



Williamson County
508 Rock Street
Georgetown, Texas 78627

8/24/2022

Contact: Shantil Moore CTCM
Phone # 512-966-0034
Email: Shantil.moore@wilco.org

Install 6ton, 3head Mitsubishi Mini Split (Sheriff Office/Jail) (North) "MSA approved in CC 4/6/21" (Buyboard CO-OP Contract #638.21)

5F Mechanical, Inc. would like to thank you for the opportunity

to propose the following Scope of Work:

Pick up Equipment, Parts & Materials needed to install 6ton VRF Mitsubishi Split System w/ 3 Air Handler Heads

Recover existing refrigerant charge and dispose of recovered refrigerant using current industry standards

Lockout & Tag-out power (Make Safe) Demo and remove existing 3ton mini split air handler, refrigerant line-set and condenser. Install new 7/8" x 3/8" refrigerant line set from condenser location to I.T. room. Install needed 5/8"x3/8" refrigerant line sets from circuit header to 2, 2.5ton air handlers. Install 1/2"x1/4" refrigerant line set from circuit header to 1, 1ton air handler. *(Note)* (Air Handlers are Wall Mounted) Install 16awg control wiring between new condenser and new wall mounted air handlers. Install condensate pumps on each of the three new air handlers and pipe to existing condensate drain. Install new Mitsubishi PUHY-P72YNU -6TON Heat-Pump Condenser. Ready Equipment and prepare for factory Start-up.

(Note) Proposed equipment includes 1, PUY-P72YNU HP Condenser, 2, PKFY-P30NKMU-E2 Wall Mounted Air Handlers 1, PKFY-PF2NLMU-E Wall Mounted Air Handler 1, CMY-Y104C-G Refrigerant Circuit Header, Isolation Valves as needed, and refrigerant line sets with Armorflex Insulation.

(NOTE) Electrical Requirements, 6ton Condenser requires 3phase power either 230volt or 460volt application. Each of the 3 Air Handlers require 230volt single phase power.

(Exclusions) Overtime-Holiday Labor, ANY AND ALL LINE VOLTAGE ELECTRICAL, Engineer, Engineering Fee's, Concrete work, Xray-Scanning of Block or Concrete walls, Painting, Patching, COGT Code Upgrades, COGT Plan & Review, COGT Mechanical & Plumbing Permits, Fire-Life-Safety Controls-Wiring-Devices, BAS Controls.

<u>Materials/Equip</u>	<u>Qty ea.</u>	<u>Sales Price</u>
Mitsubishi 6ton VRF System	1	Quoted Price
Refrigerant Line Set & Insulation	1	Q/P
Coring/Hardware/Misc Materials	1	Q/P
Condenser Pad / Demo Materials	1	Q/P
Torch/Vacuum/Recovery	1	Q/P
Refrigerant 410A	30	Q/P
Plumbing Materials/Hardware	1	Q/P
Subtotal		Quoted Price

<u>Labor</u>	
HVAC Service Mechanic	Quoted Price
Apprentice	Q/P
	Quoted Price

EXCLUSIONS:

- 1) All work will be done during normal working hours M/F 7:00-3:30
- 2) Any scope of work not included in above proposal
- 3) Pricing on proposal good for 30 days.
- 4) Any additional City Code upgrades, Mechanical Drawings, City Plan & Review...if required.

We would be pleased to provide the above for the net price of: **\$29,524.07**

(plus applicable sales tax)

Thanks Steve Pack

Accepted by:


Bill Gravell (Sep 16, 2022 10:58 CDT)

for: Williamson County

Date: Sep 16, 2022

M [REDACTED] ACLA [REDACTED]

15705 Brenda Street Austin, Texas 78758

Regulated by the Texas Department of Licensing and Regulations PO Box 12157 Austin, Texas 1-800-803-9202

Submittal

Project Name:

5FMech (Revision 1)

Contractor:

Engineer:

Architect:

Rep/Distributor:

Project Detail:

Customer:

Address:

City:

State:

Zip:

Submittal Date:

Submitted By:

Name:

Company:

Email:

Phone:

Submittal Stage:

Design Only

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Equipment Schedules

MITSUBISHI ELECTRIC TRANE HVAC US: CITY MULTI VRF OUTDOOR UNIT SCHEDULE

System Tag		System 1
Tag Reference		
Nominal Data	M-NET Address	51
	Model Number	PUHY-P72YNU-A
	Modules	P72
	Nominal Cooling Capacity (BTU/h)	72,000.0
	Nominal Heating Capacity (BTU/h)	80,000.0
Design Conditions	Design Cooling Outdoor Temp DB (°F)	95.0
	Design Heating Outdoor Temp WB (°F)	43.0
Performance Data	Corrected Cooling Total Capacity (BTU/h)	70,943.7
	Corrected Heating Capacity (BTU/h)	79,283.3
Electrical Data	Voltage / Phase	460V / 3-phase 3-wire
	MCA 208/230 or [460V]	11
	Recommended Fuse Size (RFS)	15
	MOCP	15
Notes / Options	Applicable System Notes - See Notes Below	1, 2, 3, 4, 5

Notes & Options:

- 1 Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
- 2 Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
- 3 Efficiency values for EER, IEER, COP are based on AHRI 1230 test method for mixture of ducted & non-ducted indoor units.
- 4 For systems with multiple modules, refrigerant pipe dimensions indicate total system combined piping downstream of module twinning.
- 5 Added field charge listed is in addition to factory charge, this must be updated based upon final as-built piping layout.

mitsubishi electric trane hvac us: city multi vrf indoor unit
SCHEDULE

System Tag		System 1	System 1	System 1
Tag Reference				
Nominal Data	Room Name			
	Model	PKFY-P30NKMU-E2.TH	PKFY-P30NKMU-E2.TH	PKFY-P12NLMU-E.TH
	Type	Wall -Mounted	Wall -Mounted	Wall -Mounted
	Nominal Cooling Capacity (BTU/h)	30,000.0	30,000.0	12,000.0
	Nominal Heating Capacity (BTU/h)	34,000.0	34,000.0	13,500.0
Design Conditions	Cooling Design Entering Temp DB/WB (°F) / [Water in temp]	80.0/67.0	80.0/67.0	80.0/67.0
	Heating Design Entering Temp DB/WB (°F) / [Water in temp]	70.0	70.0	70.0
	Cooling Diversity Full/Partial (See Note 5, 6)	FULL DEMAND	FULL DEMAND	FULL DEMAND
	Heating Diversity Full/Partial (See Note 5, 6)	FULL DEMAND	FULL DEMAND	FULL DEMAND
	Refrig Pipe Dim Liquid/Suction (inch)	3/8 / 5/8	3/8 / 5/8	1/4 / 1/2
Performance Data	Cooling Total Capacity (BTU/h)	29,559.9	29,559.9	11,823.9
	Cooling Sensible Capacity (BTU/h)	21,906.1	21,906.1	8,016.7
	Heating Capacity (BTU/h)	33,075.3	33,075.3	13,132.8
Fan / Water Flow Data	Fan Speed Setting	HIGH	HIGH	HIGH
	Peak Fan Airflow (cfm) / [Design gpm]	918	918	297
	Max Fan ESP Setting 208V/230V (IN WG)			
Electrical Data	Voltage / Phase	208/230V/1-phase	208/230V/1-phase	208/230V/1-phase
	Electrical MCA/MFS	0.63(208V)/0.63(230V)/15	0.63(208V)/0.63(230V)/15	0.24/0.24/15
Notes / Options	Applicable System Notes - See Notes Below	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6	1, 2, 3, 4, 5, 6

Notes & Options:

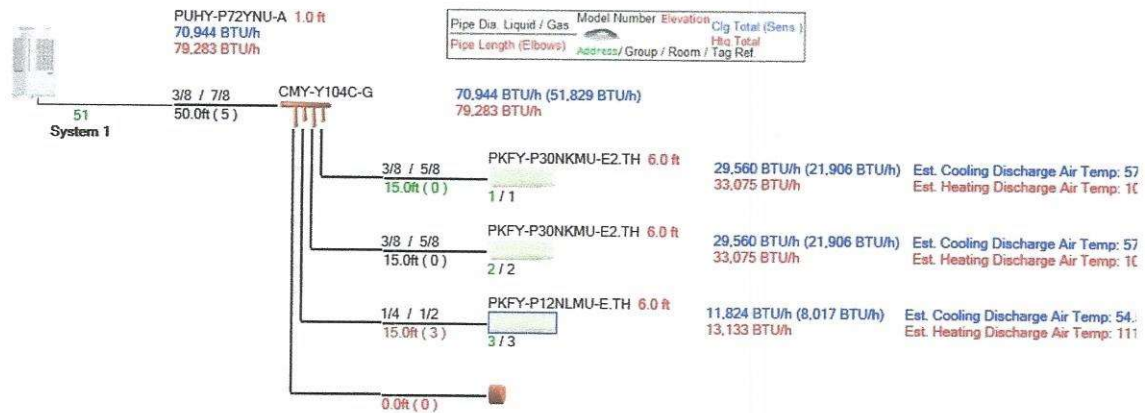
- Nominal cooling capacities are based on indoor coil EAT of 80/67°F (DB/WB), outdoor of 95°F (DB)
- Nominal heating capacities are based on indoor coil EAT of 70°F (DB), outdoor of 43°F (WB)
- See outdoor unit schedule for outdoor ambient conditions, connected capacity, and other factors associated with corrected capacities
- See schematic piping/control diagram for indication of required indoor unit remote controllers, system controllers, and integration devices.
- Full demand corrected capacity includes de-rate associated with indoor vs. outdoor connected capacity indicated on outdoor unit schedule for associated system. Partial corrected capacity assumes sufficient diversity exists such that the connected capacity de-rate does not apply. It is the designer's responsibility to ensure "Diamond System Builder" is set in the appropriate output capacity setting (full demand/partial demand) prior to generating this schedule.
- It is recommended to always base heating corrected capacity on full demand.

Design View Piping Diagrams

Floor Units: 3 / 1 to 18
 Capacity: 72 / 36 to 93 (100.0%)
 Connectable capacity is not actual capacity.
 Total Pipe Length: 104.2 / 3280.0 feet
 Shortest Actual: 65.0 / 541.0 feet
 Shortest Equiv.: 74.2 / 623.0 feet
 per 1st Branch Actual: 15.0 / 295.0 feet
 per 1st Branch Equiv.: 18.4 / 295.0 feet

Correction Factors
 Outdoor Unit Capacity: 1.00 1.00
 Temperature: 1.00 1.00
 Piping Length: 0.98 0.99
 Defrosting: - 1.00
 Derate: 1.00 1.00
 Total Derate: 0.99 0.99
 Additional Refrigerant: 10.1 lb
 Total Refrigerant Amount: 24.4 lb

Conditions (°F)
 Cooling
 Indoor DB 80.0 Humidity 51.8% Indoor WB 67.0
 Outdoor DB 95.0
 Heating
 Indoor DB 70.0
 Outdoor DB 47.0 Humidity 72.8% Outdoor WB 43.0



AutoCAD Piping & Wiring Diagrams

DIAGRAM SYMBOL LEGEND		CONT.No	PAGE
DISPLAY	DESCRIPTION		
---	POWER WIRE		
---	CONTROL WIRE		
---	REF. PIPE		

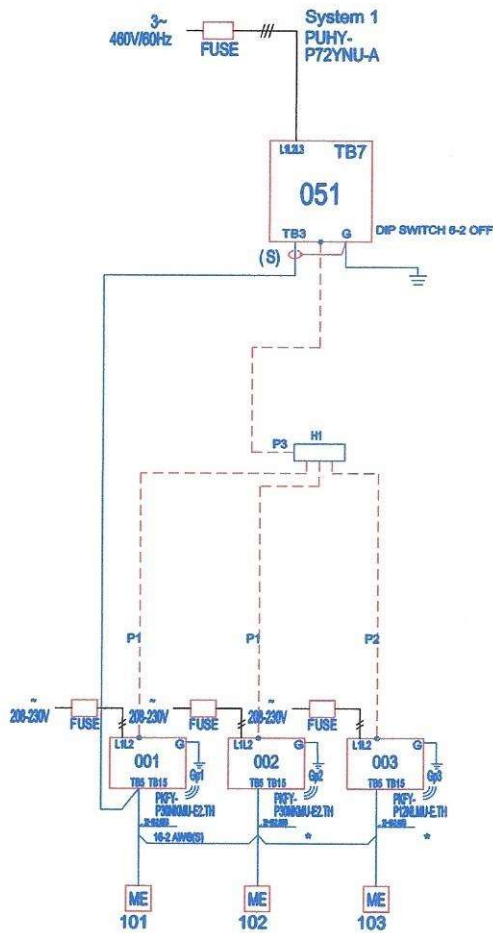
CITY MULTI

SYSTEM SCHEMATIC DWG.

This drawing is schematic in nature. Final routing of piping & wiring shall be determined by the installing contractor and/or designer of record. Additional refrigerant charge is needed depending on the size and length of extended piping. Please refer the amount of pre-charge and the formula of calculation which is mentioned on the data book.

1.25mm²(16 AWG) : 1.25mm²(16 AWG) or more. 0.75mm²(20 AWG) : between 0.5mm²(24 AWG) and 0.75mm²(20 AWG). ²

PIPING AND CONTROLS	
SYMBOL	BRANCH PIPE MODEL NAME
H1	CMY-Y104C-G
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	3/8 / 5/8
P2	1/4 / 1/2
P3	3/8 / 7/8
NOTES	
* If the thermostat wiring greater than 32" then use 16-2 AWG only	



REMARKS
Originator: Steve Schauf
Comments:

Submittal Documents

CITYMULTI

6-TON PUHY-P72YNU-A(-BS)



Job Name:

System Reference:

Date:

460V OUTDOOR VRF HEAT PUMP SYSTEM



UNIT OPTION

- ☐ Standard Model PUHY-P72YNU-A
☐ Seacoast (BS) Model PUHY-P72YNU-A-BS

ACCESSORIES

- ☐ Header Kit for details see Pipe Accessories Submittal
☐ Joint Kit for details see Pipe Accessories Submittal
☐ Low Ambient Kit for details see Low Ambient Kit Submittal
☐ Panel Heater Kit for details see Panel Heater Kit Submittal
☐ Snow/Hail Guards Kit for details see Snow/Hail Guards Kit Submittal

Specifications			System
Unit Type			PUHY-P72YNU-A(-BS)
Cooling Capacity (Nominal)		BTU/H	72,000
Heating Capacity (Nominal)		BTU/H	80,000
Guaranteed Operating Range ¹	Cooling ²	°F [°C]	23~126 [-5.0~52.0]
	Heating ³	°F [°C]	-4~60 [-20.0~15.5]
Extended Operating Range	Heating	°F [°C]	-18~60 [-28.0~15.5]
External Dimensions (H x W x D)		In. [mm]	71-10/16 x 36-4/16 x 29-3/16 [1,818 x 920 x 740]
Net Weight		Lbs. [kg]	512 [232]
External Finish			Pre-coated galvanized steel sheet (+powder coating for -BS type) <MUNSELL 3Y 7.8/1.1 or similar>
Electrical Power Requirements	Voltage, Phase, Hertz, Power Tolerance		460V, 3-phase, 60 Hz, ±10%
Minimum Circuit Ampacity		A	11.0
Maximum Overcurrent Protection		A	15
Recommended Fuse Size		A	15
Recommended Minimum Wire Size		AWG [mm]	14 [2.1]
SCCR		kA	5
Refrigerant Piping Diameter	Liquid (High Pressure)	In. [mm]	3/8 [9.52] Braze
	Gas (Low Pressure)	In. [mm]	7/8 [22.2] Braze
Max. Total Refrigerant Line Length		Ft.	3280
Max. Refrigerant Line Length (Between ODU & IDU)		Ft.	541
Max. Control Wiring Length		Ft.	1640
Indoor Unit Connectable	Total Capacity		50.0~130.0% of outdoor unit capacity
	Model/Quantity		P05~P72/1.0~15.0
Sound Pressure Levels		dB(A)	55.0~57.5
Sound Power Levels		dB(A)	74.0/76.5
FAN ⁴	Type x Quantity		Propeller fan x 1
	Airflow Rate	CFM	6000
	External Static Pressure	In. WG	Selectable; 0.00, 0.12, 0.24, 0.32 In. WG; factory set to 0 In. WG
Compressor Operating Range			21.0% to 100.0%
Compressor	Type x Quantity		Inverter scroll hermetic compressor x 1
Refrigerant	Type x Original Charge		R410A x 14 lbs + 5.0 oz [6.5 kg]
Protection Devices	High Pressure Protection		High pressure sensor, High pressure switch at 4.15 MPa (601 psi)
	Inverter Circuit (Comp./Fan)		Over-current protection
	Fan Motor		Over-current protection
AHRI Ratings (Ducted/Non-ducted)	EER		13.1/13.5
	IEER		24.8/31.5
	COP		3.97/4.34

NOTES:

Nominal cooling conditions (Test conditions are based on AHRI 1230)
 Indoor: 80°F DB/67°F WB. (26.7°C DB/19.4°C WB.), Outdoor: 95°F DB. (35°C DB.)
 Nominal heating conditions (Test conditions are based on AHRI 1230)
 Indoor: 70°F DB. (21.1°C DB.), Outdoor: 47°F DB/43°F WB. (8.3°C DB/6.1°C WB.)

¹Harsh weather environments may demand performance enhancing equipment. Ask your Mitsubishi Electric representative for more details about your region

²For details on extended cooling operation range down to -10° F DB, see Low Ambient Kit Submittal

³When applying product below -4°F, consult your design engineer for cold climate application best practices, including the use of a backup source for heating

⁴Unit will continue to operate in extended operating range, but capacity is not guaranteed

OUTDOOR UNIT: PUHY-P72YNU-A(-BS) – DIMENSIONS

PUHY-P72YNU-A(-BS)

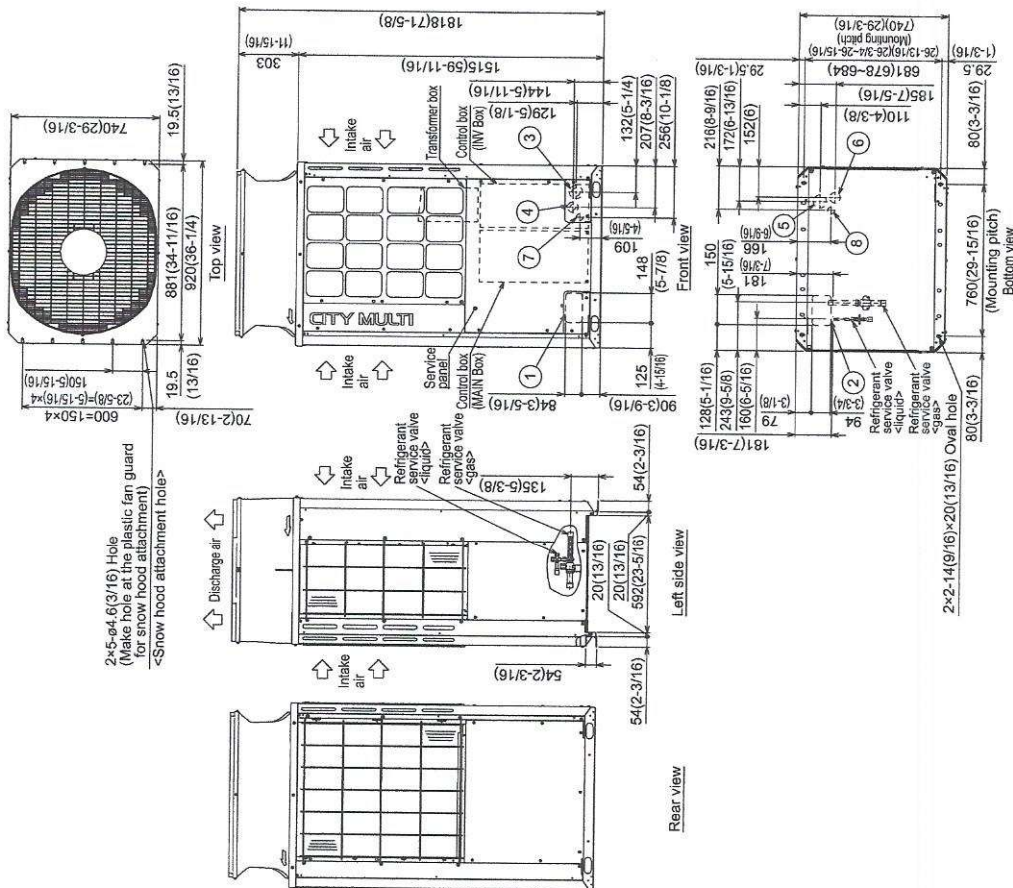
Unit: mm (in.)

Note 1. At brazing of pipes, wrap the refrigerant service valve with wet cloth and keep the temperature of refrigerant service valve under 120°C(248°F).

Connecting pipe specifications

Model	Refrigerant pipe		Diameter		Service valve
	Liquid	Gas	Liquid	Gas	
P72	ø6.35(3/8) Brazed	ø22.2(7/8) Brazed	ø6.35(3/8)	ø22.2(7/8)	

NO.	Usage	Specifications	
		Front through hole	Bottom through hole
①	For pipes	148(5-7/8) × 84(3-5/16) Knockout hole	150(5-15/16) × 84(3-5/16) Knockout hole
②		150(5-15/16) × 84(3-5/16) Knockout hole	150(5-15/16) × 84(3-5/16) Knockout hole
③		150(5-15/16) × 84(3-5/16) Knockout hole	150(5-15/16) × 84(3-5/16) Knockout hole
④	For wires	ø43.7(1-3/4) or ø22.2(7/8) Knockout hole	ø43.7(1-3/4) or ø22.2(7/8) Knockout hole
⑤		ø43.7(1-3/4) or ø22.2(7/8) Knockout hole	ø43.7(1-3/4) or ø22.2(7/8) Knockout hole
⑥		ø43.7(1-3/4) or ø22.2(7/8) Knockout hole	ø43.7(1-3/4) or ø22.2(7/8) Knockout hole
⑦	For transmission cables	ø34(1-3/8) Knockout hole	ø34(1-3/8) Knockout hole
⑧		ø34(1-3/8) Knockout hole	ø34(1-3/8) Knockout hole



NOTES:

SEACOAST PROTECTION

Anti-corrosion Protection: A coating treatment is applied to condenser coil for protection from air contaminants.

Standard: Salt Spray Test Method - no unusual rust development to 480 hours.

Sea Coast (BS): Salt Spray Test Method (JRA 9002) - no unusual rust development to 960 hours.

1340 Satellite Boulevard Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com

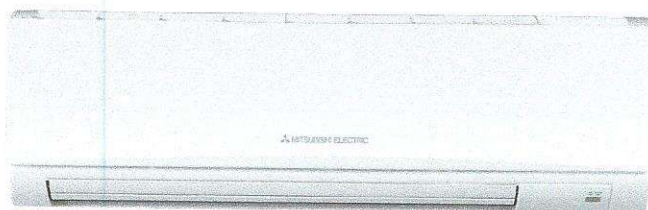
FORM# PUHY-P72YNU-A - 202105



Job Name:

Schedule Reference:

Date:

**GENERAL FEATURES**

- Dual set point functionality
- Compact, lightweight, shiny-white, flat-panel design
- Quiet operation
- Multiple fan-speed settings
- Intake grille filter is easily removed for cleaning
- Wireless receiver on board

OPTIONS

- ☐ Condensate Pump.....SI1730-230
- ☐ CN24 Relay Kit.....CN24RELAY-KIT-CM3

SPECIFICATIONS**Capacity***

Cooling.....30,000 Btu/h
Heating.....34,000 Btu/h

Power

Power Source.....208 / 230V, 1-phase, 60Hz

Power Consumption

Cooling.....0.07 kW
Heating.....0.07 kW

Current

Cooling.....0.50 A
Heating.....0.50 A
Minimum Circuit Ampacity (MCA).....0.63 A
Maximum Overcurrent Protection (MOCP) Fuse.....15 A

External Finish.....Munsell No. 1.0Y9.2/0.2

External Dimensions

Inches.....14-3/8 H x 46-1/16 W x 11-5/8 D
mm.....365 H x 1,170 W x 295 D

Net Weight

Unit.....46 lbs. / 21 kg

Coil Type.....Cross Fin
(Aluminum Plate Fin and Copper Tube)

Fan

Type x Quantity.....Line Flow Fan x 1
Airflow Rate (Low-High).....710 - 920 CFM
Motor Type.....Direct-drive DC Motor

Air Filter.....Polypropylene Honeycomb

Refrigerant Piping Dimensions

Liquid (High Pressure).....3/8" / 9.52 mm (Flare)
Gas (Low Pressure).....5/8" / 15.88 mm (Flare)

Drainpipe Dimension.....I.D. 5/8" / 16 mm

Sound Pressure Levels

Low-High.....43 - 49 dB(A)

* Cooling / Heating capacity indicated at the maximum value at operation under the following conditions:

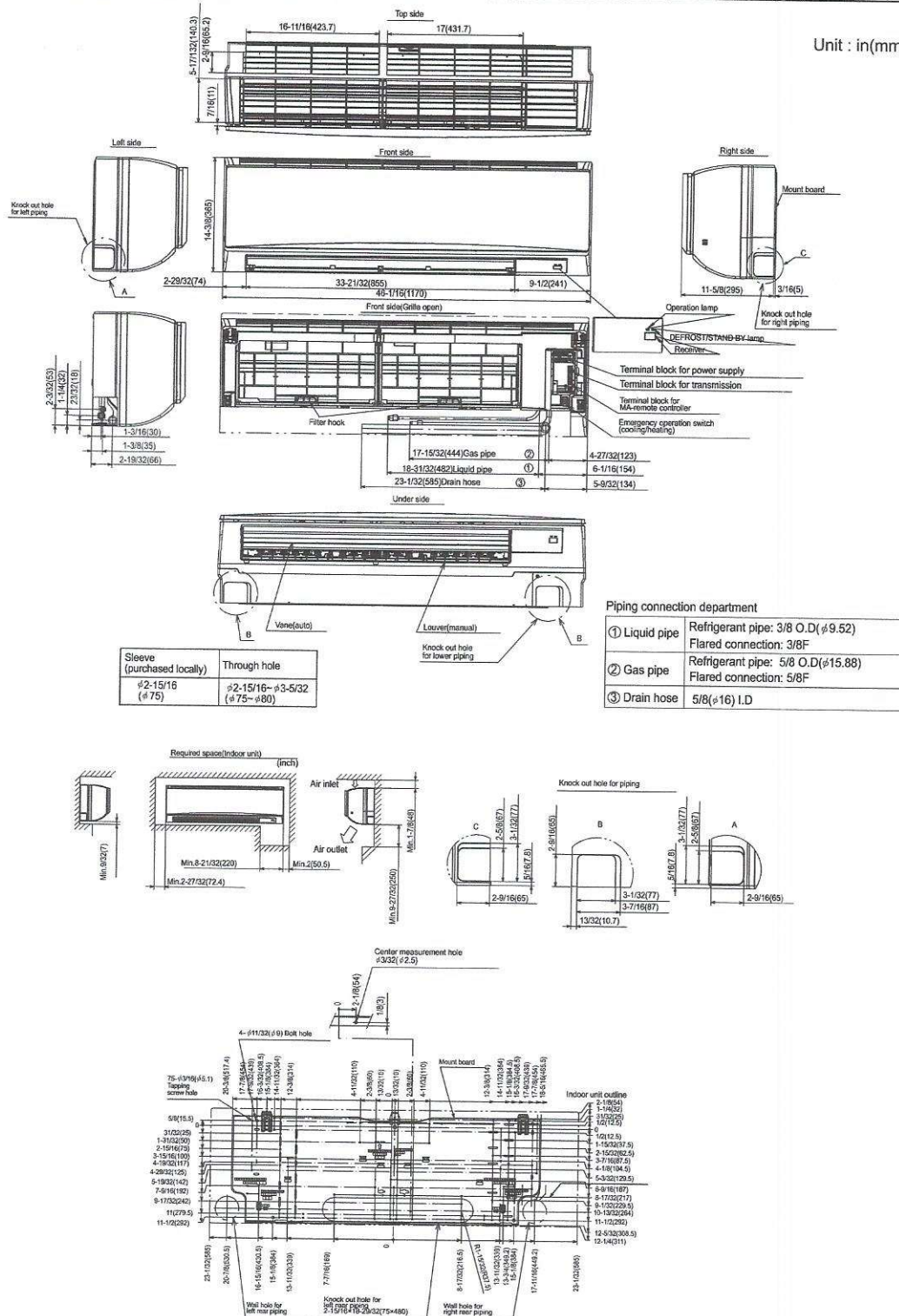
Cooling | Indoor: 80° F (27° C) DB / 67° F (19° C) WB, Outdoor 95° F (35° C) DB
Heating | Indoor: 70° F (21° C) DB, Outdoor 47° F (8° C) DB / 43° F (6° C) WB

Notes:



Model: PKFY-P30NKMU-E2.TH – DIMENSIONS

Unit : in(mm)



Intertek

FORM# PKFY-P30NKMU-E2 - 201301

Specifications are subject to change without notice.

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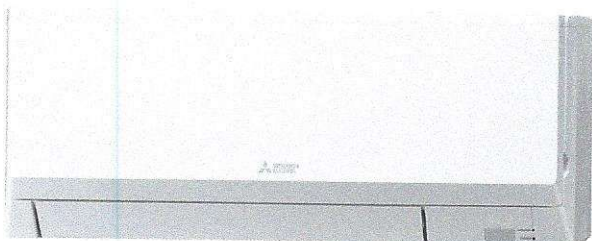
www.mitsubishipro.com

Specifications are subject to change without notice.

Job Name:

System Reference:

Date:



GENERAL FEATURES

- Dual set point functionality
- Compact, lightweight, flat-white, flat-panel, modern design
- Quiet operation
- Multiple fan speed settings
- Easily removed intake grille filter for cleaning
- Back and right-side wiring take-out
- Wireless receiver on board

Specifications		System	
Unit Type		PKFY-P12NLMU-E	
Cooling capacity (Nominal) ¹		BTU/H	12,000
Heating capacity (Nominal) ¹		BTU/H	13,500
Power source	Voltage, Phase, Hertz		208/230V, 1-phase, 60 Hz
Power Consumption	Cooling	kW	0.04
	Heating	kW	0.03
Current	Cooling	A	0.4
	Heating	A	0.3
MCA		A	0.24
Maximum Overcurrent Protection (MOCP)		A	15
Recommended Fuse Size		A	15
External finish			Plastic, MUNSELL (0.7PB 9.2/0.4)
External Dimensions		In. [mm]	30-7/16 x 9-11/32 x 11-25/32 [733 x 237 x 299]
Net weight		Lbs [kg]	24.5 [11.1]
Heat exchanger			Cross fin (Aluminum fin and copper tube)
Fan	Type x quantity		Line flow fan x 1
	Airflow rate	CFM	152–191–244–297
	Motor type		DC Motor
	Motor Output	kW	.03
	Motor FLA	A	0.19
Sound pressure level (Measured in anechoic room)³		dB(A)	24–31–37–41
Air filter			PP honeycomb
Diameter of refrigerant pipe (O.D.)	Liquid (High Pressure)	In. [mm]	1/4 [6.35] Flare
	Gas (Low Pressure)	In. [mm]	1/2 [12.70] Flare
Diameter of drain pipe		In. [mm]	1.D. 5/8 [16]

NOTES:

¹Cooling / Heating capacity indicated at the maximum value at operation under the following conditions:

Cooling | Indoor: 80° F (26.7° C) DB / 67° F (19.4° C) WB; Outdoor 95° F (35° C) DB

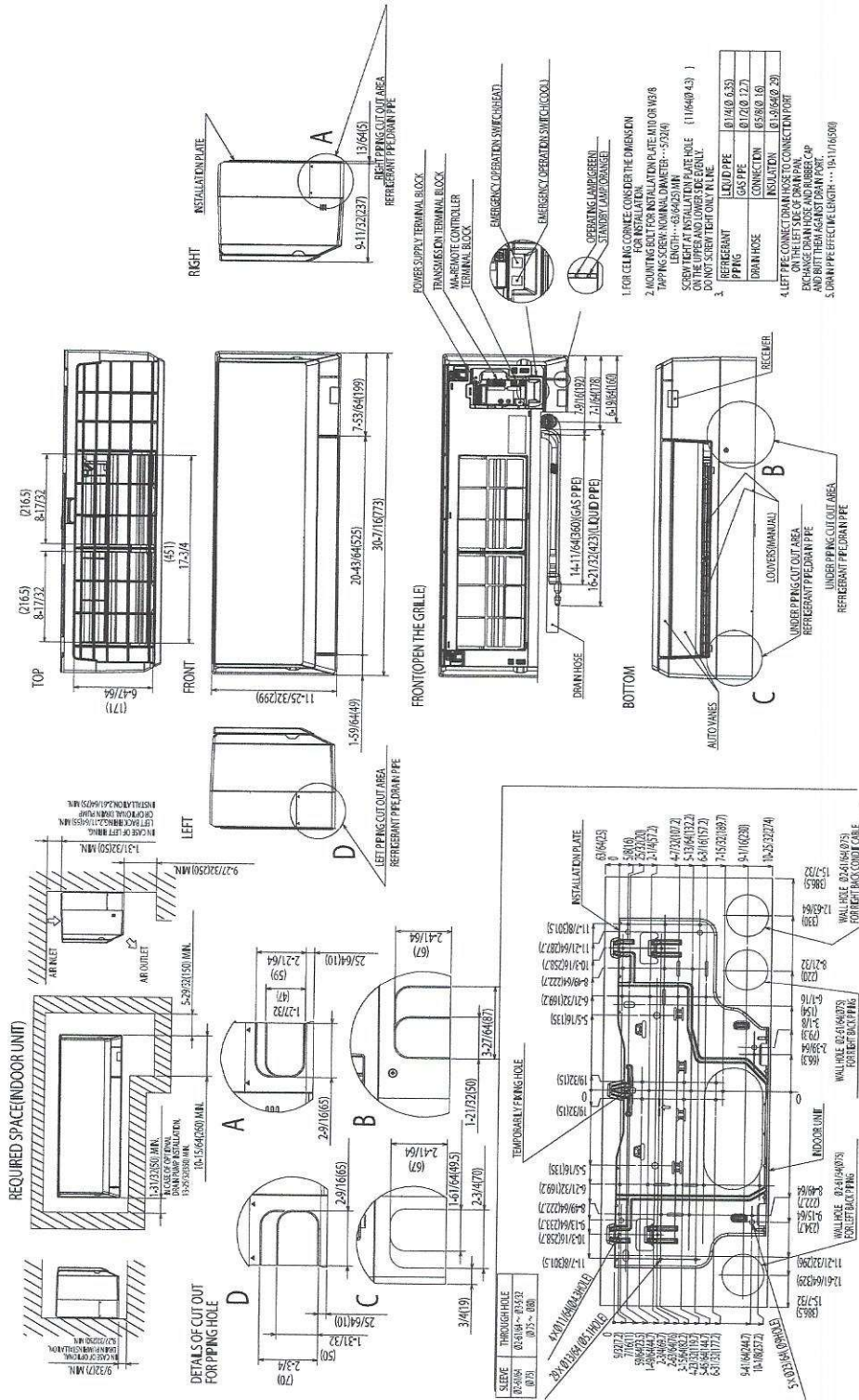
Heating | Indoor: 70° F (21.1° C) DB; Outdoor 47° F (8.3° C) DB / 43° F (6.1° C) WB

INDOOR UNIT ACCESSORIES: PKFY-P12NLMU-E

Control Interface	3-Pin Connector	☐ PAC-715AD
	BACnet® and Modbus Interface	☐ PAC-UKPRC001-CN-1
	CN24 Relay Kit	☐ CN24RELAY-KIT-CM3
	Connector and wire for Operation status/error using CN51	☐ PAC-725AD
	IT Extender	☐ PAC-WHS01IE-E
	kumo station® for kumo cloud®	☐ PAC-WHS01HC-E
	Thermostat Interface	☐ PAC-US444CN-1
	Wireless Interface for kumo cloud®	☐ PAC-USWHS002-WF-2
Remote Sensor	Flush Mount Temperature Sensor	☐ PAC-USSEN001-FM-1
	Remote Temperature Sensor	☐ PAC-SE41TS-E
	Wireless temperature and humidity sensor for kumo cloud®	☐ PAC-USWHS003-TH-1
Terminal Signal Adapter	Terminal Signal Adapter	☐ PAC-IT51AD-E
	Terminal Signal Adapter	☐ PAC-IT52AD-E
Wired Remote Controller	Deluxe Wired MA Remote Controller†	☐ PAR-40MAAU
	Simple MA Remote Controller†	☐ PAC-YT53CRAU-J
	Touch MA Controller†	☐ PAR-CT01MAU-SB
Wireless Remote Controller	kumo touch™ RedLINK™ Wireless Controller	☐ MHK2
	Wireless MA Receiver	☐ PAR-FA32MA-W
Condensate	Blue Diamond MultiTank — collection tank for use with multiple pumps	☐ C21-014
	Blue Diamond Sensor Extension Cable — 15 Ft.	☐ C13-103
	Drain Pan Level Sensor/Control	☐ SS610E
	Fascia Kit for MicroBlue Pump, mounts the MicroBlue and sensor directly beneath indoor unit	☐ T18-016
	Sauermann Condensate Pump	☐ SI30-230
Disconnect Switch	(30A/600V/UL) [fits 2" X 4" utility box] - Black	☐ TAZ-MS303
	(30A/600V/UL) [fits 2" X 4" utility box] - White	☐ TAZ-MS303W

INDOOR UNIT DIMENSIONS: PKFY-P12NLMU-E

Unit: in(mm)



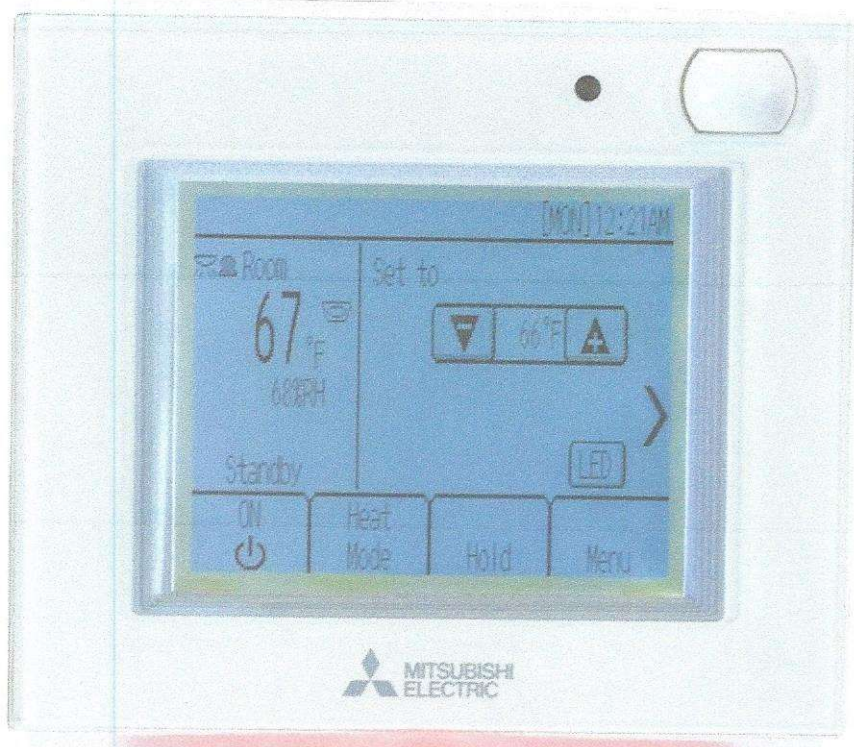
1340 Satellite Boulevard Suwanee, GA 30024
Toll Free: 800-433-4822 www.mehvac.com



Job Name:

System Reference:

Date:

**CAPABILITIES:**

- Language Options:
 - English, Spanish, French
- Controller Interface
 - Touch panel
 - Backlit LCD
 - Occupancy Sensor
 - Sensitivity level adjustable (-2 to +2)
 - Test mode for vacancy & occupancy
 - Brightness Sensor
 - Sensitivity level adjustable (0 to 100,000+ lux)
 - Test current luminance
 - Temperature Sensor
 - Humidity Sensor
 - LED indicator
- Energy-save control options with occupancy sensor, brightness sensor, and date & time:
 - On/Off
 - Setback mode
 - Set Temperature offset
 - Offset value = 2° F to 8° F (1° F-increments)
 - Auto-away time = 0:00 to 24:00 (hour: minute in 1-minute increments)
 - Detection Level: -2 to 2
 - Fan speed down
 - Thermo-off
- Non-Use (Deactivates)
- Override Energy-Save options
 - Brightness Sensor: Light or Dark
 - Date & Time: Weekly schedule
- LED Indicator adjustable options:
 - Different adjustable colors per operation mode
 - Optional 3 level color specific room temperature range
 - Blinks for error notification
 - Unique adjustable color during Energy-save
 - Off when unit is Off
 - Inverts the LED brightness (High/Low)
 - Occupancy is detected (Adjustable)
 - Touch panel is touched (Adjustable)
 - Brightness sensor changes LED Brightness:
 - Brighten, Darken, Off
- Disable LED Indicator entirely
- Basic Operations
 - On/Off
 - Operation Mode:
 - Heat, Cool, Drying, Fan, Auto (Dual and Single Set point), Setback
 - Set Temperature:
 - 40° F to 95° F (connected model dependent)
 - Fan Speed
- Air Direction:
 - Auto, Step 1-5, Swing
- Louver:
 - Off, Swing On
- Interlocked LOSSNAY control: Off, Low, High
- Hold Function:
 - Disable Schedule, On/Off timer, Auto-Off timer, Auto return
- Humidity setpoint (Requires AHC)
- Date & time
 - Adjustable format
 - Daylight Savings
- Weekly Schedule
 - Time
 - On/Off
 - Operation Mode
 - Set Temperature
 - Home screen display icon
- On/Off Timer
 - Adjustable in 5-minute increments
 - Repeatable
 - Home screen display icon
- Auto-Off timer
 - Range of 30 to 240 minutes in 10-minute increments
 - Home screen display icon
- Temperature unit selectable:
 - ° F, ° C (0.5 C increments)
 - ° C (1° C increments)
- Room temperature display option: Show or Hide
- Backlight timeout adjustable:
 - 5, 10, 20, 30, 60 seconds
- Sound level adjustable:
 - Level 0 to 3 (Level 0 = No sound)
- Display Contrast adjustable:
 - -10 to +10
- Touch panel calibration
- Permit or prohibit functions
 - On/Off
 - Operation mode
 - Set temperature
 - Air direction
- Set temperature range limit for operating modes:
 - Auto (Single setpoint)
 - Cool, Dry, Auto-Cool (Dual setpoint)
 - Heat, Auto-Heat (Dual setpoint)
 - Home screen icon notification
- Auto return function
 - Range of 10 to 120 minutes in 10-minute increments
- Filter maintenance notification
- Error code notification

MODEL: PAR-U01MEDU-K - SPECIFICATIONS, SYSTEM AND SENSOR DIAGRAMS

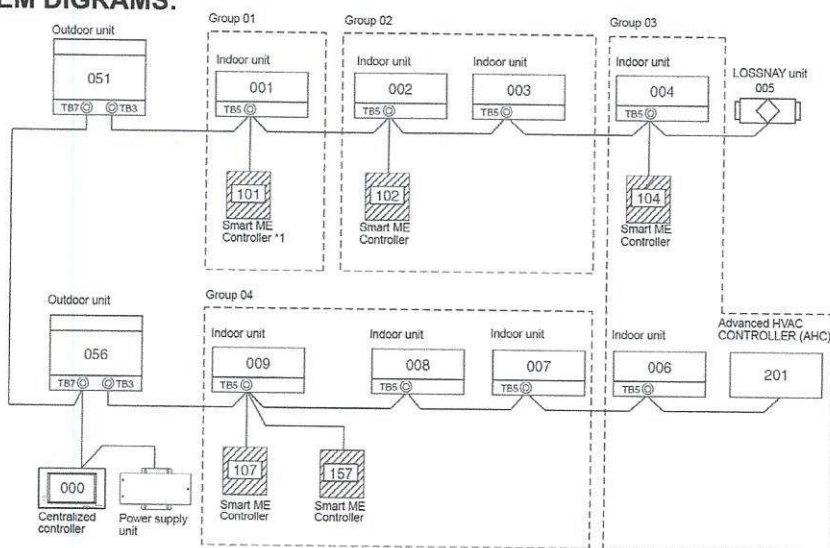
Power source		17-32 VDC *1 (for connection to M-NET only)	Receives power from outdoor units via the M-NET transmission cable. The power consumption coefficient*2 of the Smart ME Controller is "0.5".
Operating conditions	Temperature	Operating temperature range	0° C to +40° C (+32° F – +104° F)
		Storage temperature range	-20° C to +60° C (-4° F – +140° F)
	Humidity	20% to 90% RH (Non-condensing)	
Net weight	Lbs. (kg)	0.3 kg (11/16 lbs)	
Product size (W x H x D)	In. (mm)	5-17/32 x 4-3/4 Z<4-27/32> x 1 <1-5/32> (140 x 120 <123> x 25 <28.8>) * The numbers in the <> indicate the dimensions including the protruding parts.	

*1 Not for use with a generic DC power supply device.

*2 "Power consumption coefficient" is a coefficient to calculate the relative power consumption of the devices that receive power through the M-NET transmission cable.

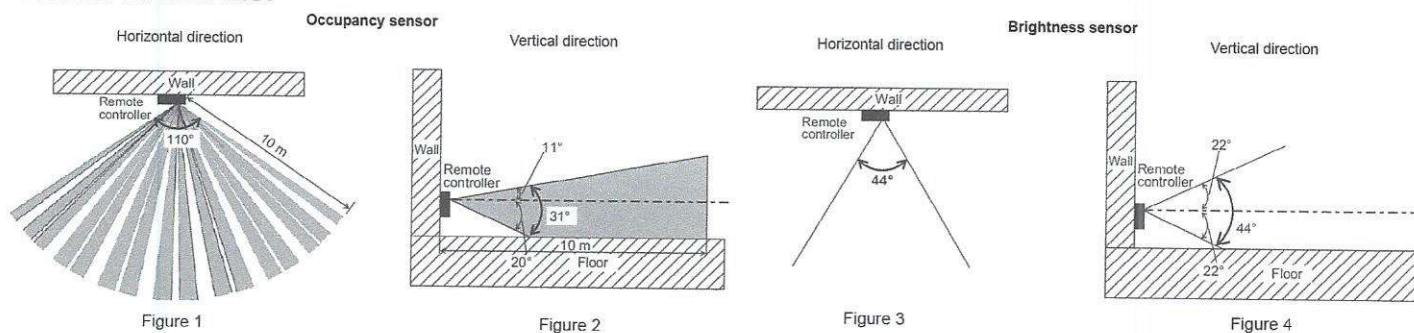
Refer to section 4 "System diagram" in Chapter 1 in the Installation Manual.

SYSTEM DIGRAMS:



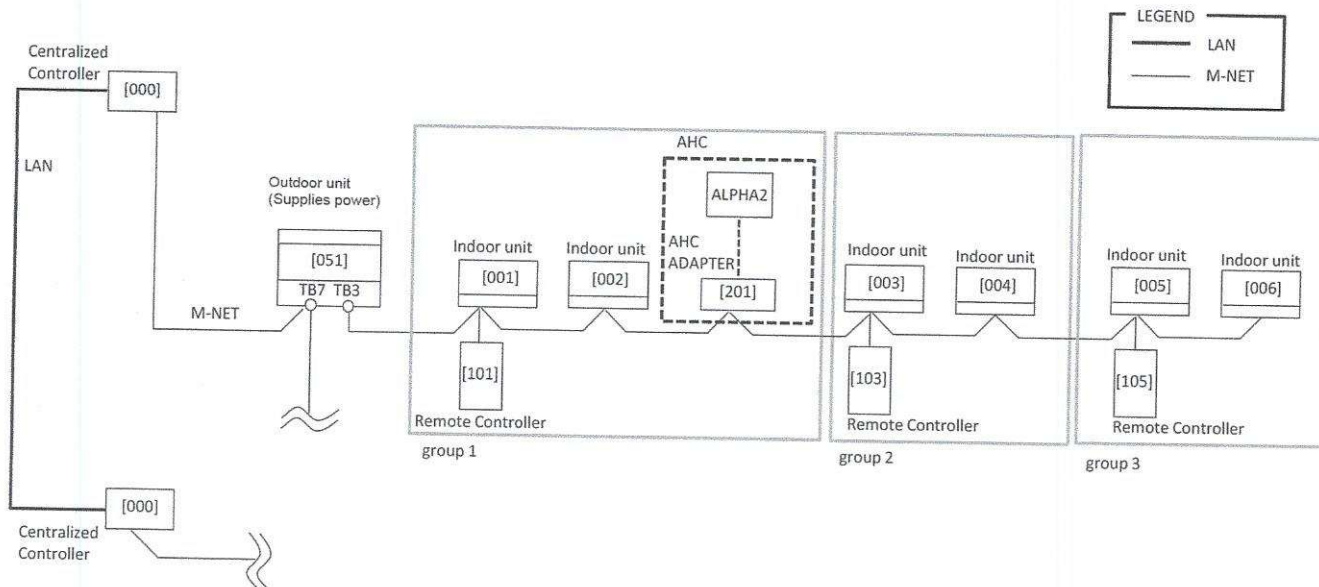
- Can control up to 16 indoor units in one group
 - The ME and MA remote controller cannot be connected in the same group
- Up to two remote controllers (main and sub) can be connected to an indoor unit or a group of indoor units
- Connect to TB5 on any indoor unit in same M-NET system
- Remote controller cable (0.3 mm² (AWG 22) 2-core sheathed cable)
 - If remote controller cable exceeds 10 m (32 ft), use AWG 16

SENSOR DIAGRAMS:



MODEL: PAR-U01MEDU-K - ADVANCED HVAC COMPATIBILITY

NETWORK LAYOUT:



The Advanced HVAC CONTROLLER (AHC) consists of AHC ADAPTER (PAC-IF01AHC-J) and α2 SIMPLE APPLICATION CONTROLLER (ALPHA2). ALPHA2 is one type of programmable logic controller manufactured by Mitsubishi Electric Corporation. AHC allows complex interlocked control with other manufacturer's external devices.

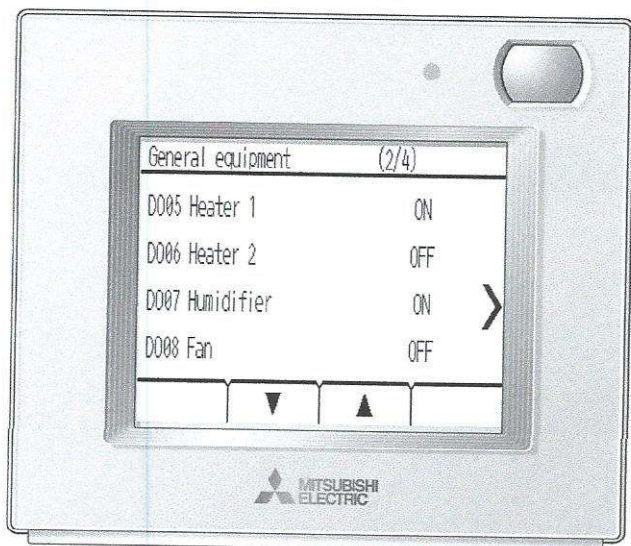
AHC has the following four functions:

- Function 1 Controls external devices based on information from external devices.
- Function 2 Controls M-NET devices based on information from external devices.
- Function 3 Controls M-NET devices based on information from M-NET devices.
- Function 4 Controls external devices based on information from M-NET devices.

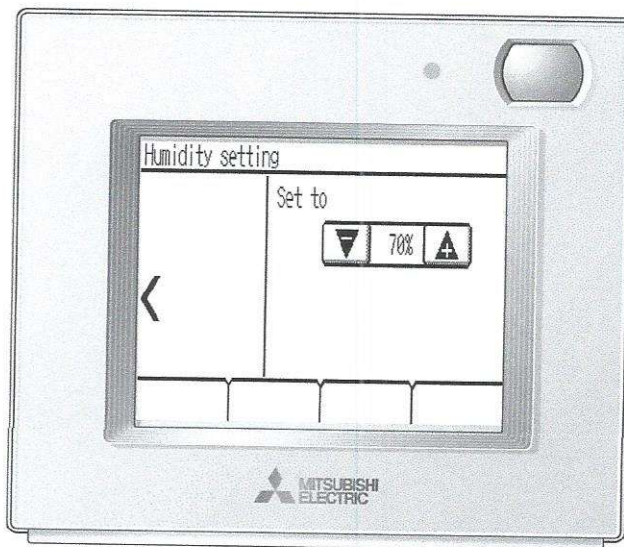
The SMART ME can display the status of external devices on the remote controller or centralized controller.

- Remote Controller requires AHC: PAR-U01MEDU-K (Smart ME Remote controller)

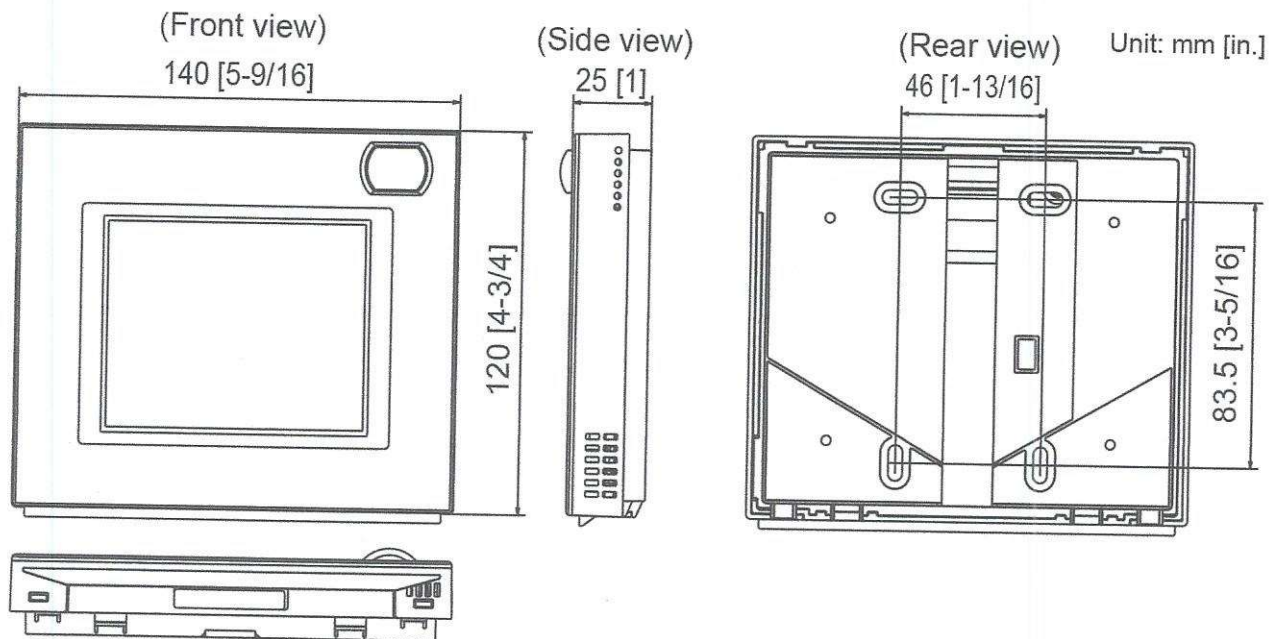
SMART ME WITH AHC: GENERAL EQUIPMENT MONITORING



SMART ME WITH AHC: HUMIDITY CONTROL APPLICATION



MODEL: PAR-U01MEDU-K - DIMENSIONS



NOTES:



COOLING & HEATING

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