt)_XXX	AI
AC Operation Mode (Setting)	UserModeAcCommand_XXX	MO
AC Operation Mode (Status)	UserModeAcStatus_XXX	MI
AC ON/OFF (Setting)	UserModeAcOperCommand_XXX	BO
AC ON/OFF (Status)	UserModeAcOperStatus_XXX	BI
AC Humidify (Setting)	HumidifierOperCommand_XXX	BO
AC Humidify (Status)	HumidifierOperStatus_XXX	BI
Partial Lock Available (Status)	PatialLockAvail_XXX	BI
Set Upper Temperature (Setting)	TempRangeUpperLimitCommand_XXX	AV
Set Lower Temperature (Setting)	TempRangeLowerLimitCommand_XXX	AV
Set Upper Tempaerature (Status)	TempRangeUpperLimitStatus_XXX	AI
Set Lower Temperature (Status)	TempRangeLowerLimitStatus_XXX	AI
Mode Lock (Setting)	ModeLockCommand_XXX	BO
Mode Lock (Status)	ModeLockStatus_XXX	BI
Fan Lock (Setting)	FanLockCommand_XXX	BO
Fan Lock (Status)	FanLockStatus_XXX	BI
NTFC Available (Status)	NtfcAvail_XXX	BI
NTFC Operation (Setting)	NtfcOperCommand_XXX	BO
NTFC Operation (Status)	NtfcOperStatus_XXX	BI
NTFC Lock (Setting)	NtfcLockCommand_XXX	BO
NTFC Lock (Status)	NtfcLockStatus_XXX	BI

AHU Points

Name	Object Name (XXX : Unit Address Number)	Object Type
On/Off (Setting)	StartStopCommand_XXX	BO
On/Off (Status)	StartStopStatus_XXX	BI
Lock (Setting)	LockCommand_XXX	BO
Lock (Status)	LockStatus_XXX	BI
Filter Sign	FilterSign_XXX	BI
Operation Mode (Setting)	AirConModeCommand_XXX	MO
Operation Mode (Status)	AirConModeStatus_XXX	MI
Fan Speed (Setting)	FanSpeedCommand_XXX	MO
Fan Speed (Status)	FanSpeedStatus_XXX	MI
Set Room Temperature	SetRoomTemp_XXX	AV
Room Temperature	RoomTemp_XXX	AI
Alarm	Alarm_XXX	BI
Error Code	MalfunctionCode_XXX	AI
Set Temperature (Status)	SetTempStatus_XXX	AI
FireAlarm (Setting)	FireAlarmCommand_XXX	BO
FireAlarm (Status)	FireAlarmStatus_XXX	BI
Humidity (Setting)	SetHumidityCommand_XXX	AV
Humidity (Status)	SetHumidityStatus_XXX	AI
Humidify ON/OFF (Setting)	HumidifyCommand_XXX	BO
Humidify ON/OFF (Status)	HumidifyStatus_XXX	BI
Auto Ventilation ON/OFF (Setting)	AutoVentilCommand_XXX	BO
Auto Ventilation ON/OFF (Status)	AutoVentilStatus_XXX	BI
Supply Unit Temperature (Status)	SupplyTempStatus_XXX	AI
Outdoor Unit Temperature (Status)	OutdoorTempStatus_XXX	AI
Mix Unit Temperature (Status)	MixTempStatus_XXX	AI
Supply Unit Humidity (Status)	SupplyHumidifyStatus_XXX	AI
Outdoor Unit Humidity (Status)	OutdoorHumidifyStatus_XXX	AI
Ventilation Unit Humidity (Status)	VentilHumidifyStatus_XXX	AI
CO2 Value (Status)	CO2ValueStatus_XXX	AI
Humidity Unit ON/OFF (Status)	HumidifyUnitStatus_XXX	BI
Heating Unit ON/OFF (Staus)	HeaterUnitStatus_XXX	BI
Ventilator FAN ON/OFF (Status)	VentilFanStatus_XXX	BI
Supply Unit FAN ON/OFF (Status)	SupplyFanStatus_XXX	BI
Current OA Damper (Status)	CurrOADamperStatus_XXX	AI
Current EA Damper (Status)	CurrEADamperStatus_XXX	AI

AHU Points, continued.

Name	Object Name (XXX : Unit Address Number)	Object Type
Current Mix Damper (Status)	CurrMixDamperStatus_XXX	AI
Cooling OA Damper (Setting)	OADamperCoolCommand_XXX	AV
Cooling OA Damper (Status))	OADamperCoolStatus_XXX	AI
Cooling EA Damper (Setting)	EADamperCoolCommand_XXX	AV
Cooling EA Damper (Status))	EADamperCoolStatus_XXX	AI
Cooling Mix Damper (Setting)	MixDamperCoolCommand_XXX	AV
Cooling Mix Damper (Status))	MixDamperCoolStatus_XXX	AI
Heating OA Damper (Setting)	OADamperHeatCommand_XXX	AV
Heating OA Damper (Status))	OADamperHeatStatus_XXX	AI
Heating EA Damper (Setting)	EADamperHeatCommand_XXX	AV
Heating EA Damper (Status))	EADamperHeatStatus_XXX	AI
Heating Mix Damper (Setting)	MixDamperHeatCommand_XXX	AV
Heating Mix Damper (Status))	MixDamperHeatStatus_XXX	AI
FAN OA Damper (Setting)	OADamperFanCommand_XXX	AV
FAN OA Damper (Status))	OADamperFanStatus_XXX	AI
FAN EA Damper (Setting)	EADamperFanCommand_XXX	AV
FAN EA Damper (Status))	EADamperFanStatus_XXX	AI
FAN Mix Damper (Setting)	MixDamperFanCommand_XXX	AV
FAN Mix Damper (Status))	MixDamperFanStatus_XXX	AI

AWHP Points

Name	Object Name (XXX : Unit Address Number)	Object Type
Run/Stop (Setting)	StartStopCommand_XXX	BO
Run/Stop (Status)	StartStopStatus_XXX	BI
Lock (Setting)	LockCommand_XXX	BO
Lock (Status)	LockStatus_XXX	BI
Operation Mode (Setting)	ModeCommand_XXX	MO
Operation Mode (Status)	ModeStatus_XXX	MI
Set Room Temperature (Setting)	SetRoomTempCommand_XXX	AV
Set Room Temperature (Status)	SetRoomTempStatus_XXX	AI
Set Hot Water Temperature (Setting)	SetHotWaterTempCommand_XXX	AV
Set Hot Water Temperature (Status)	SetHotWaterTempStatus_XXX	AI
Set PipeOut Water Temperature (Setting)	SetPipeOutWaterTempCommand_XXX	AV
Set PipeOut Water Temperature (Status)	SetPipeOutWaterTempStatus_XXX	AI
Setting Temperature Reference (Air/Water)	AirWaterFlag_XXX	BI
Hot Water Only Mode	HotWaterOnlyFlag_XXX	BI
Current Room Temperature	RoomTemp_XXX	AI
Alarm Event	Alarm_XXX	BI
Malfunction Code	MalfunctionCode_XXX	AI
HotWater On/Off (Setting)	HotWaterCommand_XXX	BO
HotWater On/Off (Status)	HotWaterStatus_XXX	BI
Pipe Inlet Temperature Status	PipeInTempStatus_XXX	AI
Water Tank Temperature Status	TankTempStatus_XXX	AI
Solar Temperature Status	SolarTempStatus_XXX	AI
Pipe Outlet Temperature Status	PipeOutTempStatus_XXX	AI
Accumulated Power Distribution (Status)	Accumulated power(100 Watt)_XXX	AI

General Points

Name	Object Name (XXX : Unit Address Number)	Object Type
All Unit Run/Stop (Setting)	AllStartStopCommand	BO
All Unit Set Room Temperature (Setting)	AllSetRoomTempCommand	AV
All Unit Temperature Lock (Setting)	AllTempLockCommand	BO
Total Accumulated Power (Status)	TotalAccumulatedPower	AI
Peak Control Operation (Setting)	PeakStartStopCommand	BO
Peak Control Operation (Status)	PeakStartStopStatus	BI
Peak Shift Time(Setting)	PeakShiftTimeCommand	AV
Peak Shift Time(Status)	PeakShiftTimeStatus	AI
Peak Target Ratio(Setting)	PeakTargetCommand	AV
Peak Target Ratio(Status)	PeakTargetStatus	AI
Peak Current Running Ratio(Status)	PeakCurrentStatus	AI
Remote Shutdown(Setting)	RemoteShutDownCommand	BO
Temperature Unit Setting (Setting)	TempUnitCommand	BO
Temperature Unit Setting (Status)	TempUnitStatus	BI

ODU Points

Name	Object Name (XXX : Unit Address Number)	Object Type
Compressor Operation	CompressorOperation_XXX	BI
Refrigerant Type	RefrigerantType_XXX	MI
Fan1 Frequency	Fan1Frequency_XXX	AI
High Pressure	HighPressure_XXX	AI
Low Pressure	LowPressure_XXX	AI
Compressor Suction Temp	CompressorSunctionTemp_XXX	AI
Liquid Pipe Temp	LiquidPipeTemp_XXX	AI
Heat Exchange Temp	HeatExchangeTemp_XXX	AI
Outdoor Unit EEV	OutdoorUnitEEV_XXX	AI
Over-cooler EEV	Over-coolerEEV_XXX	AI
Hot Gas Valve	HotGasValue_XXX	BI
Inverter Discharge Temp	InverterDischargeTemp_XXX	AI
Air Temperature	AirTemp_XXX	AI
Operation Mode	OperationMode_XXX	MI
Error Code	ErrorCode_XXX	AI
Inverter1 Compressor Frequency	Inverter1CompressorFrequency_XXX	AI
Inverter2 Compressor Frequency	Inverter2CompressorFrequency_XXX	AI
Fan2 Frequency	Fan2Frequency_XXX	AI
Inverter2 Discharge Temp	Inverter2DischargeTemp_XXX	AI
Std1 Discharge Temp	Std1DischargeTemp_XXX	AI
Std2 Discharge Temp	Std2DischargeTemp_XXX	AI
Upper Hex Temp	UpperHexTemp_XXX	AI
Lower Hex Temp	LowerHexTemp_XXX	AI
Sub Cool Pipe In Temp	SubCoolPipeInTemp_XXX	AI
Sub Cool Pipe Out Temp	SubCoolPipeOutTemp_XXX	AI
Sub EEV Pulse	SubEevPulse_XXX	AI
Oil Equalizing EEV	OilEqualizingEEV_XXX	AI
Vapor Injection EEV1	ViEev1_XXX	AI
Vapor Injection EEV2	ViEev2_XXX	AI
Inverter1 Heater	Inverter1Heater_XXX	BI
Inverter2 Heater	Inverter2Heater_XXX	BI
Inverter1 Oil Sensor	Inverter1OilSensor_XXX	BI
Inverter2 Oil Sensor	Inverter2OilSensor_XXX	BI
Inverter1 Backup	Inverter1Backup_XXX	BI
Inverter2 Backup	Inverter2Backup_XXX	BI
DDC	DDC_XXX	BI

ODU Points, continued.

Name	Object Name (XXX : Unit Address Number)	Object Type
(Slave1) Compressor Operation	CompressorOperation_XXX	BI
(Slave1) Refrigerant Type	RefrigerantType_XXX	MI
(Slave1) Fan1 Frequency	Fan1Frequency_XXX	AI
(Slave1) High Pressure	HighPressure_XXX	AI
(Slave1) Low Pressure	LowPressure_XXX	AI
(Slave1) Compressor Suction Temp	CompressorSunctionTemp_XXX	AI
(Slave1) Liquid Pipe Temp	LiquidPipeTemp_XXX	AI
(Slave1) Heat Exchange Temp	HeatExchangeTemp_XXX	AI
(Slave1) Outdoor Unit EEV	OutdoorUnitEEV_XXX	AI
(Slave1) Over-cooler EEV	Over-coolerEEV_XXX	AI
(Slave1) Hot Gas Valve	HotGasValue_XXX	BI
(Slave1) Inverter Discharge Temp	InverterDischargeTemp_XXX	AI
(Slave1) Air Temperature	AirTemp_XXX	AI
(Slave1) Operation Mode	OperationMode_XXX	MI
(Slave1) Error Code	ErrorCode_XXX	AI
(Slave1) Inverter1 Compressor Frequency	Inverter1CompressorFrequency_XXX	AI
(Slave1) Inverter2 Compressor Frequency	Inverter2CompressorFrequency_XXX	AI
(Slave1) Fan2 Frequency	Fan2Frequency_XXX	AI
(Slave1) Inverter2 Discharge Temp	Inverter2DischargeTemp_XXX	AI
(Slave1) Std1 Discharge Temp	Std1DischargeTemp_XXX	AI
(Slave1) Std2 Discharge Temp	Std2DischargeTemp_XXX	AI
(Slave1) Upper Hex Temp	UpperHexTemp_XXX	AI
(Slave1) Lower Hex Temp	LowerHexTemp_XXX	AI
(Slave1) Sub Cool Pipe In Temp	SubCoolPipeInTemp_XXX	AI
(Slave1) Sub Cool Pipe Out Temp	SubCoolPipeOutTemp_XXX	AI
(Slave1) Sub EEV Pulse	SubEevPulse_XXX	AI
(Slave1) Oil Equalizing EEV	OilEqualizingEEV_XXX	AI
(Slave1) Vapor Injection EEV1	ViEev1_XXX	AI
(Slave1) Vapor Injection EEV2	ViEev2_XXX	AI
(Slave1) Inverter1 Heater	Inverter1Heater_XXX	BI
(Slave1) Inverter2 Heater	Inverter2Heater_XXX	BI
(Slave1) Inverter1 Oil Sensor	Inverter1OilSensor_XXX	BI
(Slave1) Inverter2 Oil Sensor	Inverter2OilSensor_XXX	BI
(Slave1) Inverter1 Backup	Inverter1Backup_XXX	BI
(Slave1) Inverter2 Backup	Inverter2Backup_XXX	BI
(Slave1) DDC	DDC_XXX	BI

ODU Points, continued.

Name	Object Name (XXX : Unit Address Number)	Object Type
(Slave2) Compressor Operation	CompressorOperation_XXX	BI
(Slave2) Refrigerant Type	RefrigerantType_XXX	MI
(Slave2) Fan1 Frequency	Fan1Frequency_XXX	AI
(Slave2) High Pressure	HighPressure_XXX	AI
(Slave2) Low Pressure	LowPressure_XXX	AI
(Slave2) Compressor Suction Temp	CompressorSunctionTemp_XXX	AI
(Slave2) Liquid Pipe Temp	LiquidPipeTemp_XXX	AI
(Slave2) Heat Exchange Temp	HeatExchangeTemp_XXX	AI
(Slave2) Outdoor Unit EEV	OutdoorUnitEEV_XXX	AI
(Slave2) Over-cooler EEV	Over-coolerEEV_XXX	AI
(Slave2) Hot Gas Valve	HotGasValue_XXX	BI
(Slave2) Inverter Discharge Temp	InverterDischargeTemp_XXX	AI
(Slave2) Air Temperature	AirTemp_XXX	AI
(Slave2) Operation Mode	OperationMode_XXX	MI
(Slave2) Error Code	ErrorCode_XXX	AI
(Slave2) Inverter1 Compressor Frequency	Inverter1CompressorFrequency_XXX	AI
(Slave2) Inverter2 Compressor Frequency	Inverter2CompressorFrequency_XXX	AI
(Slave2) Fan2 Frequency	Fan2Frequency_XXX	AI
(Slave2) Inverter2 Discharge Temp	Inverter2DischargeTemp_XXX	AI
(Slave2) Std1 Discharge Temp	Std1DischargeTemp_XXX	AI
(Slave2) Std2 Discharge Temp	Std2DischargeTemp_XXX	AI
(Slave2) Upper Hex Temp	UpperHexTemp_XXX	AI
(Slave2) Lower Hex Temp	LowerHexTemp_XXX	AI
(Slave2) Sub Cool Pipe In Temp	SubCoolPipeInTemp_XXX	AI
(Slave2) Sub Cool Pipe Out Temp	SubCoolPipeOutTemp_XXX	AI
(Slave2) Sub EEV Pulse	SubEevPulse_XXX	AI
(Slave2) Oil Equalizing EEV	OilEqualizingEEV_XXX	AI
(Slave2) Vapor Injection EEV1	ViEev1_XXX	AI
(Slave2) Vapor Injection EEV2	ViEev2_XXX	AI
(Slave2) Inverter1 Heater	Inverter1Heater_XXX	BI
(Slave2) Inverter2 Heater	Inverter2Heater_XXX	BI
(Slave2) Inverter1 Oil Sensor	Inverter1OilSensor_XXX	BI
(Slave2) Inverter2 Oil Sensor	Inverter2OilSensor_XXX	BI
(Slave2) Inverter1 Backup	Inverter1Backup_XXX	BI
(Slave2) Inverter2 Backup	Inverter2Backup_XXX	BI
(Slave2) DDC	DDC_XXX	BI

ODU Points, continued.

Name	Object Name (XXX : Unit Address Number)	Object Type
(Slave2) Compressor Operation	CompressorOperation_XXX	BI
(Slave2) Refrigerant Type	RefrigerantType_XXX	MI
(Slave2) Fan1 Frequency	Fan1Frequency_XXX	AI
(Slave2) High Pressure	HighPressure_XXX	AI
(Slave2) Low Pressure	LowPressure_XXX	AI
(Slave2) Compressor Suction Temp	CompressorSunctionTemp_XXX	AI
(Slave2) Liquid Pipe Temp	LiquidPipeTemp_XXX	AI
(Slave2) Heat Exchange Temp	HeatExchangeTemp_XXX	AI
(Slave2) Outdoor Unit EEV	OutdoorUnitEEV_XXX	AI
(Slave2) Over-cooler EEV	Over-coolerEEV_XXX	AI
(Slave2) Hot Gas Valve	HotGasValue_XXX	BI
(Slave2) Inverter Discharge Temp	InverterDischargeTemp_XXX	AI
(Slave2) Air Temperature	AirTemp_XXX	AI
(Slave2) Operation Mode	OperationMode_XXX	MI
(Slave2) Error Code	ErrorCode_XXX	AI
(Slave2) Inverter1 Compressor Frequency	Inverter1CompressorFrequency_XXX	AI
(Slave2) Inverter2 Compressor Frequency	Inverter2CompressorFrequency_XXX	AI
(Slave2) Fan2 Frequency	Fan2Frequency_XXX	AI
(Slave2) Inverter2 Discharge Temp	Inverter2DischargeTemp_XXX	AI
(Slave2) Std1 Discharge Temp	Std1DischargeTemp_XXX	AI
(Slave2) Std2 Discharge Temp	Std2DischargeTemp_XXX	AI
(Slave2) Upper Hex Temp	UpperHexTemp_XXX	AI
(Slave2) Lower Hex Temp	LowerHexTemp_XXX	AI
(Slave2) Sub Cool Pipe In Temp	SubCoolPipeInTemp_XXX	AI
(Slave2) Sub Cool Pipe Out Temp	SubCoolPipeOutTemp_XXX	AI
(Slave2) Sub EEV Pulse	SubEevPulse_XXX	AI
(Slave2) Oil Equalizing EEV	OilEqualizingEEV_XXX	AI
(Slave2) Vapor Injection EEV1	ViEev1_XXX	AI
(Slave2) Vapor Injection EEV2	ViEev2_XXX	AI
(Slave2) Inverter1 Heater	Inverter1Heater_XXX	BI
(Slave2) Inverter2 Heater	Inverter2Heater_XXX	BI
(Slave2) Inverter1 Oil Sensor	Inverter1OilSensor_XXX	BI
(Slave2) Inverter2 Oil Sensor	Inverter2OilSensor_XXX	BI
(Slave2) Inverter1 Backup	Inverter1Backup_XXX	BI
(Slave2) Inverter2 Backup	Inverter2Backup_XXX	BI
(Slave2) DDC	DDC_XXX	BI

FCU-1 thru 15

PREMTBVC4
MultiSITE CRC2+Z Remote Controller

Electrical:

Power Supply	12VDC power from indoor unit

Surrounding Conditions:

Temperature	
Operating	32-122 °F
Storage	-22-122 °F
Humidity	
Operating	5-95% RH (non-condensing)
Storage	0-95% RH (non-condensing)

Features:

- Customizable color digital touch screen interface with Multilanguage support
- BACnet® Wireless IP (optional)
- ZigBee® Pro Wireless network (onboard)
- On-board motion (PIR) and humidity sensors
- Role based configuration (password protected)
- Lua scripting
- Function code settings
- Function Code Search Tool
- Date and Time Display
- Room temperature display (-9 °F ~ +9 °F adjustable)
- Humidity Display (-15% ~ +15% adjustable)
- Operation - On/Off
- Mode - Auto/Cool/Dry/Heat/Fan Only
- Occupied cooling and heating temperature setpoints
- Unoccupied cooling and heating temperature setpoints
- 7 day scheduling with mode
- Fan speed - Auto/Low/Med/High/Power
- Discharge vanes - Auto/Swing/Fixed
- Static pressure installer setting

Optional Accessories (sold separately):

☐ ZVRCZTRH1 - Wireless Temperature & Humidity Sensor[3]

Connectivity:

LG Communications	1 Channel/RS-485 V-Net
BACnet® wireless IP (optional)	
ZigBee® Pro wireless mesh network (P) (default model)	

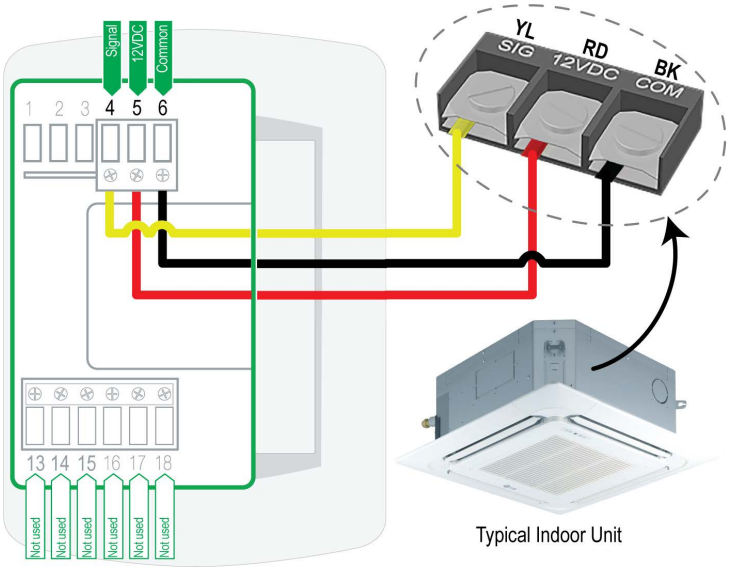
Communications Cabling Specifications (V-Net):

Type	3 conductor, stranded, twisted, unshielded
Size	AWG 22-3
Length[2]	up to 164 ft

AWG - American Wire Gage

Unit Data:

Dimensions	4.72" H x 3.39" W x 1.06" D
Maximum Number of Indoor Units (per controller)	16



Typical Indoor Unit

TERMINAL	DESCRIPTION
4 (S)	Tx - Rx Communication
5 (12V)	12 Volts DC
6 (G)	Common

Note: Terminals 1, 2, 3, 13, 14, 15, 16, 17, and 18 are unused.

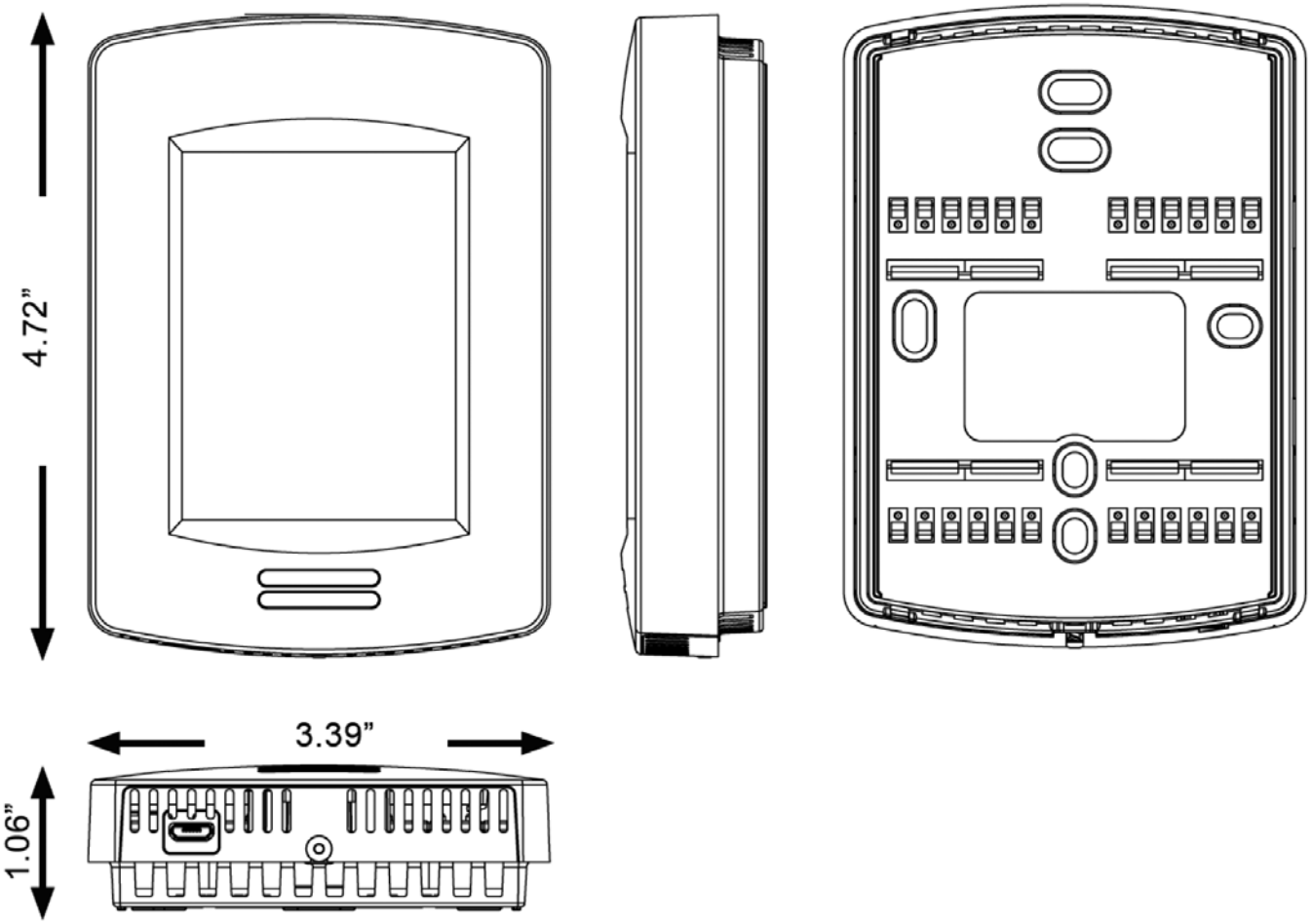
Notes:

1.Available functions/features may differ based on connected system.
2.Communication cable can be extended to a maximum of 164 feet.
3.Up to 20 ZigBee® sensors can be connected to the MultiSITE CRC2+Z Remote Controller.
4.Must follow installation instructions in the applicable LG installation manual.

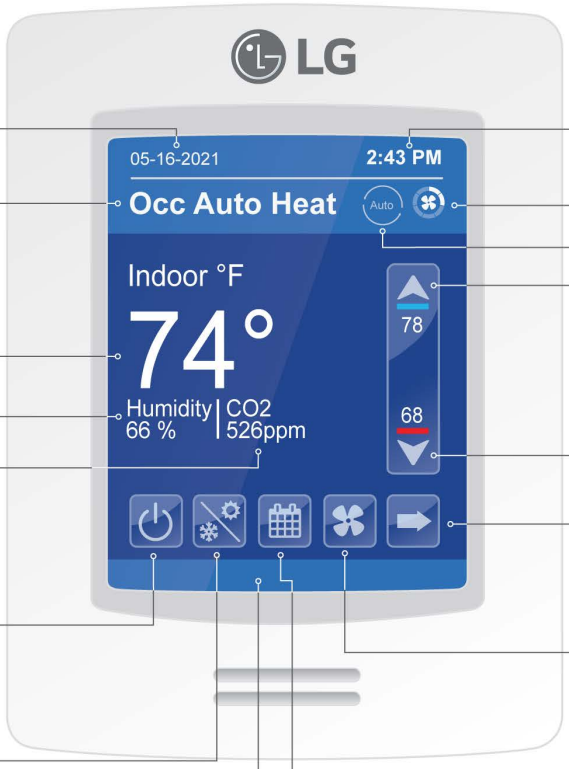
BACnet® is a registered trademark of ASHRAE

PREMTBVC4
MultiSITE CRC2+Z Remote Controller

Dimensions: 4.72”H x 3.39”W x 1.06”D



PREMTBVC4
MultiSITE CRC2+Z Remote Controller



Current Date

Current Time

Occupancy Status
Occupied (Occ) or Unoccupied (Unocc)

Current Fan Speed Setting

Operation Mode Status

Up Arrow
Raise Temperature Setpoint

Room Indoor Temperature

Room Indoor Humidity

Room Indoor CO^2

Down Arrow
Lower Temperature Setpoint

More
Provides end user with access to less often used functions.

On/Off
Turn the display on or off

Fan Speed
Set fan to Slow, Low, Low-Med, Medium, Med-High, High, Power, Auto. (Available options depend on IDU model.)

Operation Mode
Set Cool, Heat, Auto Cool, Auto Heat, Fan, Dry modes

Note: Pressing and holding the Operation Mode icon takes the user to the Operation Mode page.

Schedule
Set weekly schedule

Short Network Message

Note: Long-press of the Fan Speed button when in cooling mode triggers Power Cooling mode. If in Power Cooling mode, segments surrounding fan icon turn purple and the text changes from “Fan” to “Power Cool.” This mode lasts for 30 minutes with a setpoint of 64°F and then reverts back to the previous fan speed and setpoint.

Recommended installation height for PIR sensor:

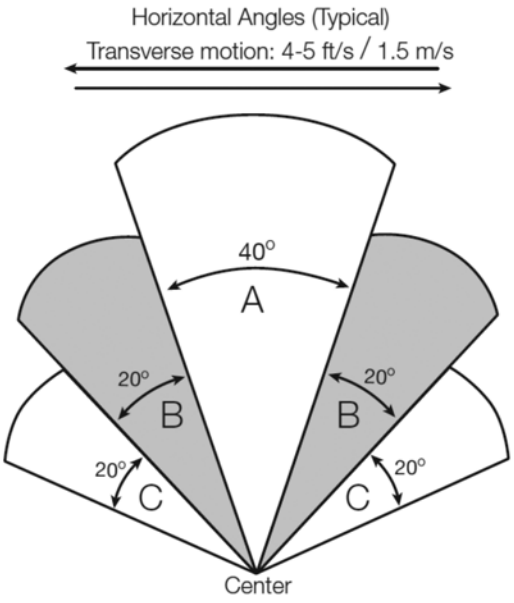
4 - 5 ft. / 1.2-1.5 m

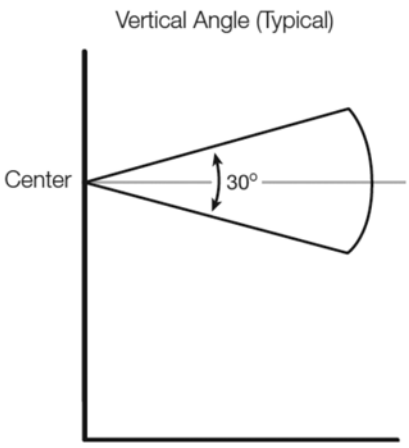
Sensor Ranges

A = 20 ft. / 6.1 m

B = 14 ft. / 4.3 m

C = 11 ft. / 3.4 m





FCU-9; 10; 11; 12; 15

ZVRCZTRH1

Temperature and Humidity Sensor

for CRC2 Series and MS8000 Series Controllers

Wall Mounted Temperature & Humidity Sensor

Model: ZVRCZTRH1

Function: Temperature, Humidity

Electrical:

Power:	3.6V lithium battery (10yr. non-replaceable)

Connectivity:

Wireless Communications	2.4GHz mesh network ZigBee® HA3.0 Compatible Range up to 40ft; 300 ft open field

Type of Measurement:

Temperature:	Range: 32 to 122°F (accuracy: +/- 0.5 °F)
Humidity:	Range: 0 to 100 % (accuracy: +/- 3 %)

MultiSITE CRC2 Remote Controller Additional Accessories (sold separately):

- ☐ ZVRCZPWC2 - ZigBee® Pro Wireless Module[2,3]
- ☐ ZVRCZDWC1 Wireless Door Window Contact[2]
- ☐ ZVRCZMTH1 - Wireless Ceiling Mounted Occupancy,
- ☐ Temperature and Humidity Sensor[2]
- ☐ ZVRCZWOC1 - Wireless Wall Mounted Occupancy Sensor[2]
- ☐ SEDCO2G5045 - Wireless CO2, Temperature, & Humidity Sensor[2]
- ☐ ZVRCZTRH1 - Wireless Temperature & Humidity Sensor[2]
- ☐ ZVRCZWLS1 - Wireless Waer Leak Sensor[2] VCM8002V504 -
- ☐ Wi-fi Card Module (BACnet wirelsss IP)

Notes:

1.Available functions/features may differ based on connected system.
2.Up to 20 Zigbee sensors can be connected to a MultiSITE CRC2 Series Remote Controller & MS8000 Series Room Controller
3.The ZVRCZPWC2 is for use with the CRC2 and not for use with the CRC1 or MS8000 Series Room Controllers.

FCU-9; 10; 11; 12; 15

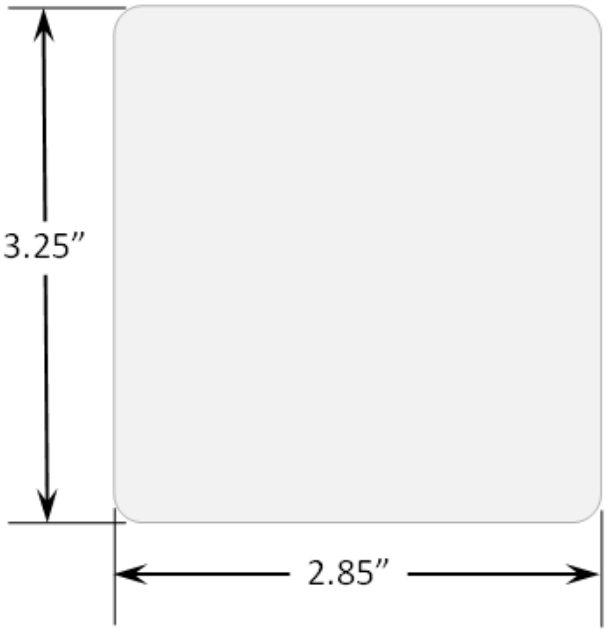
ZVRCZTRH1
Temperature and Humidity Sensor
for CRC2 Series and MS8000 Series Controllers

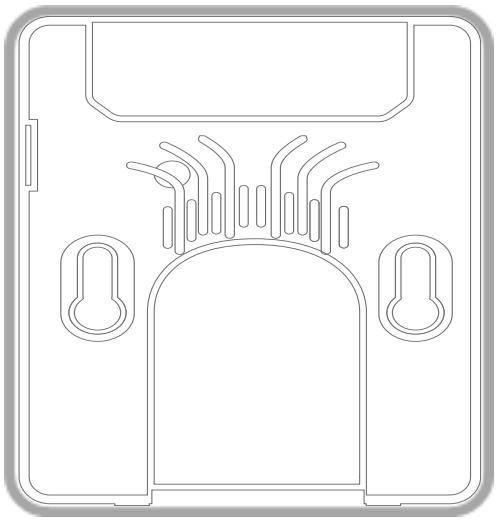
ZVRCZTRH1 Wall Mounted Temperature, and Humidity Sensor

Dimensions: 2.85" L x 3.25" W x 0.71" H

Battery Voltage: 3.6VDC Lithium

Ambient Temperature: 32°F to 122°F (0°C to 50°C)





PRHR043A
Multi V™ Heat Recovery Unit
Four (4) Port

LG Life's Good

Performance:

Maximum Port Capacity Btu/h (each port)[1,2]	60,000
Maximum Unit Capacity Btu/h (sum of ports)	230,000
Number of Indoor Unit Ports	4
Max. Connectible Number of Indoor Units	32
Max. Connectible Number of Indoor Units per Branch	8
Power Input[3]	
Cooling	39.8
Heating	37.2

Refrigerant Piping:[4]

Port Liquid Line (in., O.D.)	3/8
Port Vapor Line (in., O.D.)	5/8
System Liquid Line (in., O.D.)	5/8
System Vapor Line High (in., O.D.)	7/8
System Vapor Line Low (in., O.D.)	1-1/8

Electrical:[3]

Power Supply (V/Hz/Ø)	208-230/60/1
Rated Amps	0.06

Unit Data:

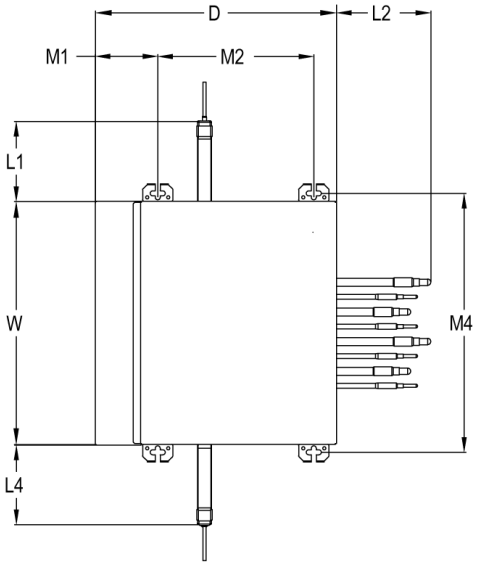
Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Pressure	
Cooling Mode dB(A)	31
Heating Mode dB(A)	31
Simultaneous dB(A)	38
Changeover Cooling to Heating	33
Changeover Heating to Cooling	38
Unit Net Weight (lbs.)	40
Unit Shipping Weight (lbs.)	53

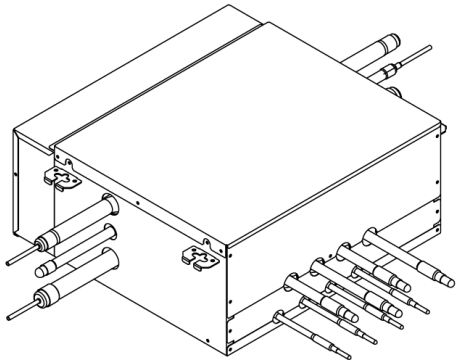
Features:
- Allows connected indoor units to be in cooling or heating mode simultaneously.
- Internal components are insulated.
  - External casing insulation is not needed.[4]
  - Condensate drain not needed.
- Includes high pressure vapor pipe strainer accessory.
- Factory installed indoor unit vapor pipe strainers.
- Series or parallel connection with additional heat recovery units.
- Flexible placement for service access or pipe routing.
- Access panels:
  - Top panel for EEV heads.
  - Rear panel for control access.
  - Bottom panel for refrigerant circuit.

Notes:
1. Each port can allow up to 8 indoor units with a maximum capacity of 60 MBh per port.
2. Multiple units installed on the same heat recovery port must operate in the same mode. Auto-changeover or Mode override is not possible.
3. Power wiring is field provided, and must comply with the applicable local and national codes.
4. All refrigerant piping requires insulation.
5. Communication cable between Master outdoor units to indoor units / heat recovery units to be 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the Master outdoor unit chassis only. ⃠ Do not ground the outdoor unit to indoor units / heat recovery units communication cable at any other point. Wiring must comply with all applicable local and national codes.
6. Kit components must be kept dry and free of debris before installation.
7. This unit comes with a dry nitrogen charge.
8. Must follow installation instructions in the applicable LG installation manual.

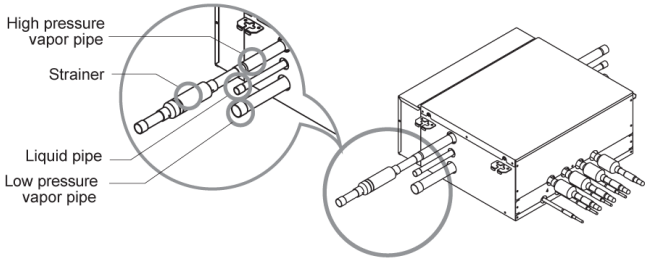
C US

PRHR043A
Multi V™ Heat Recovery Unit
Four (4) Port



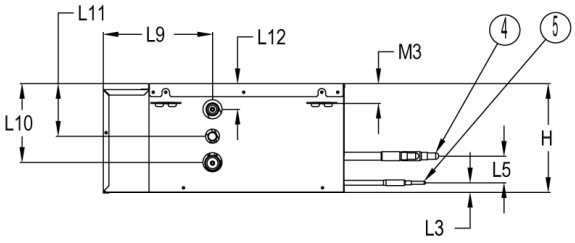


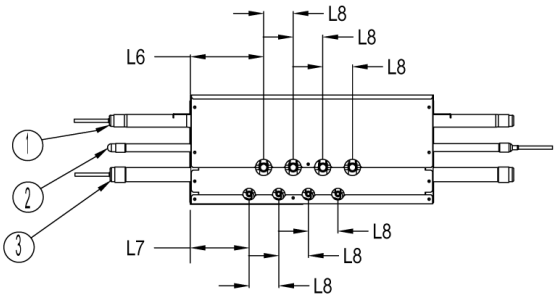
– Connect the strainer that is provided as an accessory to the HRU high pressure vapor pipe.
– Strainers are factory installed on the indoor unit vapor piping.



W	19-1/8″
H	8-5/8″
D	18-15/16″
L1	5-15/16″
L2	6-15/16″
L3	3/4″
L4	5-15/16″
L5	2-3/16″
L6	5-3/4″
L7	4-9/16″
L8	2-5/16″
L9	8-9/16″
L10	6-3/16″
L11	3-9/16″
L12	2″
M1	4-15/16″
M2	12-1/4″
M3	1-1/2″
M4	20-3/8″

[Unit: inch]





Note:

1. Unit should be installed in compliance with the appropriate LG installation manual.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials supplied from the site must comply with the local regulations or national codes.

No.	Part Name
6	Control box
5	Liquid pipe to Indoor unit
4	Vapor pipe to Indoor unit
3	Low pressure vapor pipe
2	Liquid pipe to Outdoor unit
1	High pressure vapor pipe

PRHR083A
Multi V™ Heat Recovery Unit
Eight (8) Port

Performance:

Maximum Port Capacity Btu/h (each port)[1,2]	60,000
Maximum Unit Capacity Btu/h (sum of ports)	230,000
Number of Indoor Unit Ports	8
Max. Connectible Number of Indoor Units	64
Max. Connectible Number of Indoor Units per Branch	8
Power Input[3]	
Cooling	75.9
Heating	72.1

Refrigerant Piping:[4]

Port Liquid Line (in., O.D.)	3/8
Port Vapor Line (in., O.D.)	5/8
System Liquid Line (in., O.D.)	5/8
System Vapor Line High (in., O.D.)	7/8
System Vapor Line Low (in., O.D.)	1-1/8

Electrical:[3]

Power Supply (V/Hz/Ø)	208-230/60/1
Rated Amps	0.09

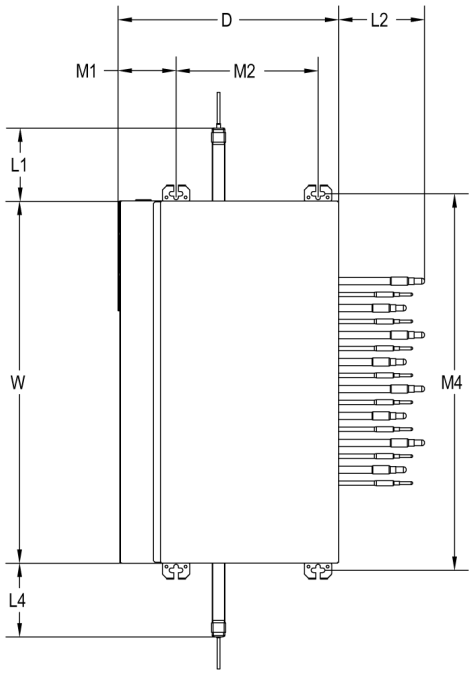
Unit Data:

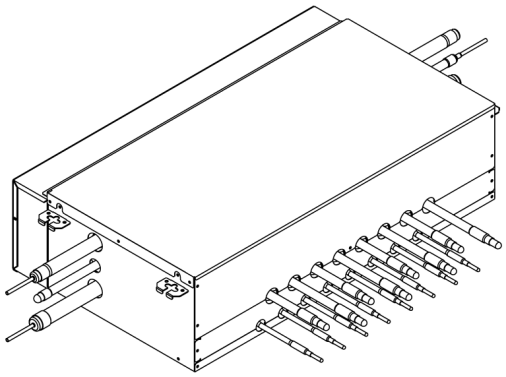
Refrigerant Type	R410A
Refrigerant Control	EEV
Sound Pressure	
Cooling Mode dB(A)	31
Heating Mode dB(A)	31
Simultaneous dB(A)	38
Changeover Cooling to Heating	33
Changeover Heating to Cooling	38
Unit Net Weight (lbs.)	68
Unit Shipping Weight (lbs.)	82

Features:
- Allows connected indoor units to be in cooling or heating mode simultaneously.
- Internal components are insulated.
  - External casing insulation is not needed.[4]
  - Condensate drain not needed.
- Includes high pressure vapor pipe strainer accessory.
- Factory installed indoor unit vapor pipe strainers.
- Series or parallel connection with additional heat recovery units.
- Flexible placement for service access or pipe routing.
- Access panels:
  - Top panel for EEV heads.
  - Rear panel for control access.
  - Bottom panel for refrigerant circuit.

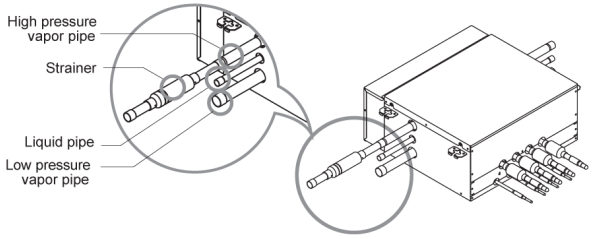
Notes:
1. Each port can allow up to 8 indoor units with a maximum capacity of 60 MBh per port.
2. Multiple units installed on the same heat recovery port must operate in the same mode. Auto-changeover or Mode override is not possible.
3. Power wiring is field provided, and must comply with the applicable local and national codes.
4. All refrigerant piping requires insulation.
5. Communication cable between Master outdoor units to indoor units / heat recovery units to be 18 AWG, 2-conductor, twisted, stranded, shielded. Ensure the communication cable shield is properly grounded to the Master outdoor unit chassis only. ⃠ Do not ground the outdoor unit to indoor units / heat recovery units communication cable at any other point. Wiring must comply with all applicable local and national codes.
6. Kit components must be kept dry and free of debris before installation.
7. This unit comes with a dry nitrogen charge.
8. Must follow installation instructions in the applicable LG installation manual.

PRHR083A
Multi V™ Heat Recovery Unit
Eight (8) Port



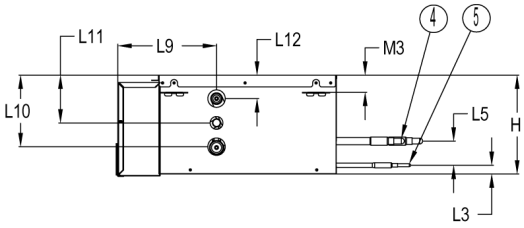


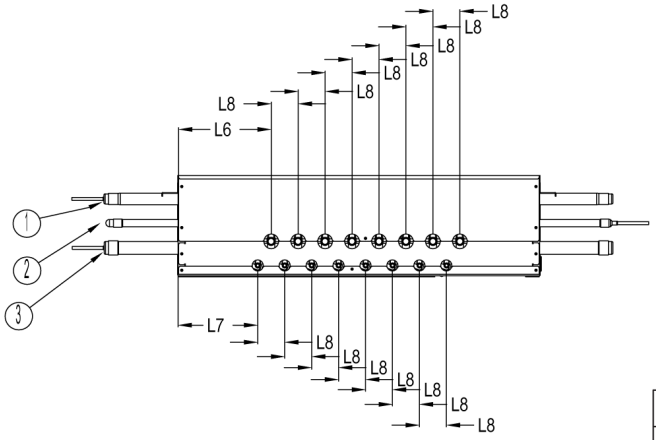
– Connect the strainer that is provided as an accessory to the HRU high pressure vapor pipe.
– Strainers are factory installed on the indoor unit vapor piping.



W	31-1/4″
H	8-5/8″
D	18-15/16″
L1	6-5/16″
L2	6-15/16″
L3	3/4″
L4	6-5/16″
L5	2-3/16″
L6	8-1/16″
L7	6-7/8″
L8	2-5/16″
L9	8-9/16″
L10	6-3/16″
L11	3-9/16″
L12	2″
M1	4-15/16″
M2	12-1/4″
M3	1-1/2″
M4	32-1/2″

[Unit: inch]





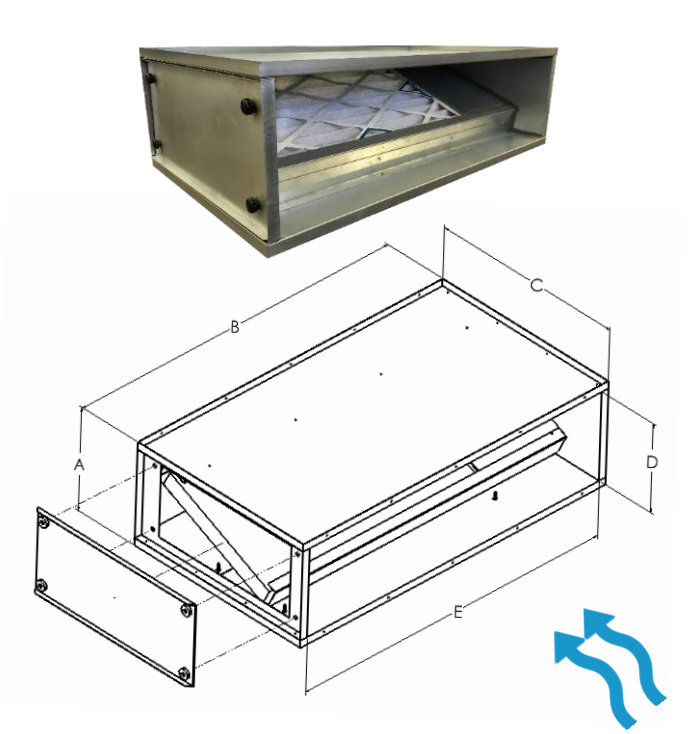
Note:

1. Unit should be installed in compliance with the appropriate LG installation manual.
2. Unit should be grounded in accordance with the local regulations or applicable national codes.
3. All electrical components and materials supplied from the site must comply with the local regulations or national codes.

No.	Part Name
6	Control box
5	Liquid pipe to Indoor unit
4	Vapor pipe to Indoor unit
3	Low pressure vapor pipe
2	Liquid pipe to Outdoor unit
1	High pressure vapor pipe

SHARPE FILTER BOX

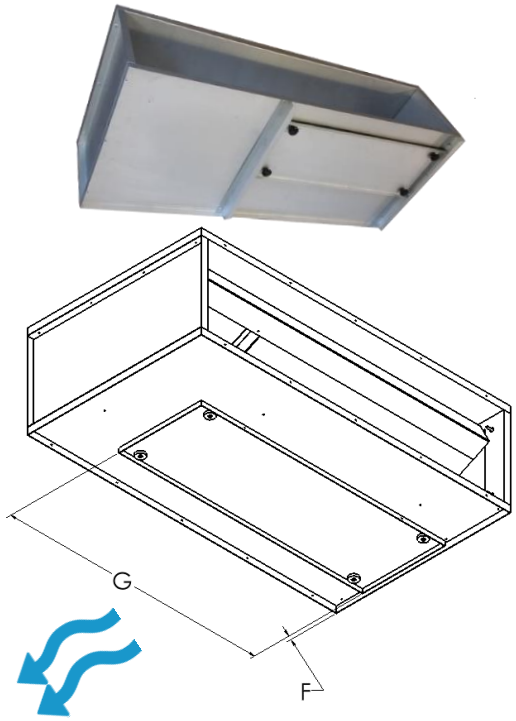
For LG Multi-V Indoor Units Ducted (High Static)



AIR FLOW

STANDARD RIGHT-HAND ACCESS DOOR

For Filter Change (shown above)



AIR FLOW

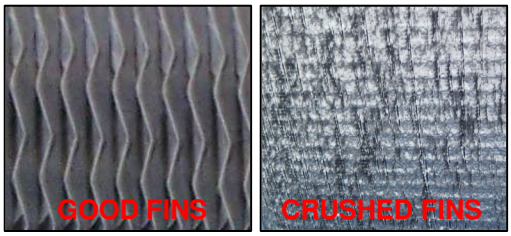
STANDARD BOTTOM ACCESS DOOR

For Filter Change (shown above)

MODEL	LG UNIT FRAME	CHASIS RANGE	RECOMMNEDED FILTER SIZE (IN)	FACE VELOCITY @ MAX CFM (FPM)	A	B	C	D	E	F	G
FB-M1	ARNUXXXM1A4	073 THROUGH 243	(1) 14 X 25 X 2"	278 @ 650 CFM	10.7	35.5	20	9.13	34	0.5	28
FB-M1-M13											
FB-M2	ARNUXXXM2A4	073 THROUGH 423	(1) 14 X 20 X 2" (1) 14 X 25 X 2"	218 @ 915 CFM	10.88	49.38	20	9.38	47.88	0.5	27.5
FB-M2-M13											
FB-M3	ARNUXXXM3A4	283 THROUGH 543	(1) 16 X 20 X 2" (1) 16 X 25 X 2"	337 @ 1,815 CFM	14.25	49.13	20	12.75	47.63	0.75	27
FB-M3-M13											
FB-B8	ARNUXXXB8A4	363 THROUGH 963	(3) 20 X 20 X 2"	341 @ 2,700 CFM	18.13	61.75	20	16.63	60.25	16.875	28
FB-B8-M13											

- Standard Right and Bottom Access Doors - Rotatable for left hand access
- Removable side access door with tethered bottom access door
- Piloted mounting holes for easy installation.

PERMATRON®



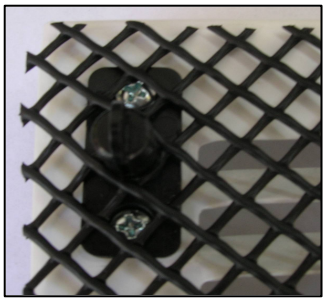
MODEL # HAILGUARD54

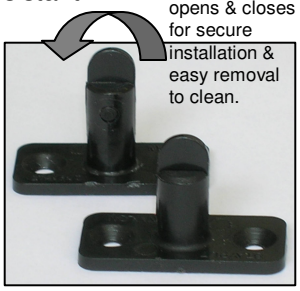
BLACK POLYPROPYLENE NETTING

Media is a rigid black polypropylene netting with 3/8"diamond shaped openings. Lightweight and easily cleaned, netting is used to deflect airborne objects and debris such as hail from air conditioner and chiller fins. Can be used alone as hail guard or layered behind PreVent® Equipment Protection filter for added air intake protection.

Sold in rolls 54" wide x 50' length to be cut with scissors or utility knife. Or netting can be customized to your OEM or cut-to-size specifications and installation needs.

- UV Protected
- Rot Resistant
- Weather Resistant
- Abrasion and Corrosion Resistant





Can be installed with plastic mounting kit:

MountKit-Single – Hailguard Alone

MountKit-Double – Hailguard & PreVent® Model U or BHA Media Filter