Utilizing IoT for Improved Convenience*

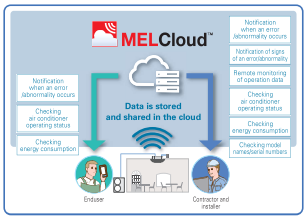
*Availability of IoT functions are depending on MELCloud version.

By connecting to a MAC-587IF-E Wi-Fi interface, it is possible to collect data and perform air conditioning control via MELCloud. In addition to basic functions such as turning the power on/off and setting the temperature, it is also possible to acquire data used for maintenance and inspection such as model names, serial numbers, and operation data.

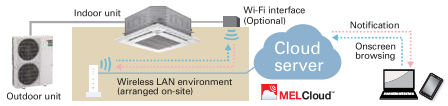
[Basic Operation Functions]
●Operation on/off ●Temperature setting
●Operation mode ●Airflow speed
●Airflow direction etc...

[Data Collection and Display]
●Model name display ●Serial number display
●Collection of operation data
●Energy consumption display etc...

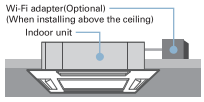




MELCloud System Configuration



Wi-Fi Adapter (Optional) Installation



On-Site Installation and Configuration

❶Wireless LAN adapter installation
Connect the wireless LAN adapter to the indoor unit PCB and install it above the ceiling.

❷Wireless LAN adapter and router connection settings

❸Wireless LAN adapter and server connection settings

Collection of operation data

All the operation data required for maintenance and inspection can be collected in a simple step. This data can then be easily checked via MELcloud. This makes it easy to check the operating status data even in cases when it is difficult to do a visual inspection. This allows you to quickly identify any system malfunctions. This function also helps to improve the quality of installation work and shortening the time required for maintenance and inspection.

Operation data that can be collected (example)
●Compressor frequency ●Compressor operating current ●Outdoor discharge temperature
●Outdoor heat exchanger temperature ●Outdoor air temperature ●Compressor shell temperature
●Sub cool ●Discharge superheat ●Indoor inlet temperature ●Indoor heat exchanger temperature
●Total compressor operating time●Compressor operation count ●Indoor filter operating time



*1 The total compressor operating time is displayed in units of 10 hours. The compressor operation count is displayed in units of 100.
*2 Indicates the elapsed time since a filter sign reset was performed.

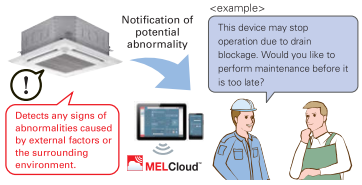
Demand control

It is possible to control air-conditioners to appropriately operate according to the energy supply-demand adjustment by electric power companies and each electricity rate plan of end users.
e.g. <Peak cut control> It is possible to utilize an external demand signal to reduce power consumption during peak hours. By satisfying the need for reducing peak power consumption or shifting consumption to a non-peak period, we have increased the range of options for our customers.

Notification of potential abnormality

The comprehensive analysis of operating data allows the early detection of abnormalities in small functional parts by alerting the operator of any signs of abnormal behaviour. The recognition in advance of abnormalities in each unit further improves the ease of servicing and maintenance. Since this allows a countermeasure to be implemented before the abnormality requires the unit to be completely shut down, it is an effective method for maintaining the unit in its optimum condition.

[Abnormalities That Have Their Signs Monitored]
●Filter blockage ●Drain blockage ●Refrigerant leakage
●Heat exchanger blockage etc...





PLA SERIES

A complete line-up including deluxe units that offer added energy savings. The incorporation of "3D total flow" and the "3D i-see Sensor" enhances airflow distribution control, achieving an enhanced level of comfort throughout the room. The synergy of higher energy efficiency and more comfortable room environment results in the utmost user satisfaction.

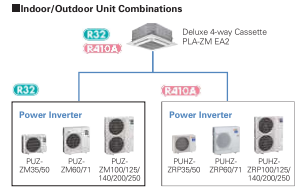
Deluxe 4-way Cassette Line-up

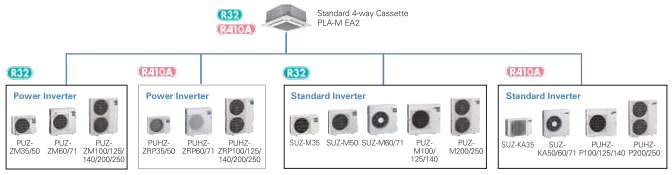
For users seeking even further energy savings, Mitsubishi Electric now offers deluxe units (PLA-ZM) to complete the line-up of models in this series, from 35-140. Compared to the standard models (PLA-M), deluxe models provide additional energy savings, contributing to a significant reduction in electricity costs.

■Line-up

Series \ Model	35	50	60	71	100	125	140
R32 R410A Deluxe 4-way Cassette (PLA-ZM)	●	●	●	●	●	●	●
R32 R410A Standard 4-way Cassette (PLA-M)	●	●	●	●	●	●	●

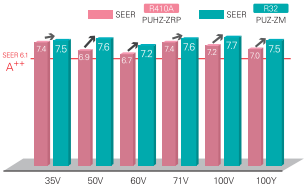
■Indoor/Outdoor Unit Combinations





Industry-leading energy efficiency

Introduction of new R32 refrigerant realises improved cooling efficiency. Rating of more than 7.0 achieved for all capacity range. Introduction of new R32 refrigerant reduces energy consumption and realises energy savings.

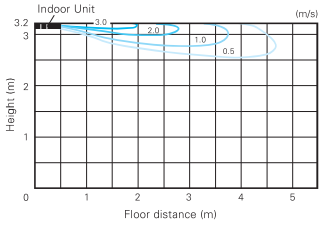


Horizontal Airflow

The new airflow control removes that uncomfortable drafty feeling with the introduction of a horizontal airflow that spreads across the ceiling. The ideal airflow for offices and restaurants.



[Horizontal airflow]
Model name: PLA-ZM140EA2
Ceiling height: 3.2m
Mode: Cooling



Automatic Grille Lowering Function (PLP-6EAJ, PLP-6EAJE)*

An automatic grille lowering function is available for easy filter maintenance. Special wired and wireless remote controllers can be used to lower the intake grille for maintenance.

*Auto elevation panel(PLP-6EAJ,PLP-6EAJE) cannot be used with Plasma Quad Connect(PAC-SK51FT-E) and Insulation kit (PAC-SK36HK-E).



Grille Elevation Remote Controller
(comes with the automatic elevation panel)



Wired Remote Controller



Wireless Remote Controller



Easy Installation

Electrical box wiring

After reviewing the power supply terminal position in the electrical box, the structure was redesigned to improve connectivity. This has made previously complex wiring work easier.

■ Previous model (B Series) ■ New model (E Series)



Increased space for plumbing work

The top and bottom positions of the liquid and gas pipes have been reversed to allow the gas pipe work, which requires more effort, to be completed first. Further, through structural innovations related to the space around the pipes, the area where the spanner can be moved has been increased, thus improving liquid pipe work and enabling it to be completed smoothly.

■ Previous model (B Series) ■ New model (E Series)



Temporary hanging hook

The structure of the panel has been revised and is now equipped with a temporary hanging hook. This has improved work efficiency during panel installation.



No need to remove screws

Installation is possible without removing the screws for the corner panel and the control box, simply loosen them. This lowers the risk of losing screws.

■ Corner panel ■ Control box cover



Lightweight decorative panel

After reviewing the structure and materials, weight has been reduced approximately 20% compared to the previous model, reducing the burden of installation.



3D i-see Sensor for S & P SERIES

Detects number of people

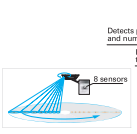
3D i-see Sensor detects the number of people in the room and sets the air-conditioning power accordingly. This makes automatic power-saving operation possible in places where the number of people entering and exiting is large. Additionally, when the area is continuously unoccupied, the system switches to a more enhanced power-saving mode. Depending on the setting, it will save additional capacity or stop operation altogether.

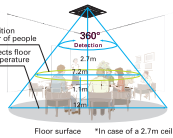
Detects people's position

Once the position of a person is detected, the duct angle of the vane is automatically adjusted in that direction. Each vane can be independently set to "block wind" or "not block wind" according to taste.









Detects number of people (3D i-see Sensor)

Room occupancy energy-saving mode

The 3D i-see Sensor detects the number of people in the room. It then calculates the occupancy rate based on the maximum number of people in the room up to that point in time in order to save air-conditioning power. When the occupancy rate is approximately 30%, air-conditioning power equivalent to 1°C during both cooling and heating operation is saved. The temperature is controlled according to the number of people.

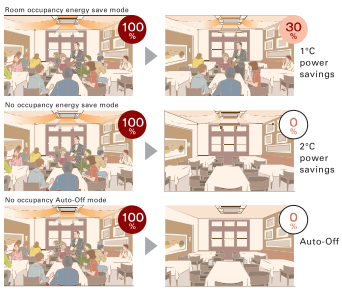
No occupancy energy-saving mode

When 3D i-see Sensor detects that no one is in the room, the system is switched to a pre-set power-saving mode. If the room remains unoccupied for more than 60min, air-conditioning power equivalent to 2°C during both cooling and heating operation is saved. This contributes to preventing waste in terms of heating and cooling.

No occupancy Auto-OFF mode*

When the room remains unoccupied for a pre-set period of time, the air conditioner turns off automatically, thereby providing even greater power savings. The time until operation is stopped can be set in intervals of 10min, ranging from 60 to 180 min.

*When MA Remote Controller is used to control multiple refrigerant systems, "No occupancy Auto-OFF mode" cannot be used.

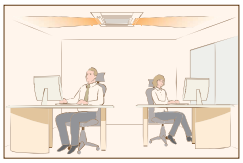


*PAR-41MAA is required for each setting

Detects people's position (3D i-see Sensor)

Direct/Indirect settings*

Some people do not like the feel of wind, some want to be warm from head to toe. People's likes and dislikes vary. With the 3D i-see Sensor, it is possible to choose to block or not block to the wind for each vane.

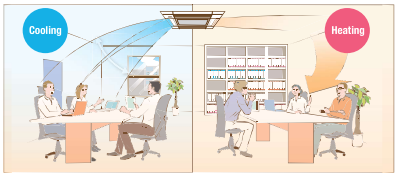


*PAR-41MAA or PAR-SL101A-E is required for each setting.

Seasonal airflow*

<When cooling>
Saves energy while keeping a comfortable effective temperature by automatically switching between ventilation and cooling. When a pre-set temperature is reached, the air conditioning unit switches to swing fan operation to maintain the effective temperature. This clever function contributes to keeping a comfortable coolness.

<When heating>
The air conditioning unit automatically switches between circulator and heating. Wasted heat that accumulates near the ceiling is reused via circulation. When a pre-set temperature is reached the air conditioner switches from heating to circulator and blows air in the horizontal direction. It pushes down the warm air that has gathered near the ceiling to people's height, thereby providing smart heating.

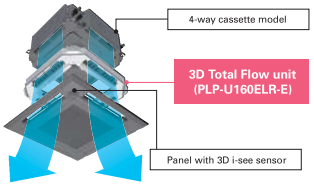


*PAR-41MAA is required for each setting.

3D Total Flow*

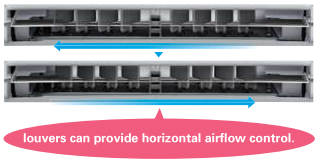
3D Total Flow is an innovative function. Our original 3D i-see sensor detects the temperature of the floor, and then the newly installed 3D Total Flow unit automatically controls the airflow in the left/right directions in a smart manner.

*3D Total Flow unit(PLP-U160ELR-E) cannot be used with Plasma Quad Connect(PAC-SK51FT-E), Insulation kit(PAC-SK36HK-E), Shutter Plate(PAC-SJ07SP-E), Multi functional casement(PAC-SJ41TM-E) and High-efficiency filter element(PAC-SH59KF-E)



Horizontal louver (3D Total Flow)

In addition to the ability of conventional models to control airflow in the vertical direction, the adoption of a horizontal louver unit allows each outlet to blow air over a horizontal angle of 90 degrees. The combination of four outlets delivers 360° airflow control around the entire circumference. This now makes it possible to blow air in diagonal directions which eliminates temperature irregularities.



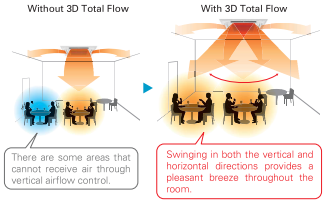
Fine-tuned sensing & airflow direction control (3D Total Flow)

Swinging

Since airflow can be controlled in the horizontal and vertical directions, you can efficiently make the entire room comfortable.

Horizontal, vertical, and diagonal airflow delivered to every corner

The combination of the vertical vanes with the horizontal louver unit makes it possible to direct airflow in any direction. This quickly makes the entire room comfortable, even when diagonal airflow is necessary.

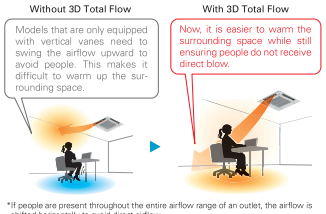


Indirect mode

When set to "Indirect" mode, the system detects the position of a person and maintains comfort while diverting airflow away from them.

Prevents direct airflow and keeps you comfortable

This function prevents people from being directly exposed to airflow while still ensuring comfort. The "Indirect" mode of 3D Total Flow keeps the downward airflow while avoiding direct blow to people, delivering a pleasant warmth.



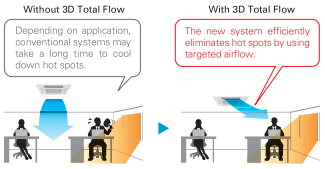
*If people are present throughout the entire airflow range of an outlet, the airflow is shifted horizontally to avoid direct airflow.

Targeting

The system can detect spaces with uneven temperatures and target them by sending air even if they are in a diagonal direction.

Detects and targets areas with uneven temperatures

3D i-see sensor detects areas with uneven temperatures, even if they are caused by the installation orientation of the air conditioner or the influence of strong sunlight. Efficient air conditioning is possible thanks to the ability to send focused airflow to such areas, even those in a diagonal position.

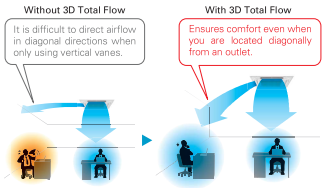


Direct mode

When set to "Direct" mode, the system detects the position and diverts airflow towards wherever they are located.

Delivers airflow even in diagonal directions

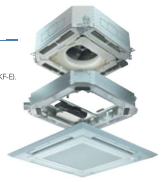
You can freely turn on "Direct" mode depending on personal prefereuce. This allows for air conditioning in diagonal directions which was difficult for models that could only swing the airflow up and down. This feature is perfect for when you come back home on a hot day.



Connectable to Plasma Quad Connect*

The optional Plasma Quad Connect PAC-SK51FT-E can be installed on the indoor units.

*Plasma Quad Connect(PAC-SK51FT-E) cannot be used with PLP-U160ELR-E(3D Total Flow unit), Insulation kit (PAC-SK36HK-E), Auto elevation panel(PLP-6EAJ, PLP-6EAJE), Multi functional casement(PAC-SJ41TM-E) and High-efficiency filter element(PAC-SH59KF-E).



SERIES SELECTION

Power Inverter Series

Indoor Unit

R32
R410A



PLA-ZM35/50/60/71/100/125/140EA2

Panel

Panel	With Signal Receiver	With 3D i-see Sensor	With Wireless Remote Controller	With Auto Elevation
PLP-6EA				
PLP-6EAL	✓			
PLP-6EAE		✓		
PLP-6EALE	✓	✓		
PLP-6EAJ*	✓			✓
PLP-6EAJE*	✓	✓		✓
PLP-6EALM2	✓		✓	
PLP-6EALME2	✓	✓	✓	

*Auto elevation panel(PLP-6EAJ,PLP-6EAJE) cannot be used with Plasma Quad Connect(PAC-SK51FT-E) and Insulation kit (PAC-SK36HK-E).

Outdoor Unit

R32

For Single


PUZ-ZM35/50


PUZ-ZM60/71


PUZ-ZM100/125/140

R32

For Multi (Twin/Triple/Quadruple)


PUZ-ZM71


PUZ-ZM100/125/140/200/250

3D Total Flow Unit



PLP-U160ELR-E (optional)

Remote Controller


Optional


Optional


Optional


* Enclosed in PLP-6EALM2/PLP-6EALME2

PLA-ZM EA2 Indoor Unit Combinations

Indoor unit combinations shown below are possible.

Indoor Unit Combination	Outdoor Unit Capacity																			
	For Single									For Twin						For Triple			For Quadruple	
	35	50	60	71	100	125	140	200	250	71	100	125	140	200	250	140	200	250	200	250
Power Inverter (PUZ-ZM)	35x1	50x1	60x1	71x1	100x1	125x1	140x1	–	–	35x2	50x2	60x2	71x2	100x2	125x2	50x3	60x3	71x3	50x4	60x4
Distribution Pipe	–	–	–	–	–	–	–	–	–	MSDD-50TR2-E				MSDD-50WR2-E		MSDT-111R3-E			MSDF-1111R2-E	

SERIES SELECTION

Standard Inverter Series

Indoor Unit

R32
R410A



PLA-M35/50/60/71/100/125/140EA2

Panel

Panel	With Signal Receiver	With 3D i-see Sensor	With Wireless Remote Controller	With Auto Elevation
PLP-6EA				
PLP-6EAL	✓			
PLP-6EAE		✓		
PLP-6EALE	✓	✓		
PLP-6EAJ*	✓			✓
PLP-6EAJE*	✓	✓		✓
PLP-6EALM2	✓		✓	
PLP-6EALME2	✓	✓	✓	

*Auto elevation panel(PLP-6EAJ,PLP-6EAJE) cannot be used with Plasma Quad Connect(PAC-SK51FT-E) and Insulation kit (PAC-SK36HK-E).

Outdoor Unit

R32

For Single


SUZ-M35


SUZ-M50


SUZ-M60/71


PUZ-M100/125/140

R32

For Multi (Twin/Triple/Quadruple)


PUZ-M100/125/140


PUZ-M200/250

3D Total Flow Unit



PLP-U160ELR-E* (optional)

*SUZ combination is not available.

Remote Controller


Optional


Optional


Optional


* Enclosed in PLP-6EALM2/PLP-6EALME2

PLA-M EA2 Indoor Unit Combinations

Indoor unit combinations shown below are possible.

Indoor Unit Combination	Outdoor Unit Capacity																			
	For Single									For Twin						For Triple			For Quadruple	
	35	50	60	71	100	125	140	200	250	71	100	125	140	200	250	140	200	250	200	250
Standard Inverter (SUZ & PUZ-M)	35x1	50x1	60x1	71x1	100x1	125x1	140x1	–	–	–	50x2	60x2	71x2	100x2	125x2	50x3	60x3	71x3	50x4	60x4
Distribution Pipe	–	–	–	–	–	–	–	–	–	–	MSDD-50TR2-E			MSDD-50WR2-E		MSDT-111R3-E			MSDF-1111R2-E	

PLA-ZM SERIES
POWER INVERTER

Type				Inverter Heat Pump										
Indoor Unit				PLA-ZM35EA2	PLA-ZM50EA2	PLA-ZM60EA2	PLA-ZM71EA2	PLA-ZM100EA2	PLA-ZM100YA2	PLA-ZM125EA2	PLA-ZM125YA2	PLA-ZM140EA2	PLA-ZM140YA2	
Outdoor Unit				PUZ-ZM35VKA2	PUZ-ZM50VKA2	PUZ-ZM60VHA2	PUZ-ZM71VHA2	PUZ-ZM100YKA2	PUZ-ZM100YHA2	PUZ-ZM125VKA2	PUZ-ZM125YKA2	PUZ-ZM140VKA2	PUZ-ZM140YKA2	
Refrigerant[*1]				R32										
Power Supply	Source			Outdoor power supply										
	Outdoor(V/Phase/Hz)			VKA: VHA 230/Single/50, YKA 400/Three/50										
Cooling	Capacity	Rated	kW	3.6	5.0	6.1	7.1	9.5	9.5	12.5	12.5	13.4	13.4	
		Min-Max	kW	1.6 - 4.5	2.3 - 5.6	2.7 - 6.5	3.3 - 8.1	4.9 - 11.4	4.9 - 11.4	5.5 - 14.0	5.5 - 14.0	6.2 - 15.0	6.2 - 15.0	
	Total Input	Rated	kW	0.705	1.106	1.462	1.651	2.159	2.159	3.378	3.378	3.722	3.722	
	EER			5.10	4.52	4.20	4.30	4.40	4.40	3.70	3.70	3.60	3.60	
	Design load		kW	3.6	5.0	6.1	7.1	9.5	9.5	–	–	–	–	
	Annual electricity consumption[*3]		kWh/a	168	230	296	327	431	442	–	–	–	–	
	SEER[*4]			7.5	7.6	7.2	7.6	7.7	7.5	–	–	–	–	
		Energy efficiency class		A+++	A+++	A+++	A+++	A+++	A+++	–	–	–	–	
Heating	Capacity	Rated	kW	4.1	6.0	7.0	8.0	11.2	11.2	14.0	14.0	16.0	16.0	
		Min-Max	kW	1.6 - 5.2	2.5 - 7.3	2.8 - 8.2	3.5 - 10.2	4.5 - 14.0	4.5 - 14.0	5.0 - 16.0	5.0 - 16.0	5.7 - 18.0	5.7 - 18.0	
	Total Input	Rated	kW	0.820	1.363	1.707	1.818	2.604	2.604	3.674	3.674	4.312	4.312	
	COP			5.00	4.40	4.10	4.40	4.30	4.30	3.81	3.81	3.71	3.71	
	Design load		kW	2.5	3.8	4.4	4.7	7.8	7.8	–	–	–	–	
	Declared Capacity	at reference design temperature	kW	2.5 (-10°C)	3.8 (-10°C)	4.4 (-10°C)	4.7 (-10°C)	7.8 (-10°C)	7.8 (-10°C)	–	–	–	–	
		at bivalent temperature	kW	2.5 (-10°C)	3.8 (-10°C)	4.4 (-10°C)	4.7 (-10°C)	7.8 (-10°C)	7.8 (-10°C)	–	–	–	–	
		at operation limit temperature	kW	2.1 (-11°C)	3.7 (-11°C)	2.8 (-20°C)	3.4 (-20°C)	5.8 (-20°C)	5.8 (-20°C)	–	–	–	–	
	Back up heating capacity		kW	0.0	0.0	0.0	0.0	0.0	0.0	–	–	–	–	
	Annual electricity consumption[*3]		kWh/a	744	1086	1339	1371	2271	2272	–	–	–	–	
	SCOP[*4]			4.7	4.9	4.6	4.8	4.8	4.8	–	–	–	–	
		Energy efficiency class		A++	A++	A++	A++	A++	A++	–	–	–	–	
Operating Current(Max)			A	13.2	13.2	19.2	19.3	20.5	8.5	27.0	9.5	30.7	12.5	
Indoor Unit	Input (cooling / Heating)	Rated	kW	0.037 / 0.03	0.037 / 0.03	0.037 / 0.03	0.035 / 0.05	0.07 / 0.07	0.07 / 0.07	0.091 / 0.08	0.091 / 0.08	0.10 / 0.10	0.10 / 0.10	
	Operating Current(Max)		A	0.21	0.22	0.22	0.34	0.47	0.47	0.52	0.52	0.66	0.66	
	Dimensions	H*W*D	mm	258-840-840 <40:950-950>						298-840-840 <40:990-950>				
	Weight		kg	21 <5>	21 <5>	21 <5>	24 <5>	26 <5>	26 <5>	26 <5>	26 <5>	26 <5>	26 <5>	
	Air Volume (Lo-M&Z-Mi1-Hi)		m³/min	11-13-15-16	12-14-16-18	12-14-16-18	17-19-21-22	19-22-25-28	19-22-25-28	21-24-26-29	21-24-26-29	24-26-29-32	24-26-29-32	
	Sound Level (Lo-M&Z-Mi1-Hi) (SPL)		dB(A)	26-29-29-31	27-29-31-32	27-29-31-32	28-30-33-36	31-34-37-40	31-34-37-40	33-36-39-41	33-36-39-41	36-39-42-44	36-39-42-44	
	Sound Level (PWL)		dB(A)	51	54	54	57	61	61	62	62	65	65	
Outdoor Unit	Dimensions	H*W*D	mm	630-805-300	630-805-300	943-950-330+29	943-950-330+29	1318-1010-392+48	1318-1010-392+48	1338-1510-330+40	1338-1510-330+40	1338-1510-330+40	1338-1510-330+40	
	Weight		kg	46	46	67	67	105	111	105	114	105	118	
	Air Volume	Cooling	m³/min	45	45	55	55	110	110	120	120	120	120	
		Heating	m³/min	45	45	55	55	110	110	120	120	120	120	
	Sound Level (SPL)	Cooling	dB(A)	44	44	47	47	49	49	50	50	50	50	
		Heating	dB(A)	46	46	49	49	51	51	52	52	52	52	
	Sound Level (PWL)	Cooling	dB(A)	65	65	67	67	69	69	70	70	70	70	
	Operating Current(Max)		A	13	13	19	19	20	8	26.5	9	30	11.8	
	Breaker Size		A	16	16	25	25	32	16	32	16	40	16	
Ext.Piping	Diameter[*5]	Liquid/Gas	mm	6.35 / 12.7	6.35 / 12.7	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	
	Max.Length	Out-In	m	50	50	55	55	100	100	100	100	100	100	
	Max.Height	Out-In	m	30	30	30	30	30	30	30	30	30	30	
Guaranteed Operating Range	(Outdoor)	Cooling[*6]	°C	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	
		Heating	°C	-11 ~ +21	-11 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	

*1 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 550. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 550 times higher than 1 kg of CO_2, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional. The GWP of R32 is 675 in the IPCC 4th Assessment Report.
*2 Energy consumption based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.
*3 Optional air protection guide is required where ambient temperature is lower than -5°C.
*4 SEER and SCOP are based on 2009/125/EC-Energy-related Products Directive and Regulation(EU) No206/2012. *5 Joint pipe is required depending on installed refrigerant pipes, outdoor units and indoor units.

PLA-M SERIES
STANDARD INVERTER

Type				Inverter Heat Pump										
Indoor Unit				PLA-M35EA2	PLA-M50EA2	PLA-M60EA2	PLA-M71EA2	PLA-M100EA2	PLA-M100EA2	PLA-M125EA2	PLA-M125EA2	PLA-M140EA2	PLA-M140EA2	
Outdoor Unit				SUZ-M35VA	SUZ-M50VA	SUZ-M60VA	SUZ-M71VA	PUZ-M100VKA2	PUZ-M100YKA2	PUZ-M125VKA2	PUZ-M125YKA2	PUZ-M140VKA2	PUZ-M140YKA2	
Refrigerant[*1]				R32										
Power Supply	Source			Outdoor power supply										
	Outdoor(V/Phase/Hz)			VA-VKA 230/Single/50, YKA 400/Three/50										
Cooling	Capacity	Rated	kW	3.6	5.5	6.1	7.1	9.5	9.5	12.1	12.1	13.4	13.4	
		Min-Max	kW	0.8 - 3.9	1.2 - 5.6	1.6 - 6.3	2.2 - 8.1	4.0 - 10.6	4.0 - 10.6	5.8 - 13.0	5.8 - 13.0	5.8 - 14.1	5.8 - 14.1	
	Total Input	Rated	kW	0.900	1.617	1.948	1.918	2.714	2.714	4.019	4.019	4.962	4.962	
	EER			4.00	3.40	3.30	3.70	3.50	3.50	3.01	3.01	2.70	2.70	
	Design load		kW	3.6	5.5	6.1	7.1	9.5	9.5	–	–	–	–	
	Annual electricity consumption[*3]		kWh/a	170	285	320	331	475	475	–	–	–	–	
	SEER[*4]			7.4	6.7	6.6	7.5	7.0	7.0	–	–	–	–	
		Energy efficiency class		A+++	A+++	A+++	A+++	A+++	A+++	–	–	–	–	
Heating	Capacity	Rated	kW	4.1	6.0	7.0	8.0	11.2	11.2	13.5	13.5	15.0	15.0	
		Min-Max	kW	1.0 - 5.0	1.5 - 7.2	1.6 - 8.0	2.0 - 10.2	2.8 - 12.5	2.8 - 12.5	4.1 - 15.0	4.1 - 15.0	4.2 - 15.8	4.2 - 15.8	
	Total Input	Rated	kW	0.976	1.734	1.842	2.216	3.018	3.018	3.638	3.638	4.398	4.398	
	COP			4.20	3.46	3.80	3.61	3.71	3.71	3.71	3.71	3.41	3.41	
	Design load		kW	2.6	4.3	4.6	5.8	8.0	8.0	–	–	–	–	
	Declared Capacity	at reference design temperature	kW	2.3 (-10°C)	3.8 (-10°C)	4.1 (-10°C)	5.2 (-10°C)	6.8 (-10°C)	6.8 (-10°C)	–	–	–	–	
		at bivalent temperature	kW	2.3 (-7°C)	3.8 (-7°C)	4.1 (-7°C)	5.2 (-7°C)	7.0 (-7°C)	7.0 (-7°C)	–	–	–	–	
		at operation limit temperature	kW	2.3 (-10°C)	3.8 (-10°C)	4.1 (-10°C)	5.2 (-10°C)	4.5 (-15°C)	4.5 (-15°C)	–	–	–	–	
	Back up heating capacity		kW	0.3	0.5	0.5	0.6	2.0	2.0	–	–	–	–	
	Annual electricity consumption[*3]		kWh/a	774	1458	1459	1798	2406	2406	–	–	–	–	
	SCOP[*4]			4.7	4.1	4.4	4.5	4.6	4.6	–	–	–	–	
		Energy efficiency class		A++	A+	A+	A+	A++	A++	–	–	–	–	
Operating Current(Max)			A	8.7	13.7	15.0	15.1	20.5	12	27.2	12.2	30.7	12.2	
Indoor Unit	Input (cooling / Heating)	Rated	kW	0.03 / 0.03	0.03 / 0.03	0.03 / 0.03	0.04 / 0.04	0.07 /0.07	0.07 /0.07	0.10 / 0.10	0.10 / 0.10	0.10 / 0.10	0.10 / 0.10	
	Operating Current(Max)		A	0.20	0.22	0.24	0.27	0.46	0.46	0.66	0.66	0.66	0.66	
	Dimensions	H*W*D	mm	258-840-840 <40:950-950>						298-840-840 <40:950-950>				
	Weight		kg	19 <5>	19 <5>	21 <5>	21 <5>	24 <5>	24 <5>	26 <5>	26 <5>	26 <5>	26 <5>	
	Air Volume (Lo-M&Z-Mi1-Hi)		m³/min	11-13-15-16	12-14-16-18	12-14-16-18	14-17-19-21	19-23-25-28	19-23-25-28	21-25-28-31	21-25-28-31	24-26-29-32	24-26-29-32	
	Sound Level (Lo-M&Z-Mi1-Hi) (SPL)		dB(A)	26-29-29-31	27-29-31-32	27-29-31-32	28-30-32-34	31-34-37-40	31-34-37-40	33-37-41-44	33-37-41-44	36-39-42-44	36-39-42-44	
	Sound Level (PWL)		dB(A)	51	54	54	56	61	61	65	65	65	65	
Outdoor Unit	Dimensions	H*W*D	mm	550-800-285	714-800-285	880-840-330	880-840-330	1318-1010-392+48	1318-1010-392+48	1338-1510-330+40	1338-1510-330+40	1338-1510-330+40	1338-1510-330+40	
	Weight		kg	35	41	54	55	76	78	84	85	84	85	
	Air Volume	Cooling	m³/min	34.3	45.8	50.1	50.1	79	79	86	86	86	86	
		Heating	m³/min	32.7	43.7	50.1	50.1	79	79	92	92	92	92	
	Sound Level (SPL)	Cooling	dB(A)	48	48	49	49	51	51	54	54	55	55	
		Heating	dB(A)	48	49	51	51	54	54	56	56	57	57	
	Sound Level (PWL)	Cooling	dB(A)	59	64	65	66	70	70	72	72	73	73	
	Operating Current(Max)		A	8.5	13.5	14.8	14.8	20	11.5	26.5	11.5	30	11.5	
	Breaker Size		A	10	20	20	20	32	16	32	16	40	16	
Ext.Piping	Diameter[*5]	Liquid/Gas	mm	6.35 / 9.52	6.35 / 12.7	6.35 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	
	Max.Length	Out-In	m	20	30	30	30	55	55	65	65	65	65	
	Max.Height	Out-In	m	12	30	30	30	30	30	30	30	30	30	
Guaranteed Operating Range	(Outdoor)	Cooling[*6]	°C	-10 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	
		Heating	°C	-10 ~ +24	-10 ~ +24	-10 ~ +24	-10 ~ +24	-15 ~ +21	-15 ~ +21	-15 ~ +21	-15 ~ +21	-15 ~ +21	-15 ~ +21	

*1 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 550. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 550 times higher than 1 kg of CO_2, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional. The GWP of R32 is 675 in the IPCC 4th Assessment Report.
*2 Energy consumption based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.
*3 Optional air protection guide is required where ambient temperature is lower than -5°C.
*4 SEER and SCOP are based on 2009/125/EC-Energy-related Products Directive and Regulation(EU) No206/2012. *5 Joint pipe is required depending on installed refrigerant pipes, outdoor units and indoor units.

PLA-M SERIES
POWER INVERTER

Type				Inverter Heat Pump										
Indoor Unit				PLA-M35EA2	PLA-M50EA2	PLA-M60EA2	PLA-M71EA2	PLA-M100EA2	PLA-M100EA2	PLA-M125EA2	PLA-M125EA2	PLA-M140EA2	PLA-M140EA2	
Outdoor Unit				PUZ-ZM35VKA2	PUZ-ZM50VKA2	PUZ-ZM60VHA2	PUZ-ZM71VHA2	PUZ-ZM100VKA2	PUZ-ZM100YHA2	PUZ-ZM125VKA2	PUZ-ZM125YKA2	PUZ-ZM140VKA2	PUZ-ZM140YKA2	
Refrigerant[*1]				R32										
Power Supply	Source			Outdoor power supply										
	Outdoor(V/Phase/Hz)			VKA : VHA 230/Single/50, YKA 400/Three/50										
Cooling	Capacity	Rated	kW	3.6	5.0	6.1	7.1	9.5	9.5	12.5	12.5	13.4	13.4	
		Min-Max	kW	1.6 - 4.5	2.3 - 5.6	2.7 - 6.5	3.3 - 8.1	4.9 - 11.4	4.9 - 11.4	5.5 - 14.0	5.5 - 14.0	6.2 - 15.0	6.2 - 15.0	
	Total Input	Rated	kW	0.761	1.175	1.523	1.718	2.209	2.209	3.396	3.396	3.746	3.746	
	EER			4.79	4.25	4.00	4.14	4.30	4.30	3.68	3.68	3.58	3.58	
	Design load		kW	3.6	5.0	6.1	7.1	9.5	9.5	–	–	–	–	
	Annual electricity consumption[*3]		kWh/a	172	234	301	336	437	448	–	–	–	–	
	SEER[*4]			7.3	7.4	7.1	7.4	7.6	7.4	–	–	–	–	
		Energy efficiency class		A+++	A+++	A+++	A+++	A+++	A+++	–	–	–	–	
Heating (Average Season)	Capacity	Rated	kW	4.1	6.0	7.0	8.0	11.2	11.2	14.0	14.0	16.0	16.0	
		Min-Max	kW	1.6 - 5.2	2.5 - 7.3	2.8 - 8.2	3.5 - 10.2	4.5 - 14.0	4.5 - 14.0	5.0 - 16.0	5.0 - 16.0	5.7 - 18.0	5.7 - 18.0	
	Total Input	Rated	kW	0.690	1.161	1.663	2.014	2.685	2.685	3.773	3.773	4.365	4.365	
	COP			4.61	3.79	3.76	3.97	4.17	4.17	3.71	3.71	3.67	3.67	
	Design load		kW	2.5	3.8	4.4	4.7	7.8	7.8	–	–	–	–	
	Declared Capacity	at reference design temperature	kW	2.5 (-10°C)	3.8 (-10°C)	4.4 (-10°C)	4.7 (-10°C)	7.8 (-10°C)	7.8 (-10°C)	–	–	–	–	
		at bivalent temperature	kW	2.5 (-10°C)	3.8 (-10°C)	4.4 (-10°C)	4.7 (-10°C)	7.8 (-10°C)	7.8 (-10°C)	–	–	–	–	
		at operation limit temperature	kW	2.1 (-11°C)	3.7 (-11°C)	2.8 (-20°C)	3.4 (-20°C)	5.8 (-20°C)	5.8 (-20°C)	–	–	–	–	
	Back up heating capacity		kW	0.0	0.0	0.0	0.0	0.0	0.0	–	–	–	–	
	Annual electricity consumption[*3]		kWh/a	798	1187	1422	1429	2496	2497	–	–	–	–	
	SCOP[*4]			4.3	4.4	4.3	4.6	4.3	4.3	–	–	–	–	
		Energy efficiency class		A+	A+	A+	A++	A+	A+	–	–	–	–	
Operating Current(Max)			A	13.2	13.2	19.2	19.3	20.5	8.5	27.2	9.7	30.7	12.5	
Indoor Unit	Input (cooling / Heating)	Rated	kW	0.03 / 0.03	0.03 / 0.03	0.03 / 0.03	0.04 / 0.04	0.07 / 0.07	0.07 / 0.07	0.10 / 0.10	0.10 / 0.10	0.10 / 0.10	0.10 / 0.10	
	Operating Current(Max)		A	0.20	0.22	0.24	0.27	0.46	0.46	0.66	0.66	0.66	0.66	
	Dimensions	H*W*D	mm	258-840-840 <40:950-950>						298-840-840 <40:950-950>				
	Weight		kg	19 <5>	19 <5>	21 <5>	21 <5>	24 <5>	24 <5>	26 <5>	26 <5>	26 <5>	26 <5>	
	Air Volume (Lo-Mid-Hi)		m³/min	11-13-15-16	12-14-16-18	12-14-16-18	14-17-19-21	19-23-26-29	19-23-26-29	21-25-28-31	21-25-28-31	24-26-29-32	24-26-29-32	
	Sound Level (Lo-Mid-Hi) (SPL)		dB(A)	26-28-29-31	27-29-31-32	27-29-31-32	28-30-32-34	31-34-37-40	31-34-37-40	33-37-41-44	33-37-41-44	36-39-42-44	36-39-42-44	
	Sound Level (PWL)		dB(A)	51	54	54	56	61	61	65	65	65	65	
Outdoor Unit	Dimensions	H*W*D	mm	630-909-300	630-909-300	943-950-330+29	943-950-330+29	1318-1810-392+48	1318-1810-392+48	1338-1510-330+40	1338-1510-330+40	1338-1510-330+40	1338-1510-330+40	
	Weight		kg	46	46	67	67	105	111	105	114	105	118	
	Air Volume	Cooling	m³/min	45	45	55	55	110	110	120	120	120	120	
		Heating	m³/min	45	45	55	55	110	110	120	120	120	120	
	Sound Level (SPL)	Cooling	dB(A)	44	44	47	47	49	49	50	50	50	50	
		Heating	dB(A)	46	46	49	49	51	51	52	52	52	52	
	Sound Level (PWL)	Cooling	dB(A)	65	65	67	67	69	69	70	70	70	70	
	Operating Current(Max)		A	13	13	19	19	20	8	26.5	9	30	11.8	
	Breaker Size		A	16	16	25	25	32	16	32	16	40	16	
Ext.Piping	Diameter[*5]	Liquid/Gas	mm	6.35 / 12.7	6.35 / 12.7	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	9.52 / 15.88	
	Max.Length	Out-In	m	50	50	55	55	100	100	100	100	100	100	
	Max.Height	Out-In	m	30	30	30	30	30	30	30	30	30	30	
Guaranteed Operating Range	(Outdoor)	Cooling[*6]	°C	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	-15 ~ +46	
		Heating	°C	-11 ~ +21	-11 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	-20 ~ +21	

*1 Refrigerant leakage contributes to climate change. Refrigerant with lower global warming potential (GWP) would contribute less to global warming than a refrigerant with higher GWP, if leaked to the atmosphere. This appliance contains a refrigerant fluid with a GWP equal to 550. This means that if 1 kg of this refrigerant fluid would be leaked to the atmosphere, the impact on global warming would be 550 times higher than 1 kg of CO_2, over a period of 100 years. Never try to interfere with the refrigerant circuit yourself or disassemble the product yourself and always ask a professional. The GWP of R32 is 675 in the IPCC 4th Assessment Report.
*2 Energy consumption based on standard test results. Actual energy consumption will depend on how the appliance is used and where it is located.
*3 Optional air protection guide is required where ambient temperature is lower than -5°C.
*4 SEER and SCOP are based on 2009/125/EC-Energy-related Products Directive and Regulation(EU) No206/2012.
*5 Joint pipe is required depending on installed refrigerant pipes, outdoor units and indoor units.