

1. Models Line Up

1.1 Indoor Unit

Category	Picture	Chassis	Nominal Capacity (kBtu/h)	Model Name
Premium		S1	9	H09S1PA.NS1 (S3NM091L1CA.EC6GEEU)
Premium		S1	12	H12S1PA.NS1 (S3NM121L1CA.EC6GEEU)
Deluxe		S1	12	H09S1DA.NS1 (S3NM091A1DA.EC6GEEU)
Deluxe		S1	12	H12S1DA.NS1 (S3NM121A1DA.EC6GEEU)
Deluxe		S1	18	H18S1DA.NS1 (S3NM181L1DA.EC6GEEU)
Deluxe		S1	24	H24S1DA.NS1 (S3NM24121DA.EC6GEEU)

1. Models Line Up

1.2 Outdoor Unit

Power Supply	Picture	Chassis	Nominal Capacity (kBtu/h)	Model Name
1 Ø , 220 ~ 240 V , 50 Hz		U18A	9	H09S1PA.U18 (S3UM091L1CA.EC6GEEU)
1 Ø , 220 ~ 240 V , 50 Hz		U18A	12	H12S1PA.U18 (S3UM121L1CA.EC6GEEU)
1 Ø , 220 ~ 240 V , 50 Hz		U12A	12	H09S1DA.U12 (S3UM091A1DA.EC6GEEU)
1 Ø , 220 ~ 240 V , 50 Hz		U12A	12	H12S1DA.U12 (S3UM121A1DA.EC6GEEU)
1 Ø , 220 ~ 240 V , 50 Hz		U18A	18	H18S1DA.U18 (S3UM181L1DA.EC6GEEU)

1 Ø , 220 ~ 240 V , 50 Hz		U24A	24	H24S1DA.U24 (S3UM24121DA.EC6GEEU)
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3. Specifications

Buyer Model				H24S1DA.SS1 (H24S1DA.NS1 / H24S1DA.U24)		
Factory Model	Set (Indoor / Outdoor)		Unit	S3-M24121DA.EC6GEEU (S3NM24121DA.EC6GEEU / S3UM24121DA.EC6GEEU)		
Capacity	Cooling	Min ~ Rated ~ Max	kW	0,900	6,600	7,420
			Btu/h	3,072	22,535	25,335
	Cooling (T3)	Min ~ Rated ~ Max	kJ/h	-	-	-
			kW	-	-	-
	Heating	Min ~ Rated ~ Max	Btu/h	-	-	-
			kW	0,900	7,500	8,640
Power Input	Cooling	Min ~ Rated ~ Max	Btu/h	3,072	25,608	29,500
			kJ/h	-	-	-
	Cooling (T3)	Min ~ Rated ~ Max	kW	-	6,000	-
			W	210	2,164	2,500
	Heating	Min ~ Rated ~ Max	W	-	-	-
			W	210	2,238	2,750
Running Current	Cooling	Min ~ Rated ~ Max	A	1,60	9,80	14,00
	Cooling (T3)	Min ~ Rated ~ Max	A	-	-	-
	Heating	Min ~ Rated ~ Max	A	1,60	10,00	14,00
EER			WW	3,05		
			(Btu/h)/W	10,41		
			(kJ/h)/W	-		
EER (T3)			WW	-		
			(Btu/h)/W	-		
SEER			-	6,9		
			WW	3,35		
COP			(Btu/h)/W	11,44		
			(kJ/h)/W	-		
SCOP			-	4,3		
P design C / P design H			kW	6,6 / 5		
Energy Label Grade		Cooling / Heating	-	A++ / A+		
Annual Energy Consumption		Cooling / Heating	kWh/year	335 / 1626		
Weighted EER			(Btu/h)/W	-		
			WW	-		
Power Supply			Ø, V, Hz	1, 220 ~ 240, 50		
Available Voltage Range			V	187 ~ 276		
Power Factor		Cooling / Heating	%	97,0 / 97,0		
Moisture Removal			l/h	2,50		
Indoor	Air Flow Rate	Cooling, SH / H / M / L	m³/min	14,6 / 12,3 / 10,1 / 7,3		
		Heating, SH / H / M / L	m³/min	14,6 / 12,3 / 10,1 / 7,3		
	Sound Pressure Level	Cooling, SH / H / M / L / SL	dB(A)	51 / 47 / 42 / 34 / 31		
		Heating, SH / H / M / L	dB(A)	51 / 47 / 42 / 34		
	Sound Power Level		dB(A)	65		
			dB(A)	65		
	Dimensions (W × H × D)	Net	mm	895 x 307 x 235		
Shipping		mm	967 x 383 x 296			
Weight	Net	kg	12,8			
	Shipping	kg	15,2			
Exterior Color Code			-	Munsell 7,5P 9/2 (RAL 9003)		
Outdoor	Air Flow Rate	Max	m³/min	49,0		
		Cooling, Min ~ Max	rpm	190 ~ 900		
	Fan Motor Speed	Heating, Min ~ Max	rpm	190 ~ 850		
		Cooling, Rated	dB(A)	54		
	Sound Pressure Level	Heating, Rated	dB(A)	57		
			dB(A)	70		
	Sound Power Level		dB(A)	70		
			dB(A)	70		
	Dimensions (W × H × D)	Net	mm	870 x 650 x 330		
		Shipping	mm	1026 x 683 x 446		
	Weight	Net	kg	44		
Shipping		kg	47			
Max. Fuse Size			A	20		
Exterior Color Code			-	Munsell 9,54Y 8,34/1,31 (RAL 9001)		
Operation Range	Cooling		°C DB	-15 ~ 48		
			°C DB	-15 ~ 24		
	Heating		°C WB	-15 ~ 18		
Circuit Breaker			A	25		
Power Supply to Unit			-	Outdoor		
Power and Communication Cable			No. × mm²	4 x 1		
Piping	Size	Liquid	mm	ø 6,35		
		Gas	mm	ø 15,88		
Connections Method		Indoor / Outdoor	-	Flared / Flared		
Drain Hose Size		O.D. I.D.	mm	21,5 16		
Between Indoor & Outdoor	Piping Length	Min / Standard / Max	m	3 / 7,5 / 30		
		No Charge	m	7,5		
	Max. Elevation Difference		m	15		
Piping Connection Heat Insulation		-	-	Both liquid and gas pipes		
Note						
• - : No Relation						
• All power supply and communication cables and circuit breaker must comply with applicable local and national codes.						
• Exterior color code is approximate value.						
• It is difficult to measure air flow rate of deep because of small values.						
• Maximum heating capacity is for heating operation without any frost.						
• Fan motor speed could vary ±20 rpm according to the operating conditions.						
• It may cause reliability, performance, noise, and vibration problem, unless meeting the range of connecting pipe length. Keep the minimum piping length by making loops, although indoor unit and outdoor unit are close.						
• This product contains fluorinated greenhouse gases.						
• Some specifications may be changed without notifications due to our policy of innovation.						
• Test conditions are based on EN 14511 and EN 14825.						

3. Specifications

Buyer Model	Set (Indoor / Outdoor)		Unit	H24S1DA.SS1 (H24S1DA.NS1 / H24S1DA.U24)
Factory Model				S3-M24121DA.EC6GEEU (S3NM24121DA.EC6GEEU / S3UM24121DA.EC6GEEU)
Refrigerant	Type		-	R32
	Pre Charge		kg	1.150
	Additional Charge		g/m	20
	Control		-	Electronic Expansion Valve
	Global Warming Potential		-	675
	t-CO ₂ eq		-	0.776
Defrost Method			-	Reverse Cycle
Tool Code (Chassis)		Indoor / Outdoor	-	S1/ U24A
Compressor	Type		-	Twin Rotary
	Model		-	DKT176MAJ
	Motor Type		-	BLDC
	Oil Type / Maker		-	PVE (FW68D) / IDEMITSU
	Oil Charge		cc	470
	O.L.P. Name		-	-
	Manufacturer / Country of Origin		-	LG Electronics / China
Fan (Indoor)	Type		-	Cross Flow Fan
	Motor Output		W	30
Fan (Outdoor)	Type		-	Propeller Fan
	Motor Type		-	BLDC
	Motor Output		W	85
	Motor Insulation		-	Class E
	Motor Enclosure / Ingress Protection		-	TEAO / IPX4
Heat Exchanger	Evaporator	Material, Tube / Fin	-	Cu / Al
		(ø x Row x Column x FPI x L) x Qty.	#1	(ø7 x 3 x 16 x 21 x 686.6) x 1
		(ø x Row x Column x FPI x L) x Qty.	#2	-
		(ø x Row x Column x FPI x L) x Qty.	#3	-
		(ø x Row x Column x FPI x L) x Qty.	#4	-
	Condenser	Corrosion Protection	-	PCM
		Fin Type	-	Slit
		Material, Tube / Fin	-	Cu / Al
		(ø x Row x Column x FPI x L) x Qty.	#1	(ø7 x 2 x 28 x 18 x 938) x 1
		(ø x Row x Column x FPI x L) x Qty.	#2	-
		Corrosion Protection	-	Gold
Fin Type	-	Corrugate		
Note				
• - : No Relation • All power supply and communication cables and circuit breaker must comply with applicable local and national codes. • Exterior color code is approximate value. • It is difficult to measure air flow rate of sleep because of small values. • Maximum heating capacity is for heating operation without any frost. • Fan motor speed could vary ±20 rpm according to the operating conditions. • It may cause reliability, performance, noise, and vibration problem, unless meeting the range of connecting pipe length. Keep the minimum piping length by making loops, although indoor unit and outdoor unit are close. • This product contains fluorinated greenhouse gases. • Some specifications may be changed without notifications due to our policy of innovation. • Test conditions are based on EN 14511 and EN 14825.				

4. Function List

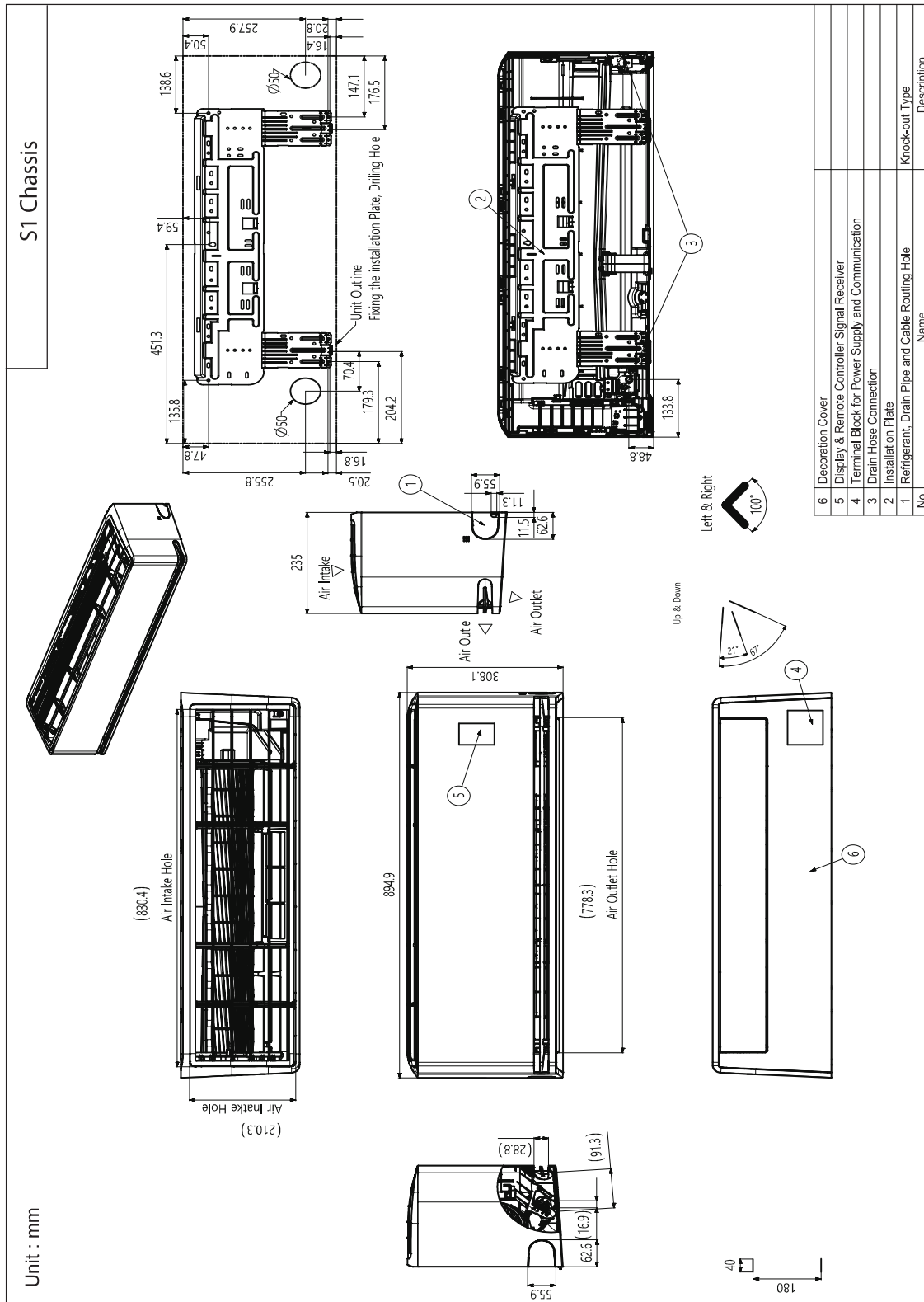
Category	Function	H24S1DA,SS1 S3-M24121DA,EC6GEEU
Air Flow	Air Supply Outlet	2
	Airflow Direction Control (Left & Right)	5 Steps
	Airflow Direction Control (Up & Down)	6 Steps
	Auto Swing (Left & Right)	O
	Auto Swing (Up & Down)	O
	Fan Speed Steps (Fan / Cool / Heat)	6 / 6 / 6
	Natural Wind (Auto Wind)	O
	Jet Cool / Jet Heat (Power Wind)	O / O
	Comfort Air	X
	Soft Air	O
Air Purifying	Vane Type	Dual Vane
	Prefilter (Washable)	O
	Fine Dust Filter(Micro Dust Filter)	X
	Ultra Fine Dust Filter / PM 1.0 Sensor	X
	Allergy Filter	O
	Plasmaster Ionizer	O
Installation	Drain Pump	X
Reliability	Hot Start	O
	Self Diagnosis	O
	De-ice Control (Defrost)	O
	Dry (Dehumidification) Operation	O
Convenience	Auto Changeover	O
	Auto Operation (Artificial Intelligence)	X
	Auto Cleaning (Coil Dry)	O
	Auto Restart Operation	O
	Child Lock ¹	O
	Forced Operation	O
	Group Control ¹	X
	Sleep Mode	12hr
	Timer 24hr (On/Off) / 7hr (Off)	O / X
	Timer (Weekly) ¹	O
	Two Thermistor Control ¹	O
	Low Ambient Operation	O
	Overheating Protection	O
	Low Heating	O
	Voice Control	X
	Outdoor Silent Mode	O
	Mosquito Away	X
	Smart Diagnosis	O
	Indoor Unit Display Type	Number Display
	Indoor Unit Display Light	On/Off
	Energy Display	O (ThinQ only)
	Air Quality Indicator (Dust Sensor)	X
	Human Detecting Sensor	X
	Freeze Cleaning	O (ThinQ only)
	Window Open Detecting	O (ThinQ only)
Energy Saving	Energy Saving	X
	Energy Control	Active Energy Control
	Gen Mode	X
	kW Manager	O
Individual Control	Wired Remote Controller (Premium) ²	X
	Wired Remote Controller (Standard) ²	PQRCVSL0(QW) / PREMTB(0/B)01
	Wired Remote Controller (Simple with Mode Selection) ²	PQRCVCL0Q(W)
	Wired Remote Controller (Simple without Mode Selection) ²	PQRCHCA0Q(W)
	Handheld Wireless (See Remote Controller Section)	AKB76044202
	Controller	Setting Temperature Range (Cooling) 18~30 °C (64~86 °F) Setting Temperature Range (Heating) 16~30 °C (60~86 °F)
CAC Network Function	General Central Controller (Non LGAP)	X
	Network Solution (LGAP)	O
	Dry Contact ²	PDRYCB000, PDRYCB100, PDRYCB400, PDRYCB500
	PDI (Power Distribution Indicator) ²	X
Special Function Kit	Outdoor Unit PI 485 ²	PMNFP14A1
	Wi-Fi ²	Embedded
	Water Level Sensor Connection ²	X
	Wind Baffle Kit ²	X
	Sump Heater	X
	Sheath Heater ²	X
	Crank Case Heater	X
Others	Smart Inverter Monitoring System (SIMs) ²	PSWMO23
	Mode Lock	Cooling Only or Heating Only
	DRED (Demand Response Enabling Device)	X
Hygiene	UV Nano	X
	Heat Exchanger Cleaning (Freeze Cleaning)	X

Note

- O : Applied, X : Not applied
- Filters are optional in some specific areas.
- ¹ : This function can be operated only when the wired remote controller is connected. The applicability of each function depends on the above table.
- ² : Optional accessories must be purchased separately. If shown as "Embedded", this function is included in product.
- The function Wi-Fi is only compatible with 2.4 GHz band. (802.11 b/g/n)
- Some specifications may be changed without notifications due to our policy of innovation.

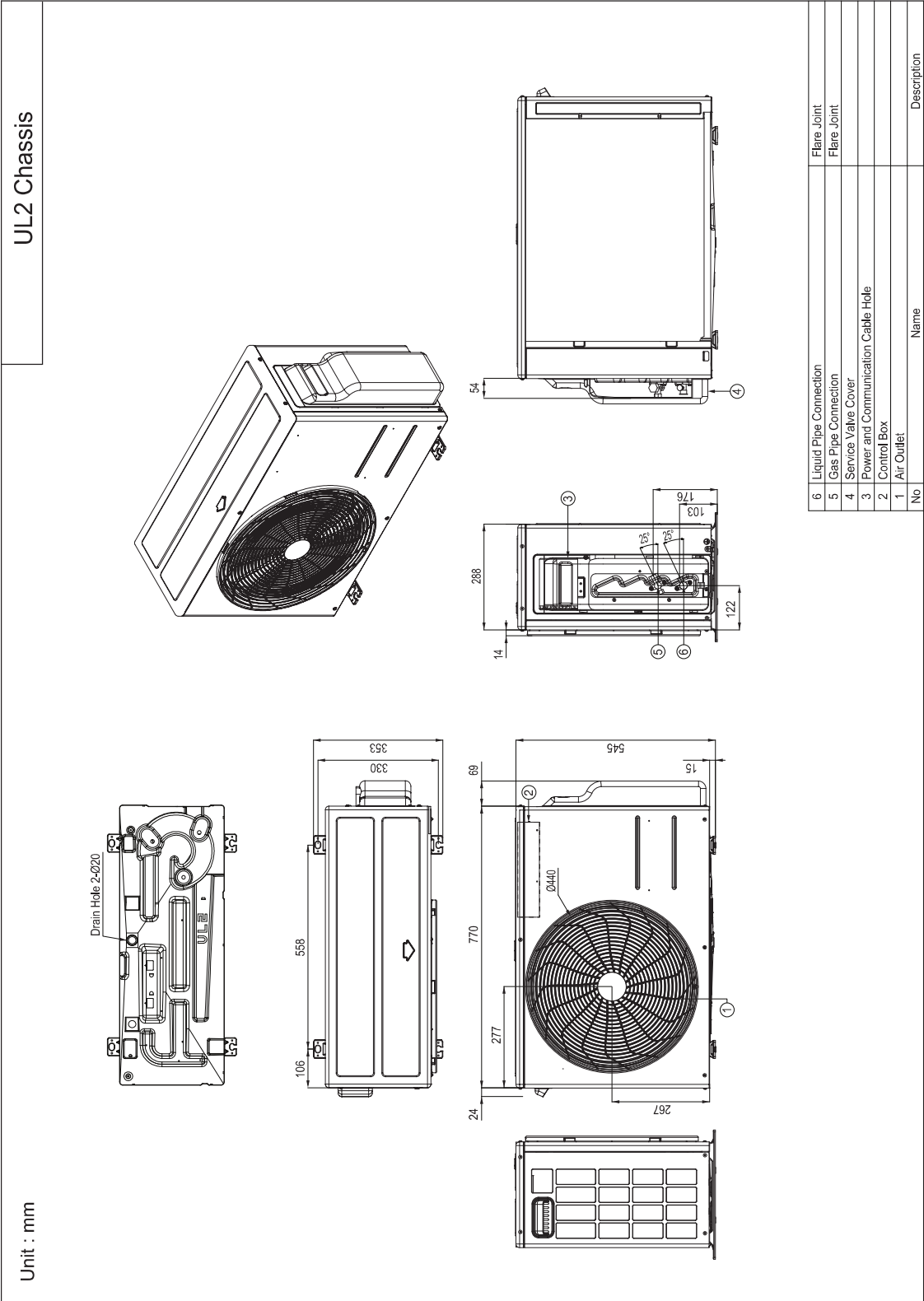
5. Dimensional Drawings

H24S1DA.NS1 (S3NM24121DA.EC6GEEU)



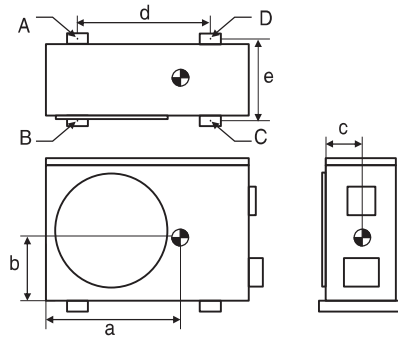
5. Dimensional Drawings

H24S1DA.U24 (S3UM24121DA.EC6GEEU)



5. Dimensional Drawings

5.3 Corner Weight and Center of Gravity Dimension for Outdoor Unit



Model	Tool	Weight (kg)		Center of Gravity (mm)			Leg (mm)		Corner Weight (kg)			
		Shipping	Net	a	b	c	d	e	A	B	C	D
H09S1PA.U18	U18A	32.0	29.9	507	237	143	558	330	4.1	4.3	10.8	10.6
H12S1PA.U18	U18A	32.0	29.9	507	237	143	558	330	4.1	4.3	10.8	10.6
H09S1DA.U12	U12A	27.2	25.1	475	219	113	463	256	1.8	2.3	10.7	10.2
H12S1DA.U12	U12A	27.2	25.1	475	219	113	463	256	1.8	2.3	10.7	10.2
H18S1DA.U18	U18A	37.0	34.4	507	237	143	558	330	4.7	4.9	12.5	12.3
H24S1DA.U24	U24A	47.0	44.0	565	260	150	586	366	5.2	7.1	16.8	14.9

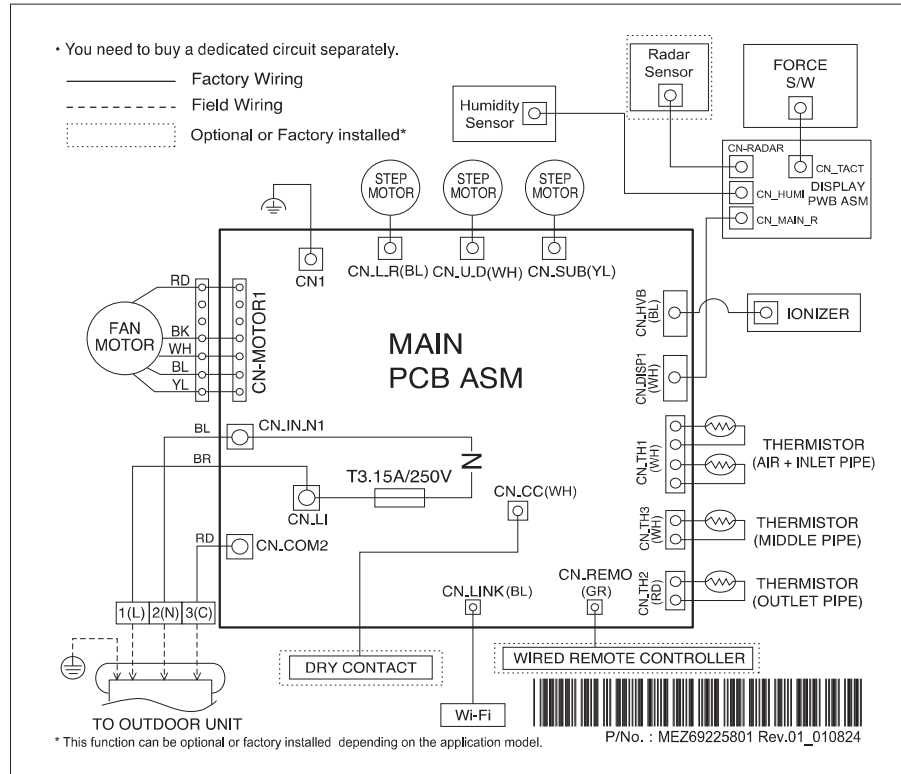
Model	Tool	Weight (lb.)		Center of Gravity (in.)			Leg (in.)		Corner Weight (lb.)			
		Shipping	Net	a	b	c	d	e	A	B	C	D
H09S1PA.U18	U18A	70.5	65.9	19-31/32	9-11/32	5-5/8	21-31/32	13	9.1	9.5	23.9	23.5
H12S1PA.U18	U18A	70.5	65.9	19-31/32	9-11/32	5-5/8	21-31/32	13	9.1	9.5	23.9	23.5
H09S1DA.U12	U12A	60.0	55.3	18-11/16	8-5/8	4-7/16	18-7/32	10-3/32	4.1	5.1	23.6	22.5
H12S1DA.U12	U12A	60.0	55.3	18-11/16	8-5/8	4-7/16	18-7/32	10-3/32	4.1	5.1	23.6	22.5
H18S1DA.U18	U18A	81.6	75.8	19-31/32	9-11/32	5-5/8	21-31/32	13	10.4	10.9	27.5	27.0
H24S1DA.U24	U24A	103.6	97.0	22-1/4	10-1/4	5-29/32	23-1/16	14-13/32	11.4	15.6	37.1	32.9

Note

- Design features and information of indoor and outdoor unit may be changed without notifications due to our policy of innovation.
- The center of gravity and corner weight may be different from the actual values because these are simulation results.

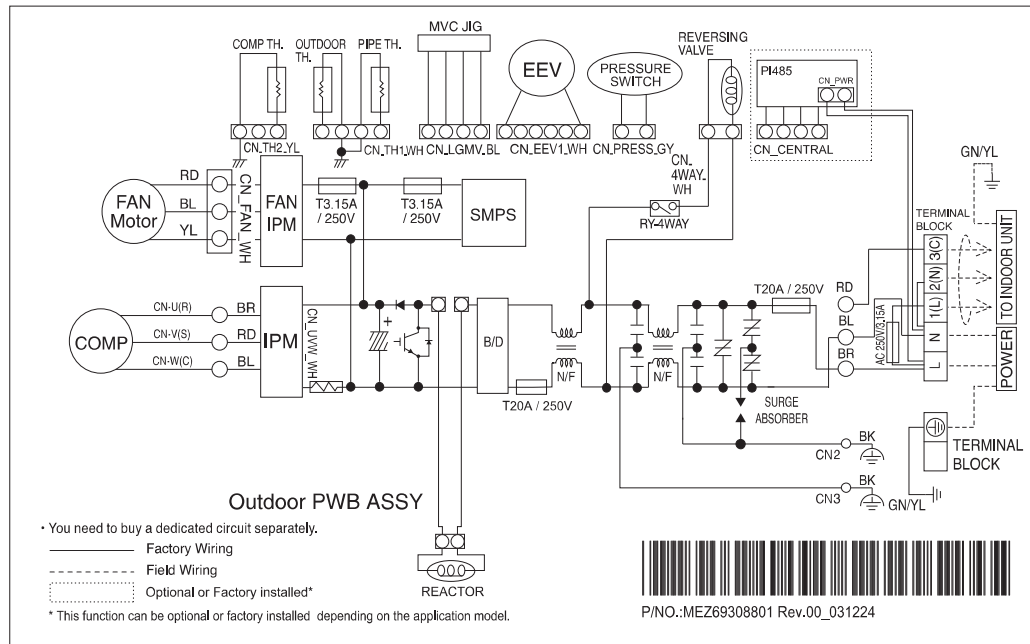
6. Wiring Diagrams

H24S1DA.NS1 (S3NM24121DA.EC6GEEU)



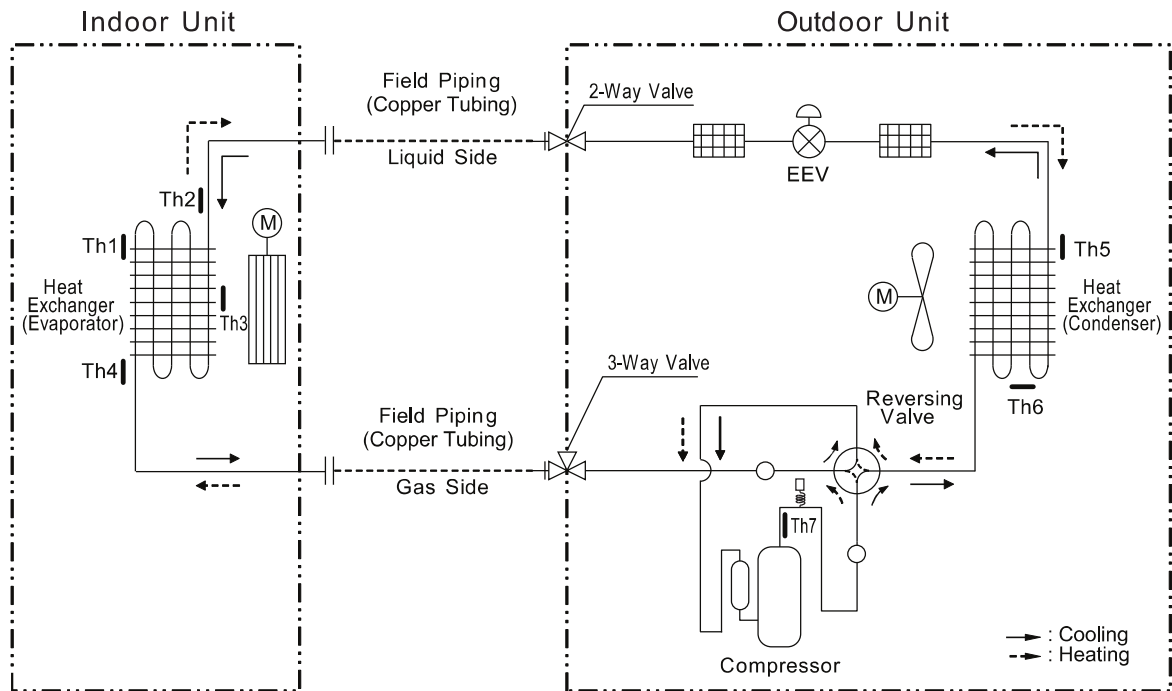
6. Wiring Diagrams

H24S1DA.U24 (S3UM24121DA.EC6GEEU)



7. Refrigerant Cycle Diagrams

H24S1DA.SS1 (S3-M24121DA.EC6GEEU)



Loc.	Description	PCB Connector
Th1	Thermistor for indoor air temperature	CN-TH1 (Indoor)
Th2	Thermistor for evaporator inlet temperature	CN-TH1 (Indoor)
Th3	Thermistor for evaporator middle temperature	CN-TH3 (Indoor)
Th4	Thermistor for evaporator outlet temperature	CN-TH2 (Indoor)
Th5	Thermistor for outdoor air temperature	CN-TH1 (Outdoor)
Th6	Thermistor for condenser temperature	CN-TH1 (Outdoor)
Th7	Thermistor for discharge pipe temperature	CN-TH2 (Outdoor)

◆ Refrigerant Pipe Connection Port Diameters

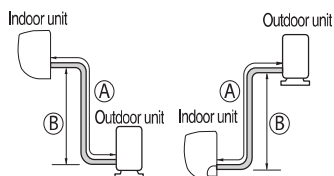
Model	Gas		Liquid		Capillary Tube
	mm	inch	mm	inch	
H24S1DA.SS1	ø 15.88	ø 5/8	ø 6.35	ø 1/4	-

Appendix	Heat Exchanger	Propeller Fan	Cross Flow Fan	Compressor	Accumulator	Reversing Valve (4 Way Valve)
	EEV (Electronic Expansion Valve)	Capillary Tube	2-Way Valve 3-Way Valve	Temperature Sensor	Pressure Sensor	Pressure Switch
	Check Valve	Flare Joint	Muffler	Strainer		

9. Capacity Coefficient Factor

9.2 Pipe Size, Length and Elevation

Model	Pipe Size				Standard Pipe Length [m (ft.)]	Min. / Max. Pipe Length A [m (ft.)]	Max. Elevation B [m (ft.)]	Additional Refrigerant [g/m (oz./ft.)]	No Charge Pipe Length [m (ft.)]
	Gas		Liquid						
	mm	inch	mm	inch					
H09S1PA.SS1 (S3-M091L1CA.EC6GEEU)	ø 9.52	ø 3/8	ø 6.35	ø 1/4	7.5 (24.6)	3 / 20 (9.8 / 65.6)	10 (32.8)	20 (0.22)	12.5 (41)
H12S1PA.SS1 (S3-M121L1CA.EC6GEEU)	ø 9.52	ø 3/8	ø 6.35	ø 1/4	7.5 (24.6)	3 / 20 (9.8 / 65.6)	10 (32.8)	20 (0.22)	12.5 (41)
H09S1DA.SS1 (S3-M091A1DA.EC6GEEU)	ø 9.52	ø 3/8	ø 6.35	ø 1/4	7.5 (24.6)	3 / 20 (9.8 / 65.6)	10 (32.8)	20 (0.22)	12.5 (41)
H12S1DA.SS1 (S3-M121A1DA.EC6GEEU)	ø 9.52	ø 3/8	ø 6.35	ø 1/4	7.5 (24.6)	3 / 20 (9.8 / 65.6)	10 (32.8)	20 (0.22)	12.5 (41)
H18S1DA.SS1 (S3-M181L1DA.EC6GEEU)	ø 12.7	ø 1/2	ø 6.35	ø 1/4	7.5 (24.6)	3 / 20 (9.8 / 65.6)	10 (32.8)	20 (0.22)	7.5 (24.6)
H24S1DA.SS1 (S3-M24121DA.EC6GEEU)	ø 15.88	ø 5/8	ø 6.35	ø 1/4	7.5 (24.6)	3 / 30 (9.8 / 98.4)	15 (49.2)	20 (0.22)	7.5 (24.6)

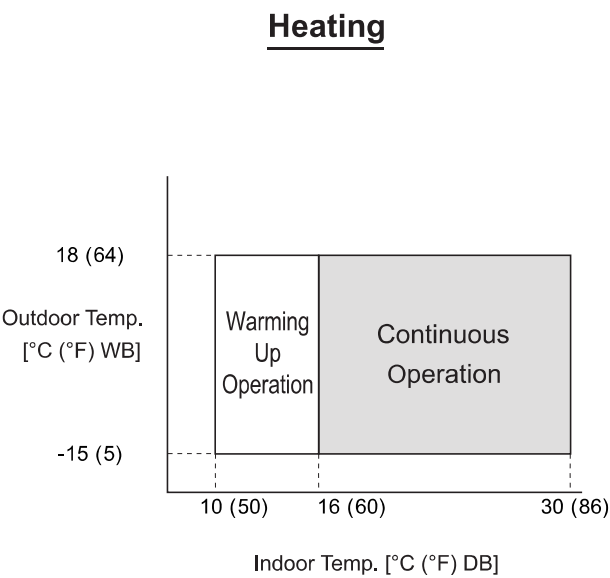
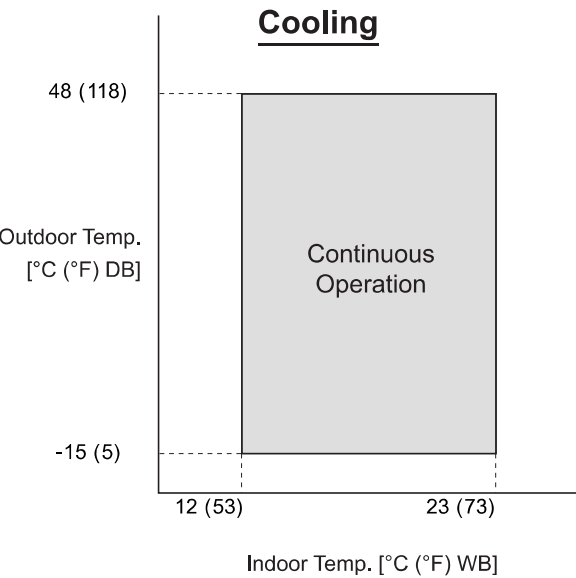


⚠ WARNING

- It may cause reliability, performance, noise, and vibration problem, if piping limitations are not met. Keep minimum piping length by making loops, although indoor unit and outdoor unit are close.

10. Operation Range

H24S1DA.SS1 (S3-M24121DA.EC6GEEU)



Note
The figures are based on the following conditions :
– Equivalent Piping Length : 7.5 m (24.6 ft.)
– Level Difference : 0 m (0 ft.)

14. Installation

14.8 Outdoor Unit Max External Static Pressure

Model	Tool	Air Flow Rate		Static Pressure	
		CMM	CFM	N / m ²	inWG
H09S1PA.U18	U18A	35	1236	9.2296	0.0371
H12S1PA.U18	U18A	35	1236	9.2296	0.0371
H09S1DA.U12	U12A	27	954	9.2296	0.0371
H12S1DA.U12	U12A	27	954	9.2296	0.0371
H18S1DA.U18	U18A	35	1236	9.2296	0.0371
H24S1DA.U24	U24A	49	1730	9.2296	0.0371