

Submittal



Project Name:

AMZN GSE

Contractor: TP Mechanical

Engineer:

Architect:

Rep/Distributor: Trane

Project Detail:

Customer: AMZN GSE

Address:

City:

State:

Zip:

Submittal Date:

5/23/2023

Submitted By:

Name: Christian Melson

Company: Trane

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Phone: (513) 415-1785

Submittal Stage: For Approval

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Equipment Bill Of Material

Quantities

Qty	Model	Description	Tag
2	TAR-40MAAU	MA remote controller	CTR1-FCU-1,CTR1-FCU-2
2	PAC-UKPRC001-CN-1	Thermostat	CTR2-FCU-1,CTR2-FCU-2
2	TRUZA0181KA70NA	R410A P Series Outdoor Unit	HP-1,HP-2
2	TPEADA0181AA80A	Ceiling-Concealed (Ducted) Indoor Unit	FCU-1,FCU-2
2	WB-PA4	Wind Baffle	

Refrigerant Piping Materials

Pipe Size (inch)	Total Length (feet)	Number of Bends
1/2	0	0
1/4	0	0

Design View Piping Diagrams

Indoor Units: 1 / 1 to 1
 Capacity: 18 / 9 to 18 (100.0%)
 * Connectable capacity is not actual capacity.
 Total Pipe Length: 0.0 / 100.0 feet

Correction Factors

Temperature:	0.95	0.62
Piping Length:	1.00	1.00
Defrosting:	-	1.00
User Derate:	1.00	1.00

Total Derate: 0.92 0.60
 Additional Refrigerant: 0.00 lb
 Total Refrigerant Amount: 4.87 lb

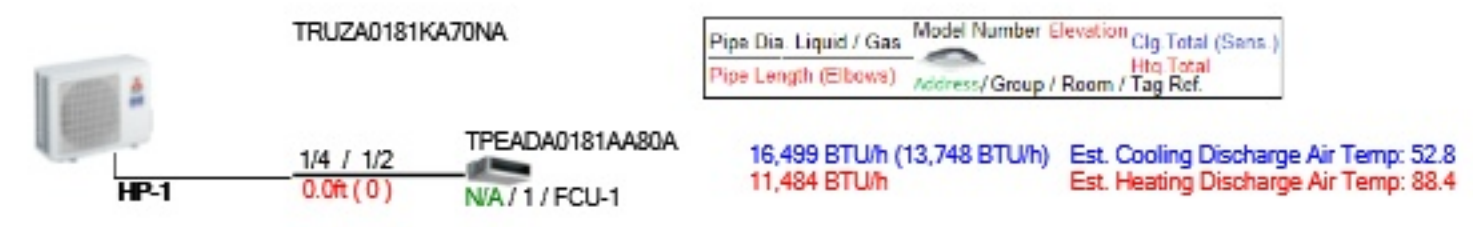
Conditions (°F)

Cooling

Indoor DB	75.0	Humidity	50.0%	Indoor WB	62.4
Outdoor DB	91.0				

Heating

Indoor DB	70.0				
Outdoor DB	1.0	Humidity	74.1%	Outdoor WB	0.2

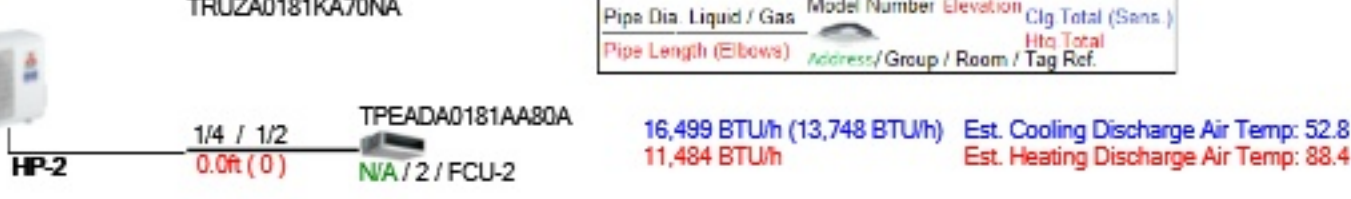


⚠ Outdoor Unit Heating Range Error: This unit is only rated to 14.0F, but derates are based upon minimum values. May need auxiliary heat.

Indoor Units: 1 / 1 to 1
 Capacity: 18 / 9 to 18 (100.0%)
 * Connectable capacity is not actual capacity.
 Total Pipe Length: 0.0 / 100.0 feet

Correction Factors
 Temperature: 0.95 0.62
 Piping Length: 1.00 1.00
 Defrosting: - 1.00
 User Derate: 1.00 1.00

Total Derate: 0.92 0.60
 Additional Refrigerant: 0.00 lb
 Total Refrigerant Amount: 4.87 lb



Pipe Dia	Liquid / Gas	Model Number	Elevation	Eq. Total (ft)	Stems

Pipe Length (Elbows)	Address/Group / Room / Tag Ref.	Disc Total

Conditions (°F)
Cooling
 Indoor DB 75.0 Humidity 50.0% Indoor WB 62.4
 Outdoor DB 91.0

Heating
 Indoor DB 70.0
 Outdoor DB 1.0 Humidity 74.1% Outdoor WB 0.2

⚠ Outdoor Unit Heating Range Error: This unit is only rated to 14.0F, but derates are based upon minimum values. May need auxiliary heat.

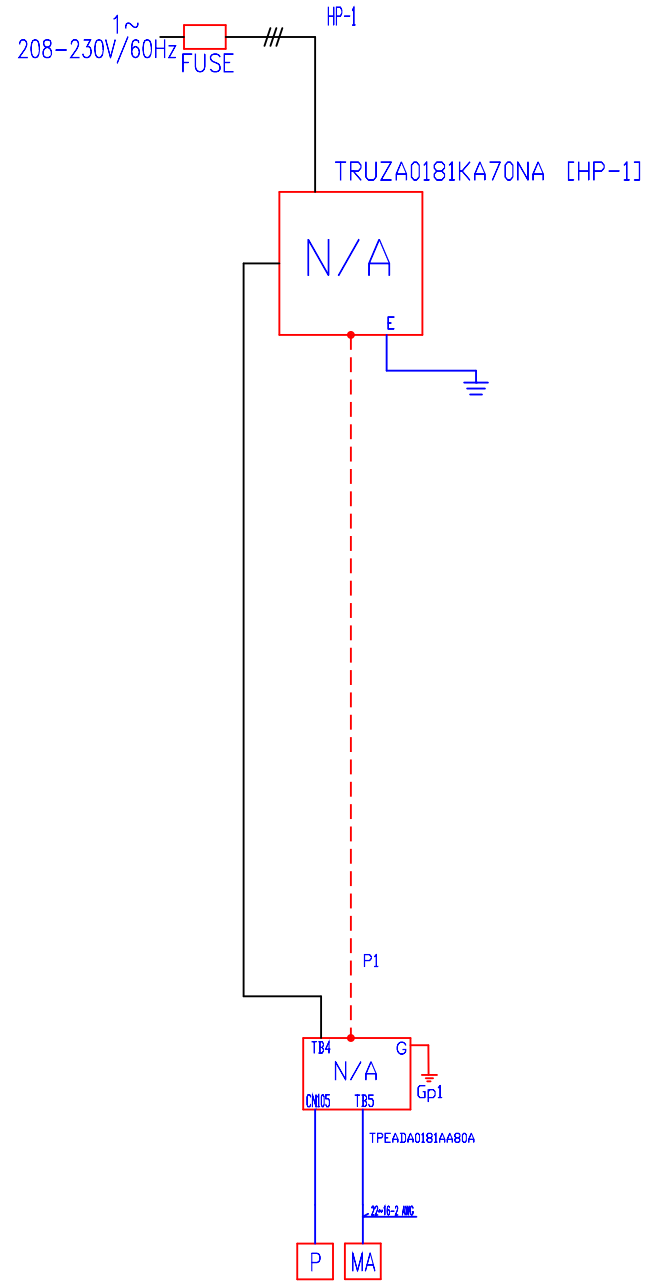
AutoCAD Piping & Wiring Diagrams

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

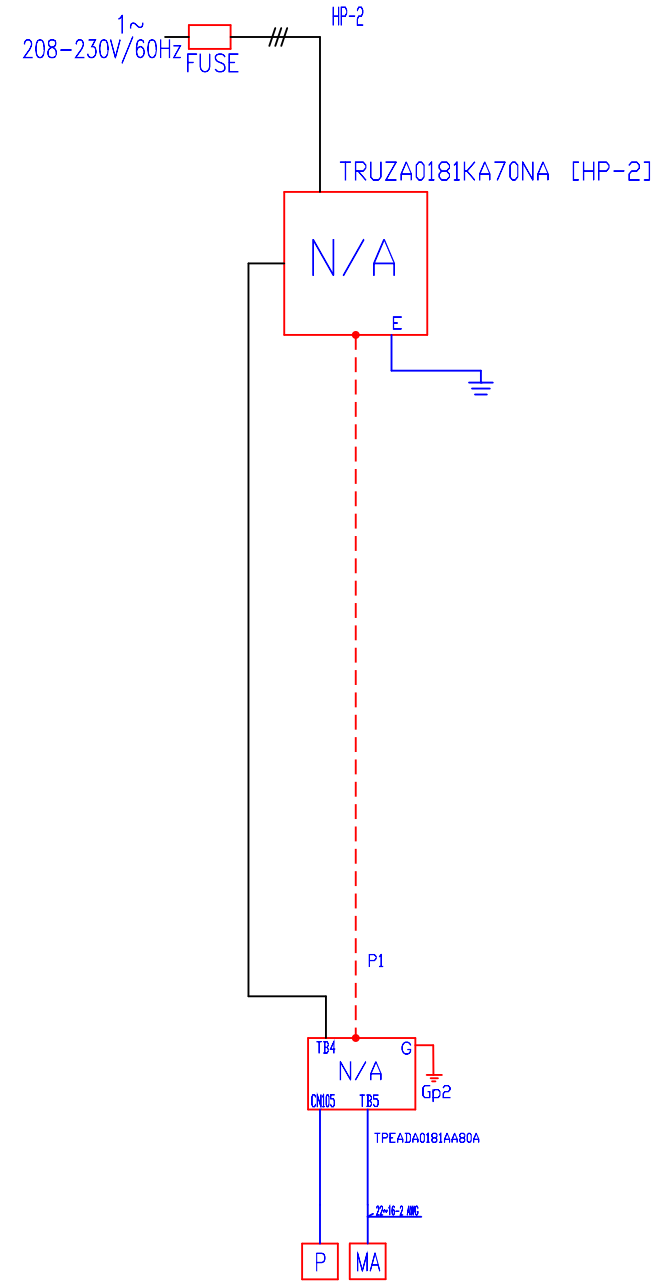
CITY MULTI
SYSTEM SCHEMATIC DWG.

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).

PIPING AND CONTROLS	
SYMBOL	LIQUID PIPE/GAS PIPE SIZE
P1	1/4 / 1/2
SYMBOL	MODEL NUMBER
MA	TAR-40MAAU
P	PAC-UKPRCO01-CN-1



FCU-1



FCU-2

Diamond System Builder
sw: 4.5.3.3
dlb: 4.5.2.5
5/23/2023
12:58 PM

REMARKS
Originator: Christian Melson
Comments:

Submittal Documents

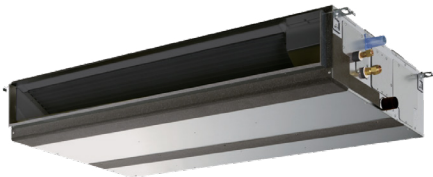
**TPEADA0181AA80A & TRUZA0181KA70NA
MID STATIC HORIZONTAL-DUCTED INDOOR UNIT
18,000 BTU/H HEAT PUMP UNIVERSAL OUTDOOR**



Job Name:

System Reference:

Date:



Indoor Unit.....TPEADA0181AA80A

Outdoor Unit.....TRUZA0181KA70NA

INDOOR UNIT FEATURES

- Unobtrusive ceiling-concealed design for short-run ductwork
- Wide ranging external static pressure (0.14-0.60 in. WG)
- Built-in condensate lift mechanism (up to 27-9/16")
- Auto fan speed mode
- Optional FB Series filter boxes for easy access and service
- Ideal for residential homes, retail shopping centers, larger classrooms, office complexes, conference rooms, ballrooms, fitness centers, and more
- Multiple control options available:
 - kumo cloud® smart device app for remote access
 - Third-party interface options
 - Wired or wireless controllers

OUTDOOR UNIT FEATURES

- Variable speed INVERTER-driven compressor
- Pre-charged with refrigerant volume for piping length up to 70 ft
- Low ambient cooling down to 0°F providing 100% capacity
- 24-hour continuous operation (cooling mode)
- High pressure protection
- Fast restart
- Superior energy and operational efficiency
- Seacoast protection*
 - External Outer Panel: Phosphate coating + Acrylic-Enamel coating
 - Fan Motor Support: Epoxy resin coating (at edge face)
 - Separator Assembly Valve Bed: Epoxy resin coating (at edge face)
 - Blue Fin treatment is an anti-corrosion treatment that is applied to the Heat exchanger coil to protect it against airborne contaminants.
 - Heat exchanger coil and base panel rated for 2,000 hours in accordance with ASTM B117 testing

*Seacoast protection standard from 2022 production

SPECIFICATIONS: TPEADA0181AA80A & TRUZA0181KA70NA

Cooling at 95°F ¹	Maximum Capacity	BTU/H	18,000
	Rated Capacity	BTU/H	18,000
	Minimum Capacity	BTU/H	8,000
	Maximum Power Input	W	1,660
	Rated Power Input	W	1,660
	Moisture Removal	Pints/h	3.7
	Sensible Heat Factor		0.77
Heating at 47°F ²	Power Factor [208V / 230V]	%	91.4 / 91.4
	Maximum Capacity	BTU/H	22,000
	Rated Capacity	BTU/H	19,000
	Minimum Capacity	BTU/H	7,800
	Maximum Power Input	W	1,750
	Rated Power Input	W	1,400
Heating at 17°F ³	Power Factor [208V / 230V]	%	92.0 / 92.0
	Maximum Capacity	BTU/H	12,700
	Rated Capacity	BTU/H	11,000
	Maximum Power Input	W	1,700
Heating at -4°F ⁵	Rated Power Input	W	1,350
	Maximum Capacity	BTU/H	9,800
Efficiency	SEER		19.9
	EER ¹		10.8
	HSPF [IV]		10.2
	COP at 47°F ²		3.9
	COP at 17°F at Maximum Capacity ³		2.1
	COP at -4°F at Maximum Capacity ⁵		2.1
	ENERGY STAR [®] Certified		No
Electrical	Voltage, Phase, Frequency		208/230, 1, 60
	Guaranteed Voltage Range	V AC	198 - 253
	Voltage: Indoor - Outdoor, S1-S2	V AC	208/230
	Voltage: Indoor - Outdoor, S2-S3	V DC	24
	Short-circuit Current Rating [SCCR]	kA	5
	Recommended Fuse/Breaker Size (Outdoor)	A	15
	Recommended Wire Size [Indoor - Outdoor]	AWG	14
	Power Supply		Indoor unit is powered by the outdoor unit
	MCA	A	2.44
	Fan Motor Full Load Amperage	A	1.95
Fan Motor Output	W	121	
Fan Motor Type		DC Motor	
Airflow Rate at Cooling, Dry	CFM	424–512–600	
Airflow Rate at Cooling, Wet	CFM	382–461–540	
Airflow Rate at Heating, Dry	CFM	424–512–600	
Sound Pressure Level [Cooling]	dB[A]	29–34–37	
Sound Pressure Level [Heating]	dB[A]	29–34–37	
External Static Pressure	in.WG	0.14–0.2–0.28–0.4–0.6	
Drain Pipe Size	In. [mm]	1-1/4 [32]	
Condensate Lift Mechanism, Maximum Distance	In. [mm]	27-9/16 [700]	
Coating on Heat Exchanger		—	
External Finish Color		Galvanized	
Unit Dimensions	W x D x H: In. [mm]	35-7/16 x 28-7/8 x 9-7/8 [900 x 732 x 250]	
Package Dimensions	W x D x H: In. [mm]	46-1/16 x 35-7/16 x 13 [1,170 x 900 x 330]	
Unit Weight	Lbs. [kg]	60 [27]	
Package Weight	Lbs. [kg]	71 [32]	
Indoor Unit Operating Temperature Range	Cooling Intake Air Temp [Maximum / Minimum]*	°F	90 DB, 72 WB / 66 DB, 61 WB
	Heating Intake Air Temp [Maximum / Minimum]	°F	77 DB / 59 DB

NOTES:

AHRI Rated Conditions (Rated data is determined at a fixed compressor speed)

¹ Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
² Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
³ Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴ Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB
⁵ Heating at -4°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -4 DB, -5 WB

*Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.
 - » Wind baffles required to operate below 23°F DB in cooling mode.
 - » Heat pump system with wind baffle: 0°F - 115°F.
 - » Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

***Blue Fin Coating Standard from 2022 production:

- PU(Y/Z)-A(12/18)NKA7 - Beginning with serial number 12U*****
- PU(Y/Z)-A(24/30/36/42)NKA7 - Beginning with serial number 12U*****

SPECIFICATIONS: TPEADA0181AA80A & TRUZA0181KA70NA

Outdoor Unit	MCA	A	11.0
	MOCP	A	28
	Fan Motor Full Load Amperage	A	0.5
	Fan Motor Output	W	46
	Airflow Rate [Cooling / Heating]	CFM	1590 / 1590
	Refrigerant Control		LEV
	Defrost Method		Reverse Cycle
	Coating on Heat Exchanger		Blue Fin Coating***
	Sound Pressure Level, Cooling ¹	dB(A)	44
	Sound Pressure Level, Heating ²	dB(A)	46
	Compressor Type		INVERTER-driven twin rotary
	Compressor Model		SNB130FQCMC-L1
	Compressor Rated Load Amps	A	7
	Compressor Locked Rotor Amps	A	12.0
	Compressor Oil [Type // Charge]	oz.	FV50S // 16
	External Finish Color		Ivory Munsell 3Y 7.8/1.1
	Base Pan Heater		N/A
	Unit Dimensions	W x D x H: In. [mm]	31-13/16 (2+7/16) x 11-13/16 x 24-13/16 [809 (+62) x 300 x 630]
	Package Dimensions	W x D x H: In. [mm]	37-1/16 x 16-3/16 x 27-7/16 [941 x 411 x 697]
	Unit Weight	Lbs. [kg]	100 [45]
Package Weight	Lbs. [kg]	112 [51]	
Outdoor Unit Operating Temperature Range	Cooling Air Temp [Maximum / Minimum]*	°F	115 DB / 0 DB
	Heating Air Temp [Maximum / Minimum]	°F	70 DB, 59 WB / 12 DB, 14 WB
	Heating Thermal Lock-out / Re-start Temperatures**	°F	8 / 12
Refrigerant	Type		R410A
	Maximum Charge Quantity	Lbs, oz	4.0, 14.0
	Initial Charge Quantity	Ft. [m]	70.0 [21.0]
	Additional Refrigerant Charge Per Additional Piping Length	oz./Ft. [g/m]	0.2 [19]
Piping	Gas Pipe Size O.D. [Flared]	In.[mm]	1/2 [12.7]
	Liquid Pipe Size O.D. [Flared]	In.[mm]	1/4 [6.35]
	Maximum Piping Length	Ft. [m]	100 [30]
	Maximum Height Difference	Ft. [m]	100 [30]
	Maximum Number of Bends		15

NOTES:

AHRI Rated Conditions
 (Rated data is determined at a fixed compressor speed)

¹ Cooling (Indoor // Outdoor)	°F	80 DB, 67 WB // 95 DB, 75 WB
² Heating at 47°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 47 DB, 43 WB
³ Heating at 17°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 17 DB, 15 WB

Conditions

⁴ Heating at 5°F (Indoor // Outdoor)	°F	70 DB, 60 WB // 5 DB, 4 WB
⁵ Heating at -4°F (Indoor // Outdoor)	°F	70 DB, 60 WB // -4 DB, -5 WB

*Indoor/Outdoor Unit Operating Temperature Range (Cooling Air Temp [Maximum / Minimum]):

- Applications should be restricted to comfort cooling only; equipment cooling applications are not recommended for low ambient temperature conditions.
 - » Wind baffles required to operate below 23°F DB in cooling mode.
 - » Heat pump system with wind baffle: 0°F - 115°F.
 - » Refer to wind baffle documentation for further information.

**Outdoor Unit Operating Temperature Range (Cooling Thermal Lock-out / Re-start Temperatures; Heating Thermal Lock-out / Re-start Temperatures):

- System cuts out in heating mode to avoid thermistor error and automatically restarts at these temperatures.

***Blue Fin Coating Standard from 2022 production:

- PU(Y/Z)-A(12/18)NKA7 - Beginning with serial number 12U*****
- PU(Y/Z)-A(24/30/36/42)NKA7 - Beginning with serial number 12U*****

INDOOR UNIT ACCESSORIES: TPEADA0181AA80A

Control Interface	3-Pin Connector	PAC-715AD
	Airzone ZBS Wired Blueface Principal Controller White	AZZBSBLUEFACECB
	Airzone ZBS Wired Blueface Principal Controller White	AZZBSBLUEZEROCB
	Airzone ZBS Wired Lite Controller White	AZZBSLITECB
	Airzone ZBS Wireless Lite Controller White	AZZBSLITERB
	Airzone ZBS Wireless Think Controller White	AZZBSTHINKRB
	BACnet® and Modbus® Interface	PAC-UKPRC001-CN-1
	CN24 Relay Kit	CN24RELAY-KIT-CM3
	IT Extender	PAC-WHS01IE-E
	kumo station® for kumo cloud®	TAC-WHS01HC-E
	Remote Operation Adapter†	PAC-SF40RM-E
	Thermostat Interface	PAC-US444CN-1
	Thermostat Interface	PAC-US445CN-1
	USNAP Adapter	PAC-WHS01UP-E
Remote Sensor	Wireless Interface for kumo cloud®	PAC-USWHS002-WF-2
	Flush Mount Remote Temperature Sensor	PAC-USSEN002-FM-1
	Flush Mount Temperature Sensor	PAC-USSEN001-FM-1
	Remote Temperature Sensor	PAC-SE41TS-E
Wired Remote Controller	Wireless temperature and humidity sensor for kumo cloud®	PAC-USWHS003-TH-1
	Deluxe Wired MA Remote Controller†	TAR-40MAAU
	Simple Ductless Wired Remote Controller	PAC-SDW01RC-1
	Simple MA Remote Controller†	TAC-YT53CRAU-J
Wireless Remote Controller	Touch MA Controller†	TAR-CT01MAU-SB
	kumo touch™ RedLINK™ Wireless Controller	MHK2
	Lockdown bracket for remote controller	RCMKP1CB
	Wireless MA Receiver	PAR-SR32MA-E
Condensate	Wireless MA Remote Controller	TAR-FL32MA-E
	Blue Diamond (Advanced) Mini Condensate Pump w/ Reservoir & Sensor (208/230V) [recommended]	X87-721
	Blue Diamond (MegaBlue Advanced) Condensate Pump w/ Reservoir & Sensor	X87-835
	Blue Diamond Sensor Extension Cable — 15 Ft.	C13-103
Control Wire	Refco Condensate Pump (100-240 VAC) up to 120,000 BTU/H	COMBI
	20/2PR, 1PR shielded + 1PR plenum wire for Airzone, 100 ft reel	CW2042S2-100
Disconnect Switch	20/2PR, shielded + 1PR plenum wire for Airzone, 500 ft reel	CW2042S2-500
	(30A/600V/UL) [fits 2" X 4" utility box] - Black	TAZ-MS303
Filter Box	(30A/600V/UL) [fits 2" X 4" utility box] - White	TAZ-MS303W
	Filter Box with MERV 13 Filter	FBM2-2-A
Lineset	100' x 1/4" x 100' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-100
	15' x 1/4" x 15' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-15
	30' x 1/4" x 30' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-30
	50' x 1/4" x 50' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-50
	65' x 1/4" x 65' / 1/2" Lineset (Twin-Tube Insulation)	MLS141212T-65

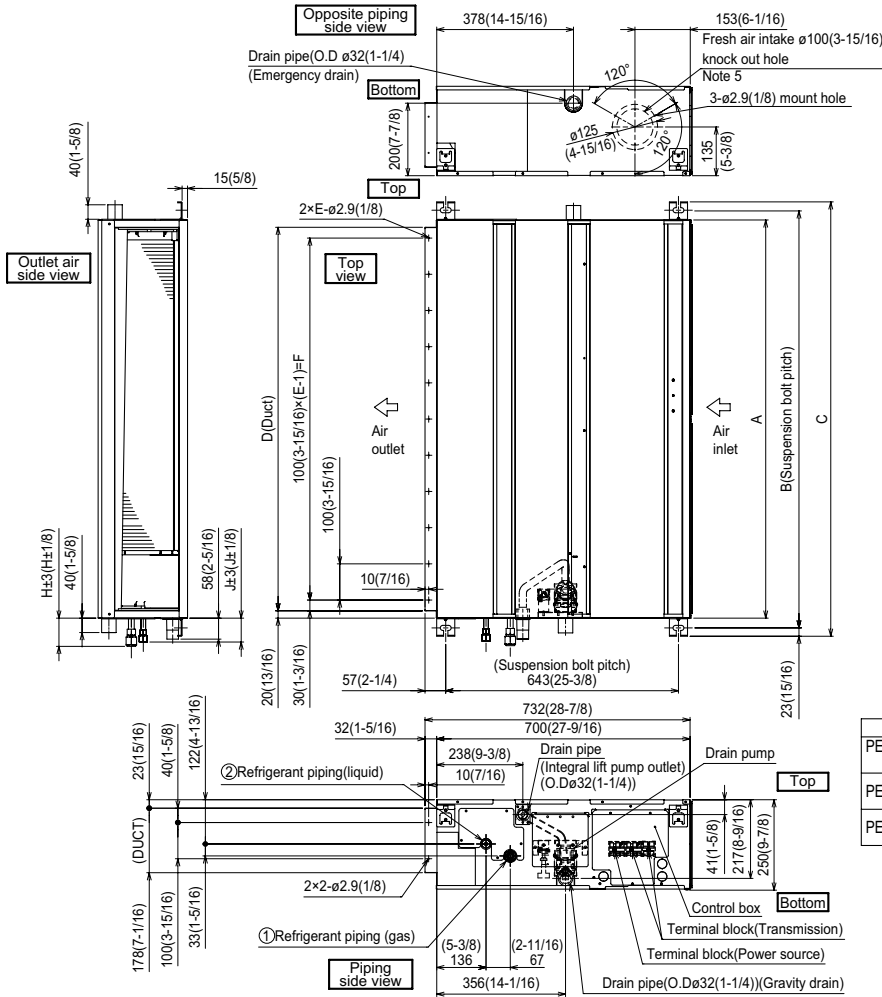
NOTES:

†PAC-SF40RM-E (Unable to use with wireless remote controller)

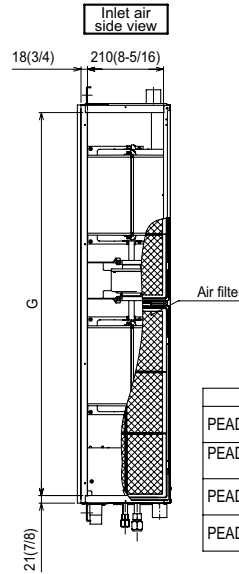
OUTDOOR UNIT ACCESSORIES: TRUZA0181KA70NA

Air Outlet Guide	Air Outlet Guide	PAC-SJ07SG-E
Centralized Drain Pan	Centralized Drain Pan	PAC-SG63DP-E
	Drain Pan	PAC-SG64DP-E
Control/Service Tool	Control/Service Tool	PAC-SK52ST
	M- & P-Series Maintenance Tool Cable Set	M21EC0397
	USB/UART Conversion Cable (Required for all laptop connection)	M21EC1397
Drain Socket	Drain Socket	MAC-871DS
Hail Guards	Hail Guard	HG-A5
M-NET Converter	M-NET Converter	PAC-SJ96MA-E
Mini-Split Wire	14 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S144-250
	14 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S144-50
	16 Gauge, 4 wire MiniSplit Cable—250 ft. roll	S164-250
	16 Gauge, 4 wire MiniSplit Cable—50 ft. roll	S164-50
Mounting Pad	Condensing Unit Mounting Pad: 16" x 36" x 3"	ULTRILITE1
Stand	18" Single Fan Stand	QSMS1801M
	24" Single Fan Stand	QSMS2401M
	Condenser Wall Bracket	QSWB2000M-1
	Condenser Wall Bracket - Stainless Steel Finish	QSWBSS
	Outdoor Unit Stand — 12" High	QSMS1201M
Wind Baffle	Front Wind Baffle	WB-PA4
	Rear Wind Baffle	WB-RE4
	Side Advanced Wind Baffle	WB-SD4

INDOOR UNIT DIMENSIONS: TPEADA0181AA80A



- Notes
1. Use an M10 screw for the suspension bolt (field supply).
 2. Keep the service space for maintenance at the bottom.
 3. This drawing is for PEAD-A09-12-15-18-24-30AA8 models, which have 2 fans. PEAD-A36AA8 model has 3 fans.
 4. If the inlet duct is used, remove the air filter (supplied with the unit), then install the filter (field supply) at the suction side.
 5. Heat air to 0°C (32°F) or higher when taking fresh air with a fresh air intake.



Unit:mm(in.)

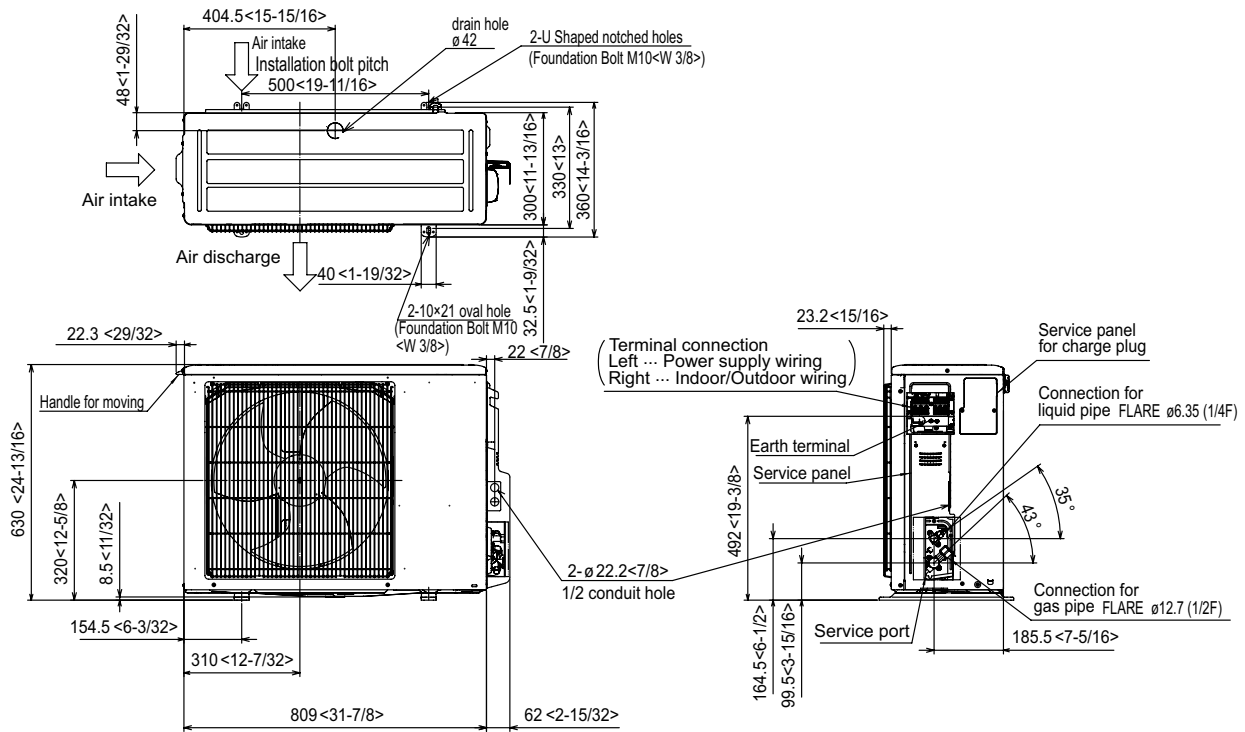
Model	J	①Gas pipe	②Liquid pipe
PEAD-A09AA8	62 (2-1/2)	$\phi 9.52$ (3/8)	$\phi 6.35$ (1/4)
PEAD-A12,15,18AA8	62 (2-1/2)	$\phi 12.7$ (1/2)	$\phi 6.35$ (1/4)
PEAD-A24,30AA8	66 (2-5/8)	$\phi 15.88$ (5/8)	$\phi 9.52$ (3/8)
PEAD-A36AA8			

Unit:mm(in.)

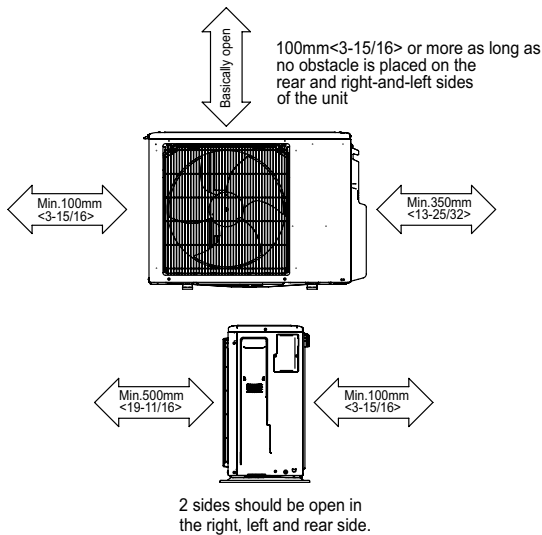
Model	A	B	C	D	E	F	G	H
PEAD-A09,12,15,18AA8	900 (35-7/16)	954 (37-9/16)	1000 (39-3/8)	860 (33-7/8)	9	800 (31-1/2)	858 (33-13/16)	72 (2-7/8)
PEAD-A24,30AA8	1100 (43-5/16)	1154 (45-7/16)	1200 (47-1/4)	1060 (41-3/4)	11	1000 (39-3/8)	1058 (41-11/16)	78 (3-1/8)
PEAD-A36AA8	1400 (55-1/8)	1454 (57-1/4)	1500 (59-1/16)	1360 (53-9/16)	14	1300 (51-3/16)	1358 (53-1/2)	

OUTDOOR UNIT DIMENSIONS: TRUZA0181KA70NA

Unit: mm<in>



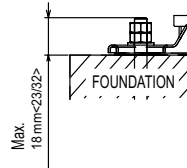
Free space around the outdoor unit (basic example)



FOUNDATION BOLTS

Please secure the unit firmly with 4 foundation (M10<W3/8>) bolts. (Bolts, washers and nut must be purchased locally).

<Foundation bolt height>



PIPING-WIRING DIRECTION

Piping and wiring connection can be made from the rear direction only.

WB-PA4 Front Wind Baffle



Job Name:

System Reference:

Date:



GENERAL FEATURES

- Front Wind Baffles allow outdoor units to operate at full capacity down to the temperature ranges shown in the table below.
- Prevents wind from reversing outdoor fan rotation when unenergized.
- Durable and low maintenance construction.

PLEASE NOTE

- Install outdoor units with the back surface facing wall side to eliminate the effects of external wind
- Outdoor units should not be installed in an orientation or site where the wind blows directly at the back of the unit
- Wind baffle should not be used where there is any obstacle at either side or above the outdoor unit as the discharged air will be blocked
- Refer to outdoor unit for detailed installation instructions

SPECIFICATIONS

Exterior			
Color	Surface Treatment	Material	Weight
Matches P-Series Outdoor Unit (Ivory Munsell 3Y 7.8/1.1)	Polyester Powder Coating	Alloy Hot-Dip Zinc Coated Carbon Steel Sheet	7 Lbs. 7.9 Oz.

APPLICATION

- The Wind Baffles are used to extend the cooling temperature operation range of the TRUY, TRUZ and MX models
- The information below outlines which wind baffles to utilize per required operation range
- Please refer to the installation manual of the appropriate outdoor unit for correct installation requirements

COOLING TEMPERATURE OPERATION RANGE WITH WIND BAFFLES

Model Series	Operation Range Without Wind Baffles	Front Wind Baffles	Front + Advanced Side + Advanced Rear Wind Baffles
TRUZ	23°F - 115°F	0°F	N/A
TRUY	23°F - 115°F	0°F	-40°F
MX	23°F - 115°F	0°F	N/A

**If unit is exposed without wall surfaces surrounding for protection from wind, then side and rear wind baffles will be required. Please refer to installation dimensions and outdoor unit installation manual for appropriate requirements.

COMPATIBILITY

Single Zone	WB-PA4 (Qty)
TRUYA0121KA70(N/B)A	1
TRUYA0181KA70(N/B)A	1
TRUZA0121KA70(N/B)A	1
TRUZA0181KA70(N/B)A	1

APPENDIX - PREVIOUS GENERATION COMPATIBILITY

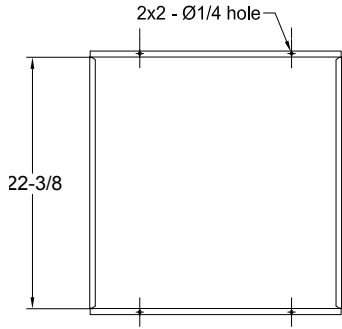
Models	Front Wind Baffles			Advanced Side Wind Baffles			Advanced Rear Wind Baffles		
	WB-PA3	WB-PA4	WB-PA5	WB-SD4	WB-SD5	WB-SD6	WB-RE4	WB-RE5	WB-RE6
TUMYH0361AK41NA	2								
TUMYH0481AK41NA	2								

COOLING TEMPERATURE OPERATION RANGE WITH WIND BAFFLES

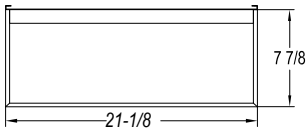
Model Series	Operation Range Without Wind Baffles	Front Wind Baffles	Front + Advanced Side + Advanced Rear Wind Baffles
TUMY*	23°F - 115°F	5°F	N/A

*Operation range varies based on indoor unit connected, refer to service manual for applicable indoor units

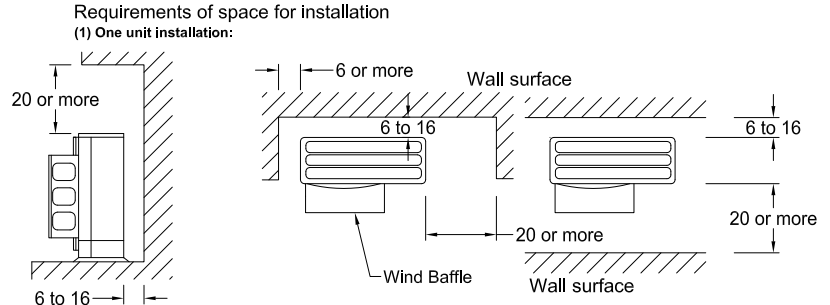
DIMENSIONS: WB-PA4



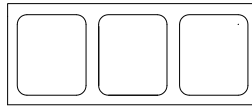
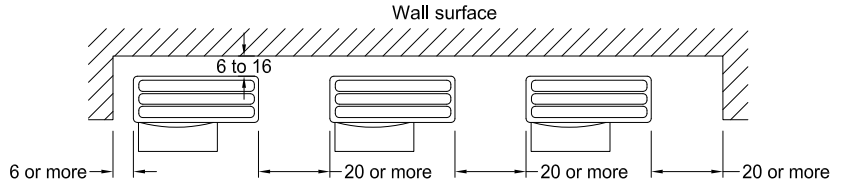
Back View



Side View



(2) Multiple Unit Installation: Installation of multiple units in series must be no more than five units.



Top View

ALL DIMENSIONS IN INCHES
ALL DIMENSIONS $\pm \frac{1}{32}$ "

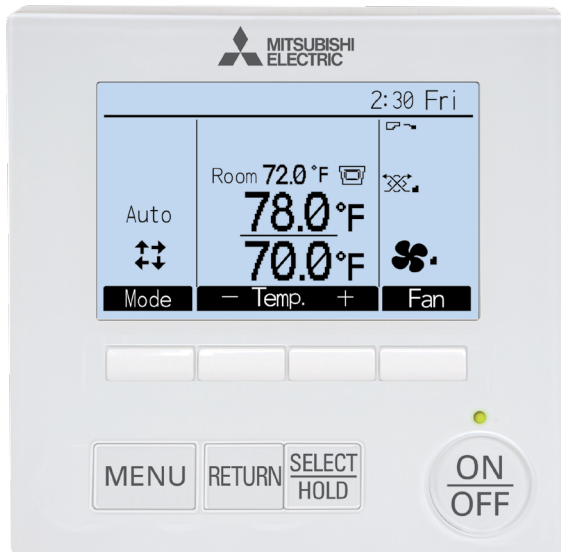
TAR-40MAAU Deluxe MA Remote Controller



Job Name:

System Reference:

Date:



FULL VIEW



BASIC VIEW

OPERATION/DISPLAY

- ON/OFF
 - Switches between ON and OFF.
- Operation mode switching
 - Switches between Cool/Dry/Fan/Auto/Setback/Heat.
- Hold
 - Switches between enable and disable the Hold function.
 - If the Hold function is enable, the following functions will be prohibited.
 - ON/OFF timer/Schedule (Weekly timer) /Auto return/Auto-OFF timer
- Temperature setting
 - Changes the set temperature.
 - Set temperature range varies depending on the indoor unit model.
- Fan speed setting
 - Changes fan speed.
 - Available fan speeds vary depending on the model.
- Air flow direction setting
 - Changes airflow direction.
 - Available airflow directions vary depending on the model.
- Louver setting
 - Switches between louver ON/OFF.
- Ventilation equipment control
 - Interlocked setting and interlocked operation setting with City Multi Lossnay units can be performed.
 - The Stop/Low/High settings of the ventilation equipment can be controlled.
- Main display mode setting
 - The Main display can be displayed in two different modes: "Full" and "Basic."
- B&W inversion
 - The colors of the display can be inverted, turning white background to black and black characters to white.
- Clock *2
 - Date (year/month/day) and time (hour/minute) can be set.
 - The set time as well as the day of the week will be displayed on the Main display.
 - It is also possible for the time to not display on the main display.
 - The clock can be displayed in 12-hour format (AM/PM before or after the time) and 24-hour format.
- Daylight saving time
 - The start/end time for daylight saving time can be set.
 - The daylight saving time function will be activated based on the setting contents.
- Room temp. display
 - The room temperature display can be enabled or disabled.
- Error information
 - When an error occurs, an error code and the unit address appear.
 - The air-conditioning unit model, serial number, and contact number can be set to appear when an error occurs. (The above information needs to be entered in advance.)
- Filter information
 - A filter sign will appear when it is time to clean the filter.
- Remote controller information
 - The version of the remote controller can be checked.

*1 This function is active only for the units that support the function.

*2 The clock is accurate within 45 seconds per month (at the temperature of 77°F [25°C]). The clock is backed up for 3 days.

TAR-40MAAU

SCHEDULE AND TIMER SETTING

- Timer
 - ON/OFF timer
 - Turns ON and OFF daily at a set time.
 - Time can be set in 5-minute increments.
 - It is also possible to set the ON time only or the OFF time only.
 - Auto-OFF timer
 - Turns off the unit after a certain period of operation.
 - Operation time can be set to a value from 30 to 240 minutes in 10-minute increments.
- Weekly timer
 - Weekly ON/OFF times and set temperatures can be set.
 - Time can be set in 5-minute increments. Up to 8 schedule patterns can be set per day of the week.
 - Not valid when the ON/OFF timer is set.

RESTRICTION SETTINGS

- Allows/disallows local operation
 - The following operation can be prohibited by applying certain settings on the centralized controller: ON/OFF, operation mode, set temperature, filter sign reset, air direction, fan speed and timer.
 - While an operation is prohibited, the operation icon lights up (only on the Main display in the "Full" mode).
- Operation lock
 - The following operations can be prohibited: Sensing Location, ON/OFF, Mode, Set temp., Menu, Fan, Louver, Vane, or Hold
- Temperature range restriction
 - The room temperature range for each operation mode can be restricted.
- Auto return
 - The units operate at the preset temperature after a designated period.
 - Time can be set to a value from 30 to 120 minutes in 10-minute increments.
 - Not valid when the temperature setting range is restricted.
- Password
 - Administrator password (required for schedule setting etc.) and Maintenance password (required for test run and function setting etc.) can be set.

MISCELLANEOUS ITEMS

- Language Selection
 - Select the display language from the following 3 languages.
 - English, French, Spanish
- Brightness Contrast
 - The brightness of the LCD can be adjusted. The contrast of the LCD can be adjusted.
- Manual Vane Angle *1
 - Fixes the vane position for each air outlet.
- Service *1
 - Contains Test run, Function setting, Request code, and Error history.
- 3D i-see Sensor
 - Settings for 3D i-see Sensor can be made.

ENERGY SAVING OPTION

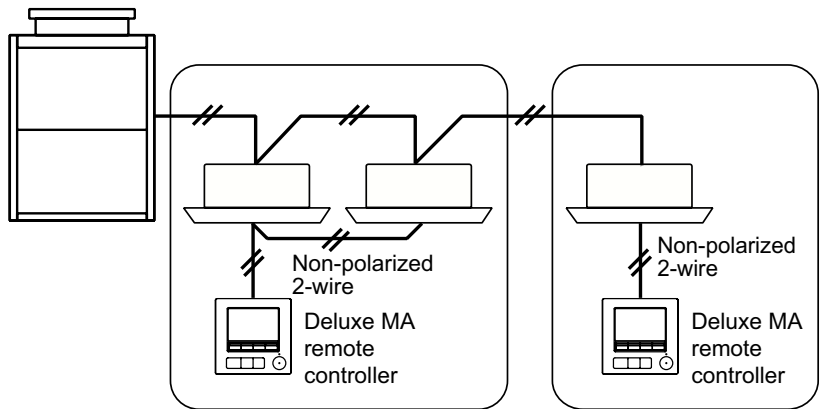
- No occupancy energy save
 - Requires 3D i-see sensor on applicable indoor units
- Room Occupancy energy save
 - Requires 3D i-see sensor on applicable indoor units
- No occupancy Auto-OFF
 - Requires 3D i-see sensor on applicable indoor units
- Setback Mode

*1 This function is active only for the units that support the function.

*2 The clock is accurate within 45 seconds per month (at the temperature of 77°F [25°C]). The clock is backed up for 3 days.

SYSTEM EXAMPLE

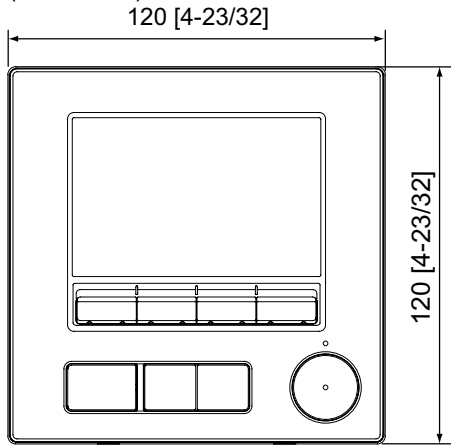
*When a TAR-40MAAU is connected to a group, no other MA remote controllers can be connected to the same group.



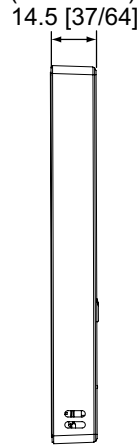
TAR-40MAAU

DIMENSIONS

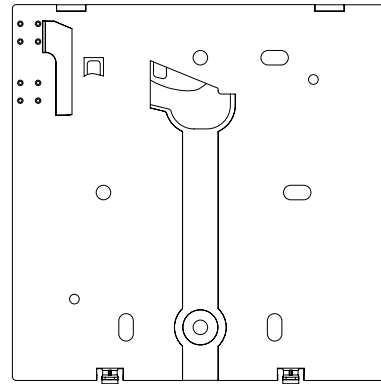
(Front view)



(Side view)



(Rear view)



Unit: mm [in.]

COMPATIBILITY CHART

CITY MULTI®	Nv-Series	P-Series
TPMFYP*BM Yes	FKS MAC-334	TPCA Yes
TPWFYP*BU Yes	WST MAC-334	TPEAD Yes
TPEFYP*MA Yes	WPH MAC-334	TPKA Yes
TPEFY*MH Yes	MSY-HM MAC-334	TPLA Yes
TPEFY*MS Yes	WMT MAC-334	TPVA Yes
TPMFY*BM Yes	AMT Yes	
TPLFY*EM Yes	DKS Yes	
TPLFY*FM Yes	CKS Yes	
TPKFY*LM Yes	UKS MAC-334	
PCFY*VKM Yes	Note: MAC-334 indicates that the unit requires a MAC-334IF-E Adapter in order to use the TAR-40MAAU	
TPCFY*KM Yes		
TPFFY*CS ¹ Yes		
TPFFY*RE Yes		
TPVFY*AM Yes		
TPKFY*BM Yes		
TPKFY*HM Yes		

SPECIFICATIONS

Product size (W x H x D)	In. (mm)	4 3/4 x 4 3/4 x 0.57 (120 x 120 x 14.5)
Net Weight	Lbs. (kg)	9/16 (0.25)
Rated Power Supply Voltage		12 VDC (supplied from indoor units)
Power Consumption	W	0.3
Usage Environment		Temperature: 0 to 40° C (32 to 104° F) Humidity: 30 to 90%RH (with no condensation)
Material	Panel	PMMA
	Main body	PC + ABS
Sound Pressure Level	dB(A)	<70 [A-weighted sound pressure level]

¹ Per Machinery Directive 2006/42/EC

Job Name:

System Reference:

Date:

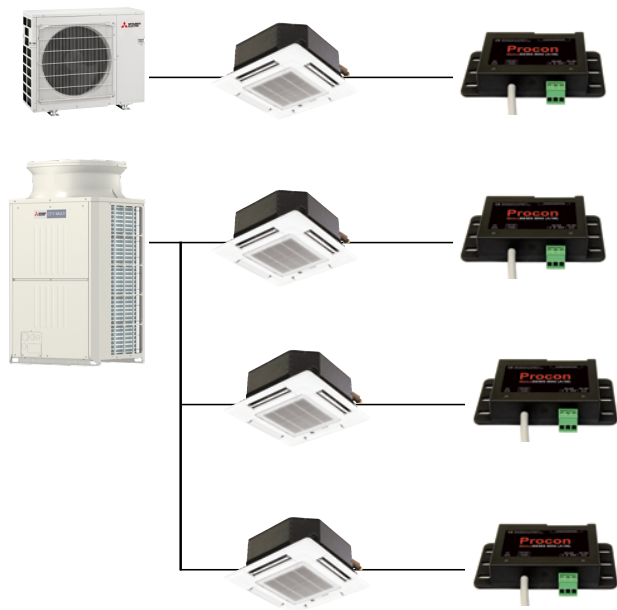
PROCON MELCOBEMS MINI (A1M)



SPECIFICATIONS

- Allows for a third party building management system to control a Mitsubishi Electric CITY MULTI®, M-Series, or P-Series indoor unit
- One MelcoBEMS MINI (A1M) per indoor unit
- Indoor Unit Connection: CN105 – IT Terminal
- 12VDC power from indoor unit CN105 Connector
- Compatible with MAC-333IF connector CN505 IT *requires additional 12VDC power supply
- Communication protocols supported:
 - BACnet® MSTP (RS-485) with addressing 1-127
 - MODBUS RTU (RS-485) with addressing 1-247
- LED light notification status of valid communication between:
 - Procon and Indoor unit
 - Procon and BACnet®/MODBUS networks
- Approximate cable length is 37 in. (940 mm)
- Dimensions: 3.74 x 2 x 0.75 in. (95 x 51 x 19 mm)
- Weight: 3.0 oz (85 g)

SYSTEM DIAGRAM



MODBUS POINTS TABLE

Object Type	Object Name
Commandable Points	ON/OFF
	Mode
	Setpoint
	Fan Speed
	Air Direction
Monitor Only Points	Fault Codes
	Room Temperature

BACnet® POINTS TABLE

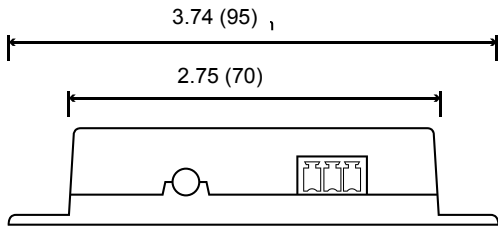
Object Type	Object Name
Commandable Points	Drive OFF/ON Setup
	Setpoint
	Mode Setup
	Fan Speed Setup
	Air Direction Setup
	Temperature Units
Monitor Only Points	Drive OFF/ON State
	Mode State
	Fan Speed State
	Air Direction State
	Inlet Temperature
	Fault Code

MODBUS POINTS TABLE

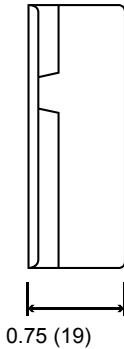
Configurable Settings	
Register Name	Modicon Address
Modbus Slave ID	40005
BACnet® Station ID	
Modbus RS-485 Baud Rate	40006
BACnet® RS-485 Baud Rate	
RS-485 Parity Type	40007
Drive On/Off	40008
Room Temperature [READ ONLY]	40009
Fault Code (hex) [READ ONLY]	40010
Firmware Version [READ ONLY]	40011
Modbus Comms Counter [READ ONLY]	40012
Fault Code (decimal) [READ ONLY]	40013
System Type Detected [READ ONLY]	40014
Deadband Enabled State [READ ONLY]	40015
BMS Room Temperature (signed)	40016
BMS Room Temperature	40017
BMS Virtual Setpoint	40018
Deadband Heating Setpoint	40019
Deadband Cooling Setpoint	40020
BACnet® Device Instance (most significant 16 bits)	40273
BACnet® Device Instance (least significant 16 bits)	40274
BACnet® Max Master	40275
BACnet® Max Info Frames	40276
BACnet® APDU Timeout	40277
BACnet® APDU Retries	40278

DIMENSIONS

Front View

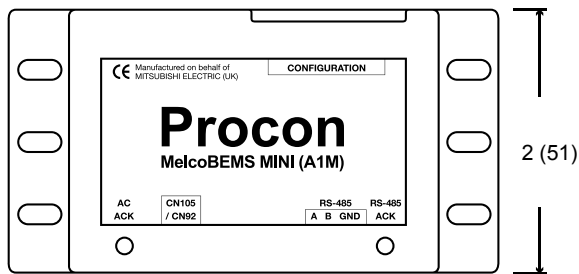


Side View



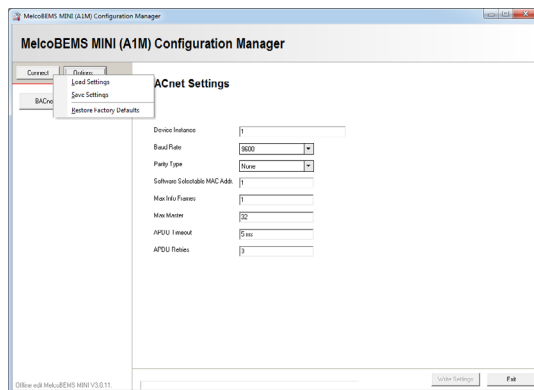
Units: in. (mm)

Top View



CONFIGURATION TOOL: MELCOBEMS MINI V1.0.1.0B.EXE

- Software downloadable from MyLinkDrive.com
- Software tool to setup BACnet® setting through Modbus Points Table
- Requires field supplied part: USB to RS-485 adapter



USB to RS-485

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

A-Control Disconnect Switch



Catalog #: TAZ-MS303

UPC# 07847702032

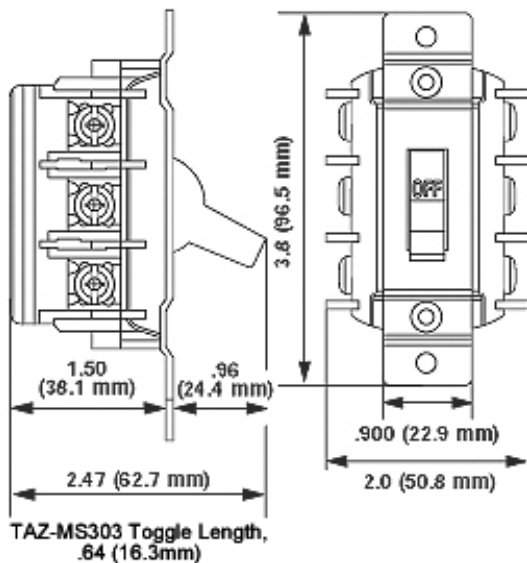
30 Amp, 600 Volt, Toggle Three-pole AC Switch, Industrial Grade, Non-grounding, Side Wired, - Black

Product Features:

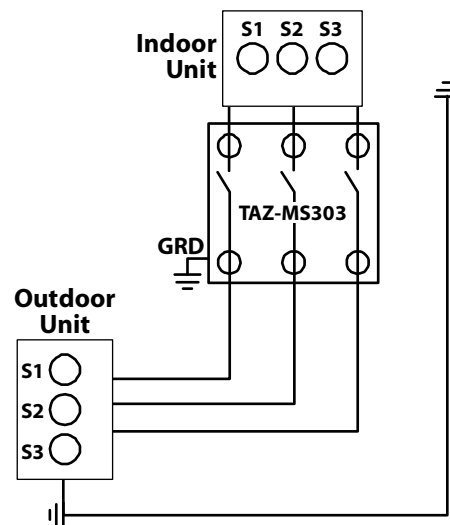


Three-pole

- Ground: Non-grounding
- Amperage: 30 Amp
- Voltage: 600 Volt
- HP Rating: 3HP-120V 7-1/2HP-240V 15HP-480V 20HP-600V
- Termination: Side
- Actuator Material: Valox
- Body Material: Rynite
- Strap Material: Nickel-plated brass
- Color: Black
- Standards and Certifications: UL/CUL
- Warranty: 10 year limited
- Installation: 2" x 4" electrical wall box with switch cover plate (by others)



**Wiring Diagram
3-Pole**

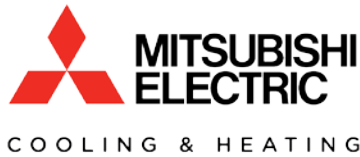


SPECIFICATION SUBMITTAL

JOB NAME: <input type="text"/>	CATALOG NUMBERS: TAZ-MS303	Use with: <input type="text"/>
JOB NUMBER: <input type="text"/>	<input type="text"/>	<input type="text"/>

Specifications subject to change without notice
Effective: 10/2/2006

Warranty Document



MITSUBISHI ELECTRIC US, INC.
Cooling & Heating
1340 Satellite Boulevard
Suwanee, GA 30024

LIMITED WARRANTY STATEMENT

Mitsubishi Electric P-Series Split Air-conditioner and Heat-pump Systems

Subject to the terms and conditions of this Limited Warranty, the Cooling & Heating Division of MITSUBISHI ELECTRIC US, INC. ("MEUS") warrants to the original owner of this P-Series product if purchased on or after **April 1, 2015** from a licensed HVAC contractor and installed by such contractor in the continental United States, Alaska and Hawaii, that:

- A. The parts are warranted for a period of five (5) years to the original owner of the System.** If any parts should prove defective due to improper workmanship and/or material for a period of five (5) years from the date of installation, MEUS will replace any defective part without charge for the part. Replacement parts are warranted for the remainder of the original 5-year warranty period. Parts used for replacement may be of like kind and quality and may be new or remanufactured. Defective parts must be made available to MEUS in exchange for the replacement parts and become the property of MEUS.
- B. The compressor is warranted for a period of seven (7) years to the original owner of this System.** If the compressor should prove defective due to improper workmanship and/or material for a period of seven (7) years from the date of installation, MEUS will replace the defective compressor without charge for the compressor. Replacement compressors are warranted for the remainder of the original 7-year warranty period. Compressors used for replacement may be of like kind and quality and may be new or remanufactured. Defective compressors must be made available to MEUS in exchange for the replacement compressor and become the property of MEUS.
- C. Notwithstanding the foregoing, if the System is installed and registered within 90 days from installation, the parts and compressor will be warranted for a period of 10 years to the original owner.** Specifically, if any parts and/or the compressor should prove defective due to improper workmanship and/or material for a period of ten (10) years from the date of installation, MEUS will replace any defective parts or compressor without charge for the part or compressor. The replacement parts and/or compressor are warranted for the remainder of the original 10-year warranty period. Parts and/or compressors used for replacement may be of like kind and quality and may be new or remanufactured. Defective parts and/or compressors must be made available to MEUS in exchange for the replacement parts and become the property of MEUS.
- D. Notwithstanding the foregoing, if the System is installed by an MEUS DIAMOND CONTRACTOR in a residential single-family home and registered within 90 days from installation, the parts and compressor will be warranted for a period of 12 years to the original owner, so long as the original owner resides in the home.** Specifically, if any parts and/or the compressor should prove defective due to improper workmanship and/or material for a period of twelve (12) years from the date of installation, MEUS will replace any defective parts or compressor without charge for the part or compressor. The replacement parts and/or compressor are warranted for the remainder of the original 12-year warranty period. Parts and/or compressors used for replacement may be of like kind and quality and may be new or remanufactured. Defective parts and/or compressors must be made available to MEUS in exchange for the replacement parts and become the property of MEUS.
- E. NO LABOR.** These limited warranties do NOT include labor or any other costs incurred for service, maintenance, repair, removing, replacing, installing, complying with local building and electric codes, shipping or handling, or replacement of the System, compressors or any other parts. For items that are designed to be maintained or replaced by the original owner, the original owner is solely responsible for all labor and other costs of maintaining, installing, replacing, disconnecting or dismantling the System and parts (such as filters or belts) in connection with owner-required maintenance. Air filter cleaning and/or replacement for each applicable indoor unit are owner-required maintenance, and labor for this procedure is not covered under warranty. Please consult the applicable technical documentation for air filter cleaning and other maintenance procedures.
- F. PROPER INSTALLATION.** This Limited Warranty applies only to Systems that are installed by contractors who are licensed for HVAC installation under applicable local and state law, and who install the Systems in accordance with (i) all applicable building codes and permits: (ii) MEUS's installation and operation instructions: and (iii) good trade practices.

- G. REGISTRATION.** To receive certain benefits under this Limited Warranty, as set forth in more detail above, the product must be registered within 90 days of installation. To register, the original owner may complete and return the postage-paid registration card by U.S. mail or may register the product online at www.mitsubishicomfort.com. MEUS Diamond Contractors may submit product registration information online via the extranet portal. Residents of California or Quebec need not register the product to receive warranty benefits, but are encouraged to do so.

BEFORE REQUESTING SERVICE, please review the applicable technical documentation to insure proper installation and correct customer control adjustment for the System. If the problem persists, please arrange for warranty service.

1) TO OBTAIN WARRANTY PARTS SERVICE:

- a. Contact the licensed contractor who installed the System or the nearest licensed contractor, dealer or distributor (whose name and address may be obtained on our website at www.mehvac.com) of any defect within the applicable warranty time period.
- b. Proof of the installation date by a licensed contractor is required when requesting warranty service. Present the sales receipt, building permit or other document which establishes proof and date of installation. In the absence of acceptable proof, this Limited Warranty shall be deemed to begin one hundred twenty (120) days after the date of manufacture stamped on the System.
- c. This Limited Warranty applies only to Systems purchased on or after **April 1, 2015**, only while the System remains at the site of the original installation, and only to locations within the continental United States, Alaska and Hawaii.

- 2) THIS LIMITED WARRANTY DOES NOT COVER:** property damages, malfunction or failure of the System, or personal injury caused by or resulting from: (a) accident, abuse, negligence or misuse; (b) operating the System in a corrosive or wet environment, including those containing chlorine, fluorine or any other hazardous or harmful chemicals or environmental factors, including sea- or salt-water; (c) installation, alteration, repair or service by anyone other than a licensed contractor or other than pursuant to the manufacturer's instructions; (d) improper matching of System components; (e) improper sizing of the System; (f) improper or deferred maintenance contrary to the manufacturer's instructions; (g) physical abuse to or misuse of the System (including failure to perform any maintenance as described in the Operation manual such as air filter cleaning, or any System damaged by excessive physical or electrical stress; (h) Systems that have had a serial number or any part thereof altered, defaced or removed; (i) System used in any manner contrary to the Operation Manual; (j) freight damage; or (k) damage caused by force majeure or other factors such as power surge damage caused by lightning and fluctuations in or interruptions of electrical power.

- 3) THIS LIMITED WARRANTY ALSO EXCLUDES:** (a) SERVICE CALLS WHERE NO DEFECT IN THE SYSTEM COVERED UNDER THIS WARRANTY IS FOUND; (b) System installation or set-ups; (c) Adjustments of user controls; (d) Systems purchased or installed outside the continental United States, Alaska and Hawaii; or (e) Systems purchased or installed prior to **April 1, 2015**. Consult the operating instructions for information regarding user controls.

- 4)** This Limited Warranty shall not be enlarged, extended or affected by, and no obligation or liability shall arise or grow out of, MEUS providing, directly or indirectly, any technical advice, information and/or service to original owner in connection with the System.

- 5) EXCEPT AS OTHERWISE PROVIDED IN THIS LIMITED WARRANTY, MEUS MAKES NO OTHER WARRANTIES OF ANY KIND WHATSOEVER REGARDING THE SYSTEM. MEUS DISCLAIMS AND EXCLUDES ALL WARRANTIES NOT EXPRESSLY PROVIDED HEREIN AND ALL REMEDIES WHICH, BUT FOR THIS PROVISION, MIGHT ARISE BY IMPLICATION OR OPERATION OF LAW, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY, NON-INFRINGEMENT OF THIRD PARTY RIGHTS, AND OF FITNESS FOR ANY PARTICULAR PURPOSE. NO ONE IS AUTHORIZED TO CHANGE THIS LIMITED WARRANTY IN ANY RESPECT OR TO CREATE ANY OTHER OBLIGATION OR LIABILITY FOR MEUS IN CONNECTION WITH THE SYSTEM. MEUS DISCLAIMS ALL LIABILITY FOR THE ACTS, OMISSIONS AND CONDUCT OF ALL THIRD PARTIES (INCLUDING, WITHOUT LIMITATION, THE INSTALLING CONTRACTOR) IN CONNECTION WITH OR RELATED TO THE SYSTEM.**

- 6) UNDER NO CIRCUMSTANCES SHALL MEUS BE LIABLE FOR ANY INDIRECT, INCIDENTAL, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES INCLUDING, WITHOUT LIMITATION, INFRINGEMENT OF THIRD PARTY RIGHTS, LOST GOODWILL, LOST REVENUES OR PROFITS, WORK STOPPAGE, SYSTEM FAILURE, IMPAIRMENT OF OTHER GOODS, COSTS OF REMOVAL AND REINSTALLATION OF THE SYSTEM, LOSS OF USE, INJURY TO**



MITSUBISHI ELECTRIC US, INC.
Cooling & Heating
1340 Satellite Boulevard
Suwanee, GA 30024

PERSONS OR PROPERTY ARISING OUT OR RELATED TO THE SYSTEM WHETHER BASED ON BREACH OF WARRANTY, BREACH OF CONTRACT, TORT OR OTHERWISE, EVEN IF MEUS HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. IN NO EVENT SHALL MEUS'S LIABILITY EXCEED THE ACTUAL PURCHASE PRICE OF THE SYSTEM WITH RESPECT TO WHICH ANY CLAIM IS MADE.

- 7) SOME STATES DO NOT ALLOW LIMITATIONS ON WARRANTIES OR EXCLUSIONS OR LIMITATION OF DAMAGES, SO THE ABOVE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY.**
- 8) DISPUTE RESOLUTION.** For any dispute with MEUS, you agree to first contact us by phone (800-433-4822) or e-mail (CustomerCare@hvac.mea.com) or U.S. Mail at Mitsubishi Electric US, Inc., ATTN: Customer Care, 1340 Satellite Blvd., Suwanee, GA 30024, and attempt to resolve the dispute with us informally by providing your name, address, and contact information and describing the nature of the dispute. In the unlikely event that MEUS has not been able to resolve a dispute with you within 60 days of your original informal claim (or sooner if, in MEUS's opinion, a dispute is not likely to be resolved within 60 days), we each agree to resolve any claim, dispute, or controversy arising out of or in connection with or relating to this Limited Warranty, or the breach or alleged breach thereof (collectively, "Claims"), by binding arbitration before an arbitrator from Judicial Mediation and Arbitration Services ("JAMS") located in Gwinnett County, Georgia. JAMS may be contacted at www.jamsadr.com and will require you to pay an initial filing fee set by JAMS (unless you successfully apply for a waiver of this fee from JAMS). All other JAMS costs associated with the arbitration will be borne by MEUS. The arbitration will be conducted in Gwinnett County, Georgia, unless you request an in-person hearing where you live, or if you and MEUS agree otherwise. If the arbitrator decides in your favor, the award may include your costs of arbitration, your reasonable attorneys' fees and your reasonable costs for any expert and other witnesses, and any judgment on the award rendered by the arbitrator may be entered in any court of competent jurisdiction. If the arbitrator makes an award in your favor greater than MEUS's last written offer, MEUS will pay you the greater of the award or \$500, plus your reasonable attorney's fees, if any, and reimburse any reasonable expenses (including reasonable expert witness fees and costs) that are reasonably accrued for investigating, preparing, and pursuing your claim in arbitration, as determined by the arbitrator or as agreed to by you and MEUS. Any judgment on the award rendered by the arbitrator may be entered in any court of competent jurisdiction. You may sue under state law in a small claims court of competent jurisdiction without first engaging in arbitration, but you must engage in arbitration before suing under the Federal Magnuson-Moss Act.
- 9) All claims must be brought in the parties' individual capacity, and not as a plaintiff or class member in any purported class or representative proceeding. This waiver applies to class arbitration unless such arbitration is necessary to effectuate the enforcement of the court class action waiver or in the event that class arbitration is expressly agreed to by MEUS. You agree that you and MEUS are each waiving the right to a trial by jury or to participate in a class action.**
- 10) You may opt-out of the foregoing arbitration and class action/jury trial waiver provision of this Limited Warranty by notifying MEUS in writing within 30 days of purchase. Such written notification must be sent to Mitsubishi Electric US, Inc., ATTN: Legal, 5900-A Katella Avenue, Cypress, CA 90630, and must include (1) your name, (2) your address, (3) your warranted product's serial number, and (4) a clear statement indicating that you do not wish to resolve disputes through arbitration and demonstrating compliance with the 30-day time limit to opt-out.**
- 11) If any clause herein is found to be illegal or unenforceable, that clause will be severed from this Limited Warranty and the remainder of the Limited Warranty will be given full force and effect. As noted above, if a class action waiver of both court and arbitration class actions is found unenforceable, class arbitration will be expressly allowed under the Limited Warranty.**
- 12) Residents of California and Quebec do not need to register the product in order to get all of the rights and remedies of registered original owners under this warranty.**
- 13) This Limited Warranty gives the original owner specific legal rights and the original owner may also have other rights that vary from state to state.**
- 14) This Limited Warranty is valid only in the continental United States, Alaska and Hawaii, and it is not transferable.**