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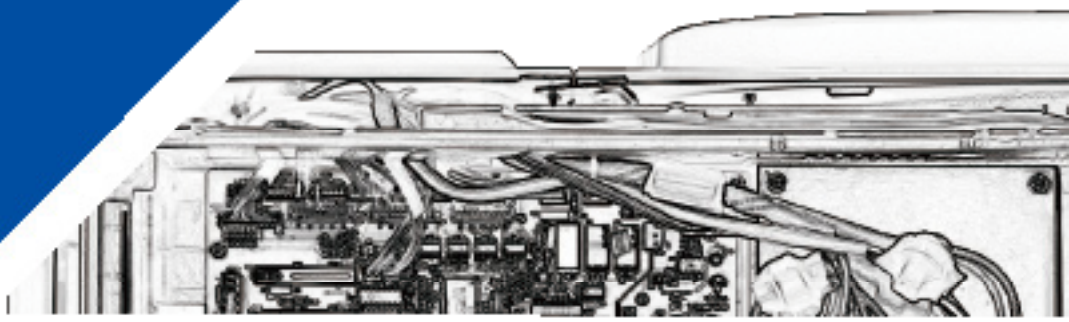

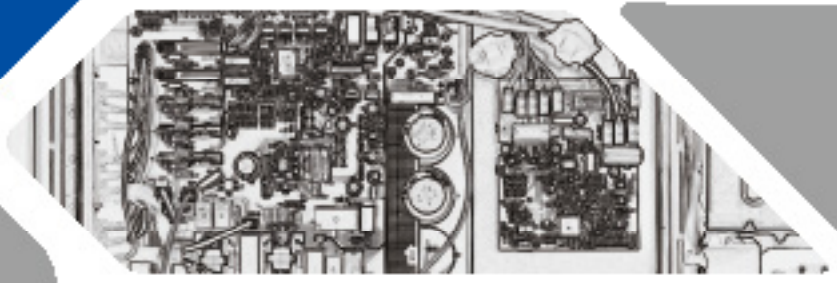

R32 Super Match Plus Service Manual

SYJS.2022.B Edition: 2022-11

Haier

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1 . General Information

1.1 Line up

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	Low ESP Duct	AD25S2SS1FA(H) AD35S2SS1FA(H)	
		AD50S2SS1FA(H) AD71S2SS1FA(H) AD90S2SM3FA(H) AD125S2SM8FA(H) AD140S2SM8FA(H) AD160S2SM3FA(H)	
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		Model	Appearance
	Medium ESP Duct	AD125S2SM8FA (H) AD140S2SM8FA (H) AD160S2SM3FA (H)	
	Console	AF25S2SD1FA(H) AF35S2SD1FA(H) AF42S2SD1FA(H) AF25S2SD1FA(D) AF35S2SD1FA(D) AF42S2SD1FA(D)	
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	Cabinet	AP140S2SK1FA(H) AP160S2SK1FA(H)	

Series	Model	The specical function	WIFI code
Console	AF25S2SD1FA(H)	CANDY WIFI + 56°C	0011800292AE
	AF35S2SD1FA(H)		
	AF42S2SD1FA(H)		
	AF25S2SD1FA(D)		
	AF35S2SD1FA(D)		
	AF42S2SD1FA(D)		
Slim duct	AD25S2SS1FA-1	CANDY WIFI	0011800292AH
	AD35S2SS1FA-1		
	AD50S2SS1FA-1		
	AD71S2SS1FA-1		
Slim duct	AD25S2SS1FA(H)	CANDY WIFI + UVC	0011800292AH
	AD35S2SS1FA(H)		
	AD50S2SS1FA(H)		
	AD71S2SS1FA(H)		
Medium ESP Duct	AD35S2SM3FA-1	CANDY WIFI	0011800292AH
	AD50S2SM3FA-1		
	AD71S2SM3FA-1		
	AD105S2SM3FA-1		
Medium ESP Duct	AD35S2SM3FA(H)	CANDY WIFI + UVC	0011800292AH
	AD50S2SM3FA(H)		
	AD71S2SM3FA(H)		
	AD105S2SM3FA(H)		
4-Way Cassette	AB25S2SC2FA-1	CANDY WIFI	0011800292AH
	AB35S2SC2FA-1-1		
	AB50S2SC2FA-1		
Cabinet	AP140S2SK1FA(H)	UVC	/
	AP160S2SK1FA(H)		

2 . Indoor Units-4-Way Cassette Type

2.1 Specification

Item			Model	AB25S2SC2FA-1	
Function			——	Cooling	Heating
Capacity			W	2600	3200
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.0	
Indoor unit	Power supply			1PH, 220~240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*1	
		Speed(H-M-L)	r/min	690/620/560/500	
		Fan motor output/input power	W	10/15	
		Air-flows (H-M-L)	m³/h	620/520/450/350	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	1	
		Total area	m²	0.272	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	570*570*260	
		Package	mmxmmxmm	718*680*380	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 26/32	
	Control type(Remote/Wired)			Remote YR-HQS01(O) Wired YR-E17(O)	
	Fresh air hole dimension		mm	95	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB(A)	52	
		Sound pressure level	dB(A)	36/33/30/27	
	Weight(Net/Shipping)		kg/kg	17/20	
Panel	Panel model(Color)			PB-620KB(White)	
	Dimension	External(L*W*H)	mmxmmxmm	620*620*60	
		Package(L*W*H)	mmxmmxmm	660*660*115	
	Weight(Net/Shipping)		kg/kg	2.8/4.8	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35(1/4)	
		Gas	mm	Φ9.52(3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AB35S2SC2FA-1	
Function			——	Cooling	Heating
Capacity			W	3500	4000
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.5	
Indoor unit	Power supply			1PH, 220~240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*1	
		Speed(H-M-L)	r/min	690/620/560/500	
		Fan motor output/input power	W	10/15	
		Air-flows (H-M-L)	m³/h	620/520/450/350	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	0.544	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	570*570*260	
		Package	mmxmmxmm	718*680*380	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 26/32	
	Control type (Remote/Wired)			Remote YR-HQS01(O) Wired YR-E17(O)	
	Fresh air hole dimension		mm	95	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB(A)	52	
		Sound pressure level	dB(A)	36/33/30/27	
	Weight(Net/Shipping)		kg/kg	18.5/22	
Panel	Panel model(Color)			PB-620KB(White)	
	Dimension	External(L*W*H)	mmxmmxmm	620*620*60	
		Package(L*W*H)	mmxmmxmm	660*660*115	
	Weight(Net/Shipping)		kg/kg	2.8/4.8	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35(1/4)	
		Gas	mm	Φ9.52(3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AB50S2SC2FA-1	
Function			——	Cooling	Heating
Capacity			W	5000	5500
Sensible Heat Ratio			W	0.71	/
Dehumidifying Capacity			10-³xm³/h	2.2	
Indoor Unit	Power Supply			1PH, 220~240V~, 50/60Hz	
	Fan	Type × Number	——	Axial Fiow*1	
		Speed (H-M-L)	r/min	800/700/600	
		Fan Motor Output/Input Power	W	33/50	
		Air-Flows (H-M-L)	m³/h	700/620/500	
		External Static Pressure	pa	0	
	Heat Exchanger	Type / Diameter	mm	Inner Grooved Pipe/φ7.0	
		Row	——	2	
		Total Area	m²	1.25	
	Dimension (LxWxH)	External	mmxmmxmm	570x570x260	
		Package	mmxmmxmm	718x680x380	
	Drainage Pipe (Material, I.D/O.D)		mm	PVC 27/31	
	Control Type (Remote/Wired)			Remote YR-HQS01(O) Wired: YR-E17(O)	
	Fresh Air Hole Dimension		mm	None	
	Electricity Heater		kW	None	
	Noise Level (H-M-L)	Sound Power Level	dB (A)	55	
		Sound Pressure Level	dB (A)	42/37/35	
	Weight (Net/Shipping)		kg/kg	18.5/22	
Panel (Optional)	Panel Model (Color)			PB-620KB (White)	
	Dimension	External (L*W*H)	mmxmmxmm	620*620*60	
		Package (L*W*H)	mmxmmxmm	660*660*115	
	Weight (Net/Shipping)		kg/kg	2.8/4.8	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ12.7 (1/2)	
	Connecting Method			Flared	

Norminal condition: indoor temperature (Cooling): 27˚C DB/19˚C WB, indoor temperature (Heating): 20˚C DB
Outdoor temperature (Cooling): 35˚C DB/24˚C WB, outdoor temperature (Heating): 7˚C DB/6˚C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AB71S2SG1FA (H)	
Function			——	Cooling	Heating
Capacity			W	7100	8000
Sensible Heat Ratio			W	0.71	/
Dehumidifying Capacity			10-³xm³/h	1.0	
Indoor Unit	Power Supply			1PH, 220~240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*2	
		Speed (H-M-L)	r/min	650/600/550/500	
		Fan Motor Output/Input Power	W	45/50	
		Air-Flows (H-M-L)	m³/h	1260/1070/820/680	
		External Static Pressure	pa	0	
	Heat Exchanger	Type / Diameter	mm	Inner Grooved Pipe/φ7.0	
		Row	——	2	
		Total Area	m²	/	
		Temp.Scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	840*840*204	
		Package	mmxmmxmm	990*990*310	
	Drainage Pipe (Material, I.D/O.D)		mm	PVC 26/32	
	Control Type (Remote/Wired)			Remote YR-HQS01(O) Wired: YR-E17(O)	
	Fresh Air Hole Dimension		mm	71.3	
	Electricity Heater		kW	None	
	Noise Level (H-M-L)	Sound Power Level	dB (A)	55	
		Sound Pressure Level	dB (A)	36/33/29/26	
	Weight (Net/Shipping)		kg/kg	27/32	
Panel (Optional)	Panel Model (Color)			PB-950KB	
	Dimension	External (L*W*H)	mmxmmxmm	950/950/50	
		Package (L*W*H)	mmxmmxmm	1000/1000/110	
	Weight (Net/Shipping)		kg/kg	6.5/9	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Connecting Method			Flared	

Norminal condition: indoor temperature (Cooling): 27˚C DB/19˚C WB, indoor temperature (Heating): 20˚C DB
Outdoor temperature (Cooling): 35˚C DB/24˚C WB, outdoor temperature (Heating): 7˚C DB/6˚C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	ABH105H1ERG (H)	
Function				cooling	heating
Capacity			KW	9.0 (2.5-10.0)	10.1 (3.0-10.5)
Sensible heat ratio				0.74	
Total power input			KW	3.12 (0.5-4.0)	2.90 (0.5-4.0)
Max. power input			W	4.0	4.0
EER or COP			W/W	2.88 (A)	3.45 (A)
Dehumidifying capacity			10-³×m³/h	3	
Power cable				4.0mm^2	
Power source			N, V, Hz	1PH, 220~240V~, 50/60Hz	
Running /Max.Running current			A / A	13.6/16.5	12.6/16.5
Start Current			A	0.58	
Circuit breaker			A	5	5
Indoor unit	Unit model (color)			ABH105H1ERG	
	Fan	Type × Number		CENTRIFUGALX1	
		Speed (H-M-L)	r/min	650/550/450/400	
		Fan motor output/ input power	W	82/134	
		Air-flow (H-M-L)	m³/h	1680/1530/1320/1190	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Row		2	
		Total Area	m²	/	
	Dimension	External（L×W×H）	mm×mm×mm	840/840/246	
		Package （L×W×H）	mm×mm×mm	990/990/310	
	Drainage pipe （material , I.D./O.D.）		mm	PVC 26/32	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(O)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	95	
	Electricity Heater		kW	NONE	
	Sound power Noise level (H-M-L)		dB(A)	62	
	Sound pressure Noise level (H-M-L)		dB(A)	45/42/38/34	
	Pipe	Liquid Pipe	mm	9.52	
		Gas Pipe	mm	15.88	
		Connecting Method		flared	
	Weight (Net / Shipping)		kg / kg	31/36	
	Panel	Model		PB-950KB	
		External dimensions (W/D/H)	mm	950/950/50	
		Shipping dimensions (W/D/H)	mm	1000/1000/110	
		Net weight/Shipping weight	kg	6.5/9	
Piping	Refrigerant	Type / Charge	g	R32/1700	
		Recharge quantity	g/m	45	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27^{O}CDB/19^{O}CWB, indoor temperature (heating): 20^{O}CDB
Outdoor temperature (cooling): 35^{O}CDB/24^{O}CWB, outdoor temperature (heating): 7^{O}CDB/6^{O}CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	ABH125K1ERG (H)	
Function				cooling	heating
Capacity			KW	12.0 (2.4~12.7)	12.3 (1.8~13.0)
Sensible heat ratio				0.77	
Total power input			KW	4.3 (0.3-5.6)	3.8 (0.3-5.6)
Max. power input			W	5600	5600
EER or COP			W/W	2.64 (A)	3.08 (A)
Dehumidifying capacity			10-³×m³/h	2.02	
Power cable				H07VV-F 3G 6.0 mm^2	
Power source			N, V, Hz	1PH, 220~240V~, 50/60Hz	
Running /Max.Running current			A / A	18.5 (1.5-26.0)/26	16.0 (1.5-26.0)/26
Start Current			A	3	
Circuit breaker			A	40	40
Indoor unit	Unit model (color)			ABH125K1ERG	
	Fan	Type × Number		CENTRIFUGALX1	
		Speed(H-M-L)	r/min	750/650/500/400	
		Fan motor output/ input power	W	90/120	
		Air-flow (H-M-L)	m³/h	1950/1600/1440/1200	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Row		/	
		Total Area	m²	/	
	Dimension	External（L×W×H）	mm×mm×mm	840/840/288	
		Package（L×W×H）	mm×mm×mm	990/990/380	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(O)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	100	
	Electricity Heater		kW	NONE	
	Sound power Noise level (H-M-L)		dB (A)	64	
	Sound pressure Noise level (H-M-L)		dB (A)	47/44/38/34	
	Panel	Model		PB-950KB	
		External dimensions(W/D/H)	mm	950/950/50	
		Shipping dimensions(W/D/H)	mm	1000/1000/110	
		Net weight/Shipping weight	kg	6.5/9	
	Pipe	Liquid Pipe	mm	9.52	
		Gas Pipe	mm	15.88	
		Connecting Method		flared	
	Weight (Net / Shipping)		kg / kg	32/38	
Piping	Refrigerant	Type / Charge	g	R32/2000	
		Recharge quantity	g/m	45	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	ABH140K1ERG (H)	
Function				cooling	heating
Capacity			KW	12.3 (2.8~14)	14.5 (3.0~15.0)
Sensible heat ratio				0.74	
Total power input			KW	4.39	4.68
Max. power input			W	7200	7200
EER or COP			W/W	2.80(A)	3.1A)
Dehumidifying capacity			10-³×m³/h	5.2	
Power cable				H07VV-F 3G 6.0 mm^2	
Power source			N, V, Hz	1PH, 220~240V~, 50/60Hz	
Running /Max.Running current			A / A	19.0 (8.7-32.0)/32.0	19.5 (8.7-32.0)/32
Start Current			A	3	
Circuit breaker			A	40	40
Indoor unit	Unit model (color)			ABH140K1ERG	
	Fan	Type × Number		CENTRIFUGALX1	
		Speed (H-M-L)	r/min	750/650/500/400	
		Fan motor output/ input power	W	90/120	
		Air-flow (H-M-L)	m³/h	1950/1600/1440/1200	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Row		/	
		Total Area	m²	/	
	Dimension	External（L×W×H）	mm×mm×mm	840/840/288	
		Package（L×W×H）	mm×mm×mm	990/990/380	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(O)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	100	
	Electricity Heater		kW	NONE	
	Sound power Noise level (H-M-L)		dB(A)	64	
	Sound pressure Noise level (H-M-L)		dB(A)	47/44/38/34	
	Panel	Model		PB-950KB	
		External dimensions (W/D/H)	mm	950/950/50	
		Shipping dimensions (W/D/H)	mm	1000/1000/110	
		Net weight/Shipping weight	kg	6.5/9	
	Pipe	Liquid Pipe	mm	9.52	
		Gas Pipe	mm	15.88	
		Connecting Method		flared	
	Weight (Net / Shipping)		kg / kg	32/38	
Piping	Refrigerant	Type / Charge	g	R32/2900	
		Recharge quantity	g/m	45	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	75	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item	Model			ABH160K1ERG (H)		
Function					cooling	heating
Capacity				KW	15(4.5~16)	16(5~17)
Sensible heat ratio					0.78	
Total power input				KW	5.03(1.0~6.5)	5.26(1.0~6.5)
Max. power input				W	6500	6500
EER or COP				W/W	2.98(A)	3.04(A)
Dehumidifying capacity				10^{-3}×m³/h	6.49	
Power cable					H05RN-F 5G 4.0mm2	
Power source				N, V, Hz	3N~/380-415V/50/60Hz	
Running /Max.Running current				A / A	7.3/10	7.6/10
Start Current				A	2	
Circuit breaker				A	5	
Indoor unit	Unit model (color)				ABH160K1ERG/INDOOR UNIT	
	Fan	Type × Number			CENTRIFUGALX1	
		Speed(H-M-L)		r/min	900/850/750/650/600	
		Fan motor output/ input power		W	90/120	
		Air-flow(H-M-L)		m³/h	2050/16001440/1220	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7.0	
		Row			2	
		Total Are a		m²	/	
	Dimension	External		mm×mm×mm	840*840*288	
		Package		mm×mm×mm	990*990*380	
	Drainage pipe (material , I.D./O.D.)			mm	PVC 13/16	
	Controller			Wired	YR-HD01(O)	
	(O-Optional,S-Standard)			Wireless	YR-HQS01(O)	
	Fresh air hole dimension			mm	71	
	Electricity Heater			kW	0	
	Sound power Noise level (H-M-L)			dB(A)	65	
	Sound pressure Noise level (H-M-L)			dB(A)	48/44/38/34	
	Pipe	Liquid Pipe	mm		9.52	
		Gas Pipe	mm		19.05	
		Connecting Method			flared	
	Weight (Net / Shipping)			kg / kg	38/32	
	Panel	Model			PB-950	
		External dimensions(W/D/H)		mm	950*950*50	
		Shipping dimensions(W/D/H)		mm	1000*1000*110	
		Net weight/Shipping weight			6.5/9	
PIPING	Refrigerant	Type / Charge		g	R32/3500	
		Recharge quantity		g/m	45	
	Pipe	Liquid		mm	9.52	
		Gas		mm	19.05	
	Between I.D &O.D	MAX.Drop		m	30	
		MAX.Piping length		m	70	
cooling	Pdesignc(kW):	15	SEER/CLASS	5.96/A+	QCE(Annual electricity consumption for cooling)kWh:	880

Item			Model			ABH160K1ERG (H)	
heating	Average	Pdesignh(-10°C)	11kW	SCOP/CLASS	3.99/A	QHE(Annual electricity consumption for heating)kWh：	3859
	Warmer	Pdesignh(2°C)	6.01	SCOP/CLASS	5.0/ A++	QHE(Annual electricity consumption for heating)kWh：	1707
	Colder	Pdesignh(-22°C)	/	SCOP/CLASS	/	QHE(Annual electricity consumption for heating)kWh：	/
Tdesignh：-10˚C			Tbivalent：-10˚C	TOL：-10˚C		Elbu:0	
Max. cooling condition			Indoor temperature： 32˚C /23˚C	Max. heating condition		Indoor temperature：27˚C /-˚C	
			Outdoor temperature： 46˚C /-˚C			Outdoor temperature：24˚C /18˚C	
Norminal condition: indoor temperature (cooling): 27˚C DB/19˚C WB, indoor temperature (heating): 20˚C DB Outdoor temperature(cooling): 35˚C DB/24˚C WB, outdoor temperature(heating): 7˚C DB/6˚C WB The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.							

Item			Model	AB25S2SC2FA (H)	
Function			——	Cooling	Heating
Capacity			W	2600	3200
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.0	
Indoor unit	Power supply			1PH, 220~240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*1	
		Speed(H-M-L)	r/min	690/620/560/500	
		Fan motor output/input power	W	10/15	
		Air-flows (H-M-L)	m³/h	620/520/450/350	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	1	
		Total area	m²	0.272	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	570*570*260	
		Package	mmxmmxmm	718*680*380	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 26/32	
	Control type(Remote/Wired)			Remote YR-HQS01(O) Wired YR-E17(O)	
	Fresh air hole dimension		mm	95	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB(A)	52	
		Sound pressure level	dB(A)	36/33/30/27	
	Weight(Net/Shipping)		kg/kg	17/20	
Panel	Panel model(Color)			PB-620KB(White)	
	Dimension	External(L*W*H)	mmxmmxmm	620*620*60	
		Package(L*W*H)	mmxmmxmm	660*660*115	
	Weight(Net/Shipping)		kg/kg	2.8/4.8	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35(1/4)	
		Gas	mm	Φ9.52(3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AB35S2SC2FA (H)	
Function			——	Cooling	Heating
Capacity			W	3500	4000
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.5	
Indoor unit	Power supply			1PH, 220~240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*1	
		Speed(H-M-L)	r/min	690/620/560/500	
		Fan motor output/input power	W	10/15	
		Air-flows (H-M-L)	m³/h	620/520/450/350	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	0.544	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	570*570*260	
		Package	mmxmmxmm	718*680*380	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 26/32	
	Control type (Remote/Wired)			Remote YR-HQS01(O) Wired YR-E17(O)	
	Fresh air hole dimension		mm	95	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB(A)	52	
		Sound pressure level	dB(A)	36/33/30/27	
	Weight(Net/Shipping)		kg/kg	18.5/22	
Panel	Panel model(Color)			PB-620KB(White)	
	Dimension	External(L*W*H)	mmxmmxmm	620*620*60	
		Package(L*W*H)	mmxmmxmm	660*660*115	
	Weight(Net/Shipping)		kg/kg	2.8/4.8	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35(1/4)	
		Gas	mm	Φ9.52(3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

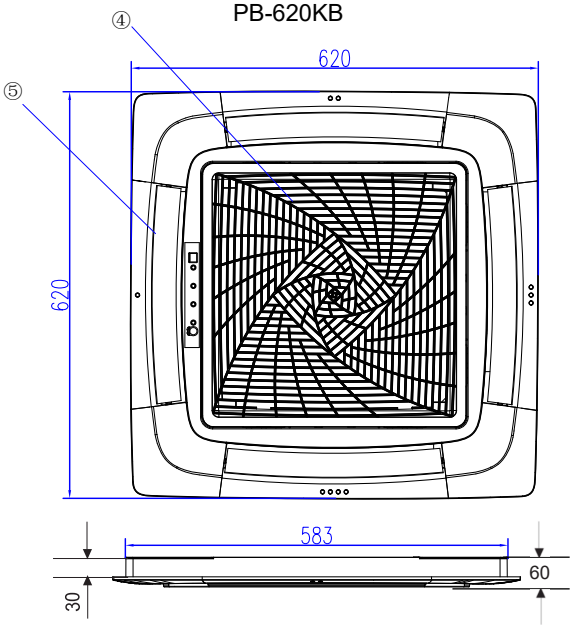
Item			Model	AB50S2SC2FA (H)	
Function			——	Cooling	Heating
Capacity			W	5000	5500
Sensible Heat Ratio			W	0.71	/
Dehumidifying Capacity			10-³xm³/h	2.2	
Indoor Unit	Power Supply			1PH, 220~240V~, 50/60Hz	
	Fan	Type × Number	——	Axial Fiow*1	
		Speed (H-M-L)	r/min	800/700/600	
		Fan Motor Output/Input Power	W	33/50	
		Air-Flows (H-M-L)	m³/h	700/620/500	
		External Static Pressure	pa	0	
	Heat Exchanger	Type / Diameter	mm	Inner Grooved Pipe/φ7.0	
		Row	——	2	
		Total Area	m²	1.25	
	Dimension (LxWxH)	External	mmxmmxmm	570x570x260	
		Package	mmxmmxmm	718x680x380	
	Drainage Pipe (Material, I.D/O.D)		mm	PVC 27/31	
	Control Type (Remote/Wired)			Remote YR-HQS01(O) Wired: YR-E17(O)	
	Fresh Air Hole Dimension		mm	None	
	Electricity Heater		kW	None	
	Noise Level (H-M-L)	Sound Power Level	dB (A)	55	
		Sound Pressure Level	dB (A)	42/37/35	
	Weight (Net/Shipping)		kg/kg	18.5/22	
Panel (Optional)	Panel Model (Color)			PB-620KB (White)	
	Dimension	External (L*W*H)	mmxmmxmm	620*620*60	
		Package (L*W*H)	mmxmmxmm	660*660*115	
	Weight (Net/Shipping)		kg/kg	2.8/4.8	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ12.7 (1/2)	
	Connecting Method			Flared	

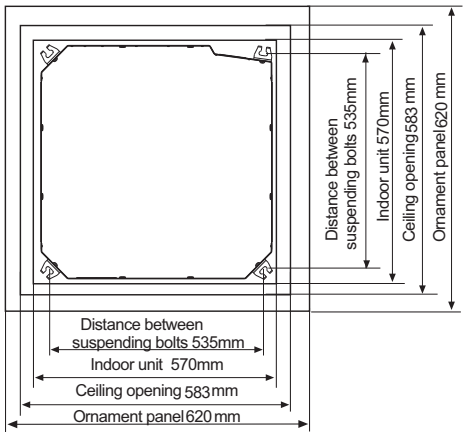
Norminal condition: indoor temperature (Cooling): 27˚C DB/19˚C WB, indoor temperature (Heating): 20˚C DB
Outdoor temperature (Cooling): 35˚C DB/24˚C WB, outdoor temperature (Heating): 7˚C DB/6˚C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

2.2 Dimension

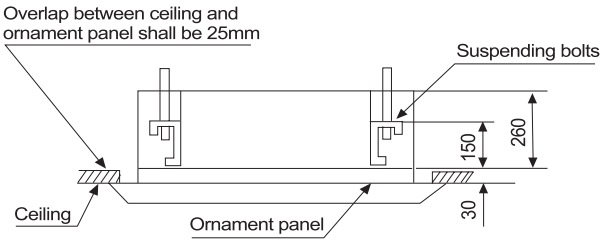
AB25S2SC2FA-1 AB35S2SC2FA-1-1 AB50S2SC2FA-1

PB-620KB



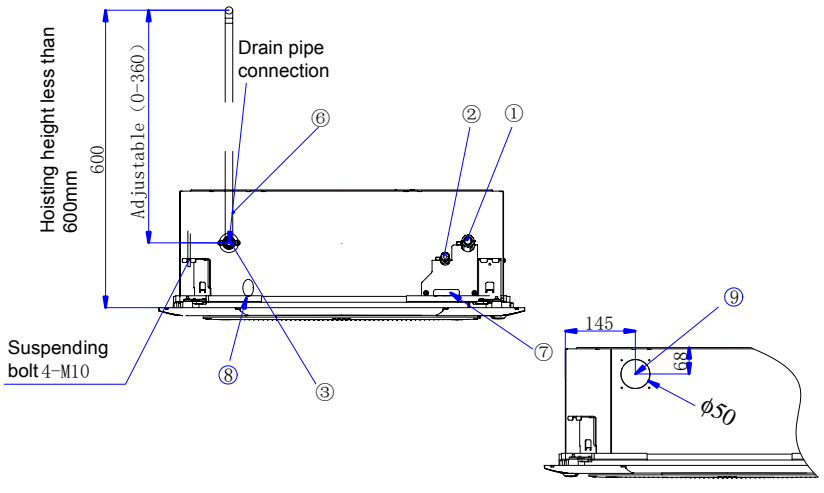


Note: to ensure that the panel can be installed properly, for PB-620KB panel, the minimum opening size of the ceiling should be more than 583mm.



Note: the design dimension of the embedded part of the panel, PB-620KB is 583*583mm

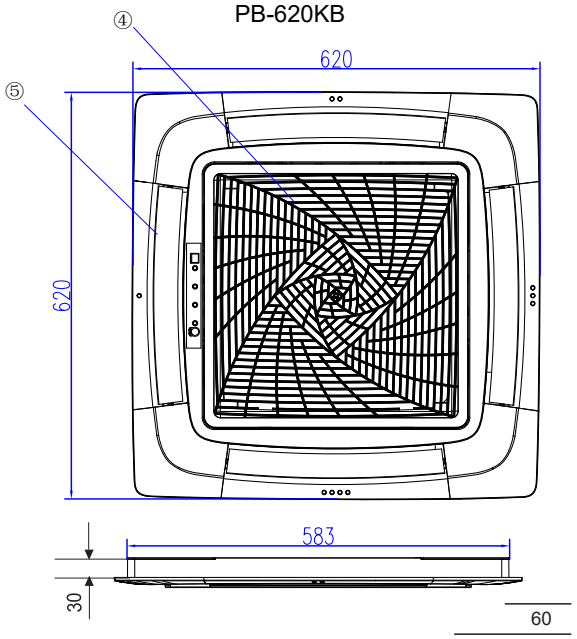
Code	Name
1	Gas pipe
2	Liquid pipe
3	Drain pipe
4	Air return grille
5	Air outlet
6	Drain soft pipe (accessory)
7	Wring hole (For connecting cable)
8	Wring hole (For wired controller)
9	Fresh air inlet

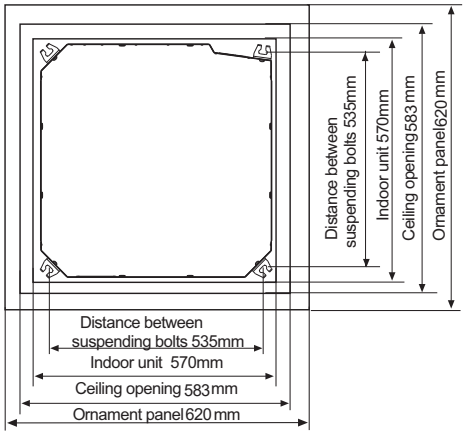


View A

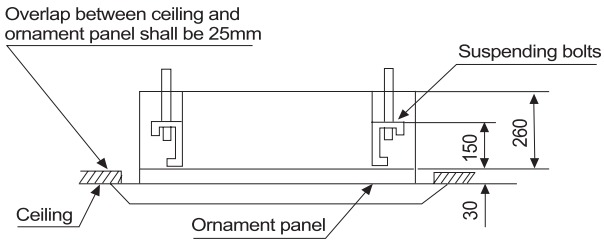
AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA(H)

PB-620KB



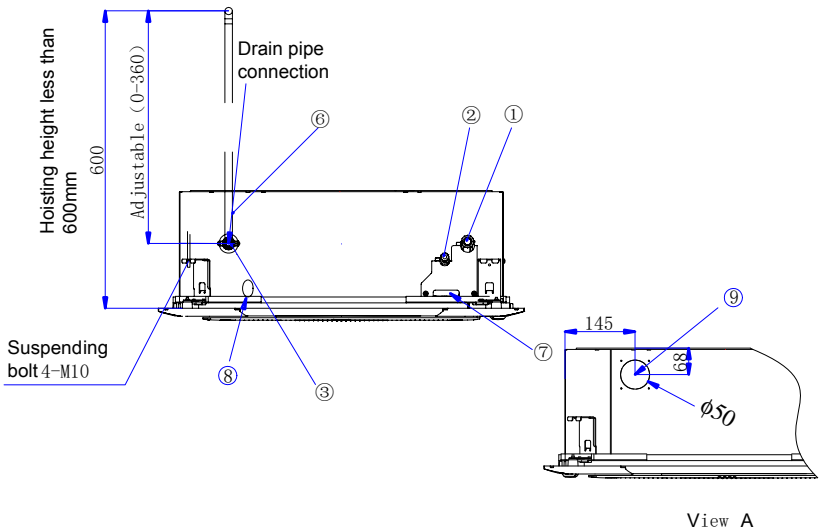


Note: to ensure that the panel can be installed properly, for PB-620KB panel, the minimum opening size of the ceiling should be more than 583mm.

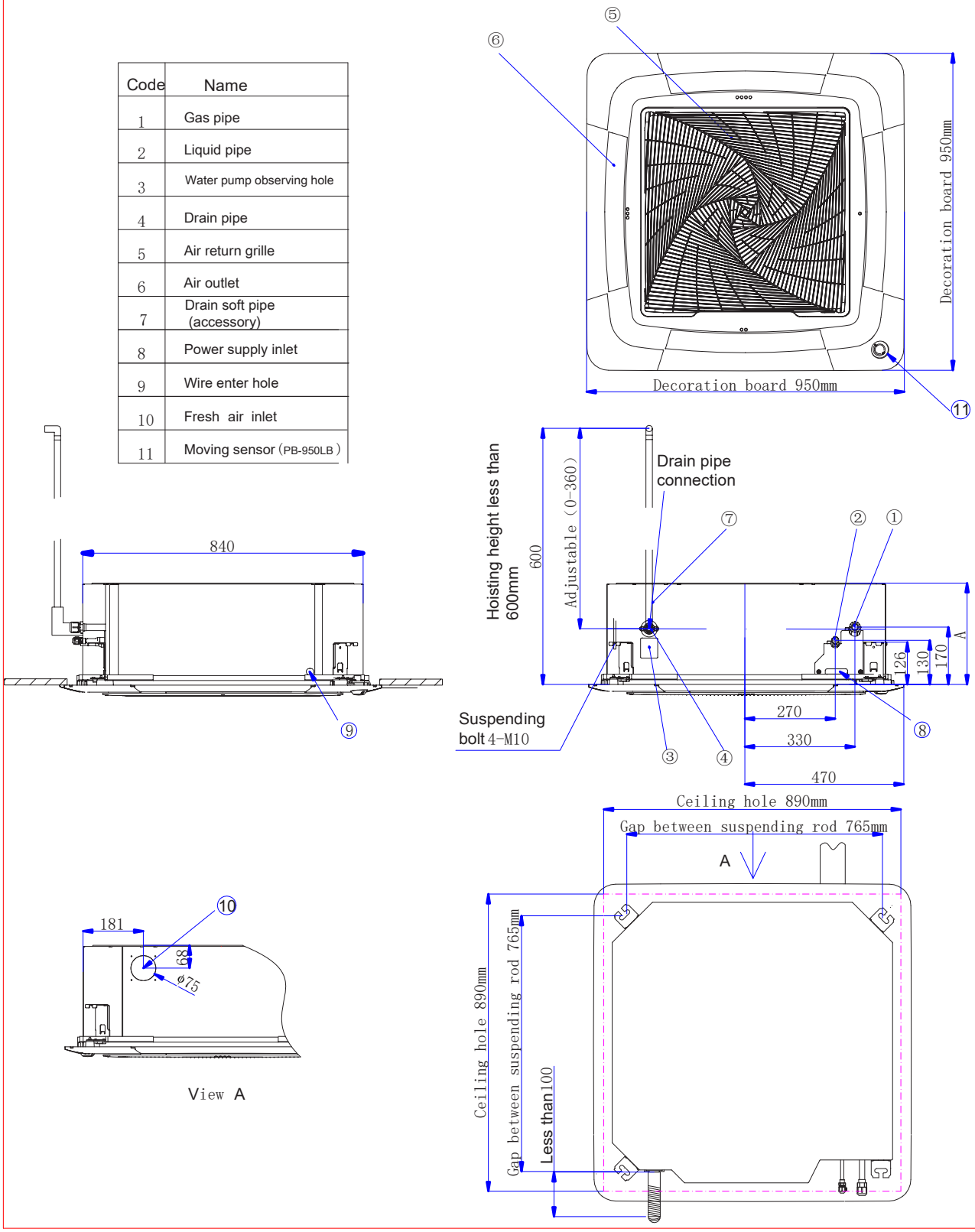


Note: the design dimension of the embedded part of the panel, PB-620KB is 583*583mm

Code	Name
1	Gas pipe
2	Liquid pipe
3	Drain pipe
4	Air return grille
5	Air outlet
6	Drain soft pipe (accessory)
7	Power supply inlet Wring hole (For connecting cable)
8	Wire enter hole Wring hole (For wired controller)
9	Fresh air inlet



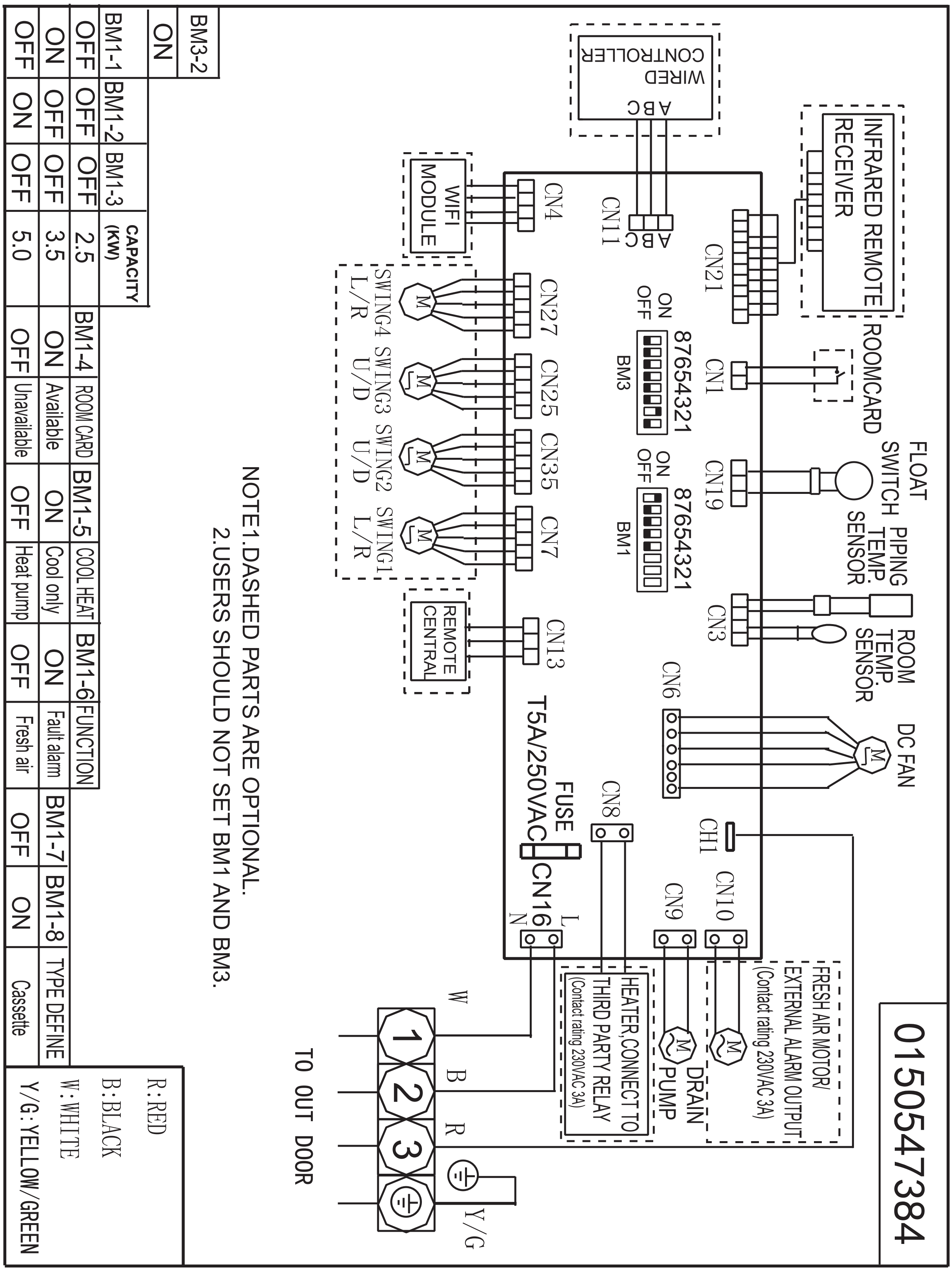
Code	Name
1	Gas pipe
2	Liquid pipe
3	Water pump observing hole
4	Drain pipe
5	Air return grille
6	Air outlet
7	Drain soft pipe (accessory)
8	Power supply inlet
9	Wire enter hole
10	Fresh air inlet
11	Moving sensor (PB-950LB)



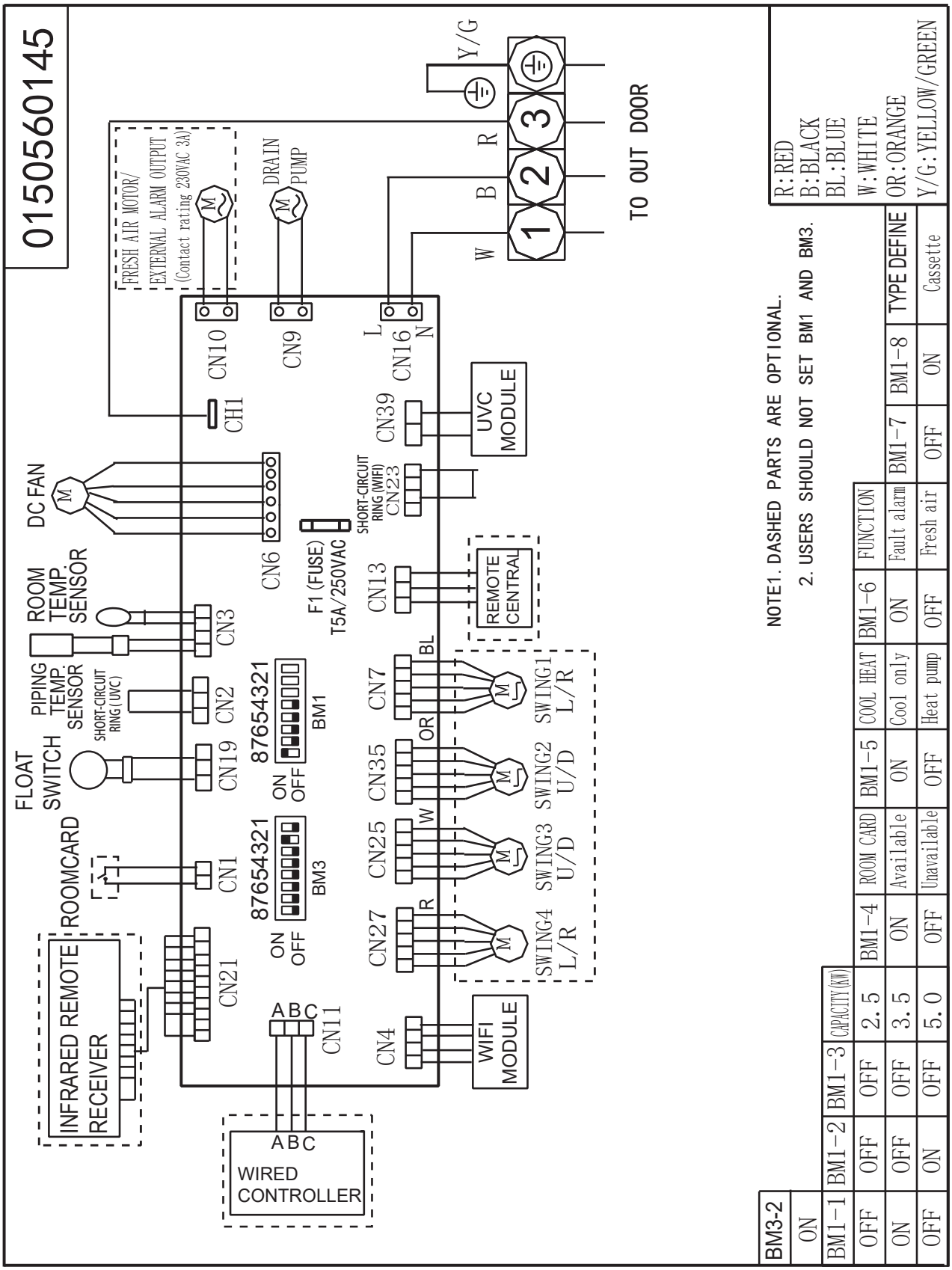
Model	A (mm)
AB71S2SG1FA (H)	234
ABH105H1ERG (H)	276
ABH125/140/160K1ERG (H)	318

2.3 Wiring Diagram

AB25S2SC2FA-1   AB35S2SC2FA-1   AB50S2SC2FA-1



AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA(H)

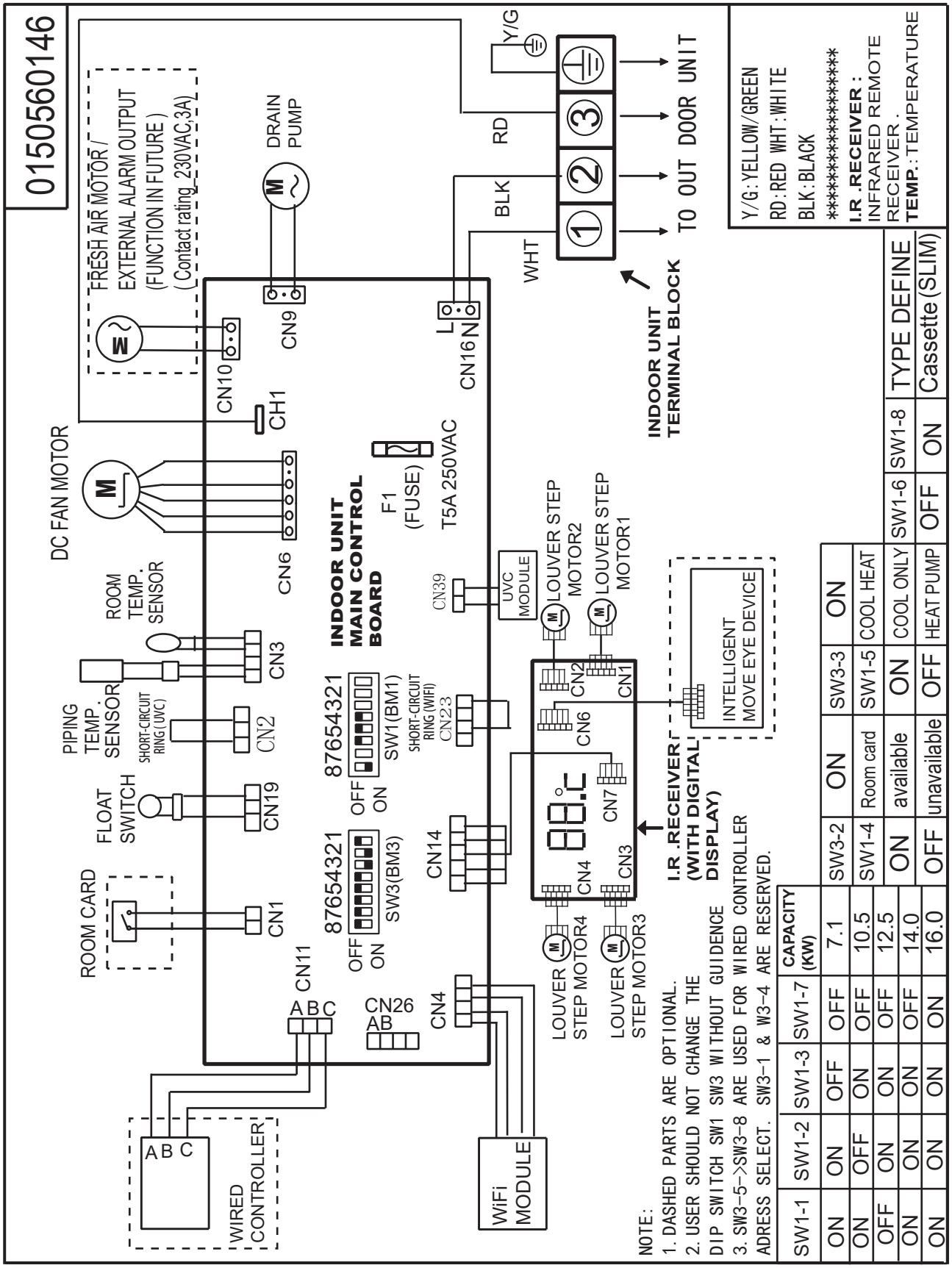


BM3-2

ON

BM1-1	BM1-2	BM1-3	CAPACITY (KW)	BM1-4	ROOM CARD	BM1-5	COOL HEAT	BM1-6	FUNCTION	BM1-7	BM1-8	TYPE DEFINE
OFF	OFF	OFF	2.5	ON	Available	ON	Cool only	ON	Fault alarm	OFF	ON	Cassette
ON	OFF	OFF	3.5	ON	Available	ON	Cool only	ON	Fault alarm	OFF	ON	Cassette
OFF	ON	OFF	5.0	OFF	Unavailable	OFF	Heat pump	OFF	Fresh air	OFF	ON	Cassette

AB71S2SG1FA(H) ABH105H1ERG(H) ABH125/140/160K1ERG(H)



NOTE:
1. DASHED PARTS ARE OPTIONAL.
2. USER SHOULD NOT CHANGE THE DIP SWITCH SW1 SW3 WITHOUT GUIDENCE
3. SW3-5->SW3-8 ARE USED FOR WIRED CONTROLLER ADRESS SELECT. SW3-1 & W3-4 ARE RESERVED.

SW1-1	SW1-2	SW1-3	SW1-7	CAPACITY (KW)	SW3-2	ON	SW3-3	ON			
ON	ON	OFF	OFF	7.1	SW1-4	Room card	SW1-5	COOL HEAT	SW1-6	SW1-8	TYPE DEFINE
ON	OFF	ON	OFF	10.5	ON	available	ON	COOL ONLY	OFF	ON	Cassette (SLIM)
OFF	ON	ON	OFF	12.5	OFF	unavailable	OFF	HEAT PUMP			
ON	ON	ON	OFF	14.0							
ON	ON	ON	ON	16.0							

2.4 Air Velocity and Temperature Distribution

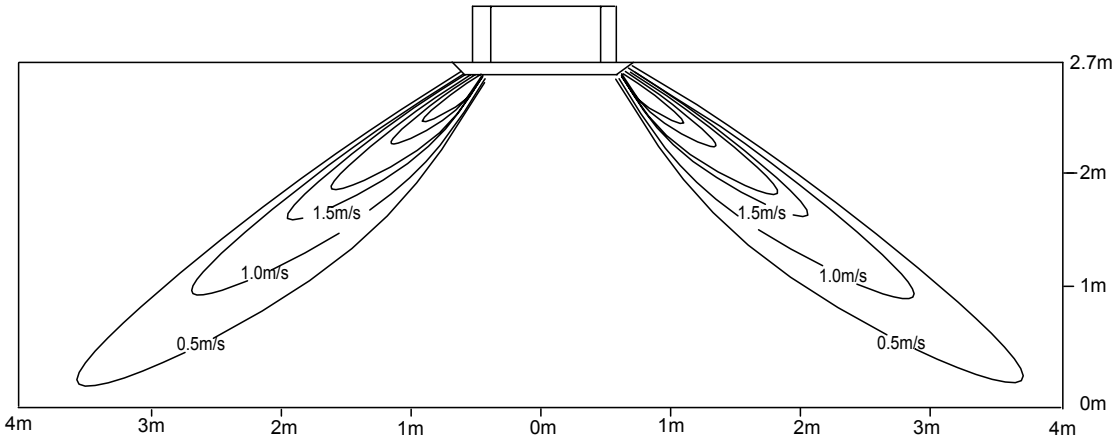
AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1

a. Cooling / air velocity distribution

Cooling

Blowy angle: 40

Air velocity distribution

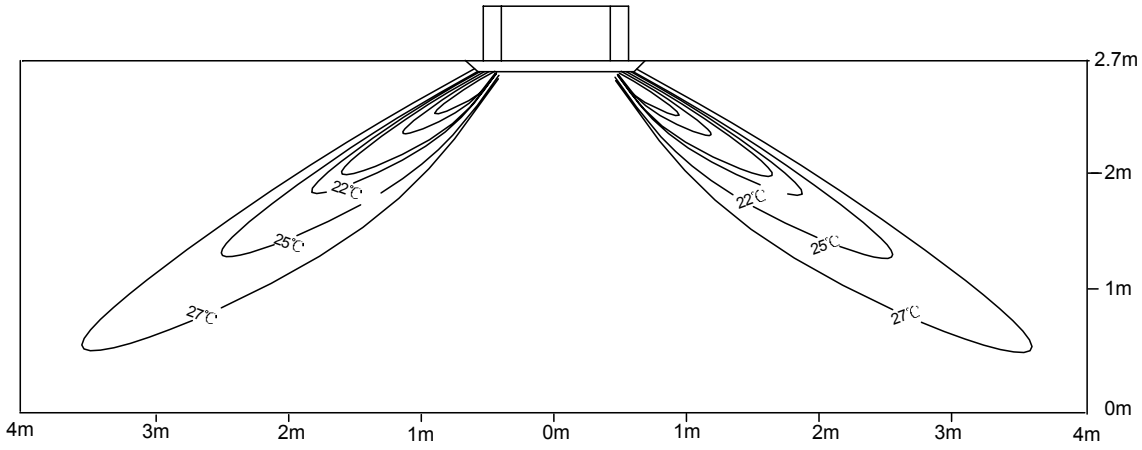


b. Cooling / temperature distribution

Cooling

Blowy angle:40

Temperature distribution

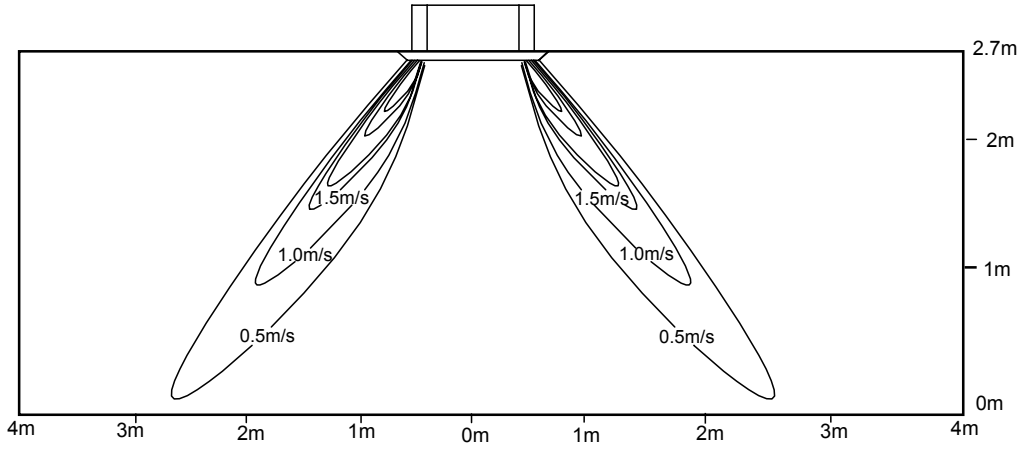


c. Heating / air velocity distribution

Heating

Blowy angle:70

Air velocity distribution

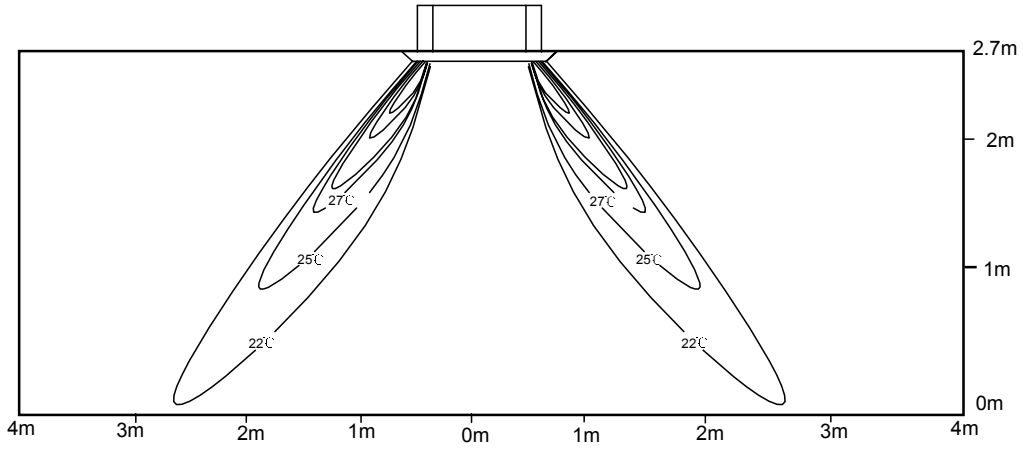


d. Heating / temperature distribution

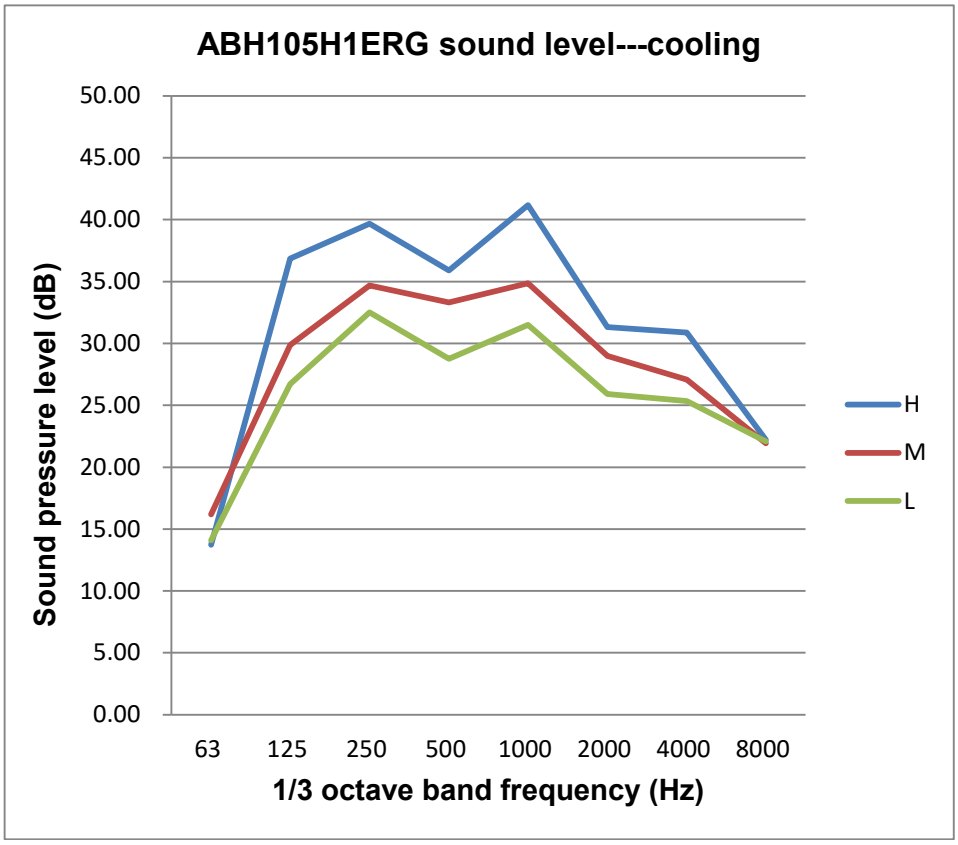
Heating

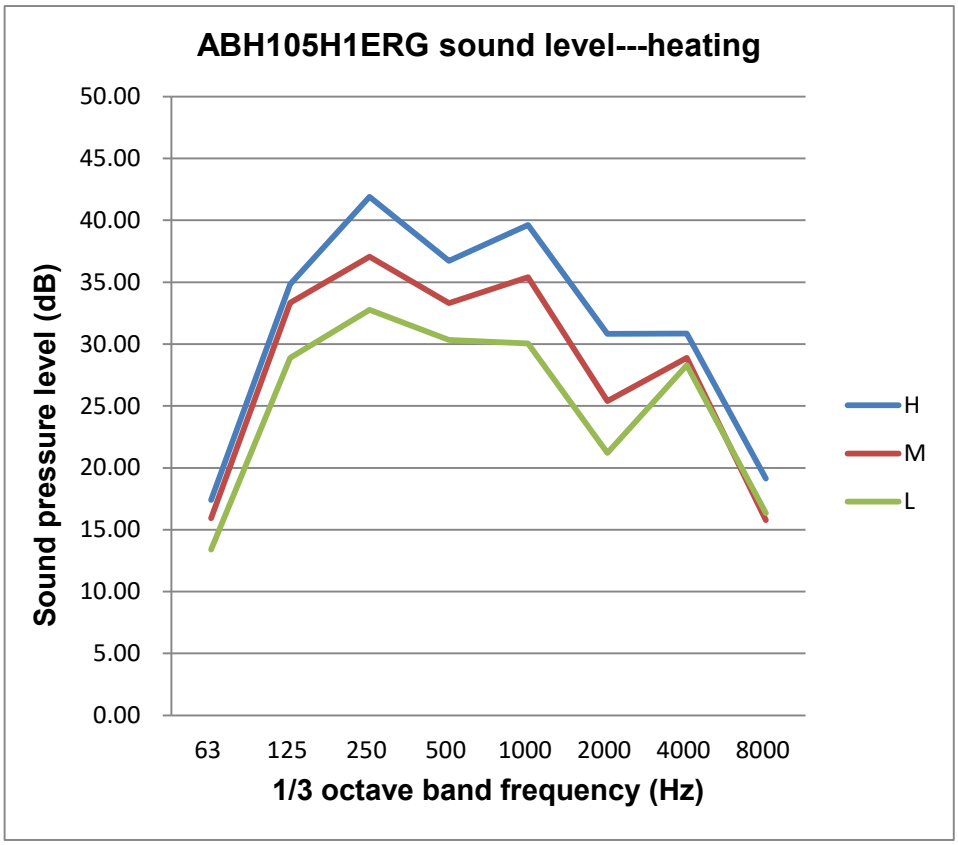
Blowy angle:70

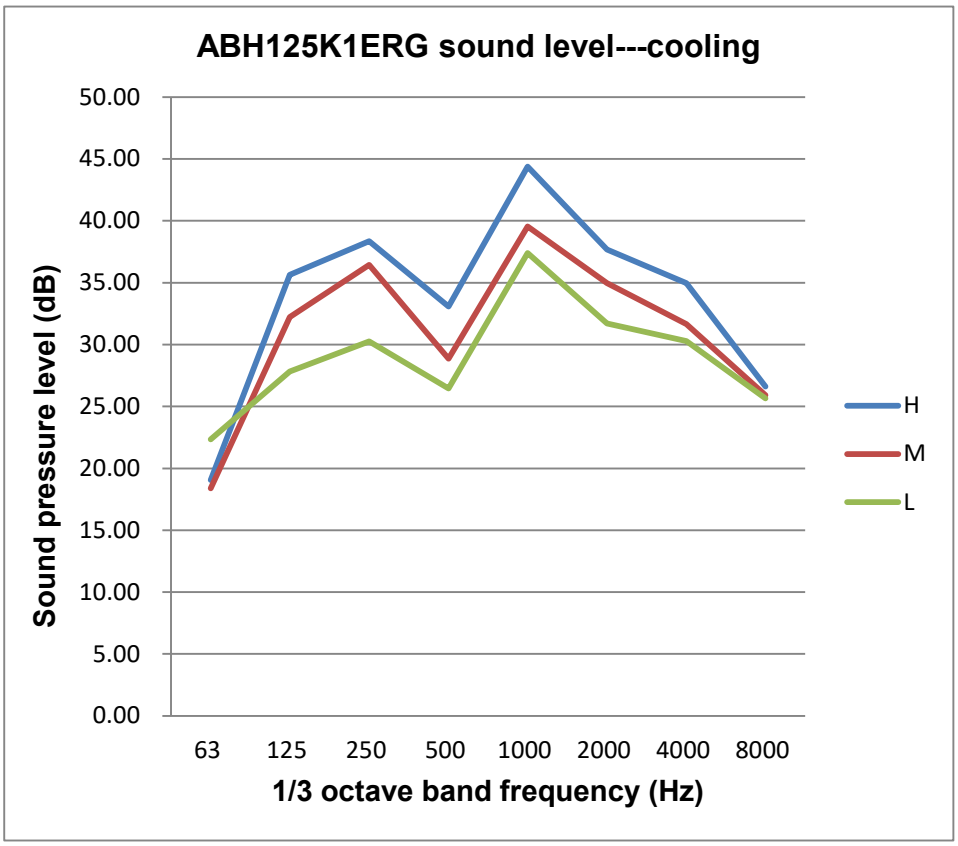
TemperAture distribution

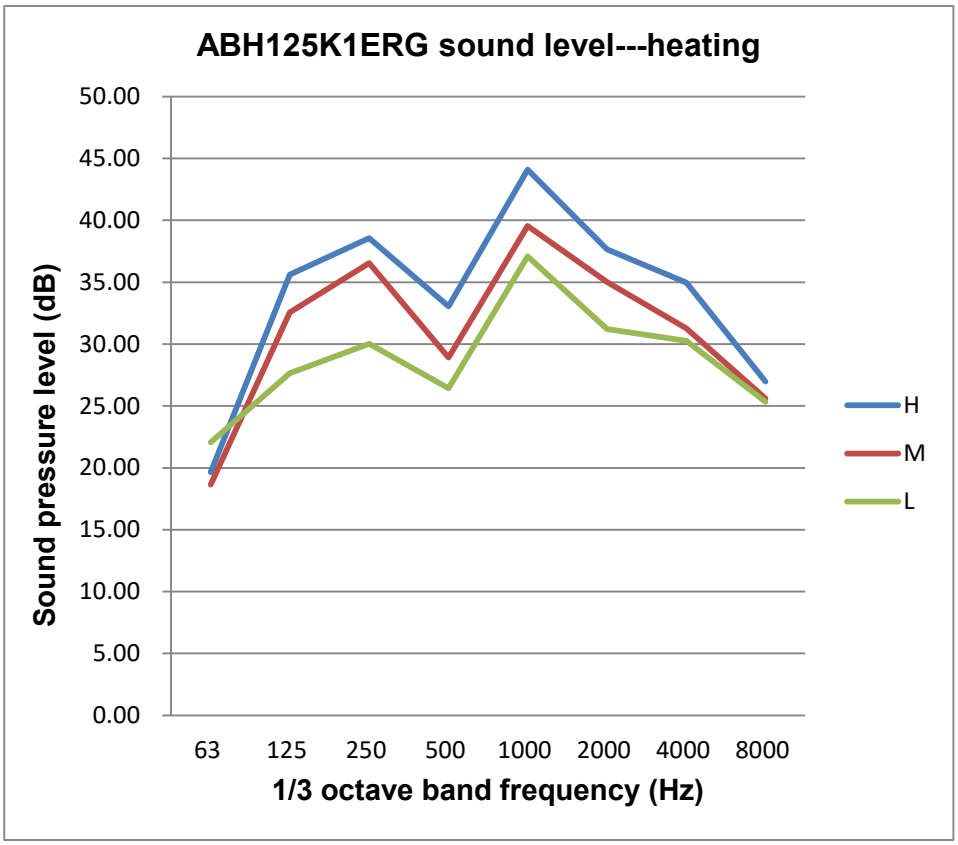


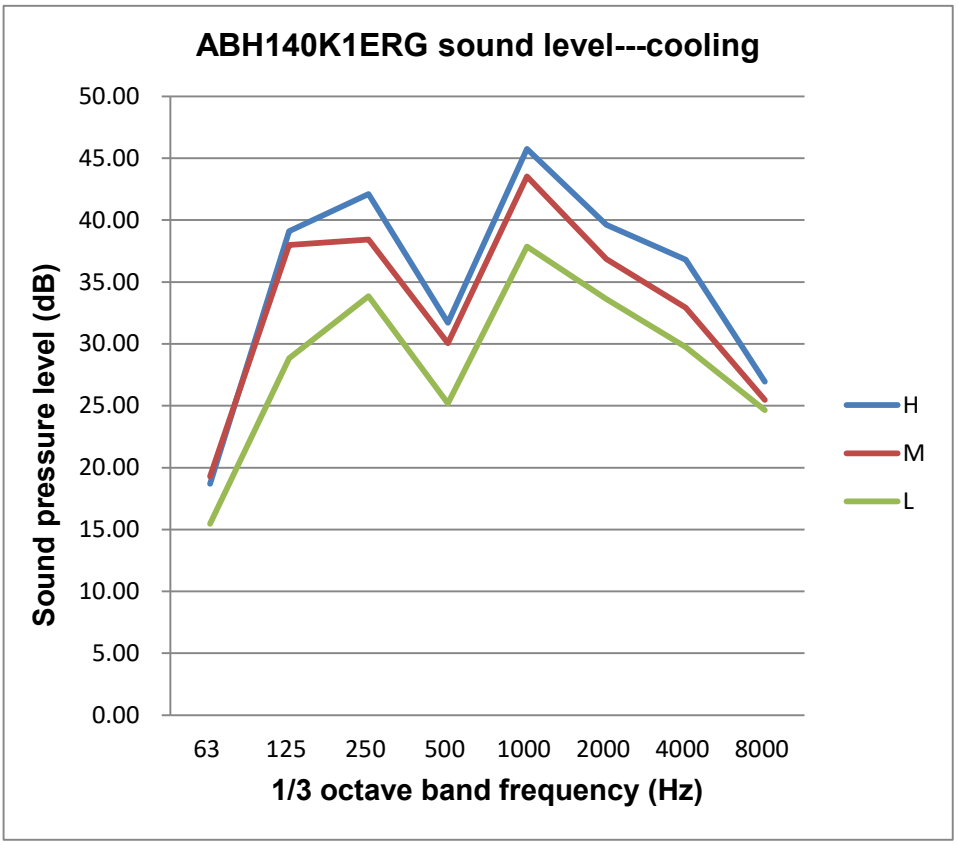
2.5 Sound Pressure level

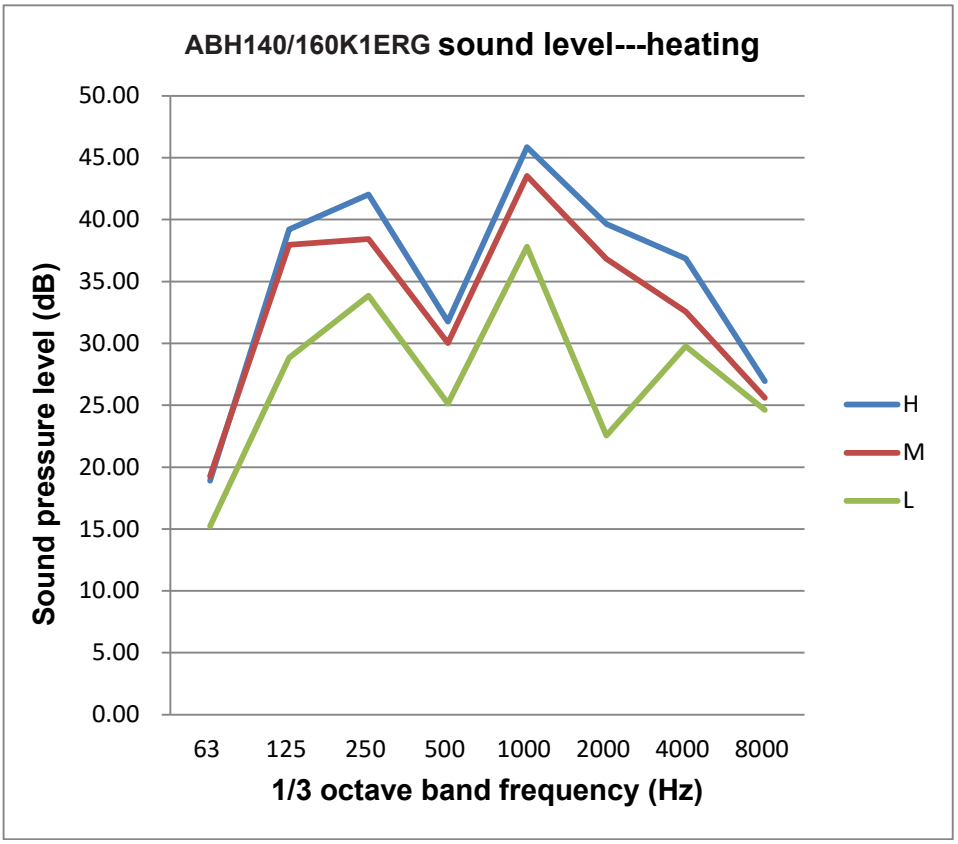


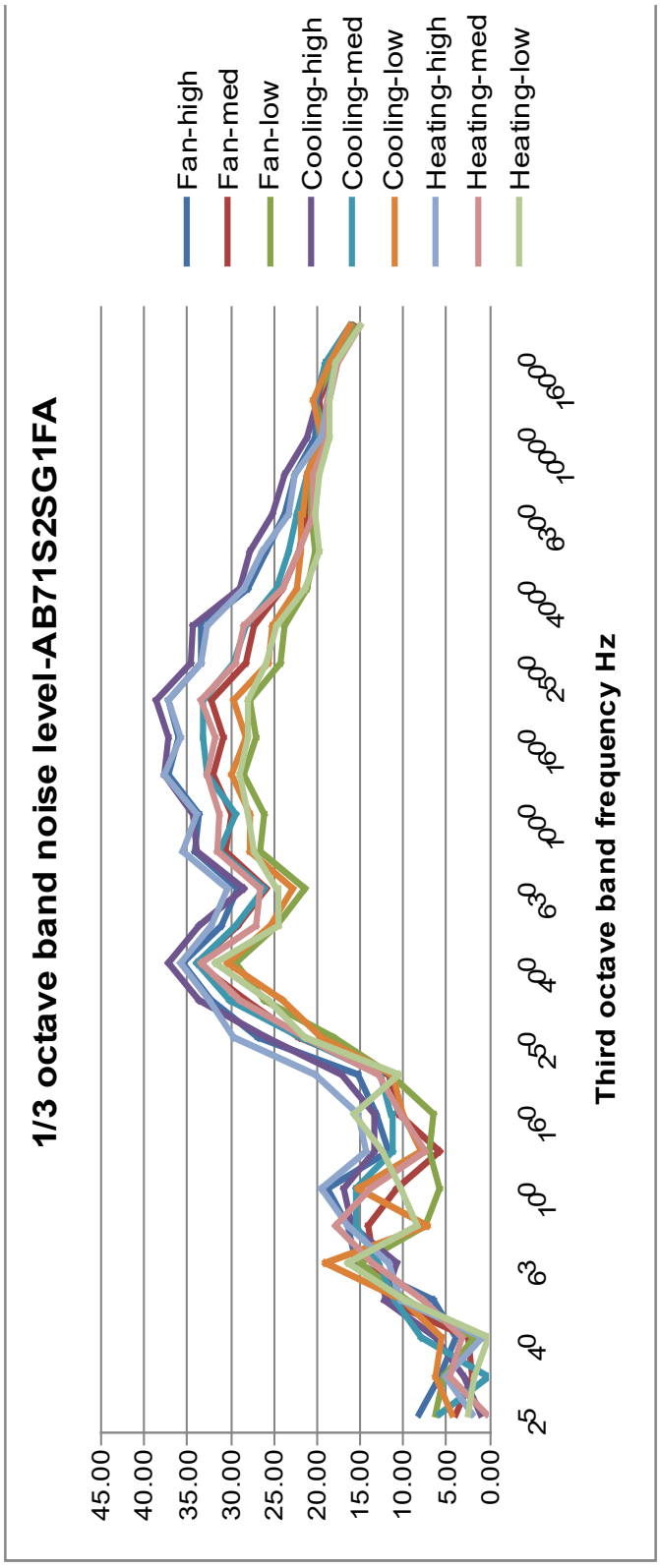



ABH125K1ERG sound level---cooling
Sound pressure level (dB)
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
63
125
250
500
1000
2000
4000
8000
1/3 octave band frequency (Hz)
H
M
L


ABH125K1ERG sound level---heating
Sound pressure level (dB)
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
63
125
250
500
1000
2000
4000
8000
1/3 octave band frequency (Hz)
H
M
L


ABH140K1ERG sound level---cooling
Sound pressure level (dB)
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
63
125
250
500
1000
2000
4000
8000
1/3 octave band frequency (Hz)
H
M
L


ABH140/160K1ERG sound level---heating
Sound pressure level (dB)
50.00
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
63
125
250
500
1000
2000
4000
8000
1/3 octave band frequency (Hz)
H
M
L


1/3 octave band noise level-AB71S2SG1FA
Fan-high
Fan-med
Fan-low
Cooling-high
Cooling-med
Cooling-low
Heating-high
Heating-med
Heating-low
45.00
40.00
35.00
30.00
25.00
20.00
15.00
10.00
5.00
0.00
25
40
63
100
160
250
400
630
1000
2500
4000
6300
10000
16000
Third octave band frequency Hz

2.6 Installation

AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA

• Select the way to carry unit to installation place.
• Don't remove packing until unit reaches installation place.
• When the packaging must be removed, protect unit properly.

② **Selection Of Installation Place**

(1) Installation place shall meet the following requirments and agreed by customers

• Place where proper air flow can be ensured.
• No block to air flow.
• Water drainage is smooth.
• The place should be strong enough to support unit weight.
• No obvious slope of the ceiling at the installation place.
• Enough space for mainenance.
• Indoor and outdoor unit piping length is within limit.
• Indoor and outdoor unit, power cable, inter unit cable are at least 1m away fromT.V. radop. This is helpful to avoid picture disturbance and noise. (Even if 1m iskept, noise can still appear if radio wave is strong)

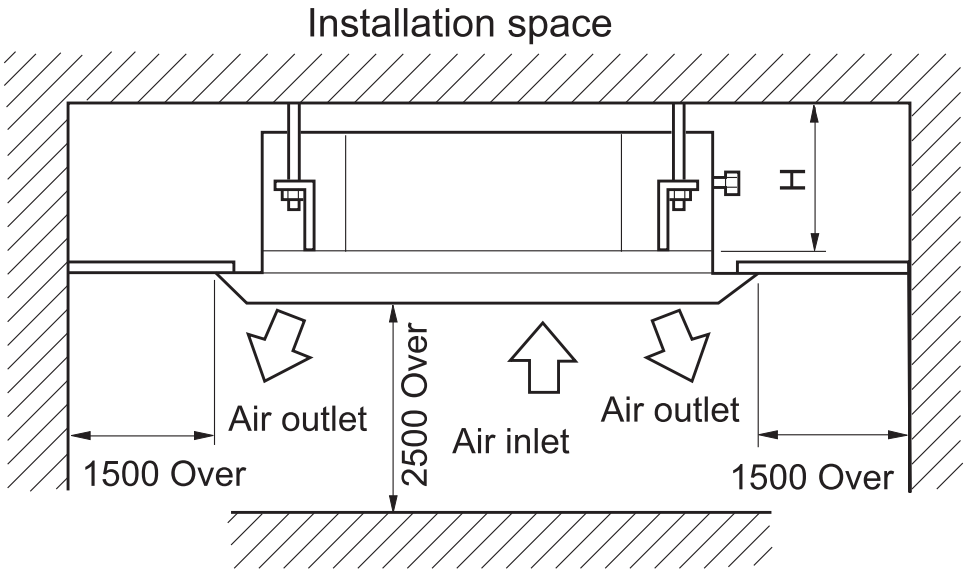
(2) Ceiling height

Indoor unit can be installed within 3m in height between the panel and the ground

(3) Install suspending bolt.

Check if the installation place is strong enough to hold weight. Take necessary measures in case it is not safe. (Distance between holes are marked on paper pattern. Refer to paper pattern for place need be reinforced)

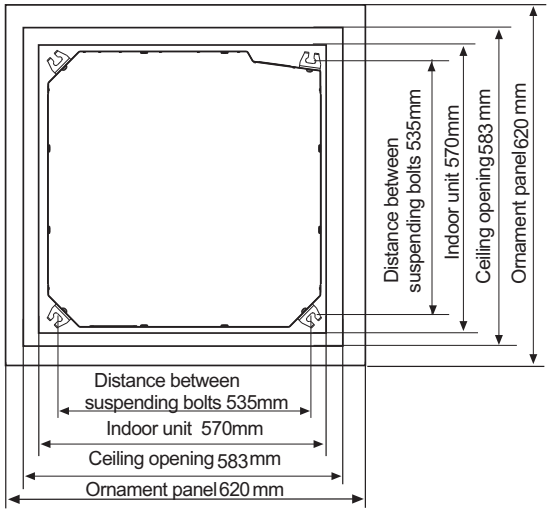
Model	H
AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1	260
AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA(H)	260
AB71S2SG1FA(H)	204



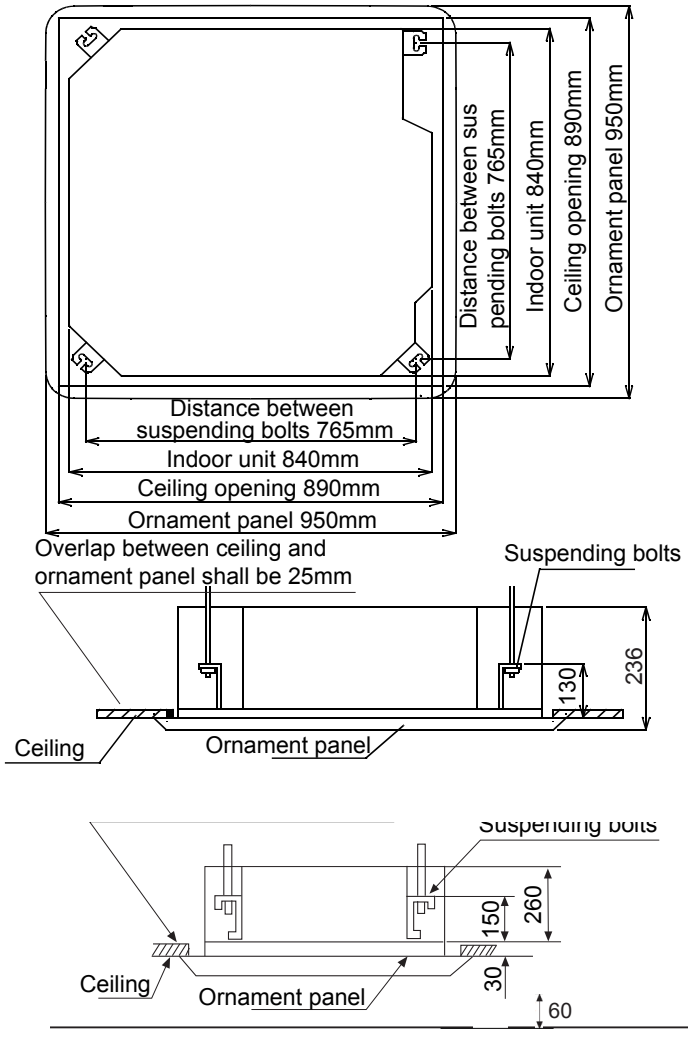
③ **Preparation for the Installation**

(1) Position of ceiling opening between unit and suspending bolt.

PB-620KB



PB-950KB



Indoor Unit	Panel
AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1	PB-620KB
AB25S2SC2FA (H) AB35S2SC2FA (H) AB50S2SC2FA (H)	PB-620KB
AB71S2SG1FA (H)	PB-950KB

(2) Cut an opening in ceiling for installation if necessary. (When ceiling already exists.)

• Refer to paper pattern for dimension of ceiling hole.

• Connect all pipings (Refrigerant, water drainage), wirings (Inter unit cable) to indoor unit, before installation.

• Cut a hole in ceiling, may be a frame should be used to ensure a smooth surface and to prevent vibration.

• Contact your real estate dealer

(3) Install a suspending bolt. (Use a M10 bolt)

• To support the unit weight, anchor bolt shall be used in the case of already exists ceiling. For new ceiling, use builtin type bolt or parts prepared in the field.

• Before going on installing adjust space between ceiling.

Note: All the above mentioned parts shall be prepared in field.

④ **Installation of Indoorunit**
In The Case of New Ceiling

(1) Install unit temporally

Put suspending bracket on the suspending bolt.

Be sure to use nut and washer at both ends of the bracket.

(2) As for the dimensions of ceiling hole, see paper pattern. Ask your real estate dealer for details.

Center of the hole is marked on the paper pattern.

Center of the unit is marked on the card in the unit and on the paper pattern.

Mount paper pattern ⑤ onto unit using 3 screws

⑥ Fix the corner of the drain pan at piping outlet.

<Afler Inslallalion on the Ceiling>

(3) Adjust unit to its right position.

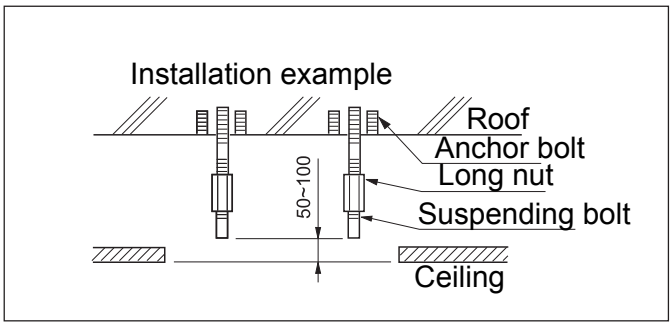
(Refer to preparation for the installation-(1))

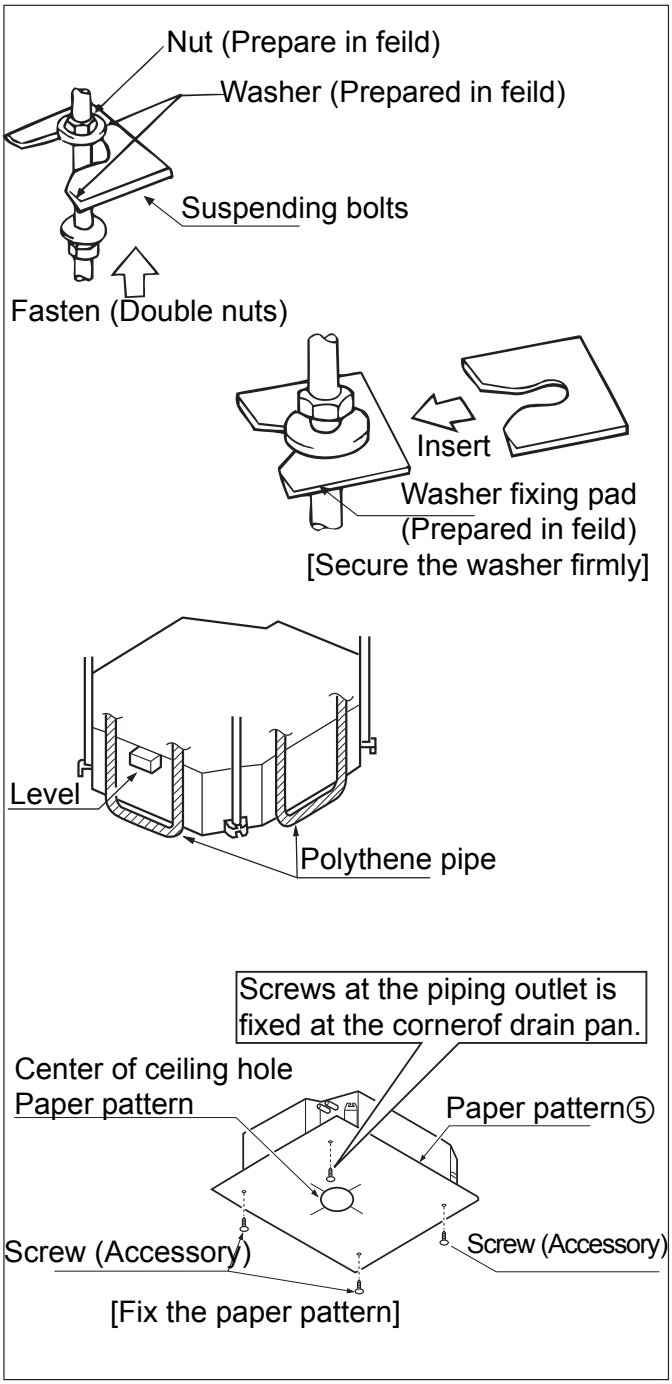
(4) Check units horizontal level.

Watert pump and flating switch is installed inside indoor unit, check four corners of the unit for its level using horizontal compartor or PVC tube with water. (If unit is tilting against the direction of water drainage, problem may occur on floating switch, causing water leakage.)

(5) Remove the washer mounlting ② and tighten the nut above.

(6) Remove the paper pattern.





In the Case of Ceiling Already Exisls

(1) Install unit temporally

Put suspending bracket on the suspending bolt.

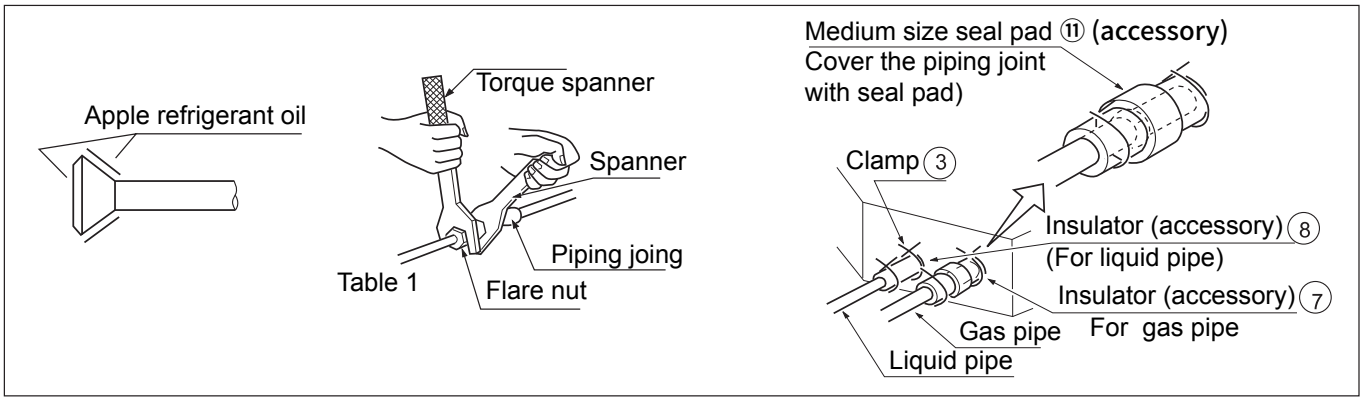
Be sure touse nut and washer at both ends of the bracket. Fix the bracket firmly.

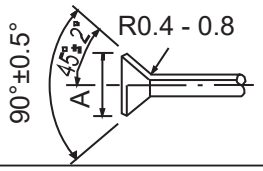
(2) Adjust the height and position of the unit. (Refer to preparation for the installation (1)).

(3) Proceed with ③ and ④ of "In the case of new ceiling".

⑤ **Refrigerant Piping (As for outdoor piping, please refer to installalion manual of outdoor unit.)**

- Outdoor is precharged with refrigerant.
- Be sure tosee the Fig.1, when connecting and removing piping from unit.
- For the size of the flare nut, please refer to Table 1.
- Apply refrigerant oil at both inside and outsid of lflare nut. Tighten it band tight 3-4 turns then tighten it.
- Use torque specified in Table 1. (Too much force may damage flare nut, causing gas leakage).
- Check piping joints for gas leakage. Insulate piping as shown in Fig. below.
- Cover joint of gas piping and insulator 7 with seal.



Pipe Size	Tighten Torque	A (mm)	Flare Shape
φ6.35	1420-1720N.cm (144-176 kgf.cm)	8.3-8.7	
φ9.52	3270-3990N.cm (333-407 kgf.cm)	12.0-12.4	
φ12.7	4950-6030N.cm (490-500 kgf.cm)	12.4-16.6	
φ15.88	6180-7540N.cm (630-770 kgf.cm)	18.6-19.0	
φ19.05	9720-11860N.cm (990-1210 kgf.cm)	22.9-23.3	

⑥ **Installation of Waterdrainage Pipe**

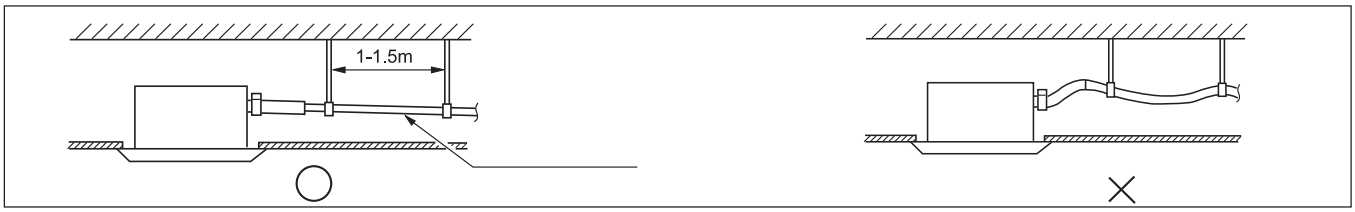
(1) Install water drainage pipe

• Pipe dia, shall be equal or larger than that of unit piping. (Pipe of polyethylent; size 25mm; O.D 32mm)

• Drain pipe should be short, with a downward slope at least 1/100 toprevent air bag from happening.

• If downward slope can t be made, take other measures to lift it up.

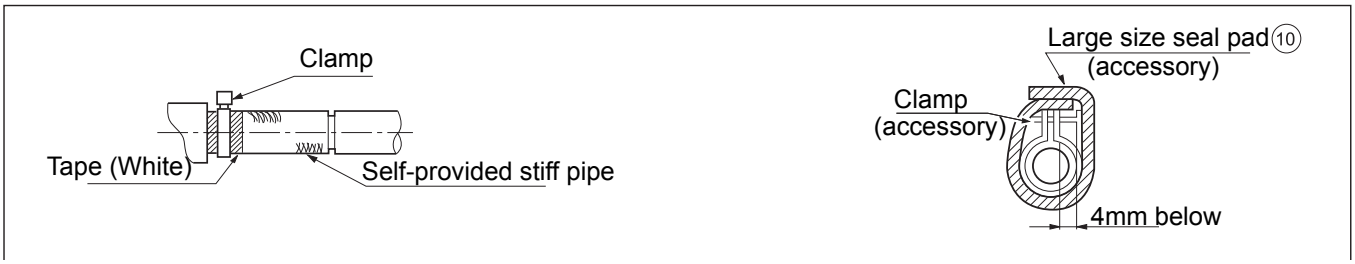
• Keep a distance of 1-1.5m between suspending brackets, tomake water hose straight.



• Use the self-provided stiff pipe and clamp ① with unit. Insert water pipe into water plug until it reaches the white tape. Tighten the clip until head of the screw is less than 4mm from hose.

• Wind the drain hose to the clip using seal pad ⑨ .

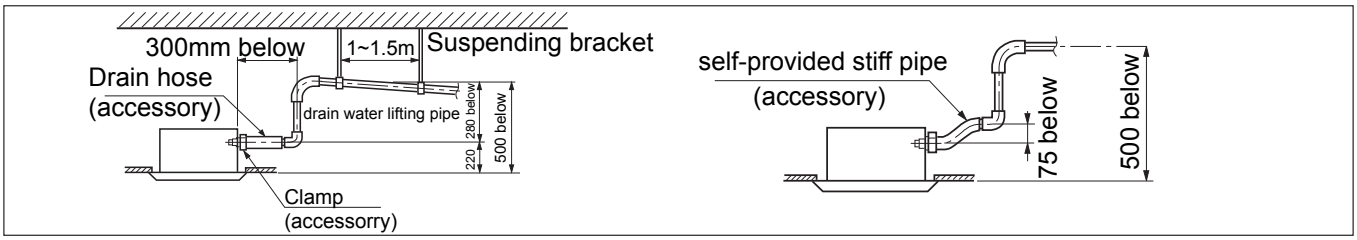
• Insulate drain hose in the room.



<Caulions for the Drain Waler Lifting Pipe >

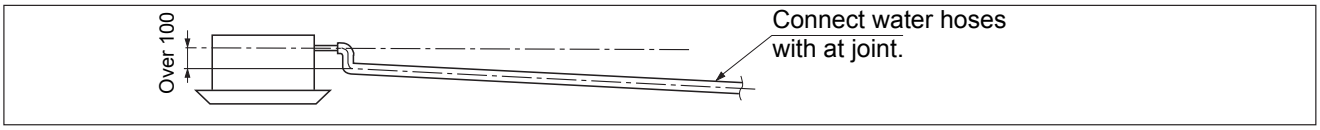
Installation height shall be less than 280mm.

There should be a right angle with unit, 300mm from unit.



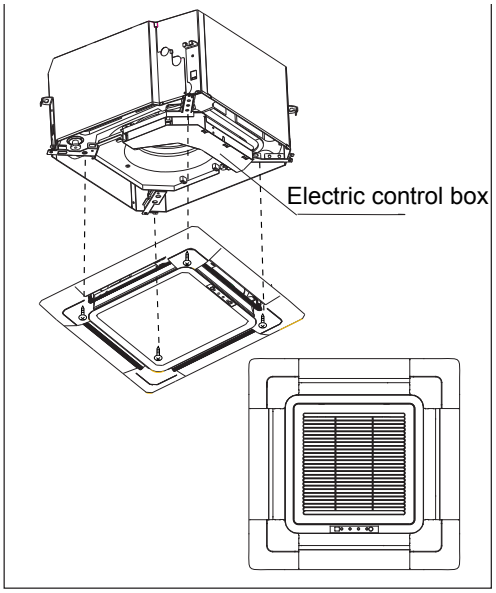
Note:

The slope of water drain hose (1) shall be within 75mm, don't apply too much force on it.
If several water hoses join together, do as per following proceedures.
Specifieations of the water hoses shall meet the requirements for the unit running.



(2) Check if water drainage is smooth after installation.

• Check whether indoor unit is horizontal with leveler or polythene pipe filled with water, and check that the dimension of the ceiling opening is correct. Take off the lever gauge before install the ornament panel.
• Fasten the screws to make the height difference between the two sides of indoor unit less than 5mm.
• First fix it with screws temporally.
• Fasten the two temporally fixing screws and other two, and tighten the four screws.
• Connect the wires of synchro-motor.
• Connect the wire of signal.
• If no response of remote controller, check whether the wiring is correct, restart remote controller 10 seconds after shut off power supply.

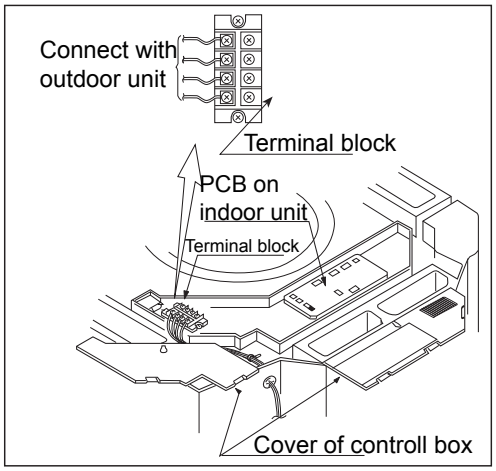


<Limits of Panel Board Installalion>

• Install the panel board in the direction shown in the figure. The incorrect direction will result in water leakage, meanwhile swing and signal receiving are displayed that cannot be connected.
• Charge, through air outlet or inspecting hole, 1200ccd water to see water drainage.

After Wiring

• Check water drainage in cooling operation.

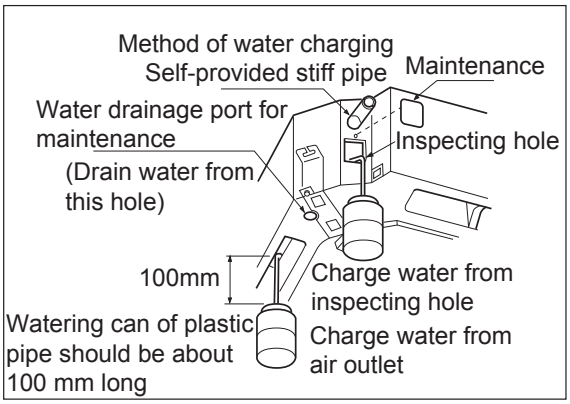


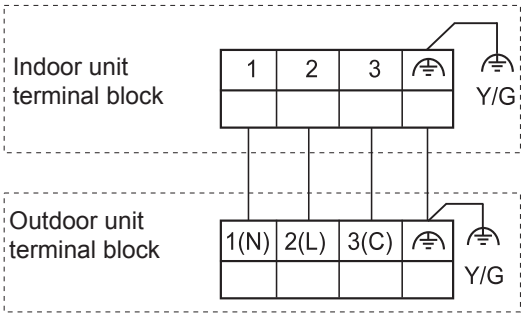
When Wiring is not Complele

• Remove cover of control box, connect 1PH power to terminal 1 and 2 on terminal block. Use remote controller to operate the unit.

• Note, in this operation, fan will be running.

• Upon confirmation of a smooth water drainage, be sure to cut off power supply.





⑦ **WIRING**

• All supplied parts. materials and wiring operation must in appliance with local code and regulations.

• Use copper wire only.

• When make wiring, please refer towiring diagram also.

• All wiring work must be done by qualified electricians.

• A circuit breaker must be installed, which can cut power

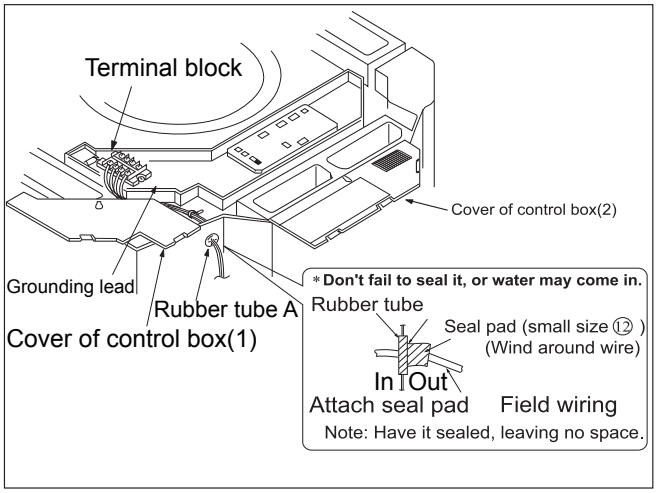
• supply toall system.

• See Installation Manual of outdoor unit for specifications of wires, circuit breaker, switches and wiring etc.

• Connecting of unit

Remove cover of switch box (1), drag wires into rubber tube A, then, after proper wiring with other wires, tighten clamp A. Connect wires of correct pole to the terminal block inside. Wind sea 12 around wires. (Be sure to do that, or, dew may occur).

• Upon connecting, replace control box cover (1) and (2).



⚠WARNING:

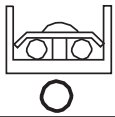
Obscrve the following when connecting power supply terminal block.

Don't connect wires of different specifications to the same terminal block.

(Loose wire may cause overheating of circuit)

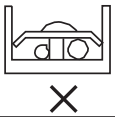
Connect wires of same specifications as shown in right Fig.

Connect wires of the same specifications at twosides.



Don't connect wires of the same specifications at one side.

Don't connect wires of the same specifications at one side.



⑧ **Wiring Example**

As for outdoor unit circuit, please see installation manual of outdoor unit.

Note all electric wires have their own poles, poles must match that on terminal block.

Pay special care lo lhe following and check afler inslallalion

Item to the checked	Unproper inslallalion may cause	Check
Is indoor unit firmly installed?	Unit might fall down, make vibration or noise.	
Is gas leakage check performed?	This may lead togas shortage.	
Is unit properly insulated?	Dew or water drop may occur.	
Is water drainage smooth?	Dew or water drop may occur.	
Is power voltage meet that stipulated on the nameplate?	Problem may occur or parts got burned.	
Is wiring and piping correctly arranged?	Problem may occur or parts got burned.	
Is unit safely grounded?	There might be a danger of electric shock.	
Is wire size correct?	Problem may occur or parts got burned.	
Are there any obstacles on air inlet and outlet grill of indoor and outdoor unit?	This may cause poor cooling.	
Is record made for piping length and refrigerant charging amount?	It is hard to control refrigerant charging amount.	

Attention: **After finishing installation, confirm no refrigerant leakage.**

- The installation of pipe-work shall be kept to a minimum.
- Pipe-work shall be protected from physical damage and shall not be installed in an unventilated space, if that space is smaller than amin ($2m^2$).
- Compliance with national gas regulations shall be observed.
- Mechanical connections shall be accessible for maintenance purposes.
- The minimum floor area of the room: $2m^2$.
- The maximum refrigerant charge amount: 1.7 kg.
- Information for handling, installation, cleaning, servicing and disposal of refrigerant.
- Warning: Keep any required ventilation openings clear of obstruction.
- Notice: Servicing shall be performed only as recommended by the manufacturer.

Unventilated Areas

- WARNING: The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified.
- WARNING: The appliance shall be stored in a room without continuously operating open flames (e.g.an operating gas appliance) and ignition sources (e.g. an operating electric heater).

Qualification of Workers

- Specific information about the required qualification of the working personnel for maintenance, service and repair operations.
- WARNING: Every working procedure that affects safety means shall only be carried out by competent persons.

Examples for such working procedures are:

- Breaking into the refrigerating circuit.
- Opening of sealed components
- opening of ventilated enclosures.

Information on Servicing

- Prior to beginning work on systems, safety checks are necessary to ensure that the risk of ignition is minimized.
- Work shall be undertaken under a controlled procedure so as to minimized the risk of flammable gas or vapor being present while the work is being performed.
- Work in confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

Checking for Presence of Refrigerant

- The area shall be checked with an appropriate refrigerant detector prior to and during work. The leak detection equipment should be suitable for use with all applicable refrigerants, i.e. non-sparking, adequately sealed or intrinsically safe.

Presence of Fire Extinguisher

- If any hot work is to be conducted, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO^2 fire extinguisher adjacent to the charging area.

No Ignition Sources

- All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

Ventilated Area

- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

Checks to the Refrigeration Equipment

- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance.

The following checks shall be applied to installations

- The charge size is in accordance with the room size within which the refrigerant containing parts are installed;
- The ventilation machinery and outlets are operating adequately and are not obstructed;
- If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
- Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
- Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

Checks to Electrical Devices

- Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

- Initial safety checks shall include:

• That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
• That no live electrical components and wiring are exposed while charging, recovering or purging the system;
• That there is continuity of earth bonding.

Repairs to Sealed Components

- During repairs to sealed components, all electrical supplies shall be disconnected prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected, including damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.
- Ensure that the apparatus is mounted securely.
- Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.

Repair to Intrinsically Safe Components

- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.
- Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere.
- Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

Cabling

- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

Detection of Flammable Refrigerants Removal and Evacuation

- The refrigerant charge shall be recovered into the correct recovery cylinders and the system shall be “flushed” with OFN to render the unit safe. This process may need to be repeated several times.
- Compressed air or oxygen shall not be used for purging refrigerant systems.
- Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.
- The vacuum pump is not close to any ignition sources and that ventilation is available.

Charging Procedures

- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
- Cylinders shall be kept upright.
- Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
- Label the system when charging is complete (if not already).
- Extreme care shall be taken not to overfill the refrigeration system.
- Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas. The system shall be leak- tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

Decommissioning

- Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail.
- Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant.
- Electrical power must be available before the task is commenced.

- Become familiar with the equipment and its operation.
- Isolate system electrically.
- Before attempting the procedure, ensure that:
• mechanical handling equipment is available, if required, for handling refrigerant cylinders;
• all personal protective equipment is available and being used correctly;
• the recovery process is supervised at all times by a competent person;
• recovery equipment and cylinders conform to the appropriate standards.

- Pump down refrigerant system, if possible.
- If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
- Make sure that cylinder is situated on the scales before recovery takes place.
- Start the recovery machine and operate in accordance with manufacturer's instructions.
- Do not overfill cylinders. (No more than 80% volume liquid charge).
- Do not exceed the maximum working pressure of the cylinder, even temporarily.
- When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
- Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

Labelling
- Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed.
- Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

Recovery
- When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed.
- Ensure that the correct number of cylinders for holding the total system charge are available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant).
- Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.
- The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants.
- A set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak- free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release.
- The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged.
- Do not mix refrigerants in recovery units and especially not in cylinders.

- If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant.
- The evacuation process shall be carried out prior to returning the compressor to the suppliers.
- Only electric heating to the compressor body shall be employed to accelerate this process.

ABH105H1ERG (H) ABH125K1ERG (H) ABH140K1ERG (H)

6.1 Before installation <Don't discard any accessories until comp>

• Determine the way to carry unit to installation place.
• Don't remove packing until unit reaches installation place.
• If unpacking is unavoidable, protect unit properly.

6.2 Selection of installation place

(1) Installation place shall meet the following and agreed by customers:

• Place where proper air flow can be ensured.
• No block to air flow.
• Water drainage is smpoth.
• Place strong enough to support unit weight.
• Place where inclination is not evident on ceiling.
• Enough space for mainenance.
• Indoor and outdoor unit piping length is within limit. (Refer to Installation Manual for outdoor unit.)
• Indoor and outdoor unit, power cable, inter unit cable are at least 1 m away fromT.V. radio. This is helpful to avoid picture disturbance and noise. (Even if 1 m is kept, noise can still appear if radio wave is strong)

(2) Ceiling height

Indoor unit can be installed on ceiling of 2.5-3m in height. (Refer to Foeld setting and Installation Manual of ornament panel.)

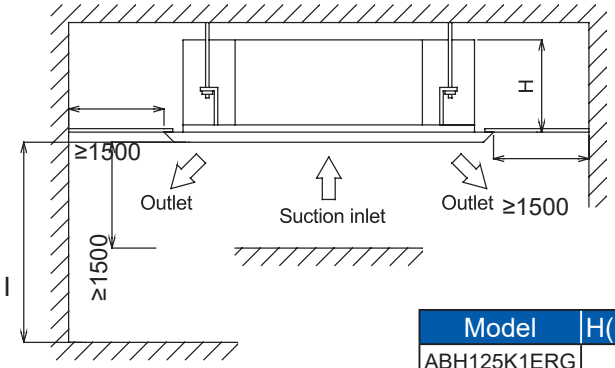
(3) Install suspending bolt.

Check if the installation place is strong enough to hold weight. Take necessary measures in case it is not safe. (Distance between holes are marked on paper pattern. Refer to paper pattern for place need be reinforced)

(4) Selection of installation location of outdoor

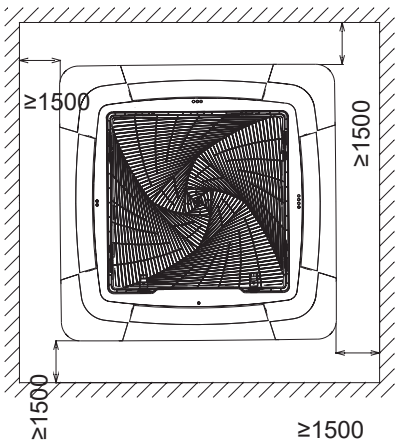
With consent from the user, installation location shall:

• Be sufficient to bear weight of the units, with air circulation.
• Avoid direct radiation from heat sources or other heat sources.
• Facilitate the drainage of condensate. Holes in wall shall also facilitate drainage.
• Be such that noise and heat air will not disturb neighbors.
• Be free of heavy snow in winter.
• Allow air inlets and outlets to be free of barriers.
• Not allow air outlet to directly face strong airflow.
• Facilitate installation at four corners, with 1m space above the unit.
• Be convenient for maintenance and repair.
• For installation of multiple units, sufficient space shall be ensured to avoid short circuit.
• The air conditioner shall not be mounted on a non-dedicated metal frame (e.g. burglar mesh) .
• When the outdoor unit is installed on a street side, its height shall not be less than 2.5m.



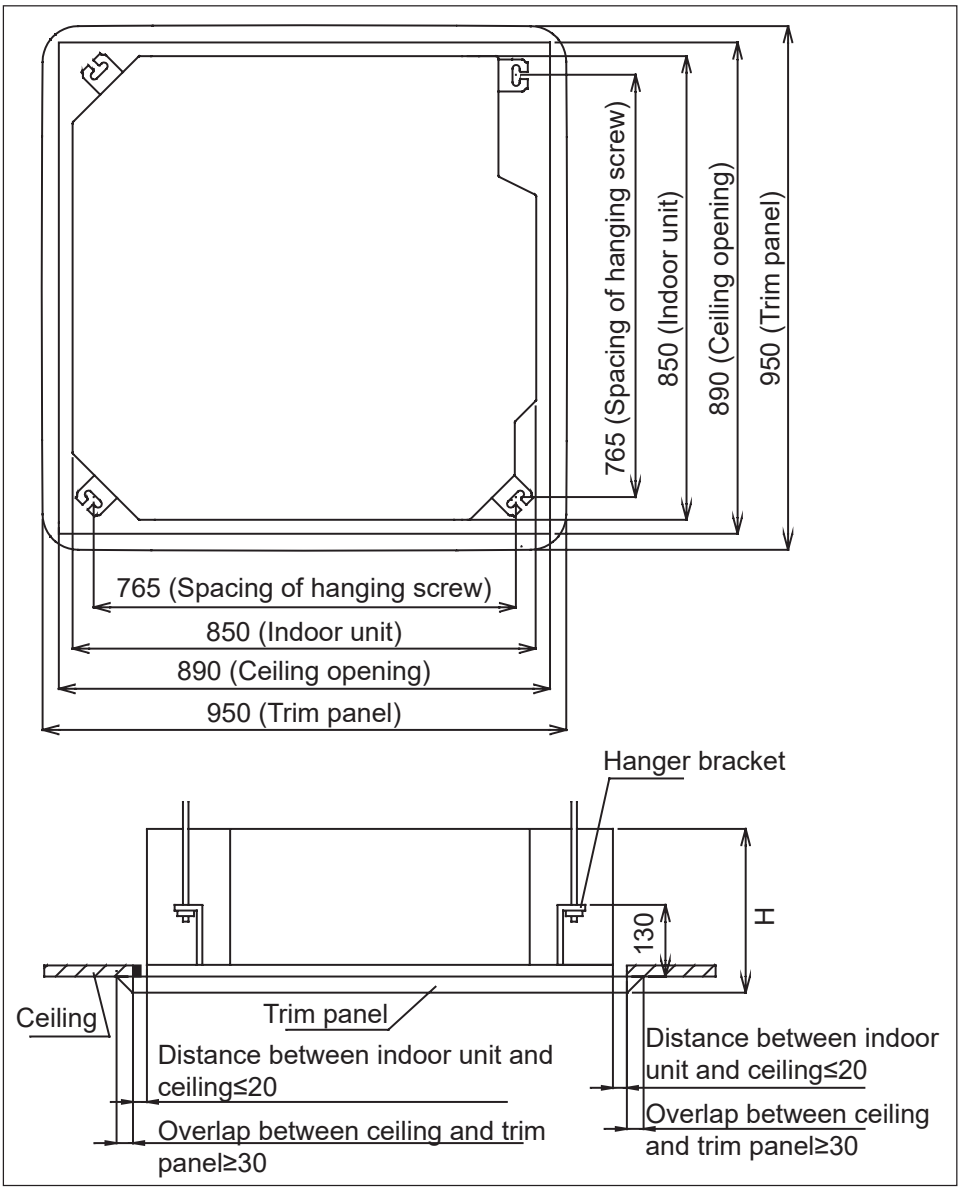
Space required for installation (unit: mm)

Model	H(mm)	I(m)
ABH125K1ERG ABH140K1ERG ABH160K1ERG	288	2.5≤I≤4.2



6.3 Preparation before installation

(1) Location relationships between ceiling opening and hanging screw



Model	H
ABH125K1ERG	341
ABH140K1ERG	
ABH160K1ERG	

Note:

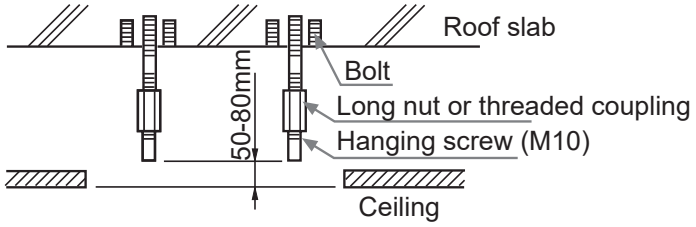
Overlap between the ceiling and decorative panel shall be 30mm or more. The distance between indoor unit and ceiling shall be 20mm or less. If it's more than 20mm, add ceiling materials at or repair the ceiling.

(2) Complete all pipes (for refrigerants and drainage) and wires (for connection of indoor and outdoor units) to be connected to indoor unit before installation so that they can be connected to indoor unit immediately after installation.

(3) Install hanging screws

• To bearing the unit weight, use foundation bolts on existing ceilings, or embedded bolts, buried bolts or other parts that is provided on site on new ceilings. Before installation is continued, adjust the distance from ceiling.

<Installation example>



Note:

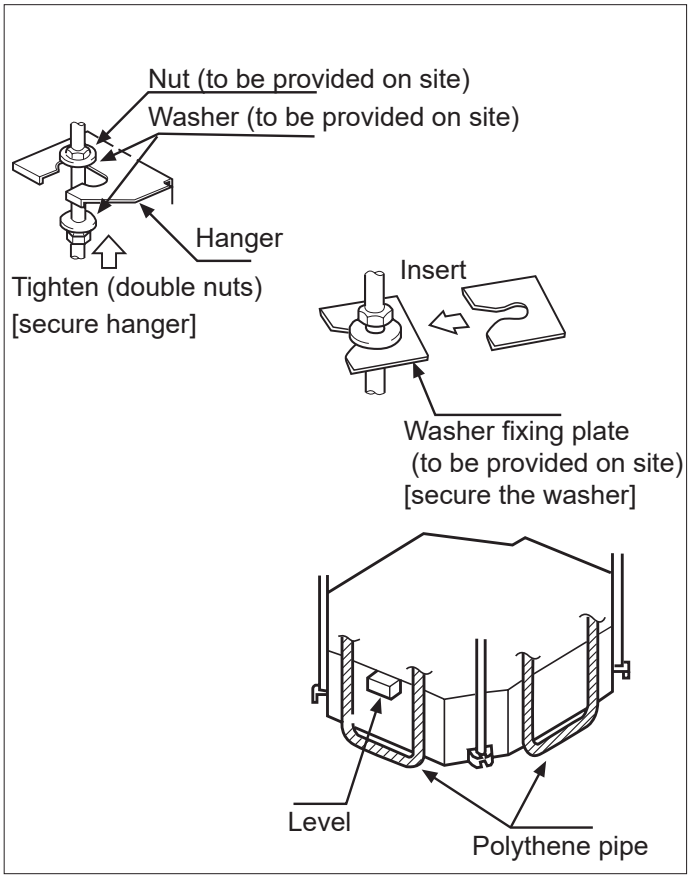
All the above parts are to be provided on installation sites. Diameter of hanging screws is M10.

6.4 Installation of indoor unit

Installation sequence on new ceiling: (1) → (3) → (4) → (5)

(1) Temporary installation of indoor unit

• Attach hangers to hanging screws, and make sure to use nuts and washers on both upper and lower ends of hangers so as to fix them firmly. A washer fixing plate (to be provided on site) can prevent the washer from dropping off.



<Work at ceilings>

(2) Adjust units to appropriate installation locations. Refer to "7.3 Preparation before installation."

(3) Correct levelness of air conditioner units.

• The indoor unit is equipped with a built-in drainage pump and a float switch. Correct levelness with a level or water-filled polyethylene pipe.

Note:

If the unit inclines towards reverse direction of condensate flow, the float switch can not work normally and water leakage will be resulted.

(4) Pull out the original fixing plate that prevents the washer from dropping off, and tighten nuts.

(5) Remove the installation cardboard.

6.5 Installation of drain pipe

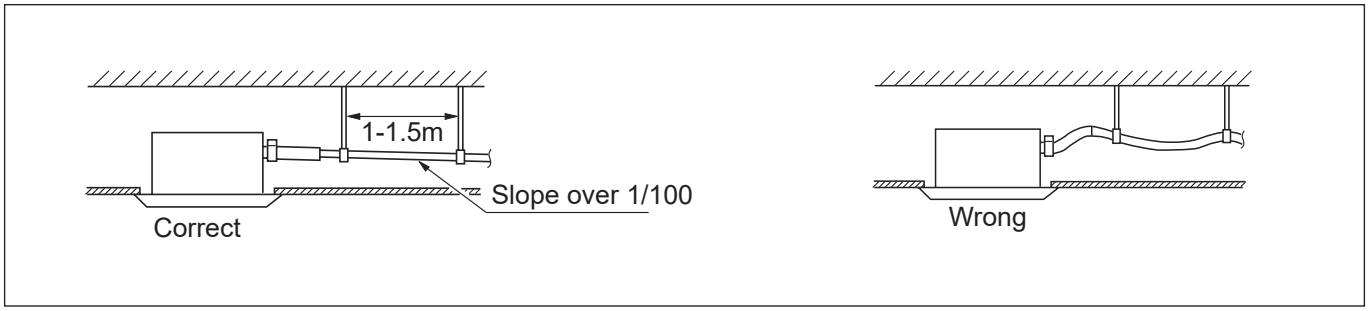
(1) Install drain pipe

• Diameter of the drain pipe shall be greater than or equal to that of the connecting pipe. (PE pipe: size: I.D.: 25mm; O.D.: 32mm)

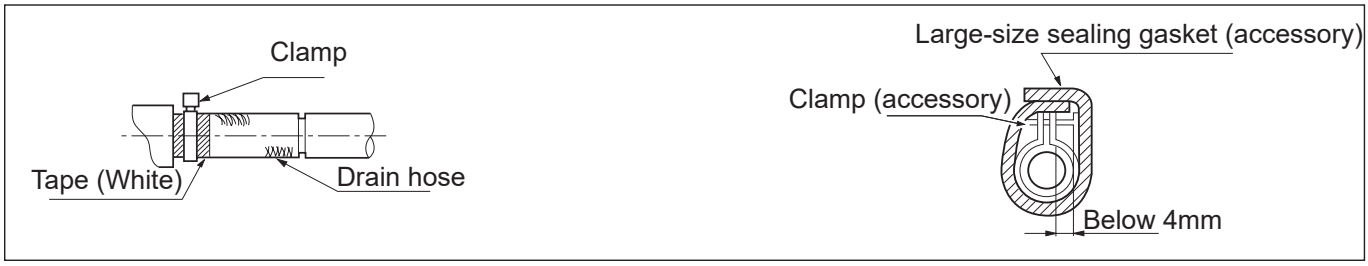
• The drain pipe shall be short and have a downward slope of at least 1/100 to prevent pockets.

• If it is impossible to provide sufficient slope to the drain pipe, a drain lift pipe shall be installed.

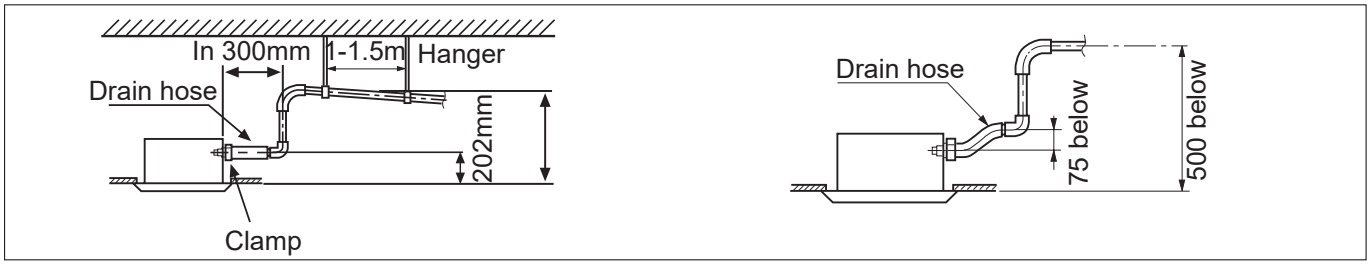
• To avoid bending of the drain pipe, hangers shall be kept 1-1.5m away from each other.



Use a drain hose and clamp.
Insert the drain hose into the drainage outlet until it reaches the white tape. Then tighten the clamp.
For heat insulation, wind the drain hose with sealing gaskets. Provide heat insulation to indoor drain hose.



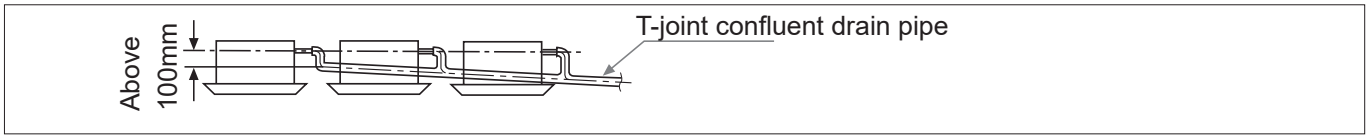
<Precautions for drain lift pipe>
The drain lift pipe shall be installed as low as possible.
The drain lift pipe shall be perpendicular to the unit and not more than 300mm away from the unit.



Note:

• *The slope of accessory drain pipe shall be within 75mm so that the drainage outlet does not necessarily bear excessive external force.*

• *If multiple drain pipes join together, install them as follows.*



The size of confluent drain pipe selected shall be suitable for operating capacity of the units.
(2) Check drainage is smooth after installation.
• Check drainage by filling in 1200cc water slowly from air outlet or inspection hole.

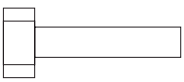
6.6 Installation instruction for embedded air-conditioning panel

1. Before installation

⚠ WARNING

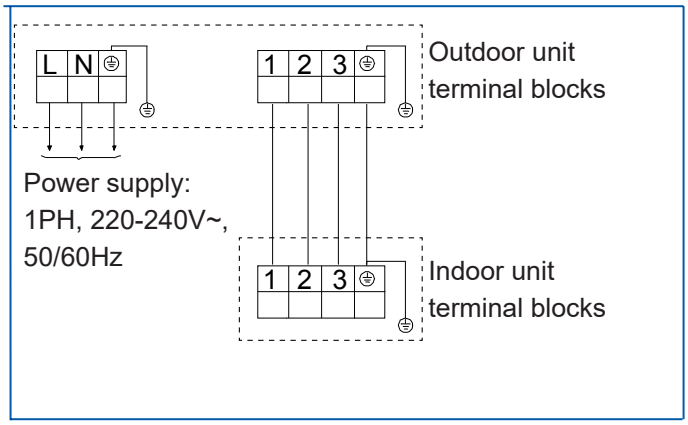
The trim panel shall be put on buffer materials when unpacked to prevent being scratched by hard objects.

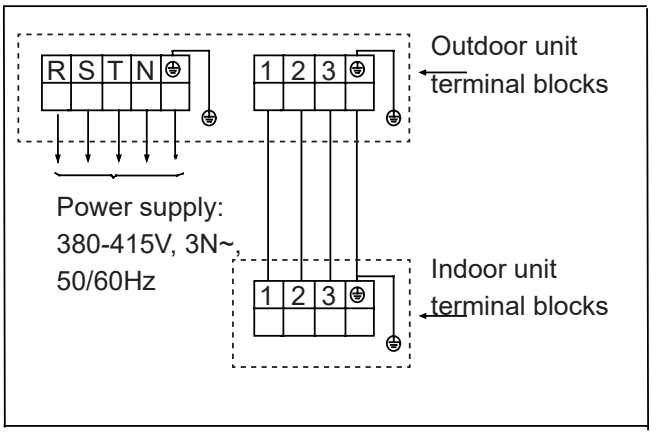
Please confirm the following accessories delivered with the product:


Bolt (M5*25) Qty: 4


Gasket Qty: 4

Connect and fix the power supply cable, indoor-outdoor connection cable as following:





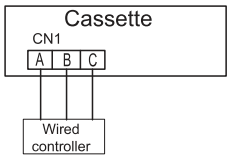
All field supplied parts, materials and electric works must conform to local codes. (ie. AS / NZS 3000)

Indoor and outdoor connection cable:
If the communication cable length ≤ 40m
071/090/105 communication cable: 1.5mm2
125/140/160 communication cable: 2.5mm2
If 40m ＜ the communication cable length ≤ 55m, all models: 4mm2
If 55m ＜ the communication cable length ≤ 75m, all models: 6mm2
Communication line length is not allowed to exceed 75 meters

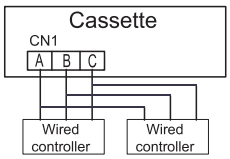
Wired controller wiring instruction

Alert! Ensure do any of the operating during power off.

A. One Wired controller controls one indoor unit



B: Double wired controllers control one indoor unit

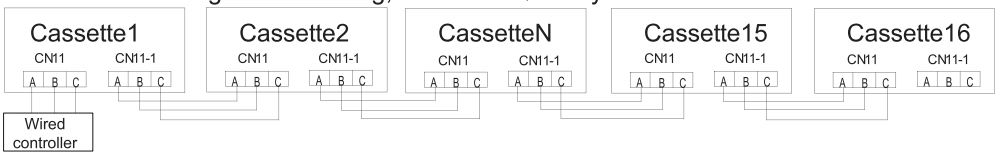


C. Connection method for ONE wired controller with MULTIPLE indoor units

For wired controller connect with cassette (AB**SC2VHA)

Step1: The wiring connection between 1.wired controller-the master unit(directly connected to the wired controller), 2.master unit-slave unit, 3.slave unit-slave unit should be one to one match of all three lines.

The connection wiring is as following, and max. Quantity of the connected indoor units is16.



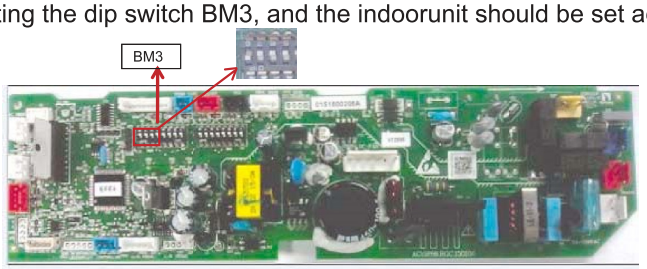
Note:

1) Shielded lays of the communication line should be connected as a daisy chain from the first master unit to the last slave unit.

2)The shielding lay of the communication line must be grounded at the end of the last slave unit.

Step2

Setting the dip switch BM3, and the indoorunit should be set according to the following table:



Wired controller address	BM3-8	BM3-7	BM3-6	BM3-5
Master indoor unit	0	0	0	0
Slave unit1	0	0	0	1
Slave unit2	0	0	1	0
Slave unit3	0	0	1	1
Slave unit4	0	1	0	0
Slave unit5	0	1	0	1
Slave unit6	0	1	1	0
Slave unit7	0	1	1	1
Slave unit8	1	0	0	0
Slave unit9	1	0	0	1
Slave unit10	1	0	1	0
Slave unit11	1	0	1	1
Slave unit12	1	1	0	0
Slave unit13	1	1	0	1
Slave unit14	1	1	1	0
Slave unit15	1	1	1	1

"1" stands for ON," 0" stands for OFF.

Note:

The above step 1, step 2, and step 3 must be operated in power off status.

The power supply terminals L1 L2 of all the outdoor units must be in the same phase sequence.

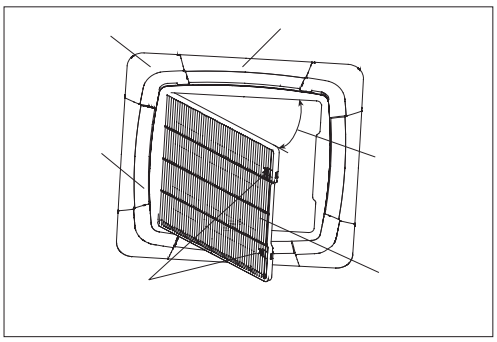
2. Installation

(1) Confirming the position of unit hanger

Please confirm the installation position of the hanger for indoor unit is about 130mm above the ceiling. For details, please refer to the Instructions for Installation and Maintenance of indoor unit.

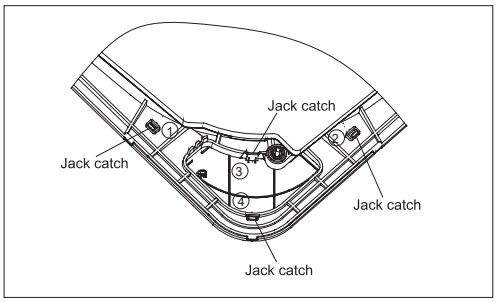
(2) Removing the air-inlet grille

Open the air-inlet grille to make it at an angle of 45° to the trim panel. As shown in the following figure, please remove the air-inlet grille as per the operation requirements.



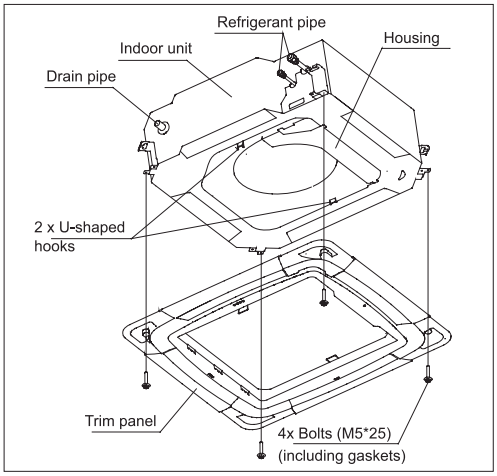
(3) Installing the panel

1) Please remove the four (4) angle trim panels. Removal method: Flip the jack catches of the angle trim panel in the order of ①②③④ , as shown in the following figure. The flipping direction is indicated by the arrows. Then the angle trim panel can be removed.



2) Pull out the two (2) U-shaped hooks on the indoor unit from below.

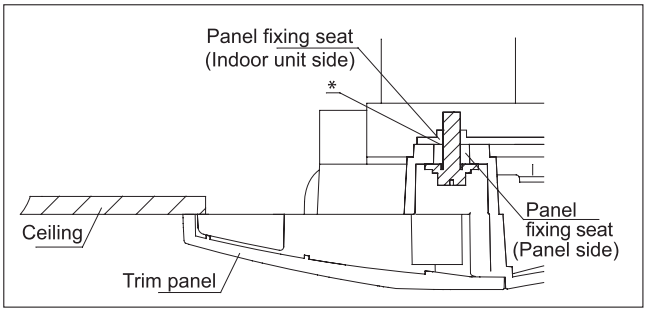
3) Adjust the panel direction to make the angle side engraved with "Pipe side" consistent with the refrigerant pipe of the indoor unit, and make the angle side engraved with "Drain side" consistent with the drain side of the indoor unit. Then hang the 2 hooks in the inner side of the panel on the 2 U-shaped hooks of the indoor unit.



4) Finally fix the panel on the indoor unit with the bolts (M5*25) and gaskets delivered with the unit.

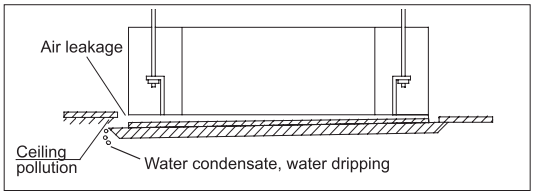
Caution: Gaskets must be used for fixing, or else the panel would be easy to fall off.

5) When tightening the four (4) bolts, please make sure there is no clearance between the panel fixing seat on the side of the indoor unit and the panel fixing seat on the side of the panel. That is to say: the bolts shall be fully tightened (see * in the figure) . If there is a clearance, air leakage or water leakage is likely to occur.

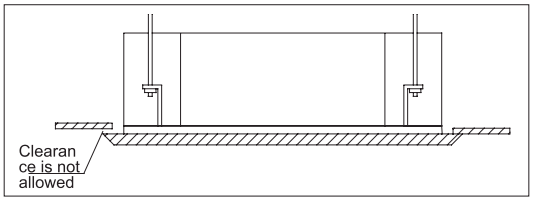


⚠ CAUTION

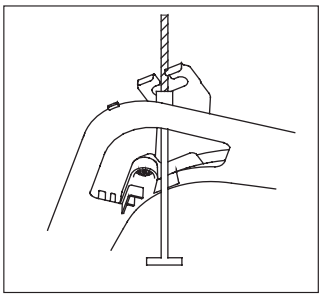
• Improper tightening of bolts would lead to the faults shown in the following figure.



• After tightening the bolts, if there is a clearance between the ceiling and the trim panel, please readjust the height of the indoor unit.

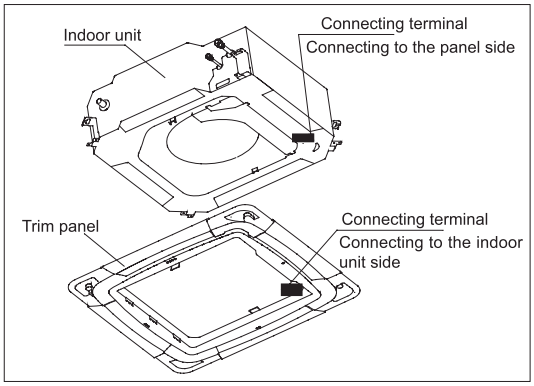


If the elevation level of the indoor unit and drain pipe are not affected, you can adjust the height of the indoor unit through the corner pore on the trim panel. Please keep the unit horizontal in the process of adjustment, or else water leakage is easy to occur.



• Please do not swing the louver blade by hand, or else the blade mechanism would be damaged.

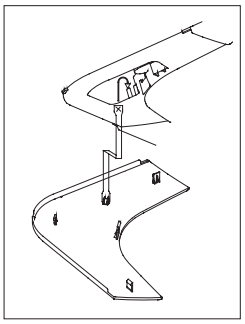
6) Connection of trim panel. Connect the black lead-out terminal of the panel to the black lead-out terminal of the indoor unit housing.



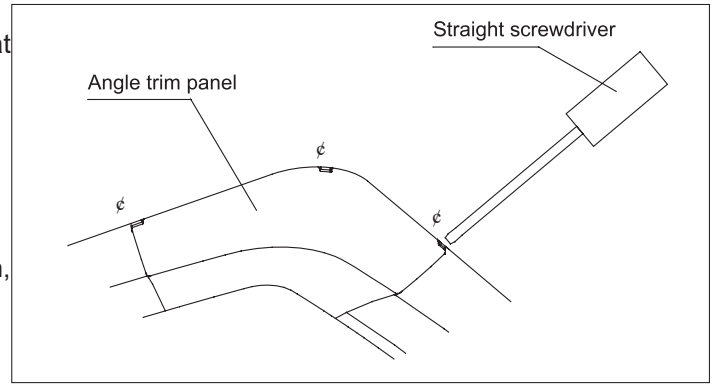
7) When the installation of panel is complete, please fix the four (4) angle trim panels.

• Hang and tighten the strap of the angle trim panel on the shackle of the trim panel, as shown in the figure.

• Fix the angle trim panel on the trim panel.



8) Installing the air-inlet grille.
Install the air-inlet grille with the steps opposite to that for removing.



For reference
The method for removing angle trim panels when the installation of trim panel is complete:
1) Insert a straight screwdriver in the notch ① . Gently turn the screwdriver downward, and slowly insert it in, and then move it up and down to make the angle fall off.
2) Make the angle ② and ③ fall off in the same way.
3) Take off the angle trim panel by hand.

7. Test Run

7.1 Check items

1. Indoor unit
• Is operation of each button on the remote control unit normal?
• Does each lamp light normally?
• Do not air flow direction louvers operate normally?
• Is the drain normal?

2. Outdoor unit
• Is there any abnormal noise and vibration during operation?
• Will noise, wind, or drain water from the unit disturb the neighbors?
• Is there any gas leakage?

Customer guidance
Explain the following to the customer in accordance with the operation manual:
(1) Starting and stopping method, operation switching, temperature adjustment, timer, air flow switching, and other remote control unit operations.
(2) Air filter removal and cleaning, and how to use air louvers.
(3) Give the operation and installation manuals to the customer.

7.2 Test run

⚠ WARNING

This unit will be started instantly without "ON" operation when electric power is supplied. Be sure to execute "OFF" operation before electric power is disconnected for servicing.
• This unit has a function of automatic restart system after recovering power stoppage

1. Before starting test run (for Heat pump models)
Confirm whether the power source breaker (main switch) of the unit has been turned on for over 12 hrs to energize the crankcase heater in advance of operation.

2. Test run
• Run the unit continuously for about 30 minutes, and check the following. Suction pressure at check joint of service valve for gas pipe.
• Discharge pressure at check joint on the compressor discharge pipe.
• Temperature difference between return air and supply air for indoor unit.

3 . Indoor Units - Convertible type indoor unit

3.1 Specification

Item			Model	AC35S2SG1FA(H)	
Function			——	Cooling	Heating
Capacity			W	3400	4200
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.5	
Indoor unit	Power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*2	
		Speed(H-M-L)	r/min	800/700/600/500	
		Fan motor output/input power	W	21/30	
		Air-flows (H-M-L)	m³/h	750/620/500/400	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	0.2	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	1000/230/680	
		Package	mmxmmxmm	1100/305/779	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 15/20	
	Control type(Remote/Wired)			Remote YR-HQS01(O) or Wired YR-E17(O)	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB (A)	54	
		Sound pressure level	dB (A)	40/35/31/28	
	Weight (Net/Shipping)		kg/kg	26/32	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ9.52 (3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AC50S2SG1FA(H)	
Function			——	Cooling	Heating
Capacity			W	5200	5900
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.8	
Indoor unit	Power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*2	
		Speed(H-M-L)	r/min	910/800/720/600	
		Fan motor output/input power	W	21/30	
		Air-flows (H-M-L)	m³/h	880/750/650/500	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	0.2	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	1000/230/680	
		Package	mmxmmxmm	1100/305/779	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 15/20	
	Control type (Remote/Wired)			Remote YR-HQS01(O) or Wired YR-E17(O)	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB(A)	57	
		Sound pressure level	dB(A)	46/40/36/31	
	Weight (Net/Shipping)		kg/kg	26/32	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35(1/4)	
		Gas	mm	Φ12.7(1/2)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AC71S2SG1FA(H)//1U71S2SG1FA	
Function				cooling	heating
Capacity			kW	7.1(1.8-8.0)	7.5(2.0-8.5)
Sensible heat ratio				0.72	
Total power input			kW	2.20(0.5-3.0)	2.02(0.5-3.0)
Max. power input			W	3.0	3.0
EER or COP			W/W	3.23	3.71
Dehumidifying capacity			10^{-3}×m³/h	2.4	
Power cable				4.0mm²	
Power source			N, V, Hz	1PH, 220-240V~, 50/60Hz	
Running /Max.Running current			A / A	9.5/13.1	8.8/13.1
Start Current			A	0.58	
Circuit breaker			A	20	
Indoor unit	Unit model (color)			AC71S2SG1FA	
	Fan	Type × Number		CENTRIFUGALX3	
		Speed (H-M-L)	r/min	1050/1000/920/840	
		Fan motor input power	kW	0.2	
		Fan motor output power	kW	0.12	
		Air-flow (H-M-L)	m³/h	1250/1128/930/840	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	2	
	Dimension	External (L×W×H)	mm×mm×mm	1325/230/680	
		Package (L×W×H)	mm×mm×mm	1425/305/779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17	
			Infrared	YR-HQS01	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	None	
	Sound power Noise level(H-M-L)		dB(A)	61	
	Sound pressure Noise level (H-M-L)		dB(A)	43/40/38/35	
	Weight (Net / Shipping)		kg / kg	33.5/41.9	
Piping	Refrigerant	Type / Charge	g	R32/1300	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	10	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item / Model				AC105S2SH1FA(H)/1U105S2SS1FA	
Function				cooling	heating
Capacity			KW	9.5 (2.5-10.0)	10.2 (3.0-10.5)
Sensible heat ratio				0.74	
Total power input			KW	3.22（0.5-4.0）	3.16（0.5-4.0）
Max. power input			W	4.0	4.0
EER or COP			W/W	2.95	3.23 (A)
Dehumidifying capacity			10-³×m³/h	3	
Power cable				4.0mm²	
Power source			N, V, Hz	1ph, 220~240, 50/60	
Running /Max.Running current			A / A	14/16.5	13.7/16.5
Start Current			A	0.58	
Circuit breaker			A	25	
Indoor unit	Unit model (color)			AC105S2SH1FA	
	Fan	Type × Number		CENTRIFUGALX3	
		Speed (H-M-L)	r/min	1050/1000/920/840	
		Fan motor output/ input power	W	260/180	
		Air-flow (H-M-L)	m³/h	1600/1400/1280/1160	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Row		2	
		Total Area	m²	/	
	Dimension	External（L×W×H）	mm×mm×mm	1330/230/680	
		Package（L×W×H）	mm×mm×mm	1425/305/779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17	
			Infrared	YR-HQS01	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	NONE	
	Sound power Noise level (H-M-L)		dB (A)	61	
	Sound pressure Noise level (H-M-L)		dB (A)	47/43/41/37	
	Pipe	Liquid Pipe (mm)		9.52	
		Gas Pipe (mm)		15.88	
		Connecting Method		flared	
	Weight (Net / Shipping)		kg / kg	33.5/41.9	
Piping	Refrigerant	Type / Charge	g	R32/1700	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item / Model				AC105S2SH1FA(H)/1U105S2SS2FA	
Function				cooling	heating
Capacity			KW	9.5 (2.5-10.0)	10.2 (3.0-10.5)
Sensible heat ratio				0.74	
Total power input			KW	3.13（0.5-4.0）	3.07（0.5-4.0）
Max. power input			W	4.0	4.0
EER or COP			W/W	3.04	3.32 (A)
Dehumidifying capacity			10-³×m³/h	3	
Power cable				4.0mm²	
Power source			N, V, Hz	1ph, 220~240, 50/60	
Running /Max.Running current			A / A	14/16.5	13.7/16.5
Start Current			A	0.58	
Circuit breaker			A	25.0	
Indoor unit	Unit model (color)			AC105S2SH1FA	
	Fan	Type × Number		CENTRIFUGALX3	
		Speed (H-M-L)	r/min	1050/1000/920/840	
		Fan motor output/ input power	W	72/90	
		Air-flow (H-M-L)	m³/h	1600/1400/1280/1160	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Row		2	
		Total Area	m²	/	
	Dimension	External（L×W×H）	mm×mm×mm	1325/230/680	
		Package（L×W×H）	mm×mm×mm	1425/305/779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17A	
			Infrared	YR-HQS01	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	NONE	
	Sound power Noise level (H-M-L)		dB (A)	61	
	Sound pressure Noise level (H-M-L)		dB (A)	47/43/41/37	
	Pipe	Liquid Pipe (mm)		9.52	
		Gas Pipe (mm)		15.88	
		Connecting Method		flared	
	Weight (Net / Shipping)		kg / kg	33.5/41.9	
Piping	Refrigerant	Type / Charge	g	R32/1700	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AC105S2SH1FA(H)/1U105S2SS1FB	
Function				cooling	heating
Capacity			KW	9.5 (2.5-10.0)	10.5 (3.0-11.0)
Sensible heat ratio				0.81	
Total power input			KW	3.25 (0.5-4.0)	3.10 (0.5-4.0)
Max. power input			W	4000	4000
EER or COP			W/W	2.9 (A)	3.5 (A)
Dehumidifying capacity			10-³×m³/h	1.78	
Power cable				H07RN-F 5G 4.0 mm^2	
Power source			N, V, Hz	3N~380-415V,50/60Hz	
Running /Max.Running current			A / A	5.5A(0.5-6.8A)/6.8A	5.3(0.5-6.8A)/6.8A
Start Current			A	1	
Circuit breaker			A	6.5	6.5
Indoor unit	Unit model (color)			AC105S2SH1FA	
	Fan	Type × Number		CENTRIFUGALX3	
		Speed (H-M-L)	r/min	1130/1050/1000/920±30r/min	
		Fan motor input power	kW	0.12	
		Fan motor output power	kW	0.09	
		Air-flow (H-M-L)	m³/h	1600/1400/1280/1160	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External（L×W×H）	mm×mm×mm	1325*230*680	
		Package（L×W×H）	mm×mm×mm	1425*305*779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 15/20	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(S)/YR-E16(O)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	123	
	Electricity Heater		kW	0	
	Sound power Noise level (H-M-L)		dB(A)	63	
	Sound pressure Noise level (H-M-L)		dB(A)	47/43/41/37	
	Weight (Net / Shipping)		kg / kg	33.5/41.9	
	Panel	Model		/	
		External dimensions (W/D/H)	mm	/	
		Shipping dimensions (W/D/H)	mm	/	
		Net weight/Shipping weight	kg	/	
Piping	Refrigerant	Type / Charge	g	R32/1700	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	9.52	
		Gas	mm	15.88	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AC125S2SK1FA(H)/1U125S2SN1FA	
Function				cooling	heating
Capacity			kW	12.0 (3.0-12.8)	12.5 (2.9-13.5)
Sensible heat ratio				0.84	
Total power input			kW	4.3 (0.3-5.6)	3.8 (0.3-5.6)
Max. power input			W	5600	5600
EER or COP			W/W	2.75(A)	3.25(A)
AEER or ACOP				2.72	3.21
Dehumidifying capacity			10^{-3}×m³/h	3.03	
Power cable				/	
Power source			N, V, Hz	1PH, 220-240V~, 50/60Hz	
Running /Max.Running current			A / A	18.5(1.5-26.0)A/26A	16.0(1.5-26.0)A/26A
Start Current			A	/	
Circuit breaker			A		
Indoor unit	Unit model (color)			AC125S2SK1FA	
	Fan	Type × Number		CENTRIFUGALX3	
		Speed (H-M-L)	r/min	1000/920/840/750±30r/min	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H-M-L)	m³/h	2050/1800/1600/1380m3/h	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External (L×W×H)	mm×mm×mm	1650*680*230	
		Package (L×W×H)	mm×mm×mm	1710/870/330	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17 (S)	
			Infrared	YR-HQS01 (O)	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	0	
	Sound power Noise level(H-M-L)		dB(A)	64	
	Sound pressure Noise level (H-M-L)		dB(A)	49/47/45	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/2000	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item \ Model				AC125S2SK1FA(H)/1U125S2SN1FB	
Function				cooling	heating
Capacity			kW	12.1 (3.0-12.8)	12.6 (2.9-13.5)
Sensible heat ratio				0.84	
Total power input			kW	4.2 (0.3-5.6)	3.7 (0.3-5.6)
Max. power input			W	5600	5600
EER or COP			W/W	2.75 (A)	3.25 (A)
AEER or ACOP				2.72	3.21
Dehumidifying capacity			10^{-3}×m³/h	3.03	
Power cable				/	
Power source			N, V, Hz	3N~380-415V,50/60Hz	
Running /Max.Running current			A / A	6.1 (1.3-9.5)A/9.5A	5.7 (2.4-9.5)A/9.5A
Start Current			A	/	
Circuit breaker			A		
Indoor unit	Unit model (color)			AC125S2SK1FA	
	Fan	Type × Number		CENTRIFUGALX3	
		Speed (H-M-L)	r/min	1000/920/840/750±30r/min	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H-M-L)	m³/h	2050/1800/1600/1380m3/h	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External (L×W×H)	mm×mm×mm	1650*680*230	
		Package (L×W×H)	mm×mm×mm	1710/870/330	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17 (S)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	0	
	Sound power Noise level (H-M-L)		dB(A)	64	
	Sound pressure Noise level (H-M-L)		dB(A)	49/47/45	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/2000	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AC125S2SK1FA(H)/1U125S2SN2FA	
Function				cooling	heating
Capacity			kW	12.3(3.0~13.0)	12.7(3.5~13.5)
Sensible heat ratio				0.84	
Total power input			kW	4.5 (0.3-6.0)	3.96(0.3-6.0)
Max. power input			W	6000	6000
EER or COP			W/W	2.71	3.21
Dehumidifying capacity			10^{-3}×m³/h	3.03	
Power cable				H07VV-F 3G 6.0 mm2	
Power source			N, V, Hz	1PH, 220-240V~, 50/60Hz	
Running /Max.Running current			A / A	19.6(1.5-26.0) A/26A	17.2(1.5-26.0) A/26A
Start Current			A	3	
Circuit breaker			A	40	40
Indoor unit	Unit model (color)			AC125S2SK1FA	
	Fan	Type × Number		CENTRIFUGALX4	
		Speed (H×M×L)	r/min	1000/920/840/750±30r/min	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H×M×L)	m³/h	2050/1800/1600/1380m3/h	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External (L×W×H)	mm×mm×mm	1650*680*230	
		Package (L×W×H)	mm×mm×mm	1750*779*305	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 15/20	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(S)/YR-E16(O)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	123	
	Electricity Heater		kW	0	
	Sound power Noise level (H×M×L)		dB(A)	64	
	Sound pressure Noise level (H×M×L)		dB(A)	46/43/41/38	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/2300	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	9.52	
		Gas	mm	15.88	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AC125S2SK1FA(H)/1U125S2SN2FB	
Function				cooling	heating
Capacity			kW	12.4(3.0~13.0)	12.8(3.5~13.5)
Sensible heat ratio				0.84	
Total power input			kW	4.52 (0.3-6.0)	3.92 (0.3-6.0)
Max. power input			W	6000	6000
EER or COP			W/W	2.74	3.26
Dehumidifying capacity			10^{-3}×m³/h	3.03	
Power cable				H05RN-F 5G 4.0 mm2	
Power source			N, V, Hz	3N~380-415V,50/60Hz	
Running /Max.Running current			A / A	6.9(1.3-9.1)A/9.1A	5.9(2.4-9.1)A/9.1A
Start Current			A	3	
Circuit breaker			A	30	30
Indoor unit	Unit model (color)			AC125S2SK1FA	
	Fan	Type × Number		CENTRIFUGALX4	
		Speed (H×M×L)	r/min	1000/920/840/750±30r/min	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H×M×L)	m³/h	2050/1800/1600/1380m3/h	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External (L×W×H)	mm×mm×mm	1650*680*230	
		Package (L×W×H)	mm×mm×mm	1750*779*305	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 15/20	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(S)/YR-E16(O)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	123	
	Electricity Heater		kW	0	
	Sound power Noise level (H×M×L)		dB(A)	64	
	Sound pressure Noise level (H×M×L)		dB(A)	46/43/41/38	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/2300	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	9.52	
		Gas	mm	15.88	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item / Model				AC140S2SK1FA(H)/1U140S2SP1FA	
Function				cooling	heating
Capacity			kW	13.1 (3.0~14.5)	14.5 (3.5~16)
Sensible heat ratio				0.74	
Total power input			kW	4.37 (1.0-6.5)	3.92 (1.0-6.5)
Max. power input			W	7200	7200
EER or COP			W/W	3.0 (A)	3.70 (A)
AEER or ACOP				2.72	3.21
Dehumidifying capacity			$10^{-3}\times m^3/h$	4.9	
Power cable				H07VV-F 3G 6.0 mm^2	
Power source			N, V, Hz	1PH, 220-240V~, 50/60Hz	
Running /Max.Running current			A / A	19/32	17/32
Start Current			A	3	
Circuit breaker			A	40	40
Indoor unit	Unit model (color)			AC140S2SK1FA	
	Fan	Type × Number		CENTRIFUGALX4	
		Speed (H-M-L)	r/min	1050/970/890/800	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H-M-L)	m^3/h	2050/1980/1800/1600	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m^2	/	
	Dimension	External (L×W×H)	mm×mm×mm	1650*680*230	
		Package (L×W×H)	mm×mm×mm	1750*305*779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(O) OR YR-E16A (O)	
			Infrared	YR-HQS01 (S)	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	0	
	Sound power Noise level (H-M-L)		dB(A)	66	
	Sound pressure Noise level (H-M-L)		dB(A)	50/46/43/40	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/2900	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	75	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item / Model				AC140S2SK1FA(H)/1U140S2SN1FB	
Function				cooling	heating
Capacity			kW	13.4 (3.5~14.0)	15.0 (4.0~15.5)
Sensible heat ratio				0.74	
Total power input			kW	5.13 (1.0-6.5)	4.97 (1.0-6.5)
Max. power input			W	6500	6500
EER or COP			W/W	2.61 (A)	3.02 (A)
Dehumidifying capacity			10^{-3}×m³/h	4.9	
Power cable				H07VV-F 3G 6.0 mm^2	
Power source			N, V, Hz	3PH, 380-415V~, 50/60Hz	
Running /Max.Running current			A / A	19/32	17/32
Start Current			A	3	
Circuit breaker			A	40	40
Indoor unit	Unit model (color)			AC140S2SK1FA (H)	
	Fan	Type × Number		CENTRIFUGALX4	
		Speed (H-M-L)	r/min	1050/970/890/800	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H-M-L)	m³/h	2150/1980/1800/1600	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External (L×W×H)	mm×mm×mm	1650*230*680	
		Package (L×W×H)	mm×mm×mm	1750*305*779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17A(O)	
			Infrared	YR-HQS01 (S)	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	0	
	Sound power Noise level (H-M-L)		dB(A)	66	
	Sound pressure Noise level (H-M-L)		dB(A)	48/46/43/40	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/2300	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	70	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item / Model				AC140S2SK1FA(H)/1U140S2SP1FB	
Function				cooling	heating
Capacity			kW	12.9 (3.0~14.5)	14.1 (3.5~16)
Sensible heat ratio				0.74	
Total power input			kW	4.43 (1.0-6.5)	4.02 (1.0-6.5)
Max. power input			W	7200	7200
EER or COP			W/W	2.91 (A)	3.51 (A)
AEER or ACOP				2.72	3.21
Dehumidifying capacity			10^{-3}×m³/h	4.9	
Power cable				H05RN-F 5G 4.0mm^2	
Power source			N, V, Hz	3N~380-415V,50/60Hz	
Running /Max.Running current			A / A	7.2/11	7/11
Start Current			A	3	
Circuit breaker			A	30	30
Indoor unit	Unit model (color)			AC140S2SK1FA	
	Fan	Type × Number		CENTRIFUGALX4	
		Speed (H-M-L)	r/min	1050/970/890/800	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H-M-L)	m³/h	2050/1980/1800/1600	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External(L×W×H)	mm×mm×mm	1650*680*230	
		Package(L×W×H)	mm×mm×mm	1750*305*779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17 (O) OR YR-E16A (O)	
			Infrared	YR-HQS01 (S)	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	0	
	Sound power Noise level (H-M-L)		dB (A)	66	
	Sound pressure Noise level (H-M-L)		dB (A)	50/46/43/40	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/2900	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	75	

Norminal condition: indoor temperature (cooling): 27^{O}CDB/19^{O}CWB, indoor temperature (heating): 20^{O}CDB
Outdoor temperature (cooling): 35^{O}CDB/24^{O}CWB, outdoor temperature (heating): 7^{O}CDB/6^{O}CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AC140S2SK1FA(H)/1U140S2SP2FA	
Function				cooling	heating
Capacity			kW	13.6(4.0~15.0)	15.0(4.5~16.0)
Sensible heat ratio				0.74	
Total power input			kW	4.53(1.0-6.0)	4.17(1.0-6.0)
Max. power input			W	6000	6000
EER or COP			W/W	3.00	3.60
Dehumidifying capacity			10^{-3}×m³/h	4.9	
Power cable				H07VV-F 3G 6.0 mm2	
Power source			N, V, Hz	1PH, 220-240V~, 50/60Hz	
Running /Max.Running current			A / A	19.7/26	18.1/26
Start Current			A	3	
Circuit breaker			A	40	40
Indoor unit	Unit model (color)			AC140S2SK1FA	
	Fan	Type × Number		CENTRIFUGALX4	
		Speed (H×M×L)	r/min	1050/970/890/800	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H×M×L)	m³/h	2150/1980/1800/1600	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External(L×W×H)	mm×mm×mm	1650*230*680	
		Package(L×W×H)	mm×mm×mm	1750*305*779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 15/20	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(O) OR YR-E16A(O)	
			Infrared	YR-HQS01(S)	
	Fresh air hole dimension		mm	123	
	Electricity Heater		kW	0	
	Sound power Noise level (H×M×L)		dB(A)	66	
	Sound pressure Noise level (H×M×L)		dB(A)	48/46/43/40	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/2900	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	9.52	
		Gas	mm	15.88	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	75	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AC140S2SK1FA(H)/1U140S2SP2FB	
Function				cooling	heating
Capacity			kW	13.6(4.0~15.0)	15.0(4.5~16.0)
Sensible heat ratio				0.74	
Total power input			kW	4.53(1.0-6.0)	4.29(1.0-6.0)
Max. power input			W	6000	6000
EER or COP			W/W	3.00	3.50
Dehumidifying capacity			10^{-3}×m³/h	4.9	
Power cable				H05RN-F 5G 4.0mm2	
Power source			N, V, Hz	3N~380-415V,50/60Hz	
Running /Max.Running current			A / A	6.88/9.1	6.51/9.1
Start Current			A	3	
Circuit breaker			A	30	30
Indoor unit	Unit model (color)			AC140S2SK1FA	
	Fan	Type × Number		CENTRIFUGALX4	
		Speed (H×M×L)	r/min	1050/970/890/800	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H×M×L)	m³/h	2050/1980/1800/1600	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External(L×W×H)	mm×mm×mm	1650*230*680	
		Package(L×W×H)	mm×mm×mm	1750*305*779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 15/20	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(O) OR YR-E16A(O)	
			Infrared	YR-HQS01(S)	
	Fresh air hole dimension		mm	123	
	Electricity Heater		kW	0	
	Sound power Noise level (H×M×L)		dB(A)	66	
	Sound pressure Noise level (H×M×L)		dB(A)	48/46/43/40	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/3500	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	9.52	
		Gas	mm	15.88	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	75	

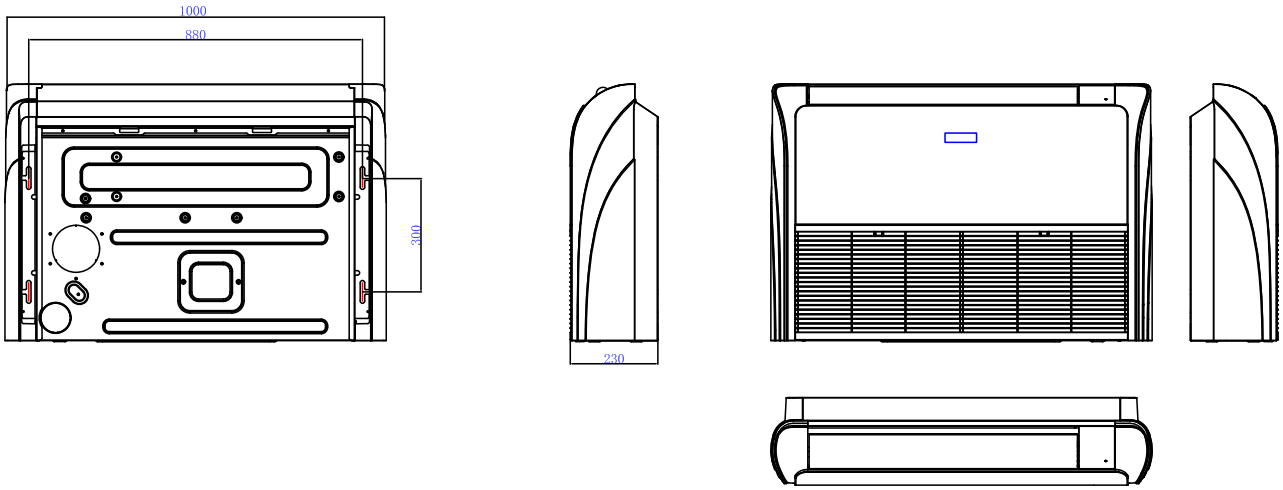
Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AC160S2SK1FA(H)/1U160S2SP1FB	
Function				cooling	heating
Capacity			kW	16.0(4.5~16.5)	17.0(5.0~18.0)
Sensible heat ratio				0.74	
Total power input			kW	5.39(1.0~6.5)	4.97(1.0~6.5)
Max. power input			W	6500	6500
EER or COP			W/W	2.97	3.42
Dehumidifying capacity			10^{-3}×m³/h	6.56	
Power cable				H05RN-F 5G 4.0mm2	
Power source			N, V, Hz	3N~380-415V,50/60Hz	
Running /Max.Running current			A / A	8.2/10	7.3/10
Start Current			A	5	
Circuit breaker			A	33	33
Indoor unit	Unit model (color)			AC160S2SK1FA	
	Fan	Type × Number		CENTRIFUGALX4	
		Speed (H×M×L)	r/min	1250/1210/1100/1010	
		Fan motor input power	kW	0.15	
		Fan motor output power	kW	0.11	
		Air-flow (H×M×L)	m³/h	2250/2000/1850/1650	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Total Area	m²	/	
	Dimension	External(L×W×H)	mm×mm×mm	1650*230*680	
		Package(L×W×H)	mm×mm×mm	1750*305*779	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17A(O)	
			Infrared	YR-HQS01(S)	
	Fresh air hole dimension		mm	124	
	Electricity Heater		kW	/	
	Sound power Noise level (H×M×L)		dB(A)	67	
	Sound pressure Noise level (H×M×L)		dB(A)	48/46/43/40	
	Weight (Net / Shipping)		kg / kg	43/51	
Piping	Refrigerant	Type / Charge	g	R32/3500	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	30	
	Pipe	Liquid	mm	9.52	
		Gas	mm	19.05	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	70	

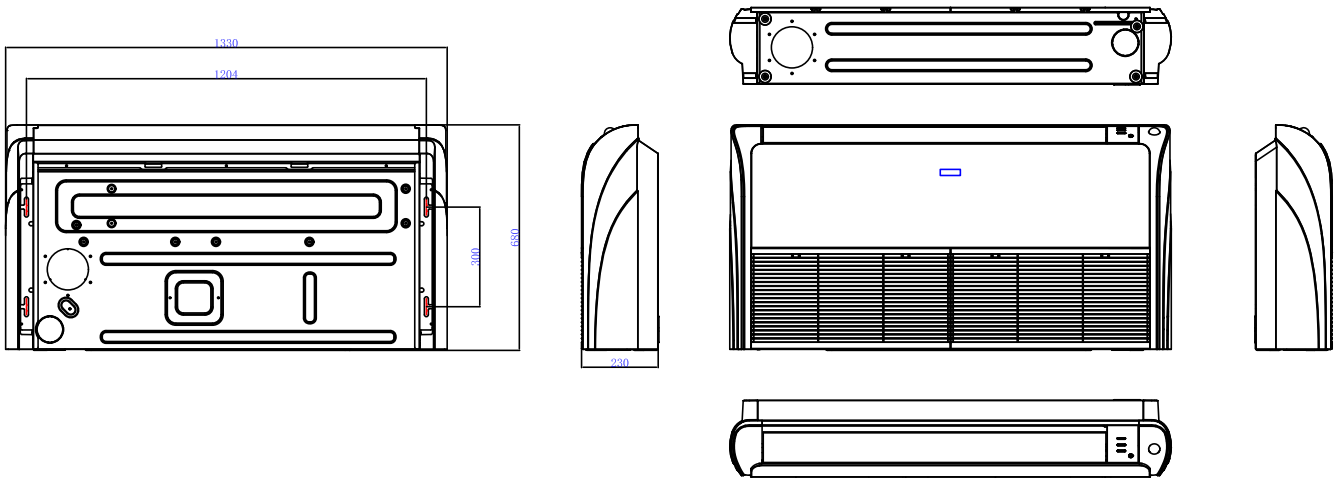
Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

3.2 Dimension

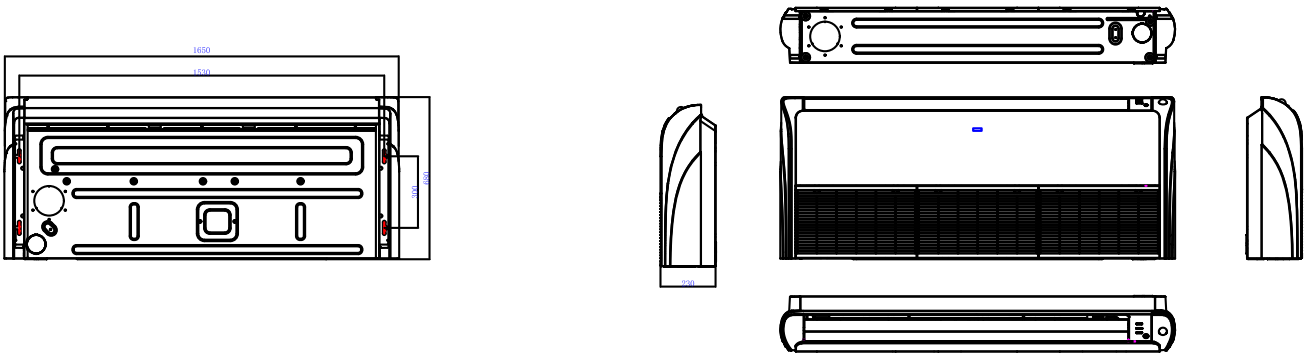
AC35S2SG1FA(H)　AC50S2SG1FA(H)



AC71S2SG1FA(H)　AC105S2SH1FA(H)

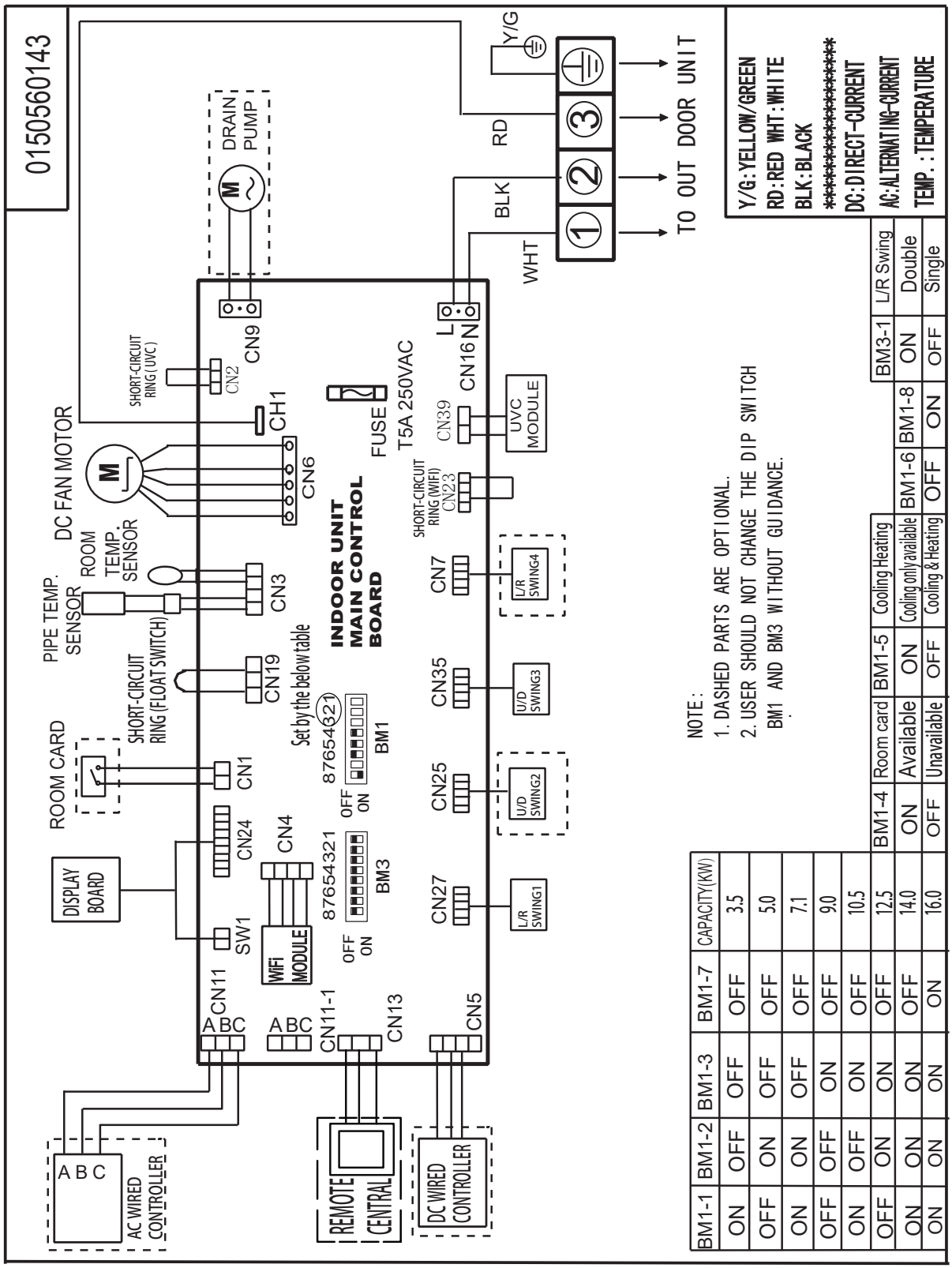


AC125S2SK1FA(H) AC140S2SK1FA(H) AC160S2SK1FA(H)



3.3 Wiring diagram

AC35S2SG1FA(H) AC50S2SG1FA(H) AC71S2SG1FA(H) AC105S2SH1FA(H)
AC125S2SK1FA(H) AC140S2SK1FA (H) AC160S2SK1FA (H)



BM1-1	BM1-2	BM1-3	BM1-7	CAPACITY(KW)
ON	OFF	OFF	OFF	3.5
OFF	ON	OFF	OFF	5.0
ON	ON	OFF	OFF	7.1
OFF	OFF	ON	OFF	9.0
ON	OFF	ON	OFF	10.5
OFF	ON	ON	OFF	12.5
ON	ON	ON	OFF	14.0
ON	ON	ON	ON	16.0

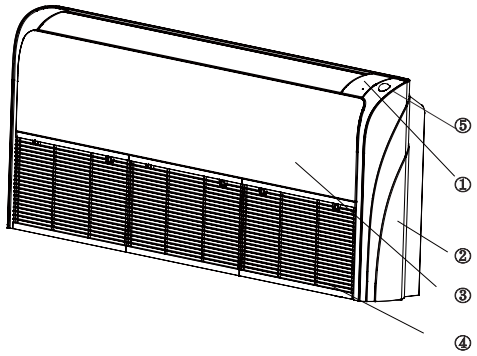
BM1-4	Room card
ON	Available
OFF	Unavailable

BM1-5	Cooling Heating
ON	Cooling only available
OFF	Cooling & Heating

BM1-6	BM1-8	BM3-1	L/R Swing
OFF	ON	ON	Double
ON	OFF	OFF	Single

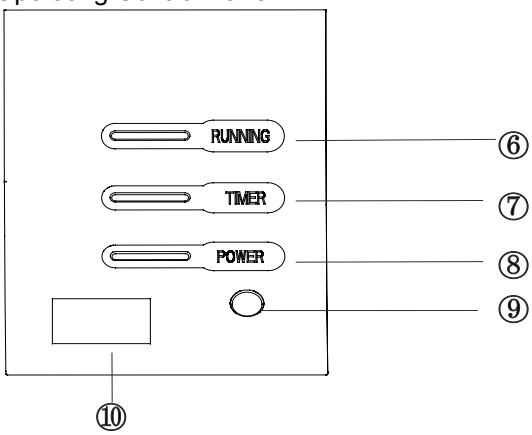
Parts and Functions

Indoor Unit



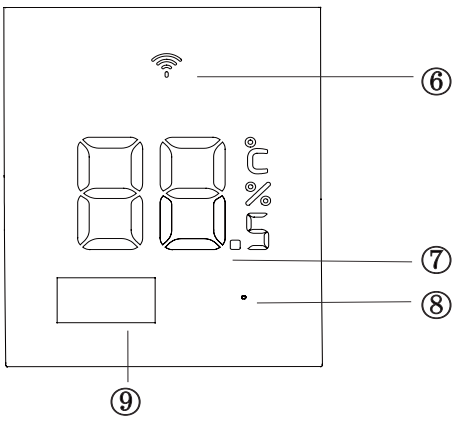
Operating Control Panel 1
(1) Operation Control Panel
(2) Cover Plate
(3) Front Panel
(4) Inlet Grill(Filter inside)
(5) Human Sensor
(6) RUNNING Indicator Lamp
(7) TIMER Indicator Lamp
(8) POWER Indicator Lamp
(9) Emergency Switch
(10) Remote Receiver

Operating Control Panel 1



Operating Control Panel 2
(1) Operation Control Panel
(2) Cover Plate
(3) Front Panel
(4) Inlet Grill(Filter inside)
(5) Human Sensor
(6) WIFI Indicator Lamp
(7) Display Indicator Lamp
(8) Emergency Switch
(9) Remote Receiver

Operating Control Panel 2



Note:
For the wired control type unit, the unit state should be checked by the wired controller, instead of the remote receiver.
And if you set the TIMER function, the TIMER LED on the remote receiver will not be on.

2.The different PANEL for different models.

Installation Procedure

SELECTING THE MOUNTING POSITION

WARNING

- Install at a place that can withstand the weight of the indoor unit and install it positively so that the unit will not topple or fall.

CAUTION

- Do not install the unit where there is the danger of combustible gas leakage.
- Do not install near heat sources.
- If children under 10 years old may approach the unit, take preventive measures so that they cannot reach the unit.

Decide the mounting position with the customer as follows.

(1) Install the indoor unit level on a strong wall which is not subject to vibration.
(2) The inlet and outlet ports should not be obstructed, and the air should be able to blow all over the room.
(3) Do not install the unit where it will be exposed to direct sunlight
(4) Install the unit where connection to the outdoor unit is easy.
(5) Install the unit where the drain pipe can be easily installed.
(6) Take servicing, etc. into consideration and leave the spaces shown in "Maintenace space dimension" .
(7) Install the unit where the filter can be removed

ACCESSORIES FOR INSTALLATION

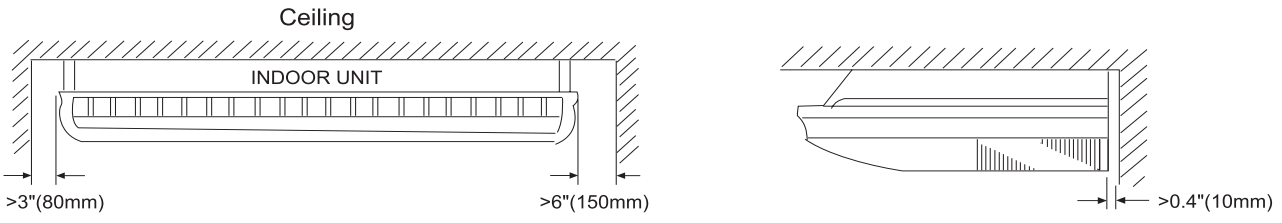
The following installation parts are optional parts. Use them as required.

Optional parts

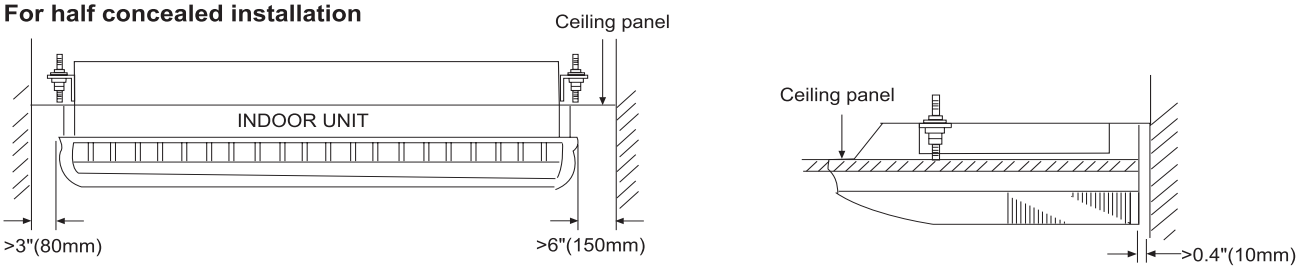
Adhesive tape
Saddle (L.S) with screws
Drain hose
Heat insulation material
Piping hole cover
Putty
Plastic clamp

MAINTENANCE SPACE DIMENSION

For ceiling installation



For half concealed installation



Installation Procedure

INSTALLING THE INDOOR UNIT

Connection pipe requirement

Model	Diameter		Maximum length	Maximum height (between indoor and outdoor)
	Liquid side	Gas side		
AC35S2SG1FA	6.35mm	9.52mm	15m	10m
AC50S2SG1FA	6.35mm	12.7mm	20m	10m
AC71S2SG1FA	9.52mm	15.88mm	20m	10m
AC105S2SH1FA AC125S2SK1FA	9.52mm	15.88mm	30m	20m
AC140S2SK1FA	9.52mm	15.88mm	50m	30m
AC160S2SK1FA	9.52mm	19.05mm	70m	30m

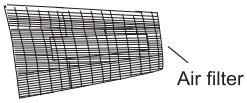
Install the room air conditioner as follows

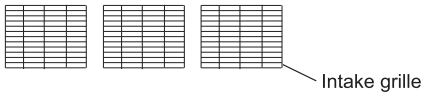
1. Remove the intake grill and side cover

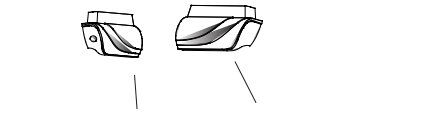
(1) Open the intake grill

(2) Remove the Side cover(Right and left side)

(3) This air conditioner can be set up to intake fresh air. The information about how to install for fresh-air intake, refer to "Fresh air intake".







Open the intake grill

(1) Push the embeding switch according to the direction of the arrowhead.(Refer to Fig.1)

(2)Turn into the intake grill according to the direction of the arrowhead.(Refer to Fig.2)

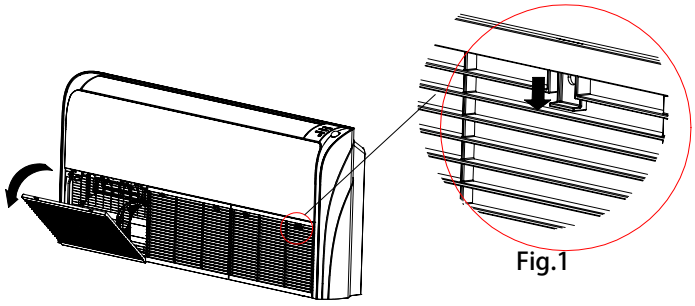


Fig.1

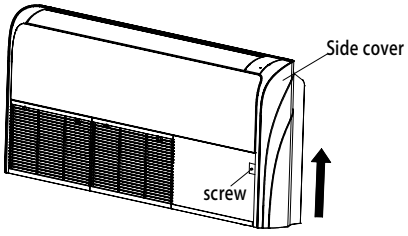
Fig.2

Remove the Side cover

(1) Remove the screw.

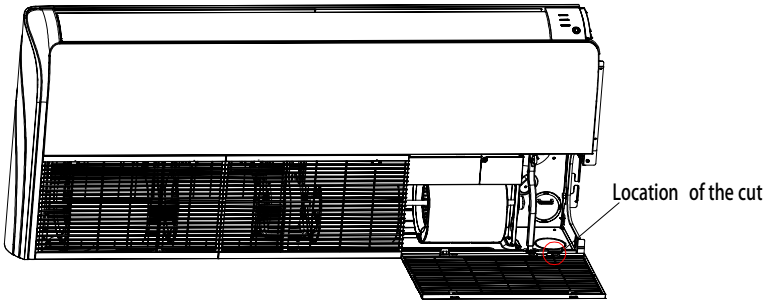
(2) Push the Side cover according to the direction of the arrowhead.

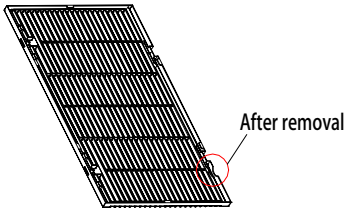
(3) Then remove the Side cover.



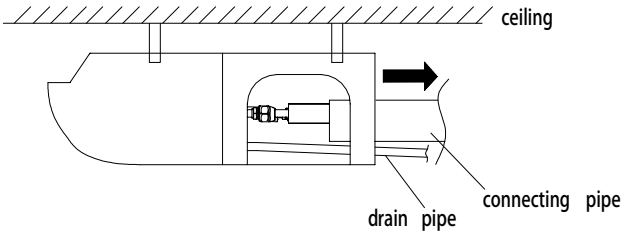
Installation Procedure

Cut intake grill for drain pipe
(1) Tools:Knife or Pliers.
(2) Cut the intake grill before installing the drain pipe,Then,pass the drain pipe through the hole.As the following schematic.

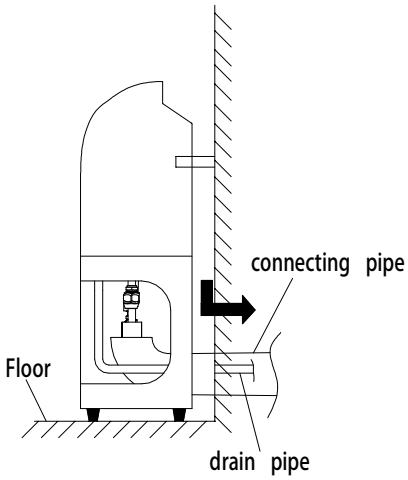




Installing the drain pipe and the connecting pipe
(1) When the unit is installed in the ceiling,Installing them as below

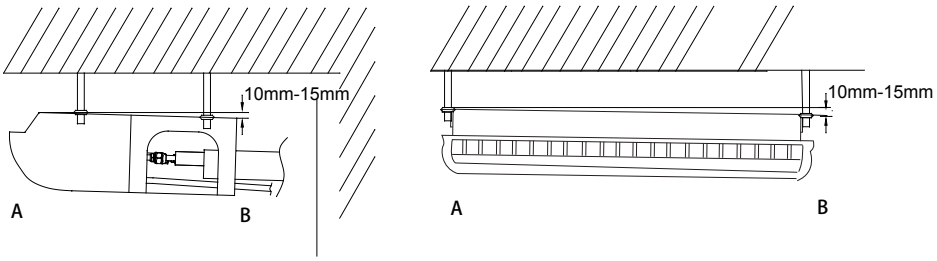


(2) When the unit is installed on the floor,Installing them as below.



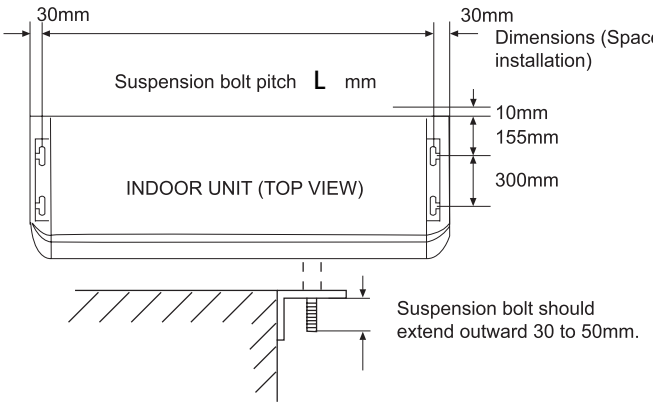
CAUTION

When the unit is installed in the ceiling,side B is lower than side A for condensate discharge.As below.



Installation Procedure

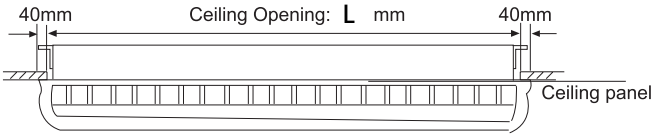
2. Location of ceiling supension bolts

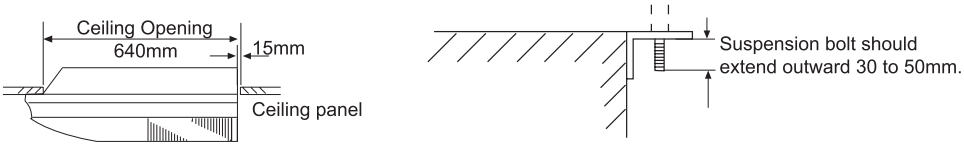


MODEL	L
AC35S2SG1FA AC50S2SG1FA	880
AC90S2SH1FA AC105S2SH1FA	1204
AC125S2SK1FA AC140S2SK1FA AC160S2SK1FA	1530

For half-concealed installation

Supension-bolt pitch should be as shown below



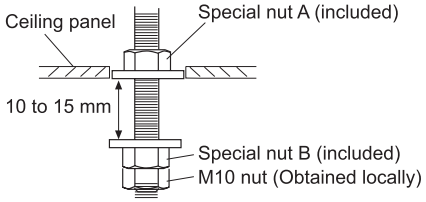


3. Drilling the holes and attaching the suspension bolts

(1) Drill Φ25mm holes at the suspension-bolt locations. The two special nuts are provided with the unit. The M10 nut must be obtained locally.

(2) Install the bolts, then temporarily attach Special nuts A and B and a normal M10 nut to each bolt.

Bolt strength: 980 to 1470 N (100 TO 150 kgf)

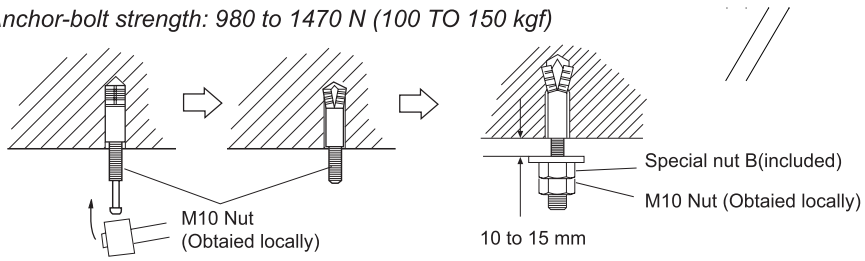


If using anchor bolts

(1) Drill holes for anchor bolts at the locations at which you will set the suspension bolts. Note that anchor bolts must be obtained locally.

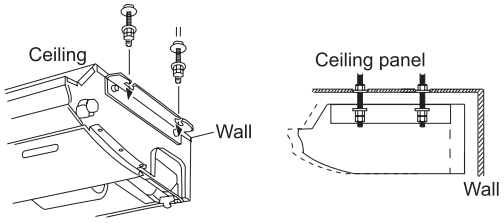
(2) Install the anchor bolts, then temporarily attach special nut "B" (included) and a locally-procured M10 nut to each of the bolts.

Anchor-bolt strength: 980 to 1470 N (100 TO 150 kgf)



Installation Procedure

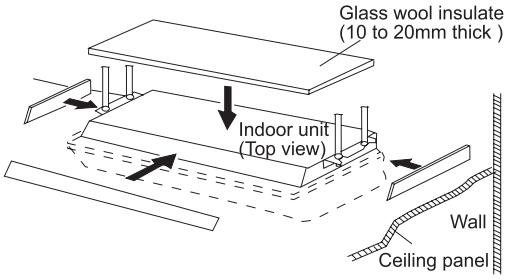
4.Installing the indoor unit



(1) Lift unit so that suspension bolts pass through suspension fittings at the sides (four places),and slide the unit back.
(2) Fasten the indoor unit into place by tightening-up the special "B" bolts and the M10 nuts. Make sure that unit is secure and will not shift back and forth.

For half-concealed installation

When installing the indoor unit in a semi-concealed orientation, make sure to reinforce the insulation of the unit on all sides. Drops of water may fall from the unit if it is not thoroughly insulated.

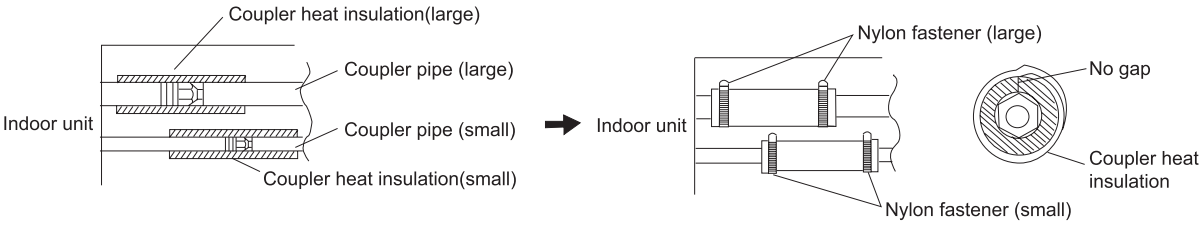


CAUTION

In order to check the drainage, be sure to use a level during installation of the indoor unit. If the installation site of the indoor unit is not level, water leakage may occur.

5.Installing the coupler heat insulation

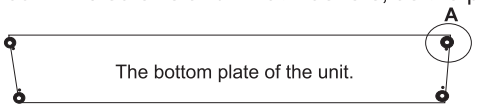
After checking for gas leaks, insulate by wrapping insulation around the two parts (large and small) of the indoor unit coupling, using the coupler heat insulation. After installling the coupler heat insulation, wrap both ends with vinyl tape so that there is no gap. Secure both ends of the heat insulation material using nylon fasteners.

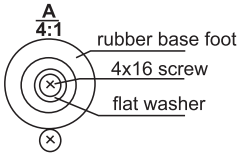


When using an auxiliary pipe, make sure that the fastener used is insulated in the same way.

Note:

When installing the unit on the floor, fix the four rubber base feet in the accessories on the bottom plate of the unit with four 4x16 screws and 4 flat washers, as the position in the figure.

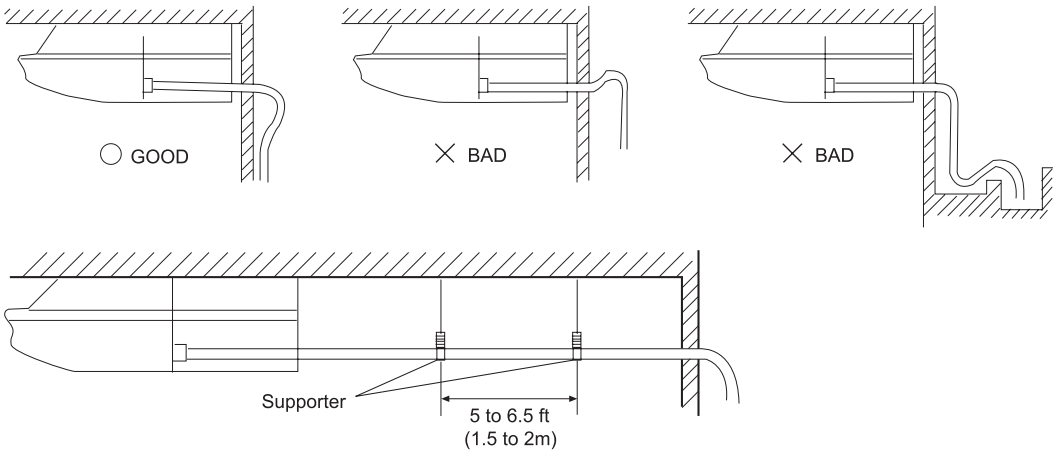




Installation Procedure

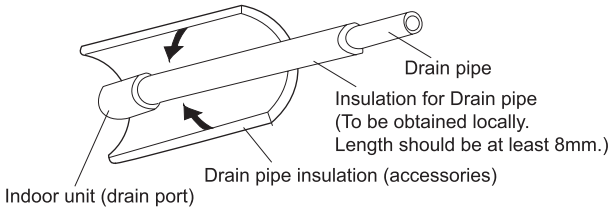
INSTALLING THE DRAIN HOSE

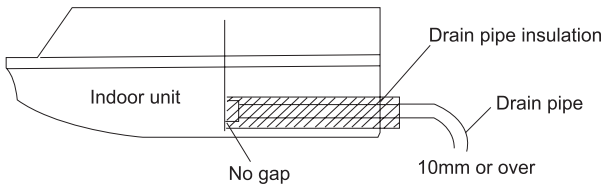
- Install the drain pipe with downward gradient (1/50 to 1/100) and so there are no rises or traps in the pipe.
- Use general hard polyvinyl chloride pipe (VP25) (outside diameter 38 mm)
- During installation of the drain pipe, be careful to avoid applying pressure to the drain point of the unit.
- When the pipe is long, install supporters.
- Do not perform air bleeding.
- Always heat insulate (8mm or over thick) the indoor side of the drain pipe.



Install insunlation for the drain pipe

Cut the included insulation material to an appropriate size and adhere it to the pipe.

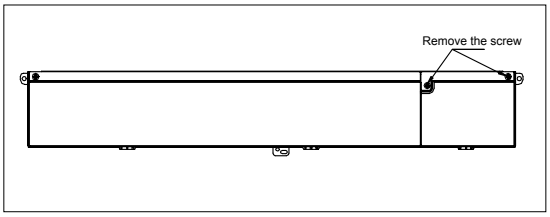




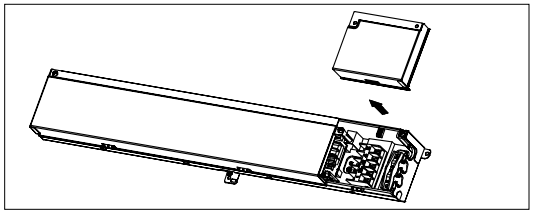
ELECTRICAL WIRING

A.Connect wiring to the terminals

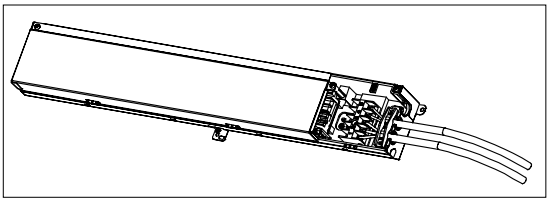
(1) Remove the screw



(2) Remove the cover



(3) Connect the wiring



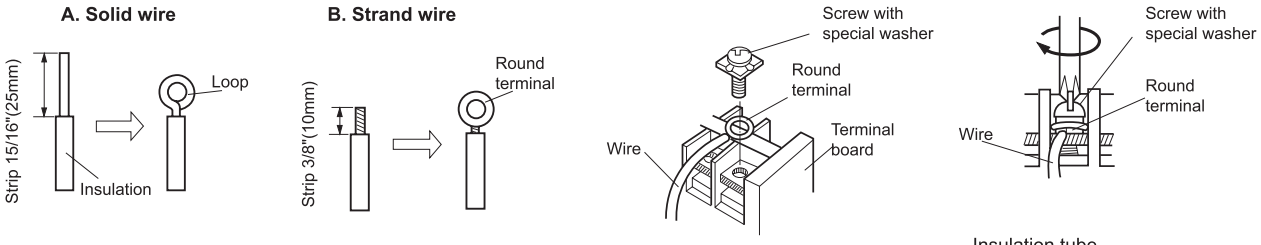
Installation Procedure

B.For solid core wiring (or F-cable)

(1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 15/16"(25mm) to expose the solid wire.
(2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
(3) Using pliers, bend the solid wire to form a loop suitable for the terminal screw.
(4) Shape the loop wire properly, place it on the terminal board and tighthen securely with the terminal screw using a screwdriver.

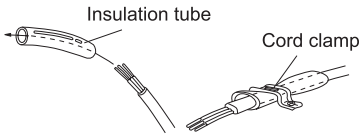
C.For strand wiring

(1) Cut the wire end with a wire cutter or wire-cutting pliers, then strip the insulation to about 3/8"(10mm) to expose the solid wire.
(2) Using a screwdriver, remove the terminal screw(s) on the terminal board.
(3) Using a round terminal fastener or pliers, securely clamp a round terminal to each stripped wire end.
(4) Position the round terminal wire, and replace and tighten the terminal screw using a screwdriver.



Fix connection cord and power cable at the cord clamp

After passing the connection cord and power cable through the insulation tube, fasten it with the cord clamp.
Use VW-1, 0.5 to 1.0 mm thick, PVC tube as the insulation tube.



Electrical requirement

Select wire sizes and circuit protection from table below. (This table shows 20m length wires with less than 2% voltage drop).

CAUTION

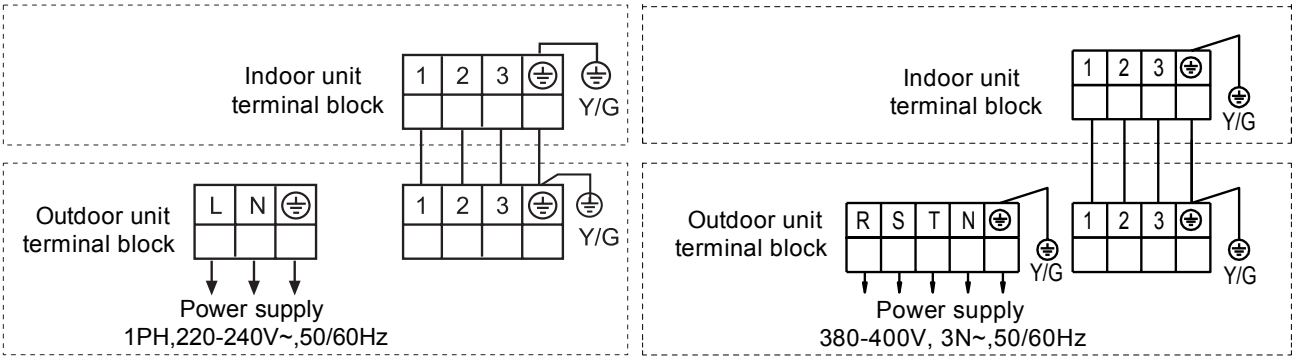
- Match the terminal block numbers and connection cord colors with those of the outdoor unit. Erroneous wiring may cause burning the electric parts.
- Connect the connection cords firmly to the terminal block. Imperfect installation may cause a fire.
- Always fasten the outside covering of the connection cord with the cord clamp. If the insulator is chafed, electric leakage may occur.
- Always connect the ground wire.
- The Unit has default temperature compensation setting, please cancel it when floor standing installation.

Connect indoor unit and outdoor unit

(1) Remove the cord clamp.
(2) Process the end of the connection cords to the dimensions shown in wiring diagram.
(3) Connect the end of the connection cord fully into the terminal block.
(4) Fasten the connection cord with a cord clamp.
(5) Fasten the end of the connection cord with the screw.

Installation Procedure

Wiring diagram



The specification of cable between indoor unit to outdoor unit is HO5RN-F4G 2.5mm²

WARNING

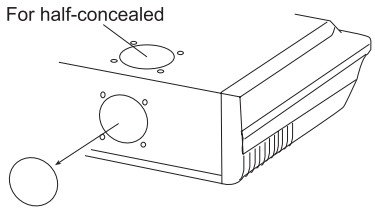
- The power cable and connecting cable are self-provided.
- Always use a special branch circuit and install a special receptacle to supply power to the room air conditioner.
- Use a circuit breaker and receptacle matched to the capacity of the room air conditioner.
- The circuit breaker is installed in the permanent wiring. Always use a circuit that can trip all the poles of the wiring and has an isolation distance of at least 3mm between the contacts of each pole.
- Perform wiring work in accordance with standards so that the room air conditioner can be operated safely and positively.
- Install a leakage circuit breaker in accordance with the related laws and regulations and electric company standards.

CAUTION

- The power source capacity must be the sum of the room air conditioner current and the current of other electrical appliances. When the current contracted capacity is insufficient, change the contracted capacity.
- When the voltage is low and the air conditioner is difficult to start, contact the power company the voltage raised.

FRESH AIR INTAKE

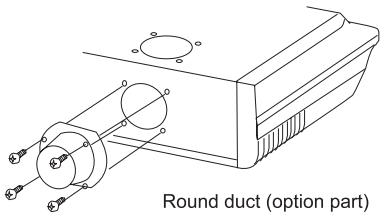
1. Open up the knockout hole for the fresh air intake. If using half-concealed installation, open up the top knockout hole instead.



CAUTION

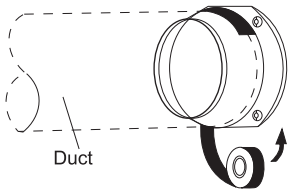
- When removing the cabinet (iron plate), be careful not to damage the indoor unit internal parts and surrounding area (outer case).
- When processing the cabinet (iron plate), be careful not to injury yourself with burrs,etc.

2. Fasten the round flange (optional) to the fresh air intake. If using half-concealed installation, attach to the top.



3. Connect the duct to the round flange.

4. Seal with a band and vinyl tape,etc. so that air does not leak from the connection.



Test Run

Check items

1. Indoor unit

- Is operation of each button on the remote control unit normal?
- Does each lamp light normally?
- Do not air flow direction louvers operate normally?
- Is the drain normal?

2. Outdoor unit

- Is there any abnormal noise and vibration during operation?
- Will noise, wind, or drain water from the unit disturb the neighbors?
- Is there any gas leakage?

Customer guidance

Explain the following to the customer in accordance with the operation manual:

(1) Starting and stopping method, operation switching, temperature adjustment, timer, air flow switching, and other remote control unit operations.
(2) Air filter removal and cleaning, and how to use air louvers.
(3) Give the operation and installation manuals to the customer.

4 . Indoor Units-Low ESP DUCT

4.1 Specification

Item / Model				AD25S2SS1FA-1	
Function			——	Cooling	Heating
Capacity			W	2500	3000
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.0	
Indoor unit	Power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*2	
		Speed (H-M-L)	r/min	850/750/650	
		Fan motor output/input power	W	11/15	
		Air-flows (H-M-L)	m³/h	530/460/390	
		External static pressure	pa	0/10/20/40	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	0.11	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	850x420x185	
		Package	mmxmmxmm	1045x540x270	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 27/31	
	control type(Remote/Wired)			Wired YR-E17A(O) Remote YR-HQS01(O)	
	Fresh air hole dimension		mm	None	
	Electricity heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB(A)	51	
		Sound pressure level	dB(A)	33/30/26	
	Weight (Net/Shipping)		kg/kg	16/21	
panel (optional)	Panel model (Color)			P1B-890IA/D	
	Dimension	External (L*W*H)	mmxmmxmm	890/190/100 (Outlet panel)/ 890/290.5/32.4 (Inlet panel)	
		Package (L*W*H)	mmxmmxmm	938/335/220	
	Weight (Net/Shipping)		kg/kg	4/5	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ9.52 (3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AD25S2SS1FA(H)	
Function			——	Cooling	Heating
Capacity			W	2500	3000
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.0	
Indoor unit	Power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*2	
		Speed (H-M-L)	r/min	850/750/650	
		Fan motor output/input power	W	11/15	
		Air-flows (H-M-L)	m³/h	530/460/390	
		External static pressure	pa	0/10/20/40	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	0.11	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	850x420x185	
		Package	mmxmmxmm	1045x540x270	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 27/31	
	control type(Remote/Wired)			Wired YR-E17A(O) Remote YR-HQS01(O)	
	Fresh air hole dimension		mm	None	
	Electricity heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB(A)	51	
		Sound pressure level	dB(A)	33/30/26	
	Weight (Net/Shipping)		kg/kg	16/21	
panel (optional)	Panel model (Color)			P1B-890IA/D	
	Dimension	External (L*W*H)	mmxmmxmm	890/190/100 (Outlet panel)/ 890/290.5/32.4 (Inlet panel)	
		Package (L*W*H)	mmxmmxmm	938/335/220	
	Weight (Net/Shipping)		kg/kg	4/5	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ9.52 (3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AD35S2SS1FA-1	
Function			——	Cooling	Heating
Capacity			W	3500	4000
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.5	
Indoor unit	Power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*2	
		Speed (H-M-L)	r/min	950/850/750	
		Fan motor output/input power	W	16/21	
		Air-flows (H-M-L)	m³/h	600/480/420	
		External static pressure	pa	0/10/20/40	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	0.11	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	850x420x185	
		Package	mmxmmxmm	1045x540x270	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 27/31	
	control type(Remote/Wired)			Wired YR-E17A(O) or Remote YR-HQS01(O)	
	Fresh air hole dimension		mm	None	
	Electricity heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB(A)	53	
		Sound pressure level	dB(A)	33/28/25	
	Weight (Net/Shipping)		kg/kg	16/21	
Panel (optional)	Panel model (Color)			P1B-890IA/D	
	Dimension	External(L*W*H)	mmxmmxmm	890/190/100 (Outlet panel)/ 890/290.5/32.4 (Inlet panel)	
		Package(L*W*H)	mmxmmxmm	938/335/220	
	Weight (Net/Shipping)		kg/kg	4/5	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ9.52 (3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AD35S2SS1FA(H)	
Function			——	Cooling	Heating
Capacity			W	3500	4000
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.5	
Indoor unit	Power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*2	
		Speed (H-M-L)	r/min	950/850/750	
		Fan motor output/input power	W	16/21	
		Air-flows (H-M-L)	m³/h	600/480/420	
		External static pressure	pa	0/10/20/40	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	0.11	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	850x420x185	
		Package	mmxmmxmm	1045x540x270	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 27/31	
	control type(Remote/Wired)			Wired YR-E17A(O) or Remote YR-HQS01(O)	
	Fresh air hole dimension		mm	None	
	Electricity heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB(A)	53	
		Sound pressure level	dB(A)	33/28/25	
	Weight (Net/Shipping)		kg/kg	16/21	
Panel (optional)	Panel model (Color)			P1B-890IA/D	
	Dimension	External(L*W*H)	mmxmmxmm	890/190/100 (Outlet panel)/ 890/290.5/32.4 (Inlet panel)	
		Package(L*W*H)	mmxmmxmm	938/335/220	
	Weight (Net/Shipping)		kg/kg	4/5	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ9.52 (3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AD50S2SS1FA-1	
Function			——	Cooling	Heating
Capacity			W	5000	5500
Sensible Heat Ratio			W	0.71	/
Dehumidifying Capacity			10-³xm³/h	2.2	
Indoor Unit	Power Supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*3	
		Speed (H-M-L)	r/min	900/800/700/600	
		Fan Motor Output/Input Power	W	40/55	
		Air-Flows (H-M-L)	m³/h	900/750/600/450	
		External Static Pressure	pa	0/10/20/40	
	Heat Exchanger	Type / Diameter	mm	Inner Grooved Pipe/φ7.0	
		Row	——	2	
		Total Area	m²	0.21	
	Dimension (LxWxH)	External	mmxmmxmm	1170x420x185	
		Package	mmxmmxmm	1365x540x270	
	Drainage Pipe (Material,I.D/O.D)		mm	PVC 27/31	
	Control Type (Remote/Wired)			Wired YR-E17(O) Remote YR-HQS01(O)	
	Fresh Air Hole Dimension		mm	None	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound Power Level	dB(A)	54	
		Sound Pressure Level	dB(A)	36/34/32/27	
	Weight (Net/Shipping)		kg/kg	22/28	
Panel (Optional)	Panel Model (Color)			P1B-890IA/D	
	Dimension	External (L-W-H)	mmxmmxmm	890/190/100 (Outlet Panel)/ 890/290.5/32.4 (Inlet Panel)	
		Package (L-W-H)	mmxmmxmm	938/335/220	
	Weight (Net/Shipping)		kg/kg	4/5	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ12.7 (1/2)	
	Connecting Method			Flared	

Norminal condition: indoor temperature (Cooling): 27°C DB/19°C WB, indoor temperature (Heating): 20°C DB
Outdoor temperature (Cooling): 35°C DB/24°C WB, outdoor temperature (Heating): 7°C DB/6°C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AD50S2SS1FA(H)	
Function			——	Cooling	Heating
Capacity			W	5000	5500
Sensible Heat Ratio			W	0.71	/
Dehumidifying Capacity			10-³xm³/h	2.2	
Indoor Unit	Power Supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*3	
		Speed (H-M-L)	r/min	900/800/700/600	
		Fan Motor Output/Input Power	W	40/55	
		Air-Flows (H-M-L)	m³/h	900/750/600/450	
		External Static Pressure	pa	0/10/20/40	
	Heat Exchanger	Type / Diameter	mm	Inner Grooved Pipe/φ7.0	
		Row	——	2	
		Total Area	m²	0.21	
	Dimension (LxWxH)	External	mmxmmxmm	1170x420x185	
		Package	mmxmmxmm	1365x540x270	
	Drainage Pipe (Material,I.D/O.D)		mm	PVC 27/31	
	Control Type (Remote/Wired)			Wired YR-E17(O) Remote YR-HQS01(O)	
	Fresh Air Hole Dimension		mm	None	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound Power Level	dB(A)	54	
		Sound Pressure Level	dB(A)	36/34/32/27	
	Weight (Net/Shipping)		kg/kg	22/28	
Panel (Optional)	Panel Model (Color)			P1B-890IA/D	
	Dimension	External (L-W-H)	mmxmmxmm	890/190/100 (Outlet Panel)/ 890/290.5/32.4 (Inlet Panel)	
		Package (L-W-H)	mmxmmxmm	938/335/220	
	Weight (Net/Shipping)		kg/kg	4/5	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ12.7 (1/2)	
	Connecting Method			Flared	

Norminal condition: indoor temperature (Cooling): 27°C DB/19°C WB, indoor temperature (Heating): 20°C DB
Outdoor temperature (Cooling): 35°C DB/24°C WB, outdoor temperature (Heating): 7°C DB/6°C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AD71S2SS1FA-1	
Function			——	Cooling	Heating
Capacity			W	7100	7500
Sensible Heat Ratio			W	0.71	/
Dehumidifying Capacity			10-³xm³/h	1.0	
Indoor Unit	Power Supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*3	
		Speed (H-M-L)	r/min	1250/1100/1000/900	
		Fan Motor Output/Input Power	W	48/55	
		Air-Flows (H-M-L)	m³/h	1000/850/750/650	
		External Static Pressure	pa	0/10/20/40	
	Heat Exchanger	Type / Diameter	mm	Inner Grooved Pipe/φ7.0	
		Row	——	3	
		Total Area	m²	0.11	
		Temp.Scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	1170x420x185	
		Package	mmxmmxmm	1365x540x270	
	Drainage Pipe (Material,I.D/O.D)		mm	PVC 25/29	
	Control Type (Remote/Wired)			Wired YR-E17A(O) or Remote YR-HQS01(O)	
	Fresh Air Hole Dimension		mm	None	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound Power Level	dB(A)	57	
		Sound Pressure Level	dB(A)	38/35/33/30	
	Weight (Net/Shipping)		kg/kg	24/30	
Panel (Optional)	Panel Model (Color)			P1B-1210IA/D	
	Dimension	External (L-W-H)	mmxmmxmm	1210/190/100 (Outlet Panel)/ 1210/290.5/32.4 (Inlet Panel)	
		Package (L-W-H)	mmxmmxmm	1258/335/220	
	Weight (Net/Shipping)		kg/kg	5/6	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Connecting Method			Flared	

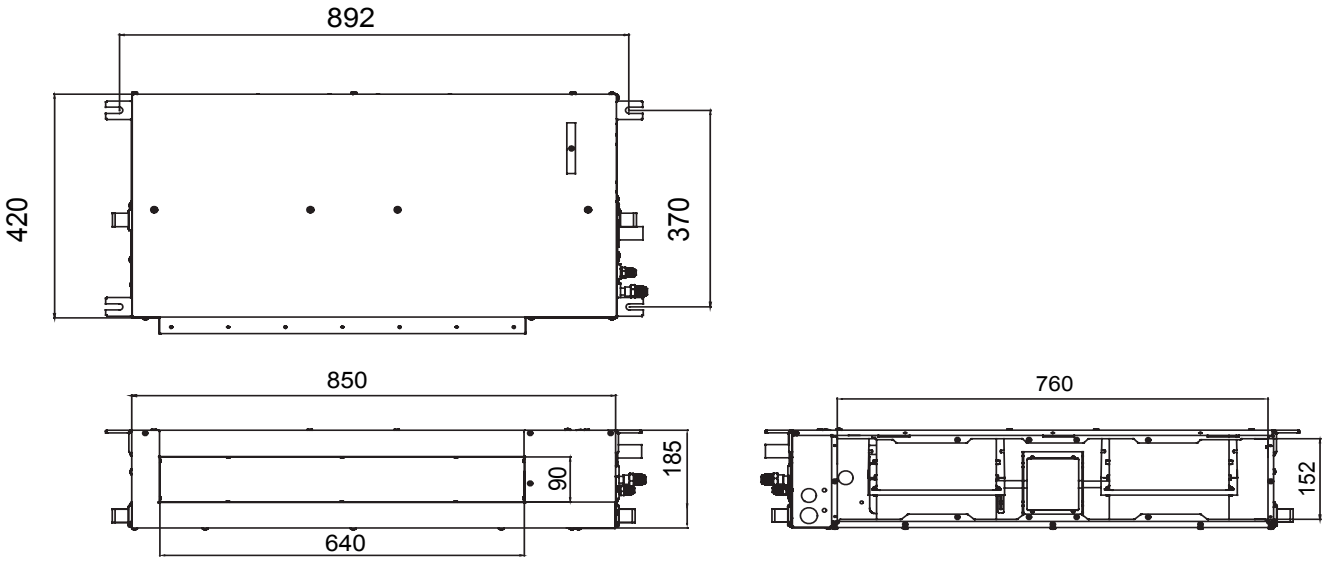
Norminal condition: indoor temperature (Cooling): 27°C DB/19°C WB, indoor temperature (Heating): 20°C DB
Outdoor temperature (Cooling): 35°C DB/24°C WB, outdoor temperature (Heating): 7°C DB/6°C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AD71S2SS1FA(H)	
Function			——	Cooling	Heating
Capacity			W	7100	7500
Sensible Heat Ratio			W	0.71	/
Dehumidifying Capacity			10-³xm³/h	1.0	
Indoor Unit	Power Supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*3	
		Speed (H-M-L)	r/min	1250/1100/1000/900	
		Fan Motor Output/Input Power	W	48/55	
		Air-Flows (H-M-L)	m³/h	1000/850/750/650	
		External Static Pressure	pa	0/10/20/40	
	Heat Exchanger	Type / Diameter	mm	Inner Grooved Pipe/φ7.0	
		Row	——	3	
		Total Area	m²	0.11	
		Temp.Scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	1170x420x185	
		Package	mmxmmxmm	1365x540x270	
	Drainage Pipe (Material,I.D/O.D)		mm	PVC 25/29	
	Control Type (Remote/Wired)			Wired YR-E17(O) or Remote YR-HQS01(O)	
	Fresh Air Hole Dimension		mm	None	
	Electricity Heater		kW	None	
	Noise level (H-M-L)	Sound Power Level	dB(A)	57	
		Sound Pressure Level	dB(A)	38/35/33/30	
	Weight (Net/Shipping)		kg/kg	24/30	
Panel (Optional)	Panel Model (Color)			P1B-1210IA/D	
	Dimension	External (L-W-H)	mmxmmxmm	1210/190/100 (Outlet Panel)/ 1210/290.5/32.4 (Inlet Panel)	
		Package (L-W-H)	mmxmmxmm	1258/335/220	
	Weight (Net/Shipping)		kg/kg	5/6	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Connecting Method			Flared	

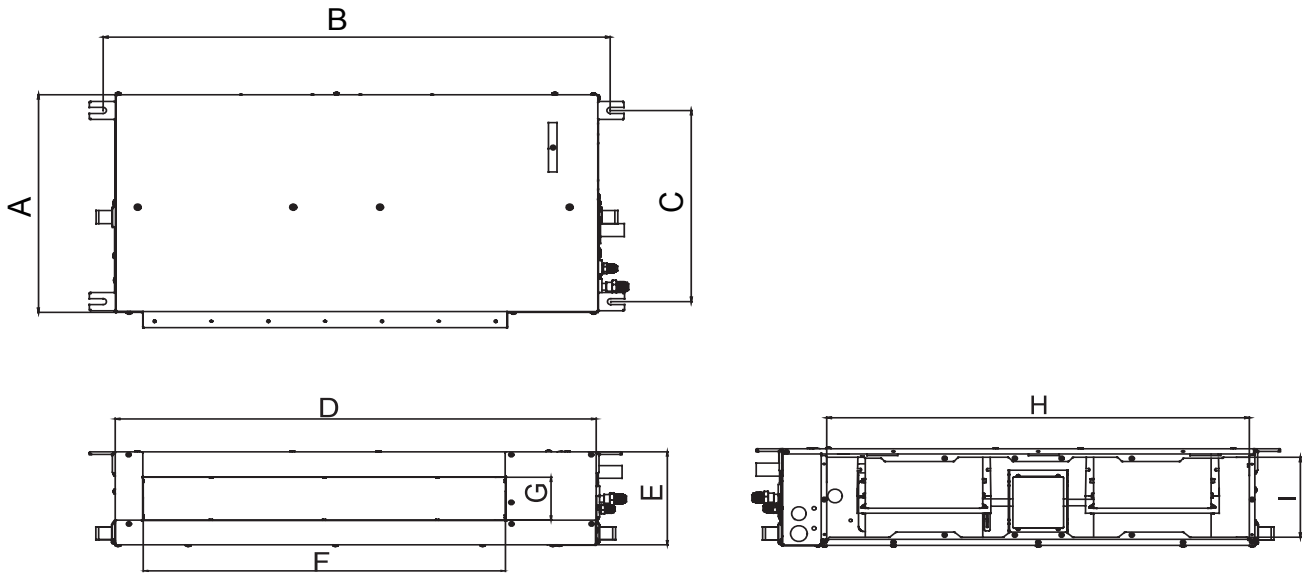
Norminal condition: indoor temperature (Cooling): 27°C DB/19°C WB, indoor temperature (Heating): 20°C DB
Outdoor temperature (Cooling): 35°C DB/24°C WB, outdoor temperature (Heating): 7°C DB/6°C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

4.2 Dimension

AD25S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA-1 AD35S2SS1FA(H)



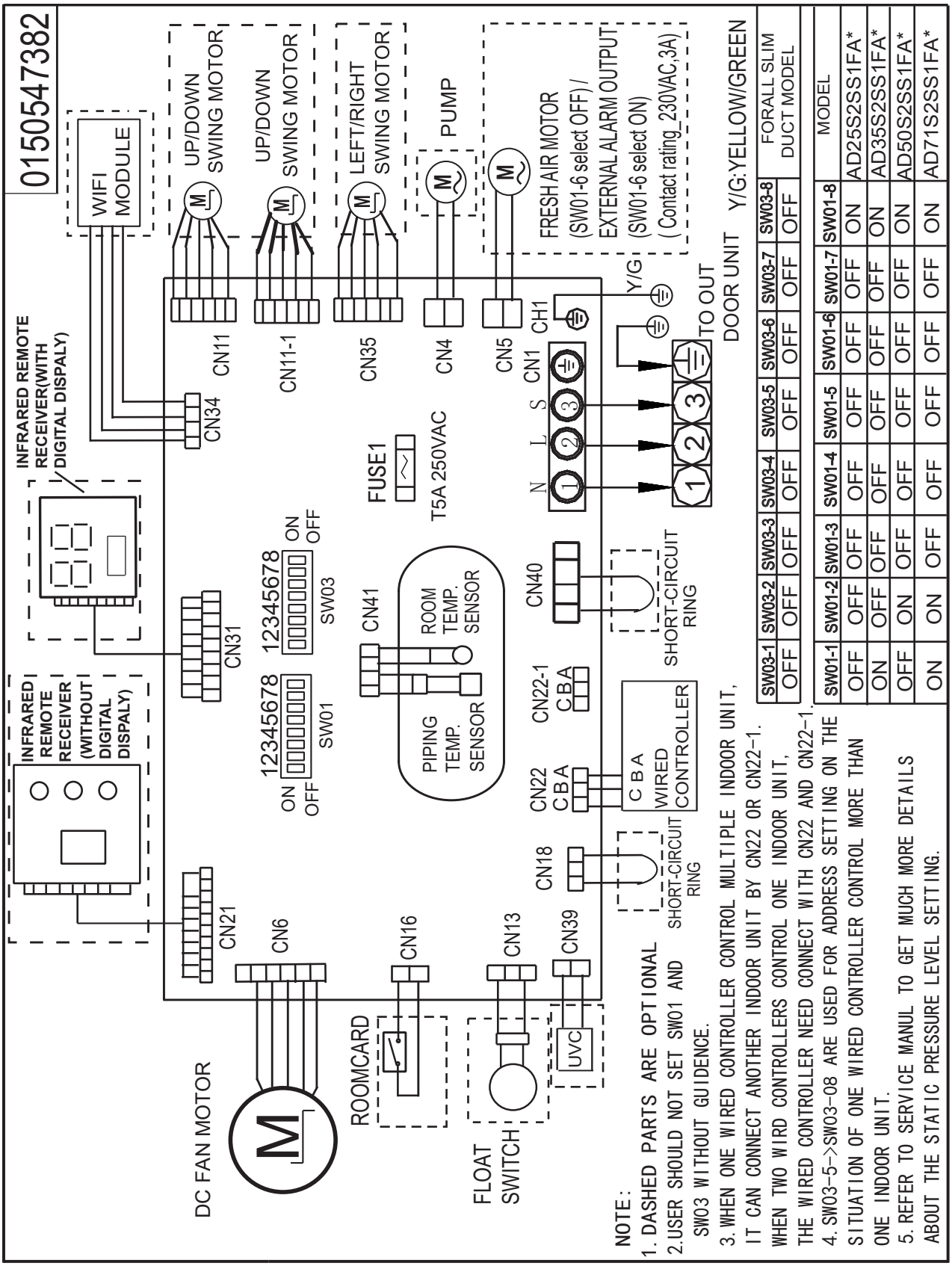
AD50S2SS1FA-1 AD71S2SS1FA(H) AD50S2SS1FA-1 AD71S2SS1FA(H)



Unit Model	A	B	C	D	E	F	G	H	I
AD50S2SS1FA-1 AD71S2SS1FA(H) AD50S2SS1FA-1 AD71S2SS1FA(H)	420	1212	370	1170	185	960	90	1080	152

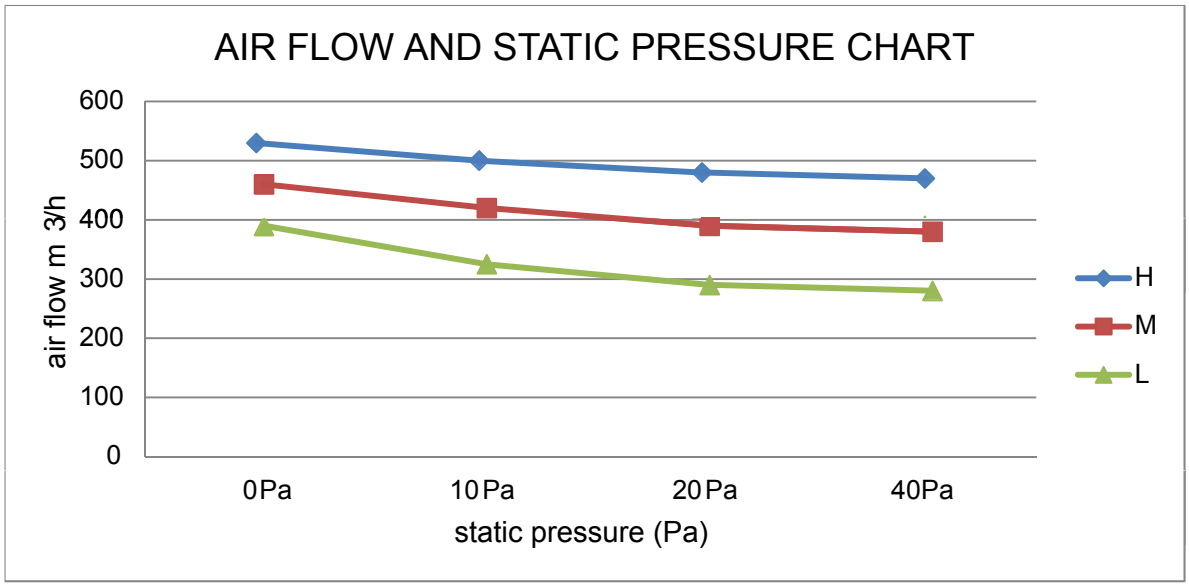
4.3 Wiring Diagram

AD25S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA-1 AD35S2SS1FA(H)
AD50S2SS1FA-1 AD71S2SS1FA(H) AD50S2SS1FA-1 AD71S2SS1FA(H)

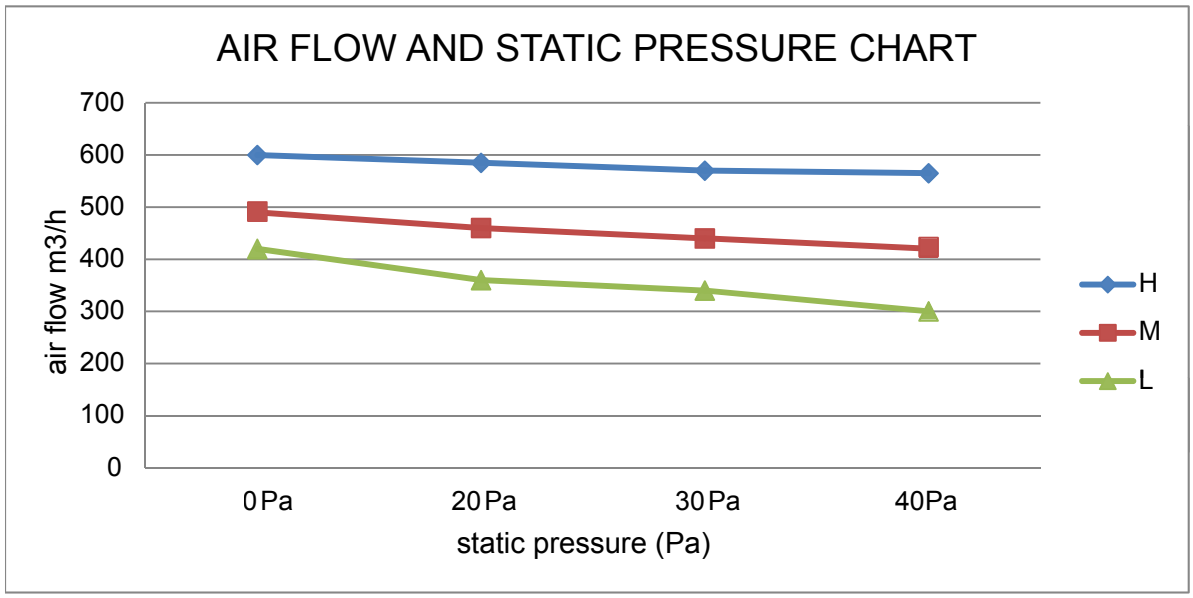


4.4 Airflow and Static Pressure Chart

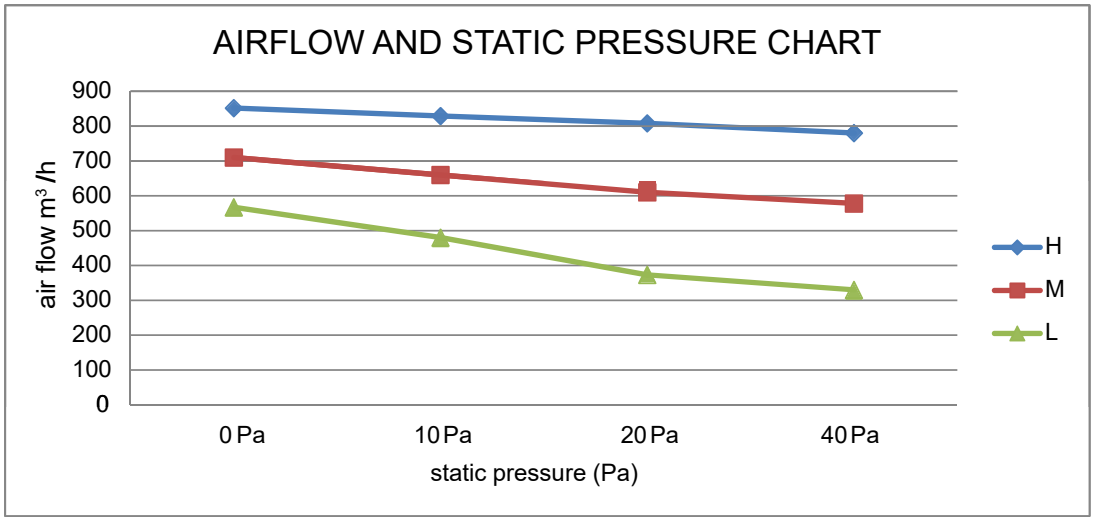
AD25S2SS1FA-1 AD25S2SS1FA(H)



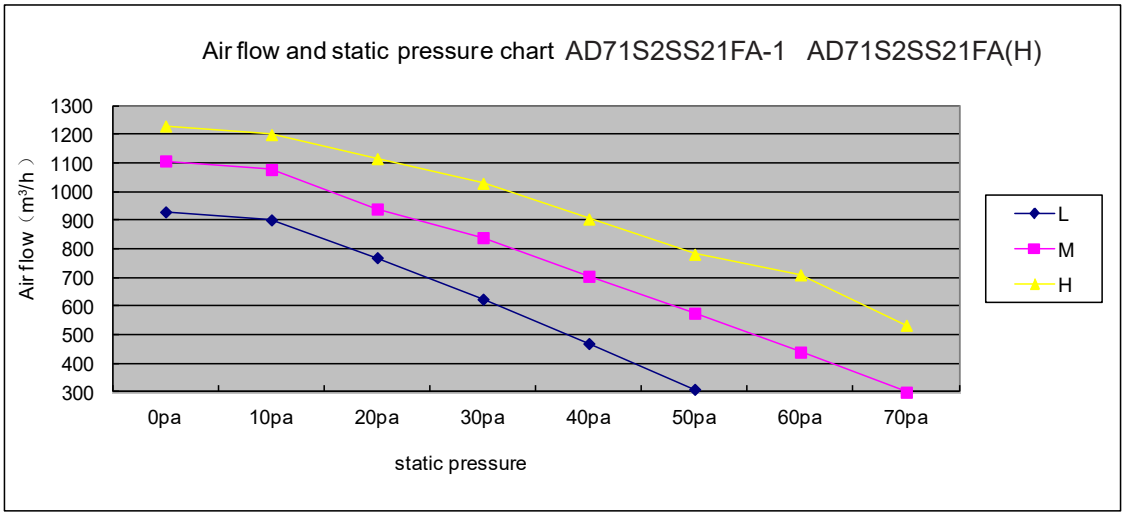
AD35S2SS1FA-1 AD35S2SS1FA(H)



AD50S2SS21FA-1 AD50S2SS21FA(H)



AD71S2SS21FA-1 AD71S2SS21FA(H)



4.5 Installation

AD25S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA-1 AD35S2SS1FA(H) AD50S2SS1FA-1 AD50S2SS1FA(H) AD71S2SS1FA-1 AD71S2SS1FA(H)

The Machine Is Adaptive In Following Situation

1. Applicable ambient temperature range:

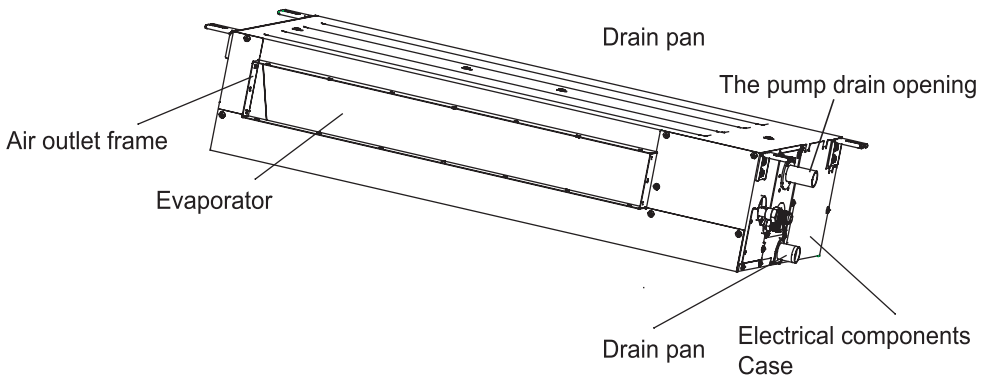
Cooling	Heating	Max. DB/WB	32/23 °C
		Min. DB/WB	18/14 °C
	Outdoor Temperature	Max. DB/WB	46/24 °C
		Min. DB/WB	18 °C
Heating	Indoor Temperature	Max. DB/WB	27 °C
		Min. DB/WB	15 °C
	Outdoor Temperature	Max. DB/WB	24/18 °C
		Min. DB/WB	15 °C

2. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person.
3. If the fuse on PC board is broken please change it with the type of T3.15A /250VAC.
4. The wiring method should be in line with the local wiring standard.
5. The breaker of the air conditioner should be all pole switch, and the distance between its two contacts should be no less than 3mm. Such means for disconnection must be incorporation in the fixed wiring.
6. The installation height of the indoor unit is recommended from 2.5m to 2.7m.
7. The distance between its two terminal blocks of indoor unit and outdoor unit should not be over 5m. If exceeded, the diameter of the wire should be enlarged according to the local wiring standard.
8. The waste battery shall be disposed properly.

Attention: Cut off the power supply to adjust the SW14, and SW15, or else the operation is invalid.

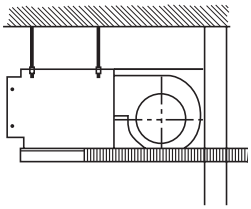
Parts and Functions

AD25S2SS1FA-1
AD25S2SS1FA(H)
AD35S2SS1FA-1
AD35S2SS1FA(H)
AD50S2SS1FA-1
AD50S2SS1FA(H)
AD71S2SS1FA-1
AD71S2SS1FA(H)



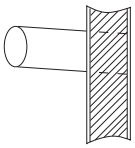
Selecting the Mounting Position to Install the Indoor Units

• Select suitable places where the outlet air can be sent to the entire room, and convenient to lay out the connection pipe, connection wire and the drainage pipe to outdoor.
• The ceiling structure must be strong enough to support the unit weight.
• The connecting pipe, drain pipe and connection wire shall be able to go though the building wall to connect between the indoor and outdoor units.
• The connecting pipe between the indoor and outdoor units as well as the drain pipe shall be as short as possible.
• If it is necessary to adjust the filling amount of the refrigerant, please refer to the installation manual attached with the outdoor unit.
• The connecting flange should be provided by the user himself.
• The indoor unit has two water outlets one of which is obstructed at the factory (with a rubber cap).
• Only the outlet not obstructed (liquid inlet and outlet side) will be generally used during installation. If applicable, both the outlets should be used together.
• An access port must be provided during installation of indoor unit for maintenance.



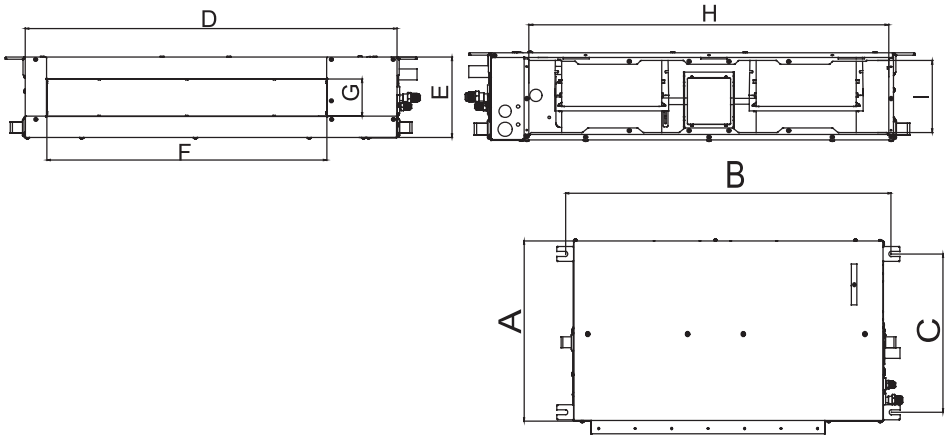
After Selecting The Unit Installation Location, Proceed The Following Steps:

1. Drill a hole in the wall and insert the connecting pipe and wire through a PVC wall-through tube purchased locally. The wall hole shall be with a outward down slope of at least 1/100.
2. Before drilling check that there is no pipe or reinforcing bar just behind the drilling position. drilling shall avoid at positions with electric wire or pipe.
3. Mount the unit on a strong and horizontal building roof. f the base is not firm, it will cause noise, vibration or leakage.
4. Support the unit firmly.
5. Change the form of the connection pipe, connection wire and drain pipe so that they can go through the wall hole easily.



Installation Dimension

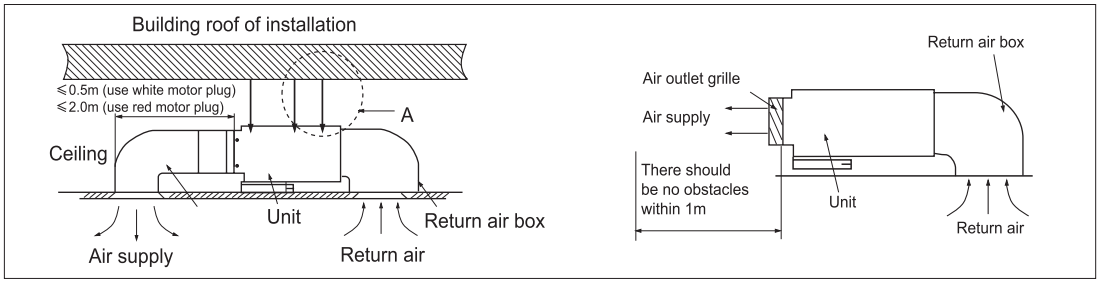
AD25S2SS1FA-1
AD25S2SS1FA(H)
AD35S2SS1FA-1
AD35S2SS1FA(H)
AD50S2SS1FA-1
AD50S2SS1FA(H)
AD71S2SS1FA-1
AD71S2SS1FA(H)



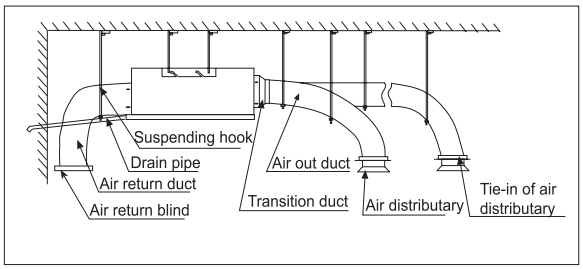
Indoor Unit Dimensions (Unit:mm)

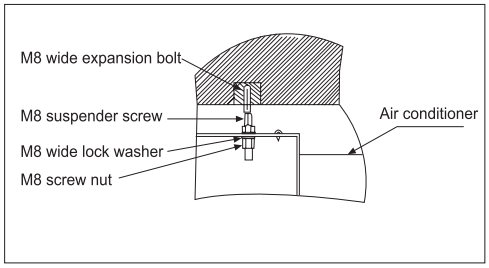
Unit Model	A	B	C	D	E	F	G	H	I
AD25S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA-1 AD35S2SS1FA(H)	420	892	370	850	185	640	90	760	152
AD50S2SS1FA-1 AD50S2SS1FA(H) AD71S2SS1FA-1 AD71S2SS1FA(H)	420	1212	370	1170	185	960	90	1080	152

• Each of the air sending duct and air return duct shall be fixed on the prefabricated panel of the floor by the iron bracket. The recommended distance between the edge of the air return duct and the wall is over 150mm.
• The gradient of the condensate water pipe shall keep over 1%.
• The condensate water pipe shall be thermal insulated.
• When installing the ceiling Concealed type indoor unit, the air return duct must be designed and installed as figure shown



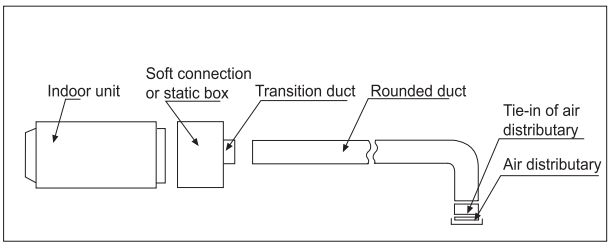
The sketch map of long duct





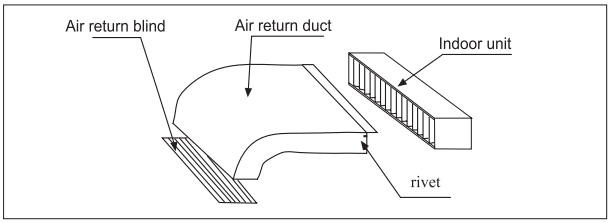
1. Installation of Air sending duct

• This unit uses rounded duct, the diameter of the duct is 180mm.
• The rounded duct needs to add a transition duct to connect with the air-sending duct of indoor unit, then connect with respective separator. As Figure shown, all the fan speed of any of the separator's air outlet shall be adjusted approximately the same to meet the requirement for the room air conditioner.



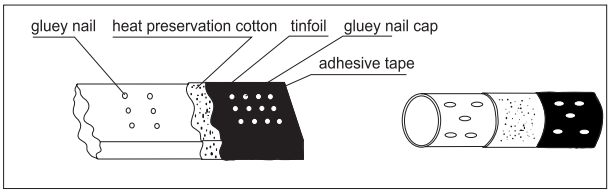
2. Installation of Air Return Duct

• Use rivet to connect the air return duct on the air return inlet of the indoor unit, then connect the other end with the air return blind as figure shown.



3.Thermal Insulation of Duct

• Air-sending duct and air return duct shall be thermally insulated. First stick the gluey nail on the duct, then attach the heat preservation cotton with a layer of tinfoil paper and use the gluey nail cap to fix. Finally use the tinfoil adhesive tape to seal the connected part. As figure shown.

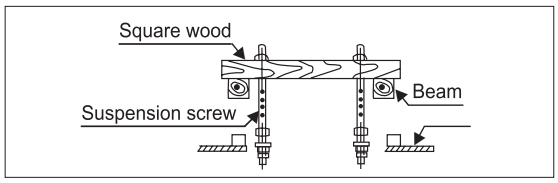


Installing the Suspension Screw

Use M8 or M10 suspension screws (4, prepared in the field) (When the suspension screw height exceeds 0.9m, M10 size is theonly choice). These screws shall be installed as follows with space adapting to air conditioner overall dimensions according tothe original building structures.

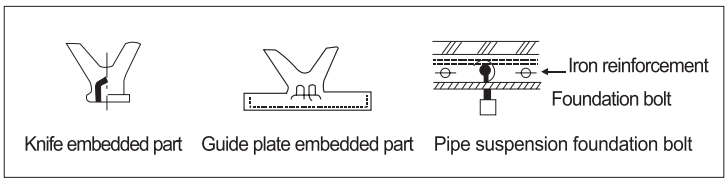
Wooden Structure

A square wood shall be supported by the beams and then set the suspension screws.



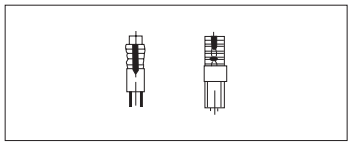
New Concrete Lab

To set with embedded parts,foundation bolts etc.



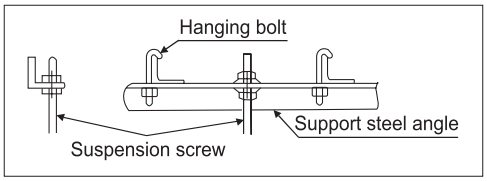
Orig Inal Concrete Slad

Use hole hinge, hole plunger or hole bolt



Steel Reinforcement Structure

Use steel angle or new support steel angle directly



Hanging of the indoor unit

- Fasten the nut on the suspens on screw and then hang the suspension screw in the T slot of the suspension part of the unit.
- Aided with a level meter, adjust level of the unit within 5mm

⚠ CAUTION

- In installation,if there is refrigerant gas leakage, pleasetake ventilation measures immediately.The refrigerant gas will generate poisonous gas upon contacting fire.
- After installation, please verify that there is no refrigerant leakage. The leaked refrigerant gas will produce poisonous gas when meeting fire source such as heater and furnace etc.

Model	Gas Side	Liquid Side
AD25S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA-1 AD35S2SS1FA(H)	φ9.52	φ6.35
AD50S2SS1FA-1 AD50S2SS1FA(H)	φ12.7	φ6.35
AD71S2SS1FA-1 AD71S2SS1FA(H)	φ15.88	φ9.52

Pipe Material

Phosphorus deoxidized copper seamless pipe (TP2M) for air conditioner.

Allowable Pipe Length and Drop

These parameters differ according to the outdoor unit. See the instruction manual attached with the outdoor unit for details.

Supplementary Refrigerant

The refrigerant supplementation shall be as specified in the installation instructions attached with the outdoor unit. The adding procedure shall be aided with a measuring meter for a specified amount of supplemented refrigerant.

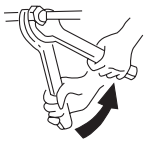
Note:

Over filling or underilling of refrigerant will cause compressor fault. The amount of the added refrigerant shall be as specified in the instructions.

Connecting	Installing Torque (N-m)
φ6.35	11.8 (1.2 kgf-m)
φ9.52	24.5 (2.5 kgf-m)
φ12.7	49.0 (5.0 kgf-m)
φ15.88	78.4 (8.0 kgf-m)

Connection of Refrigerant Pipe

Conduct flared connection work to connect all refrigerant pipes.



Double-spanner operation

- The connection of indoor unit pipes must use double spanners.
- The installing torque shall be as given in the following table.
- Wall thick ness of connection pipe≥0.8mm

Creating Vacuum

With a vacuum pump, create vacuum from the stop valve of the outdoor unit. Emptying with refrigerant sealed in the outdoor unit is absolutely forbidden.

Open All Valves

Open all the valves on the outdoor unit.

Gas Leakage Detection

Check with a leakage detector or soap water if there is gas leakage at the pipe connections and bonnets.

Insulation Treatment

Conduct insulation treatment on both the gas side and liquid side of pipes respectively.
During cooling operation, both the liquid and gas sides are cold and thus shall be insulated so as to avoid dew generation.

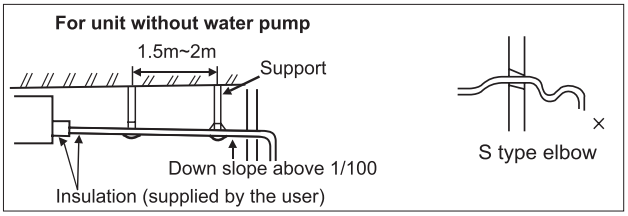
- The insulating material at gas side shall be resistant to a temperature above 120℃
- The indoor unit pipe connection part shall be insulated.

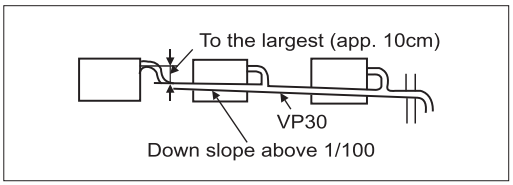
⚠ CAUTION

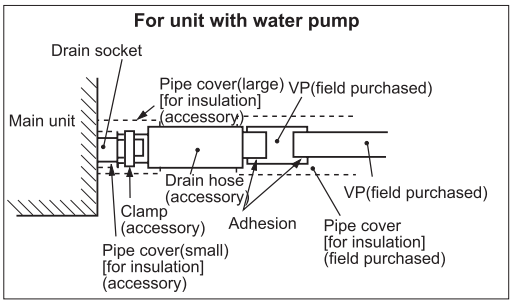
In order to drain water normally, the drain pipe shall be processed as specified in the installation manual and shall be thermal insulated to avoid dew generation. Improper hose connection may cause indoor water leakage.

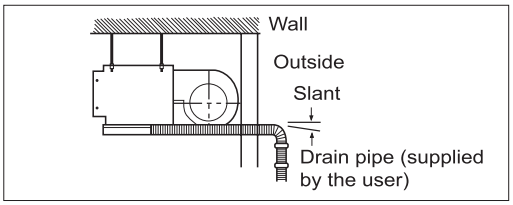
Requirements

- The indoor drain pipe shall be thermal insulated.
- The connection part between the drain pipe and the indoor unit shall be insulated so as to prevent dew generation.
- The drain pipe shall be slant downwards (greater than 1/100). The middle part shall not be of stype elbow, otherwise abnormal sound will be produced.
- The horizontal length of the drain pipe shall be less than 20m. In case of long pipe, supports shall be provided every 1.5-2m to prevent wavy form.
- Central piping shall be laid out according to the right figure.
- Take care not to apply external force onto the drain pipe connection part.
- For unit with water pump drain pipeuse hard PVC general purpose pipe VP which can be purchased locally. When connecting, insert a PVC pipe end securely into the drain socket before tightening securely using the attached drain hose and clamp. Adhesive must not be used for connection of the drain socket and drain hose (accessory).









Pipe and Insulation Material

Pipe	Rigid PVC Pipe VP20 mm (Internal Diameter)
Insulation	Foamed PE with Thickness Above 7 mm

Hose

Drain pipe size: (3/4) PVC pipe

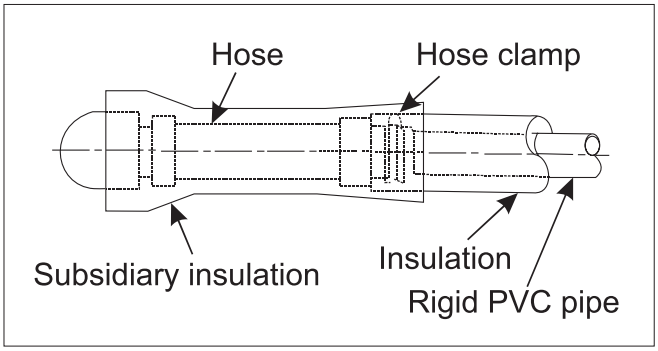
The hose is used for adjusting the off-center and angle of the rigid PVC pipe.

• Directly stretch the hose to install without making any deformation.

• The soft end of the hose must be fastened with a hose clamp.

• Please apply the hose on horizontal part Insulation treatment.

• Wrap the hose and its clamp up to the indoor unit without any clearance with insulating material, as shown in the figure.



Drain Confirmation

During trial run, check that there is no leakage at the pipe connection part during water draining even in winter.

⚠WARNING
Danger of Bodily Injury or Death
Turn off electric power at circuit breaker or power source before making any electric connections. Ground connections must be completed before making line voltage connections.

Precautions for Electrical Wiring

• Electrical wiring work should be conducted only by authorized personnel.

• Do not connect more than three wires to the terminal block. Always use round type crimped terminal lugs with insulated grip on the ends of the wires.

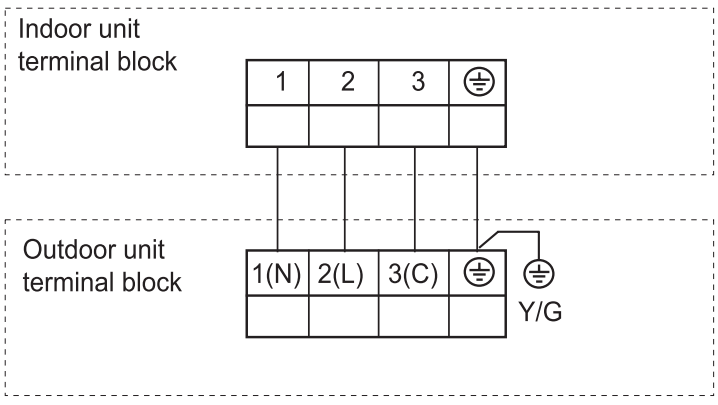
• Use copper conductor only.

Wiring Connection

Make wiring to supply power to the outdoor unit, so that the power for the indoor unit is supplied by terminals.

The specification of power cable is HO5RN-F3G 4.0mm^2.

The specification of cable between indoor unit to outdoor unit is HO5RN-F4G 2.5mm^2.



- The installation of pipe-work shall be kept to a minimum.
- Pipe-work shall be protected from physical damage and shall not be installed in an unventilated space, if that space is smaller than Amin ($2m^2$).
- Compliance with national gas regulations shall be observed.
- Mechanical connections shall be accessible for maintenance purposes.
- The minimum floor area of the room: $2m^2$.
- The maximum refrigerant charge amount: 1.7 kg.
- Information for handling, installation, cleaning, servicing and disposal of refrigerant.
- WARNING: Keep any required ventilation openings clear of obstruction.
- Notice: Servicing shall be performed only as recommended by the manufacturer.

Unventilated Areas

- WARNING: The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified.
- WARNING: The appliance shall be stored in a room without continuously operating open flames (e.g.an operating gas appliance) and ignition sources (e.g.an operating electric heater).

Qualification of Workers

- Specific information about the required qualification of the working personnel for maintenance, service and repair operations.
- WARNING: Every working procedure that affects safety means shall only be carried out by competent persons Examples for such working procedures are:
- Breaking into the refrigerating circuit.
- Opening of sealed components
- Opening of ventilated enclosures.

Information on Servicing

- Prior to beginning work on systems, safety checks are necessary to ensure that the risk of ignition is minimized.
- Work shall be undertaken under a controlled procedure so as to minimized the risk of flammable gas or vapor being present while the work is being performed.
- Work in confined spaces shall be avoided. The area around the workspace shall be sectioned off. Ensure that the conditions within the area have been made safe by control of flammable material.

Checking for Presence of Refrigerant

- The area shall be checked with an appropriate refrigerant detector prior to and during work. The leak detection equipment should be suitable for use with all applicable refrigerants, i.e.non-sparking, adequately sealed or intrinsically safe.

Presence of Fire Extinguisher

- If any hot work is to be conducted, appropriate fire extinguishing equipment shall be available to hand. Have a dry powder or CO^2 fire extinguisher adjacent to the charging area.

No Ignition Sources

- All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal. Prior to work taking place, the area around the equipment is to be surveyed to make sure that there are no flammable hazards or ignition risks. “No Smoking” signs shall be displayed.

Ventilated Area

- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperseany released refrigerant and preferably expel it externally into the atmosphere.

Checks to the Refrigeration Equipment

- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times the manufacturer's maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance.

The Following Checks Shall be Applied to Installations

- The charge size is in accordance with the room size within which the refrigerant containing parts are installed;
- The ventilation machinery and outlets are operating adequately and are not obstructed;
- If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant;
- Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected;
- Refrigeration pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

Checks to Electrical Devices

- Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment so all parties are advised.

- Initial safety checks shall include:

• That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
• That no live electrical components and wiring are exposed while charging, recovering or purging the system;
• That there is continuity of earth bonding.

Repairs to Sealed Components

- During repairs to sealed components, all electrical supplies shall be disconnected prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected, including damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.
- Ensure that the apparatus is mounted securely.
- Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.

Repair to Intrinsically Safe Components

- Do not apply any permanent inductive or capacitance loads to the circuit without ensuring that this will not exceed the permissible voltage and current permitted for the equipment in use.
- Intrinsically safe components are the only types that can be worked on while live in the presence of a flammable atmosphere.
- Replace components only with parts specified by the manufacturer. Other parts may result in the ignition of refrigerant in the atmosphere from a leak.

Cabling

- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.

Detection of Flammable Refrigerants Removal and Evacuation

- The refrigerant charge shall be recovered into the correct recovery cylinders and the system shall be “flushed” with OFN to render the unit safe. This process may need to be repeated several times.
- Compressed air or oxygen shall not be used for purging refrigerant systems.
- Flushing shall be achieved by breaking the vacuum in the system with OFN and continuing to fill until the working pressure is achieved, then venting to atmosphere, and finally pulling down to a vacuum. This process shall be repeated until no refrigerant is within the system. When the final OFN charge is used, the system shall be vented down to atmospheric pressure to enable work to take place.
- The vacuum pump is not close to any ignition sources and that ventilation is available.

Charging Procedures

- Ensure that contamination of different refrigerants does not occur when using charging equipment. Hoses or lines shall be as short as possible to minimise the amount of refrigerant contained in them.
- Cylinders shall be kept upright.
- Ensure that the refrigeration system is earthed prior to charging the system with refrigerant.
- Label the system when charging is complete (if not already).
- Extreme care shall be taken not to overfill the refrigeration system.
- Prior to recharging the system, it shall be pressure-tested with the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

Decommissioning

- Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail.
- Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of reclaimed refrigerant.
- Electrical power must be available before the task is commenced.

- Become familiar with the equipment and its operation.
- Isolate system electrically.
- Before attempting the procedure, ensure that:
• Mechanical handling equipment is available, if required, for handling refrigerant cylinders;
• All personal protective equipment is available and being used correctly;
• The recovery process is supervised at all times by a competent person;
• Recovery equipment and cylinders conform to the appropriate standards.

- Pump down refrigerant system, if possible.
- If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
- Make sure that cylinder is situated on the scales before recovery takes place.
- Start the recovery machine and operate in accordance with manufacturer's instructions.
- Do not overfill cylinders. (No more than 80% volume liquid charge).
- Do not exceed the maximum working pressure of the cylinder, even temporarily.
- When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
- Recovered refrigerant shall not be charged into another refrigeration system unless it has been cleaned and checked.

Labelling

- Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed.
- Ensure that there are labels on the equipment stating the equipment contains flammable refrigerant.

Recovery

- When transferring refrigerant into cylinders, ensure that only appropriate refrigerant recovery cylinders are employed.
- Ensure that the correct number of cylinders for holding the total system charge are available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant).
- Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order. Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs.
- The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants.
- A set of calibrated weighing scales shall be available and in good working order. Hoses shall be complete with leak- free disconnect couplings and in good condition. Before using the recovery machine, check that it is in satisfactory working order, has been properly maintained and that any associated electrical components are sealed to prevent ignition in the event of a refrigerant release.
- The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged.
- Do not mix refrigerants in recovery units and especially not in cylinders.
- If compressors or compressor oils are to be removed, ensure that they have been evacuated to an acceptable level to make certain that flammable refrigerant does not remain within the lubricant.
- The evacuation process shall be carried out prior to returning the compressor to the suppliers.
- Only electric heating to the compressor body shall be employed to accelerate this process.

5 . Indoor Units -Medium Pressure Slim Duct Type

5.1 Specification

Item			Model	AD35S2SM3FA-1	
Function			——	Cooling	Heating
Capacity			W	3500	4000
Sensible Heat Ratio			W	0.71	/
Dehumidifying Capacity			10-³xm³/h	1.0	
Indoor Unit	Power Supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*1	
		Speed (H-M-L)	r/min	900/800/700/650	
		Fan Motor Output/Input Power	W	110/120	
		Air-Flows (H-M-L)	m³/h	840/720/600/450	
		External Static Pressure	pa	25(Default)/37/50/70/90/ 100/110/120/130/150	
	Heat Exchanger	Type / Diameter	mm	Inner Grooved Pipe/φ7.0	
		Row	——	2	
		Total Area	m²	0.11	
		Temp.Scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	700/700/248	
		Package	mmxmmxmm	950/900/340	
	Drainage Pipe (Material,I.D/O.D)		mm	PVC 21/25	
	Control Type(Remote/Wired)			Wired YR-E17 (O) or Remote YR-HQS01 (O)	
	Fresh Air Hole Dimension		mm	¢ 123	
	Electricity Heater		kW	None	
	Noise Level (H-M-L)	Sound Power Level	dB (A)	55	
		Sound Pressure Level	dB (A)	41/35/28/26	
	Weight (Net/Shipping)		kg/kg	27/31	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ9.52 (3/8)	
	Connecting Method			Flared	

Norminal condition: indoor temperature (Cooling): 27°C DB/19°CWB, indoor temperature (Heating): 20°C DB
Outdoor temperature (Cooling): 35°C DB/24°C WB, outdoor temperature (Heating): 7°C DB/6°C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AD35S2SM3FA(H)	
Function			——	Cooling	Heating
Capacity			W	3500	4000
Sensible Heat Ratio			W	0.71	/
Dehumidifying Capacity			10-³xm³/h	1.0	
Indoor Unit	Power Supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*1	
		Speed (H-M-L)	r/min	900/800/700/650	
		Fan Motor Output/Input Power	W	110/120	
		Air-Flows (H-M-L)	m³/h	840/720/600/450	
		External Static Pressure	pa	25(Default)/37/50/70/90/ 100/110/120/130/150	
	Heat Exchanger	Type / Diameter	mm	Inner Grooved Pipe/φ7.0	
		Row	——	2	
		Total Area	m²	0.11	
		Temp.Scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	700/700/248	
		Package	mmxmmxmm	950/900/340	
	Drainage Pipe (Material,I.D/O.D)		mm	PVC 21/25	
	Control Type(Remote/Wired)			Wired YR-E17 (O) or Remote YR-HQS01 (O)	
	Fresh Air Hole Dimension		mm	¢ 123	
	Electricity Heater		kW	None	
	Noise Level (H-M-L)	Sound Power Level	dB (A)	55	
		Sound Pressure Level	dB (A)	41/35/28/26	
	Weight (Net/Shipping)		kg/kg	27/31	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ9.52 (3/8)	
	Connecting Method			Flared	

Norminal condition: indoor temperature (Cooling): 27°C DB/19°CWB, indoor temperature (Heating): 20°C DB
Outdoor temperature (Cooling): 35°C DB/24°C WB, outdoor temperature (Heating): 7°C DB/6°C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item / Model				AD50S2SM3FA-1	
Function			——	Cooling	Heating
Capacity			W	5000	6000
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.0	
Indoor unit	Power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*2	
		Speed (H-M-L)	r/min	750/650/550/500	
		Fan motor output/input power	W	140/160	
		Air-flows (H-M-L)	m³/h	1020/900/780/550	
		External static pressure	Pa	25(default)/37/50/70/90/100/110/120/130/150	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	/	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	1100/700/248	
		Package	mmxmmxmm	1270/860/340	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 21/25	
	Control type (Remote/Wired)			Wired YR-E17(O) or Remote YR-HQS01(O)	
	Fresh air hole dimension		mm	123	
	Electricity heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB (A)	56	
		Sound pressure level	dB (A)	43/37/30/28	
	Weight (Net/Shipping)		kg/kg	35/39	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ12.7 (1/2)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item / Model				AD50S2SM3FA(H)	
Function			——	Cooling	Heating
Capacity			W	5000	6000
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.0	
Indoor unit	Power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	Centrifugal*2	
		Speed (H-M-L)	r/min	750/650/550/500	
		Fan motor output/input power	W	140/160	
		Air-flows (H-M-L)	m³/h	1020/900/780/550	
		External static pressure	Pa	25(default)/37/50/70/90/ 100/110/120/130/150	
	Heat exchanger	Type / Diameter	mm	Inner grooved pipe/φ7.0	
		Row	——	2	
		Total area	m²	/	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	1100/700/248	
		Package	mmxmmxmm	1270/860/340	
	Drainage pipe (Material,I.D/O.D)		mm	PVC 21/25	
	Control type (Remote/Wired)			Wired YR-E17(O) or Remote YR-HQS01(O)	
	Fresh air hole dimension		mm	123	
	Electricity heater		kW	None	
	Noise level (H-M-L)	Sound power level	dB (A)	56	
		Sound pressure level	dB (A)	43/37/30/28	
	Weight (Net/Shipping)		kg/kg	35/39	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ12.7 (1/2)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item			Model	AD71S2SM3FA-1/1UH071N1ERG	
Function				Cooling	Heating
Capacity			kW	7.1 (2.0~9.0)	8 (2.0~10.0)
Sensible heat ratio				0.72	/
Total power input			kW	2.03 (0.4~4.0)	2.0 (0.4~4.0)
Max. power input			W	4000	4000
EER or COP			W/W	3.5 (B)	4 (C)
Dehumidifying capacity			10^{-3}×m^3/h	2.4	
Power cable				/	
Power source			N, V, Hz	1PH, 220-240V~, 50/60Hz	
Running/Max. Running current			A/A	8.8 (2.0-17.5)/17.5	8.0 (2.0-17.5)/17.5
Start current			A	0.52	
Circuit breaker			A	5	5
Indoor unit	Unit model (color)			AD71S2SM3FA-1	
	Fan	Type×Number		CENTRIFUGALX2	
		Speed (H-M-L)	r/min	950/850/750/700 (37Pa)	
		Fan motor output/ input power	kW	0.228	
		Air-flow (H-M-L)	kW	0.160	
		External static pressure	m^3/h	1440/1260/1100/900 (25/37(default)/ 50/70/90/100/110/120/130/150Pa)	
	Heat exchanger	Type/Diameter	mm	Inner grooved pipe/φ7.0	
		Total area	m^2	/	
	Dimension	External (L×W×H)	mm×mm×mm	1100*700*248	
		Package (L×W×H)	mm×mm×mm	1290/840/320	
	Drainage pipe (material, I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional, S-Standard)		Wired	YR-E17(S)	
			Infrared	YRHBS(O)	
	Fresh air hole dimension		mm	123	
	Electricity heater		kW	0	
	Sound power Noise level (H-M-L)		dB (A)	58	
	Sound pressure Noise level (H-M-L)		dB (A)	42/38/35	
	Weight (Net / Shipping)		kg / kg	31/37	
Piping	Refrigerant	Type / Charge	g	R410A/2500	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	10	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition:
Indoor temperature (cooling): 27°C DB/19°C WB, indoor temperature (heating): 20°C DB
Outdoor temperature (cooling): 35°C DB/24°C WB, outdoor temperature (heating): 7°C DB/6°C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AD71S2SM3FA(H)/1UH071N1ERG	
Function				Cooling	Heating
Capacity			kW	7.1 (2.0~9.0)	8 (2.0~10.0)
Sensible heat ratio				0.72	/
Total power input			kW	2.03 (0.4~4.0)	2.0 (0.4~4.0)
Max. power input			W	4000	4000
EER or COP			W/W	3.5 (B)	4 (C)
Dehumidifying capacity			10^{-3}×m^3/h	2.4	
Power cable				/	
Power source			N, V, Hz	1PH, 220-240V~, 50/60Hz	
Running/Max. Running current			A/A	8.8 (2.0-17.5)/17.5	8.0 (2.0-17.5)/17.5
Start current			A	0.52	
Circuit breaker			A	5	5
Indoor unit	Unit model (color)			AD71S2SM3FA(H)	
	Fan	Type×Number		CENTRIFUGALX2	
		Speed (H-M-L)	r/min	950/850/750/700 (37Pa)	
		Fan motor output/ input power	kW	0.228	
		Air-flow (H-M-L)	kW	0.160	
		External static pressure	m^3/h	1440/1260/1100/900 (25/37(default)/ 50/70/90/100/110/120/130/150Pa)	
	Heat exchanger	Type/Diameter	mm	Inner grooved pipe/φ7.0	
		Total area	m^2	/	
	Dimension	External (L×W×H)	mm×mm×mm	1100*700*248	
		Package (L×W×H)	mm×mm×mm	1290/840/320	
	Drainage pipe (material, I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional, S-Standard)		Wired	YR-E17(S)	
			Infrared	YRHBS(O)	
	Fresh air hole dimension		mm	123	
	Electricity heater		kW	0	
	Sound power Noise level (H-M-L)		dB (A)	58	
	Sound pressure Noise level (H-M-L)		dB (A)	42/38/35	
	Weight (Net / Shipping)		kg / kg	31/37	
Piping	Refrigerant	Type / Charge	g	R410A/2500	
		Recharge quantity	g/m	45	
		Maximum pipe length without charge refrigerant	m	10	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition:
Indoor temperature (cooling): 27°C DB/19°C WB, indoor temperature (heating): 20°C DB
Outdoor temperature (cooling): 35°C DB/24°C WB, outdoor temperature (heating): 7°C DB/6°C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AD90S2SM3FA (H)	
Function				Cooling	Heating
Capacity			kW	8.5 (2.5~10)	9.5 (2.5~11)
Sensible heat ratio				0.72	/
Total power input			kW	2.50 (0.5~4.4)	2.50 (0.5~4.4)
Max. power input			W	4400	4400
EER or COP			W/W	3.4 (B)	3.8 (C)
Dehumidifying capacity			$10^{-3}\times m^3/h$	2.5	
Power cable				/	
Power source			N, V, Hz	1PH, 220-240V~, 50/60Hz	
Running/Max. Running current			A/A	11.1(2.3-19.2)/19.2	11.1(2.3-19.2)/19.2
Start current			A	0.56	
Circuit breaker			A	5	5
Indoor unit	Unit model (color)			AD90S2SM3FA	
	Fan	Type×Number		CENTRIFUGALX2	
		Speed (H-M-L)	r/min	1050/980/920/860(37Pa)	
		Fan motor output/ input power	kW	0.260	
		Air-flow (H-M-L)	kW	0.180	
		External static pressure	m^3/h	1440/1260/1100/900(25/37(default)/ 50/70/90/100/110/120/130/150Pa)	
	Heat exchanger	Type/Diameter	mm	Inner grooved pipe/φ7.0	
		Total area	m^2	/	
	Dimension	External (L×W×H)	mm×mm×mm	1100*700*248	
		Package (L×W×H)	mm×mm×mm	1290/840/320	
	Drainage pipe (material, I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional, S-Standard)		Wired	YR-E17(S)	
			Infrared	YRHBS(O)	
	Fresh air hole dimension		mm	123	
	Electricity heater		kW	0	
	Sound power noise level (H-M-L)		dB (A)	60	
	Sound pressure noise level (H-M-L)		dB (A)	44/40/37	
	Weight (Net / Shipping)		kg / kg	38/45	
Piping	Refrigerant	Type / Charge	g	R410A/2500	
		Recharge quantity	g/m	45	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition:

Indoor temperature (cooling): 27°C DB/19°C WB, indoor temperature (heating): 20°C DB

Outdoor temperature (cooling): 35°C DB/24°C WB, outdoor temperature (heating): 7°C DB/6°C WB

The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AD105S2SM3FA-1/1UH105N1ERG	
Function				Cooling	Heating
Capacity			kW	10 (2.5~11)	10.4 (2.5~12.0)
Sensible heat ratio				0.72	/
Total power input			kW	2.93 (0.5~4.5)	2.8 (0.5~4.5)
Max. power input			W	5000.00	5000.00
EER or COP			W/W	3.31 (B)	3.71 (C)
Dehumidifying capacity			10^{-3}×m^3/h	3.2	
Power cable				/	
Power source			N, V, Hz	1PH, 220-240V~, 50/60Hz	
Running/Max. Running current			A/A	13.3(2.3-19.0)/21.0	13.1(2.3-19.0)/21.0
Start current			A	0.52	
Circuit breaker			A	5	5
Indoor unit	Unit model (color)			AD105S2SM3FA-1	
	Fan	Type×Number		CENTRIFUGALX3	
		Speed (H-M-L)	r/min	900/840/780/750 (37Pa)	
		Fan motor output/ input power	kW	0.260	
		Air-flow (H-M-L)	kW	0.180	
		External static pressure	m^3/h	2000/1740/1380/1280 (25/37(default)/ 50/70/90/100/110/120/130/150Pa)	
	Heat exchanger	Type/Diameter	mm	Inner grooved pipe/φ7.0	
		Total area	m^2	/	
	Dimension	External (L×W×H)	mm×mm×mm	1500*700*248	
		Package (L×W×H)	mm×mm×mm	1710/870/330	
	Drainage pipe (material, I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional, S-Standard)		Wired	YR-E17 (S)	
			Infrared	YRHBS (O)	
	Fresh air hole dimension		mm	123	
	Electricity heater		kW	0	
	Sound power noise level (H-M-L)		dB (A)	60	
	Sound pressure noise level (H-M-L)		dB (A)	44/40/37	
	Weight (Net / Shipping)		kg / kg	46/55	
Piping	Refrigerant	Type / Charge	g	R410A/2500	
		Recharge quantity	g/m	45	
		Maximum pipe length without recharge refrigerant	m	20	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition:

Indoor temperature (cooling): 27°C DB/19°C WB, indoor temperature (heating): 20°C DB

Outdoor temperature (cooling): 35°C DB/24°C WB, outdoor temperature (heating): 7°C DB/6°C WB

The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AD105S2SM3FA(H)/1U105S2SS1FA	
Function				cooling	heating
Capacity			KW	9.2 (2.5-10.0)	10.2 (3.0-10.5)
Sensible heat ratio				0.74	
Total power input			KW	3.23 (0.5-4.0)	2.92 (0.5-4.0)
Max. power input			W	4.0	4.0
EER or COP			W/W	2.85 (A)	3.49 (A)
Dehumidifying capacity			10-³×m³/h	3	
Power cable				4.0mm^2	
Power source			N, V, Hz	1PH~,220~240V, 50/60Hz	
Running /Max.Running current			A / A	14.0/16.5	12.7/16.5
Start Current			A	0.58	
Circuit breaker			A	25	25
Indoor unit	Unit model (color)			AD105S2SM3FA(H)	
	Fan	Type × Number		CENTRIFUGALX2	
		Speed (H-M-L)	r/min	900/840/780/750 (37Pa)	
		Fan motor output/ input power	W	180/260	
		Air-flow (H-M-L)	m³/h	2250/1960/1680/1500 (25/37(default)/50/70/90/ 100/110/120/130/150Pa)	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Row		2	
		Total Area	m²	/	
	Dimension	External（L×W×H）	mm×mm×mm	1500*700*248	
		Package（L×W×H）	mm×mm×mm	1710/870/330	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(O)/YR-E16(O)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	123	
	Electricity Heater		kW	NONE	
	Sound power Noise level (H-M-)		dB (A)	60	
	Sound pressure Noise level (H-M-L)		dB (A)	44/40/37	
	Weight (Net / Shipping)		kg / kg	46/55	
Piping	Refrigerant	Type / Charge	g	R32/1700	
		Recharge quantity	g/m	45	
		Maximum pipe length without recharge refrigerant	m	30	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27^{O}CDB/19^{O}CWB, indoor temperature (heating): 20^{O}CDB
Outdoor temperature (cooling): 35^{O}CDB/24^{O}CWB, outdoor temperature (heating): 7^{O}CDB/6^{O}CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AD105S2SM3FA(H)/1U105S2SS2FA	
Function				cooling	heating
Capacity			KW	9.5 (2.5-10.0)	10.2 (3.0-10.5)
Sensible heat ratio				0.74	
Total power input			KW	3.16(0.5-4.0)	2.91(0.5-4.0)
Max. power input			W	4000	4000
EER or COP			W/W	3.01 (A)	3.50 (A)
Dehumidifying capacity			10-³×m³/h	3	
Power cable				4.0mm^2	
Power source			N, V, Hz	1PH~,220~240V, 50/60Hz	
Running /Max.Running current			A / A	14.0/16.5	12.7/16.5
Start Current			A	0.58	
Circuit breaker			A	25	25
Indoor unit	Unit model (color)			AD105S2SM3FA(H)	
	Fan	Type × Number		CENTRIFUGALX2	
		Speed (H-M-L)	r/min	900/840/780/750 (37Pa)	
		Fan motor output/ input power	W	180/260	
		Air-flow (H-M-L)	m³/h	1600/1480/1360/1240	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Row		2	
		Total Area	m²	/	
	Dimension	External（L×W×H）	mm×mm×mm	1500*700*248	
		Package（L×W×H）	mm×mm×mm	1711/870/325	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17A(O)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	123	
	Electricity Heater		kW	NONE	
	Sound power Noise level (H-M-)		dB (A)	66	
	Sound pressure Noise level (H-M-L)		dB (A)	53	
	Weight (Net / Shipping)		kg / kg	26/30	
Piping	Refrigerant	Type / Charge	g	R32/1700	
		Recharge quantity	g/m	45	
		Maximum pipe length without recharge refrigerant	m	30	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition: indoor temperature (cooling): 27^{O}CDB/19^{O}CWB, indoor temperature (heating): 20^{O}CDB
Outdoor temperature (cooling): 35^{O}CDB/24^{O}CWB, outdoor temperature (heating): 7^{O}CDB/6^{O}CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AD125S2SM8FA (H)	
Function				cooling	heating
Capacity			kW	12.3(3.0~13.0)	12.7(3.5~13.5)
Sensible heat ratio				0.78	
Total power input			kW	4.6(1.0~6.0)	3.93(1.0~6.0)
Max. power input			W	6000	6000
EER or COP			W/W	2.67	3.23
Dehumidifying capacity			10^{-3}×m³/h	5	
Power cable				H07VV-F 3G 6.0 mm2	
Power source			N, V, Hz	1/220~, 240/50/60	
Running/Max. Running current			A / A	20(1.5-26.0)A/26A	17(1.5-26.0)A/26A
Start current			A	3	
Circuit breaker			A	40	40
Indoor unit	Unit model (color)			AD125S2SM8FA (H)	
	Fan	Type×Number		CENTRIFUGALX3	
		Speed (H×M×L)	r/min	1070/960/880/850	
		Fan motor input power	kW	0.26	
		Fan motor output power	kW	0.18	
		Air-flow(H×M×L)	m³/h	2250/1960/1680/1500	
	Heat exchanger	Type/Diameter	mm	TP2M/Φ7.0	
		Total area	m²	/	
	Dimension	External (L×W×H)	mm×mm×mm	1500×700×248	
		Package (L×W×H)	mm×mm×mm	1711×870×325	
	Drainage pipe (material, I.D./O.D.)		mm	/	
	Controller (O-Optional, S-Standard)		Wired	YR-E17A	
			Infrared	YR-HQS01+RE-02	
	Fresh air hole dimension		mm	123	
	Electricity heater		kW	0	
	Sound power noise level (H×M×L)		dB(A)	65	
	Sound pressure noise level (H×M×L)		dB(A)	48/45/42/39	
	Weight (Net / Shipping)		kg / kg	48/57	
Piping	Refrigerant	Type / Charge	g	R32/2300	
		Recharge quantity	g/m	45	
	Pipe	Liquid	mm	9.52	
		Gas	mm	15.88	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	50	

Norminal condition:
Indoor temperature (cooling): 27°C DB/19°C WB, indoor temperature (heating): 20°C DB
Outdoor temperature (cooling): 35°C DB/24°C WB, outdoor temperature (heating): 7°C DB/6°C WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item			Model	AD140S2SM8FA (H)	
Function				cooling	heating
Capacity			KW	13.4(3.5~14.0)	15.0(4.0~15.5)
Sensible heat ratio				0.78	
Total power input			KW	5.28(1.0~6.5)	4.92(1.0~6.5)
Max. power input			W	6500	6500
EER or COP			W/W	2.54	3.05
Dehumidifying capacity			10-³×m³/h	5.5	
Power cable				H07VV-F 3G 6.0 MM2	
Power source			N, V, Hz	1/220~,240/50/60	
Running /Max.Running current			A / A	6.8/9.1	5.86/9.1
Start Current			A	3	
Circuit breaker			A	30	30
Indoor unit	Unit model (color)			AD140S2SM8FA (H)	
	Fan	Type × Number		CENTRIFUGALX3	
		Speed (H-M-L)	r/min	1180/1080/990/930	
		Fan motor output/ input power	W	180/260	
		Air-flow (H-M-L)	m³/h	2500/2160/1780/1500	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/φ7.0	
		Row		3	
		Total Area	m²	/	
	Dimension	External（L×W×H）	mm×mm×mm	1500/700/248	
		Package（L×W×H）	mm×mm×mm	1710/870/330	
	Drainage pipe (material , I.D./O.D.)		mm	PVC 21/25	
	Controller (O-Optional,S-Standard)		Wired	YR-E17(O)/YR-E16(O)	
			Infrared	YR-HQS01(O)	
	Fresh air hole dimension		mm	123	
	Electricity Heater		kW	NONE	
	Sound power Noise level (H-M-L)		dB (A)	66	
	Sound pressure Noise level (H-M-L)		dB (A)	48/45/42/39	
	Weight (Net / Shipping)		kg / kg	48/57	
Piping	Refrigerant	Type / Charge	g	R32/2300	
		Recharge quantity	g/m	45	
	Pipe	Liquid	mm	Φ9.52 (3/8)	
		Gas	mm	Φ15.88 (5/8)	
	Between I.D &O.D	MAX.Drop	m	30	
		MAX.Piping length	m	70	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature (cooling): 35°CDB/24°CWB, outdoor temperature (heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

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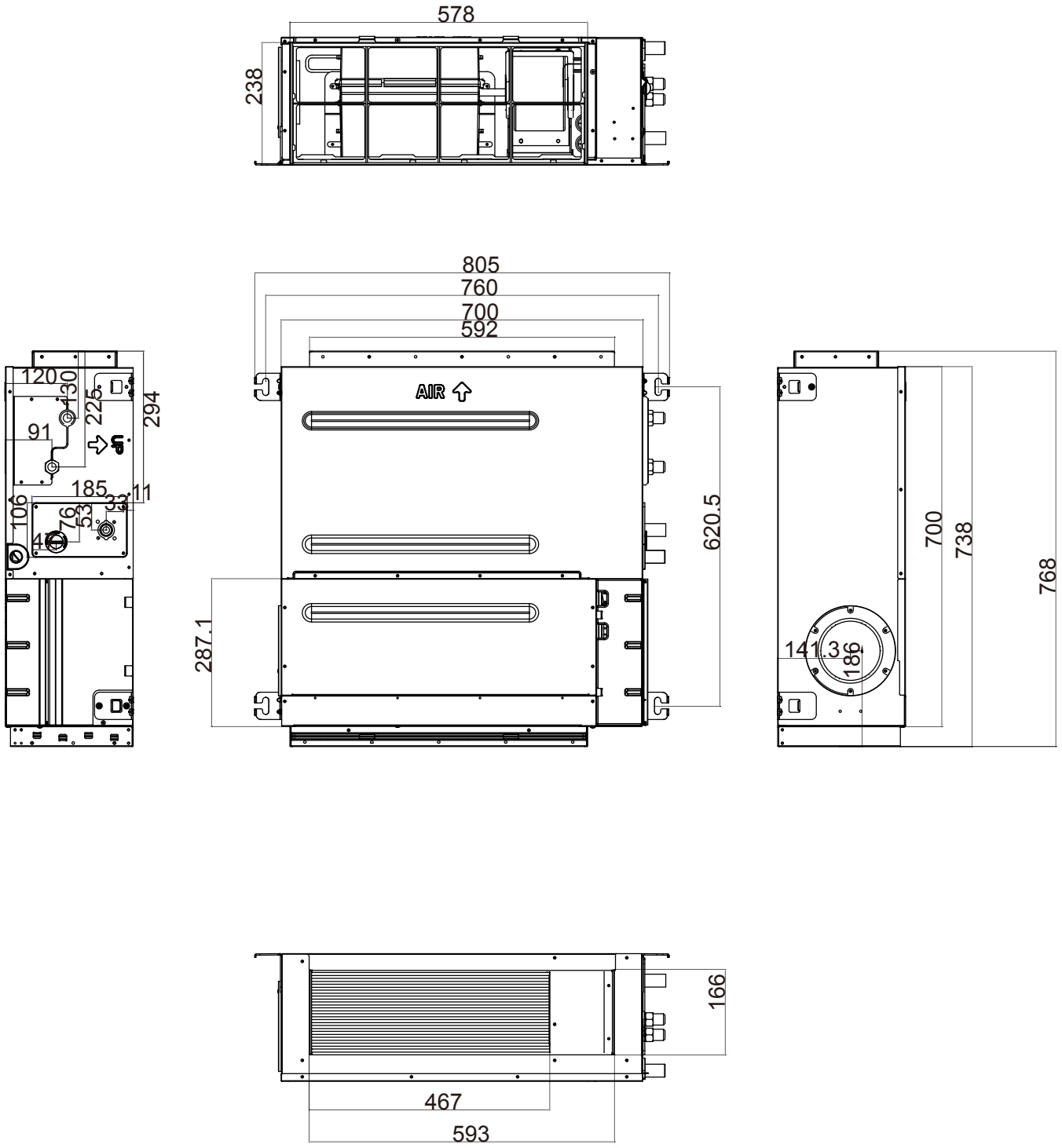
Item / Model						AD160S2SM3FA (H)	
Function						cooling	heating
Capacity					KW	16(4.5-16.5)	17(5.0-18.0)
Sensible heat ratio						0.76	
Total power input					KW	5.48(1.0-6.5)	4.82(1.0-6.5)
Max. power input					W	6500	6500
EER or COP					W/W	2.92(A)	3.53(A)
Dehumidifying capacity					10-³×m³/h	6.51	
Power cable						2.5 mm^2	
Power source					N, V, Hz	1ph, 220~240, 50/60	
Running /Max.Running current					A / A	8.0/10	7.1/10
Start Current					A	2	
Circuit breaker					A	5	
Indoor unit	Unit model (color)					AD160S2SM3FA (H)	
	Fan	Type × Number				CENTRIFUGALX3	
		Speed (H-M-L)			r/min	1200/1150/1070/1000	
		Fan motor output/ input power			W	130/180	
		Air-flow (H-M-L)			m³/h	2500/2160/1780/1500	
	Heat exchanger	Type / Diameter			mm	inner grooved pipe/φ7.0	
		Row				2	
		Total Area			m²	/	
	Dimension	External（L×W×H）			mm×mm×mm	1500/700/248	
		Package（L×W×H）			mm×mm×mm	1715/858/320	
	Drainage pipe (material , I.D./O.D.)				mm	PVC 21/25	
	Controller (O-Optional,S-Standard)				Wired	YR-E17(O)	
	Fresh air hole dimension				mm	123	
	Electricity Heater				kW	0	
	Sound power Noise level (H-M-L)				dB (A)	67	
	Sound pressure Noise level (H-M-L)				dB (A)	41/36/33/31	
	Pipe	Liquid Pipe	mm			9.52	
		Gas Pipe	mm			19.05	
		Connecting Method				flared	
	Weight (Net / Shipping)				kg / kg	48/57	
Piping	Refrigerant	Type / Charge			g	R32/3500	
		Recharge quantity			g/m	45	
	Pipe	Liquid			mm	9.52	
		Gas			mm	19.05	
	Between I.D &O.D	MAX.Drop			m	30	
		MAX.Piping length			m	70	
cooling	Pdesignc(kW):	16	SEER/ CLASS		5.94/A++	QCE(Annual electricity consumption for cooling)kWh:	943

Item			Model			AD160S2SM3FA (H)	
cooling	Pdesignc(kW):		16	SEER/ CLASS	5.94/A++	QCE(Annual electricity consumption for cooling)kWh:	943
heating	Average	Pdesignh(-10°C)	11kW	SCOP/ CLASS	4.06/A+	QHE(Annual electricity consumption for heating)kWh:	3798
	Warmer	Pdesignh(2°C)	5.95kW	SCOP/ CLASS	5.0/A++	QHE(Annual electricity consumption for heating)kWh:	1665
	Colder	Pdesignh(-22°C)	/	SCOP/ CLASS	/	QHE(Annual electricity consumption for heating)kWh:	/
Tdesignh:-10°C			Tbivalent:-10°C	TOL:-10°C		Elbu:0	
Max. cooling condition	Indoor temperature:32°C/23°C		Max. heating condition		Indoor temperature:27°C/-°C		
	Outdoor temperature:46°C/-°C				Outdoor temperature:24°C/18°C		

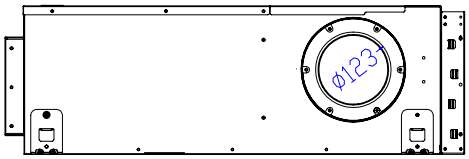
Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

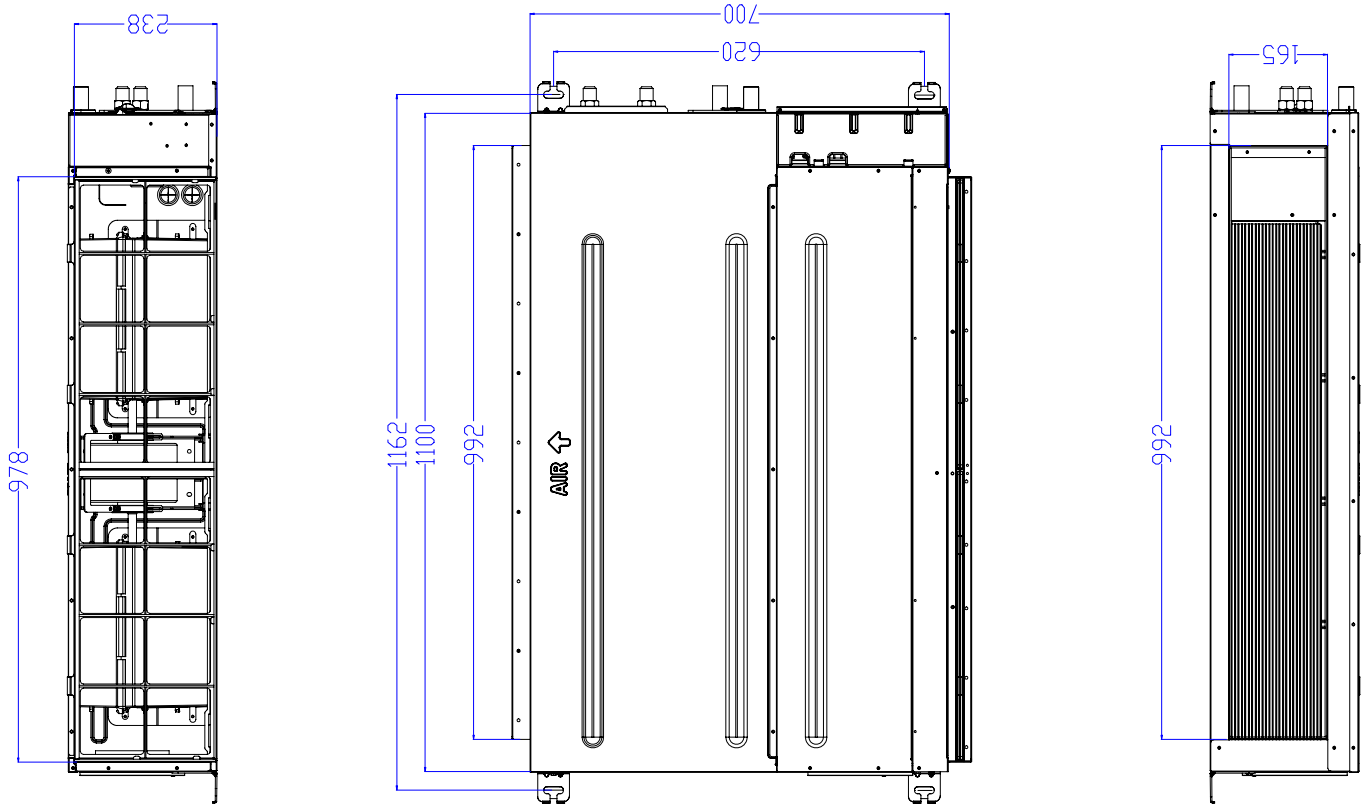
5.2 Dimension

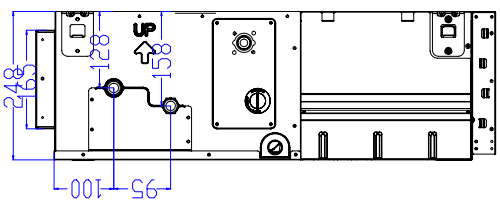
AD35S2SM3FA-1 AD35S2SM3FA(H)



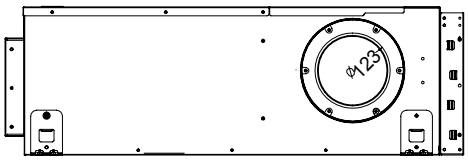
AD50S2SM3FA-1 AD50S2SM3FA(H)

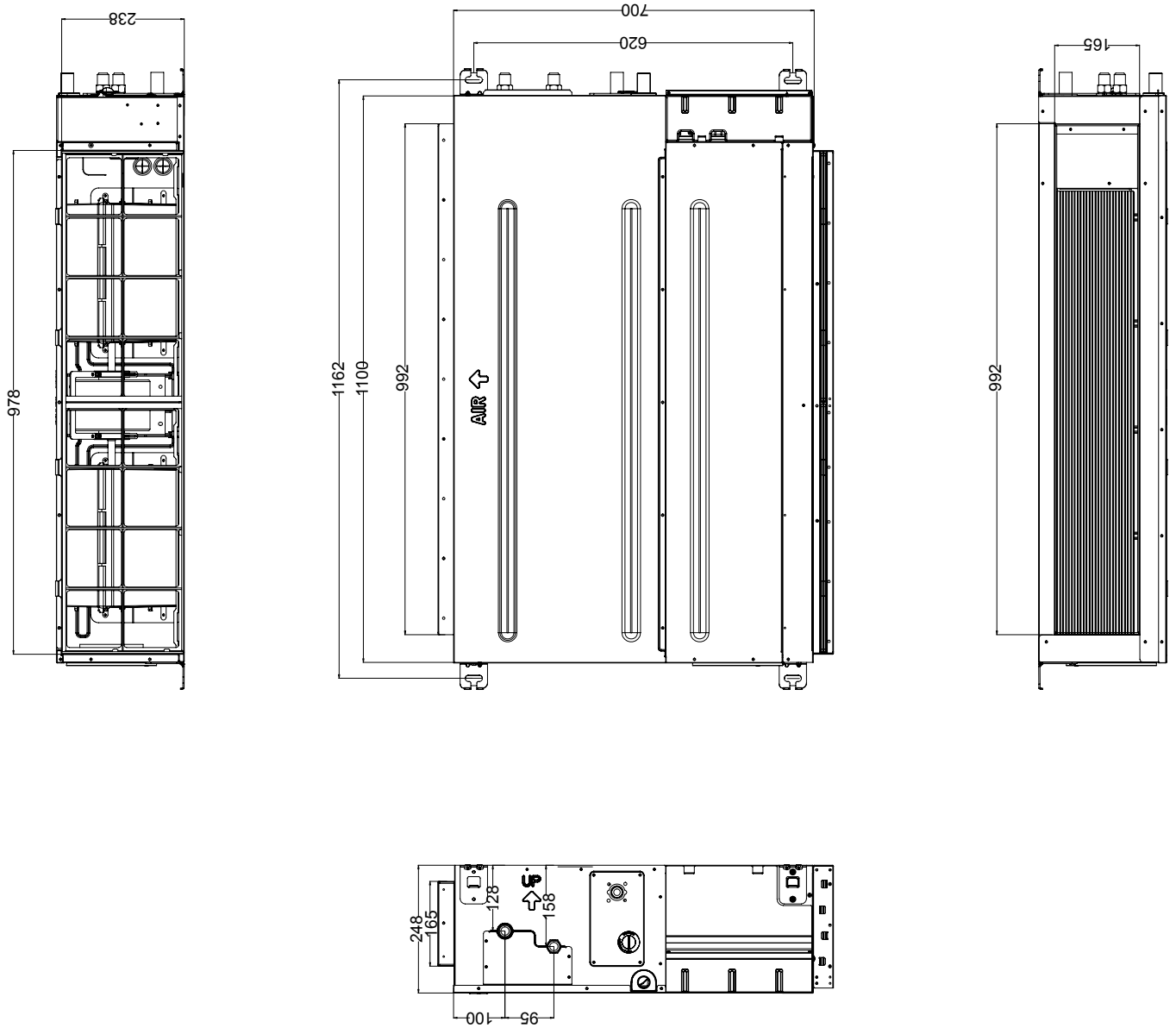




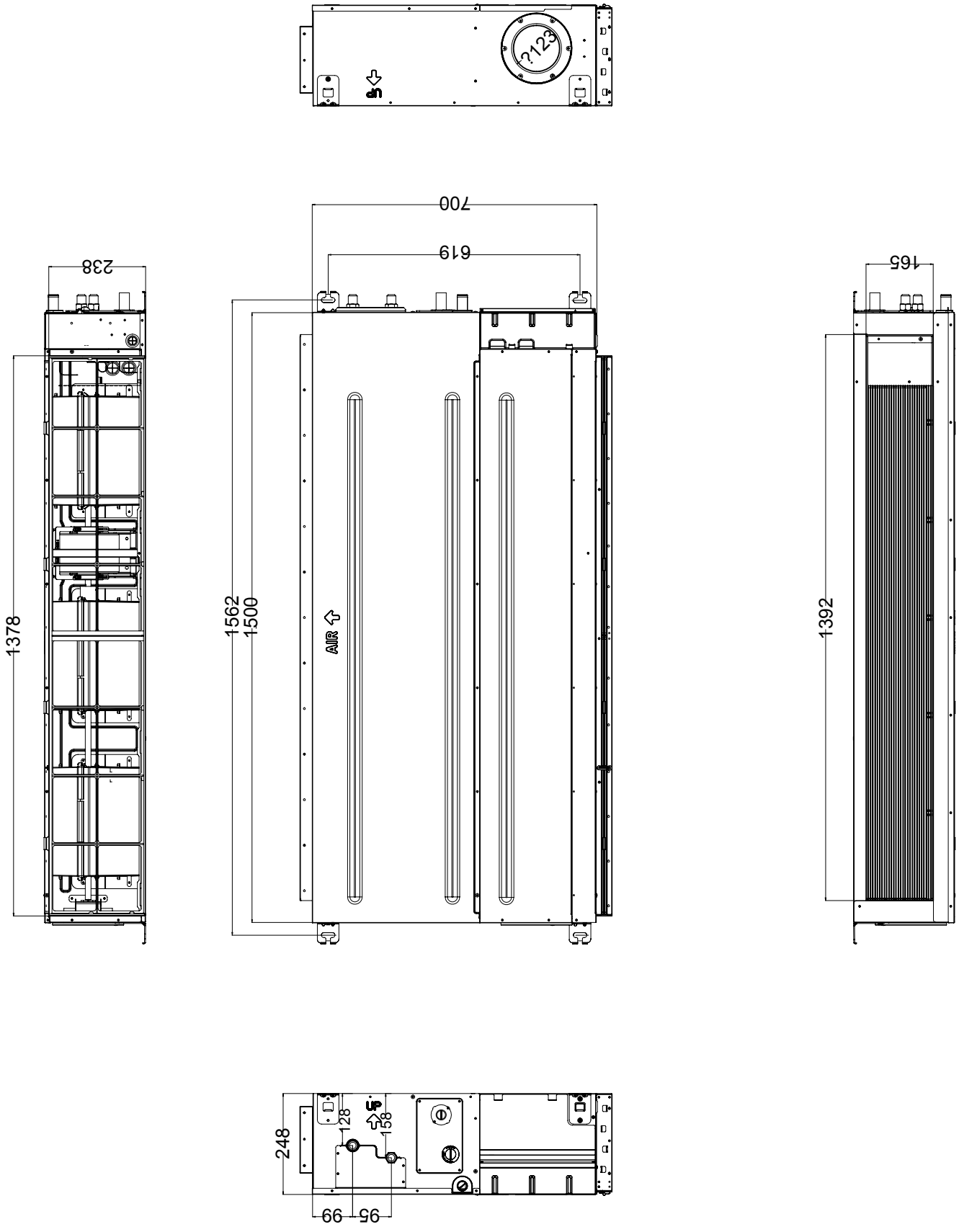


AD71S2SM3FA-1 AD71S2SM3FA(H) AD90S2SM3FA (H)

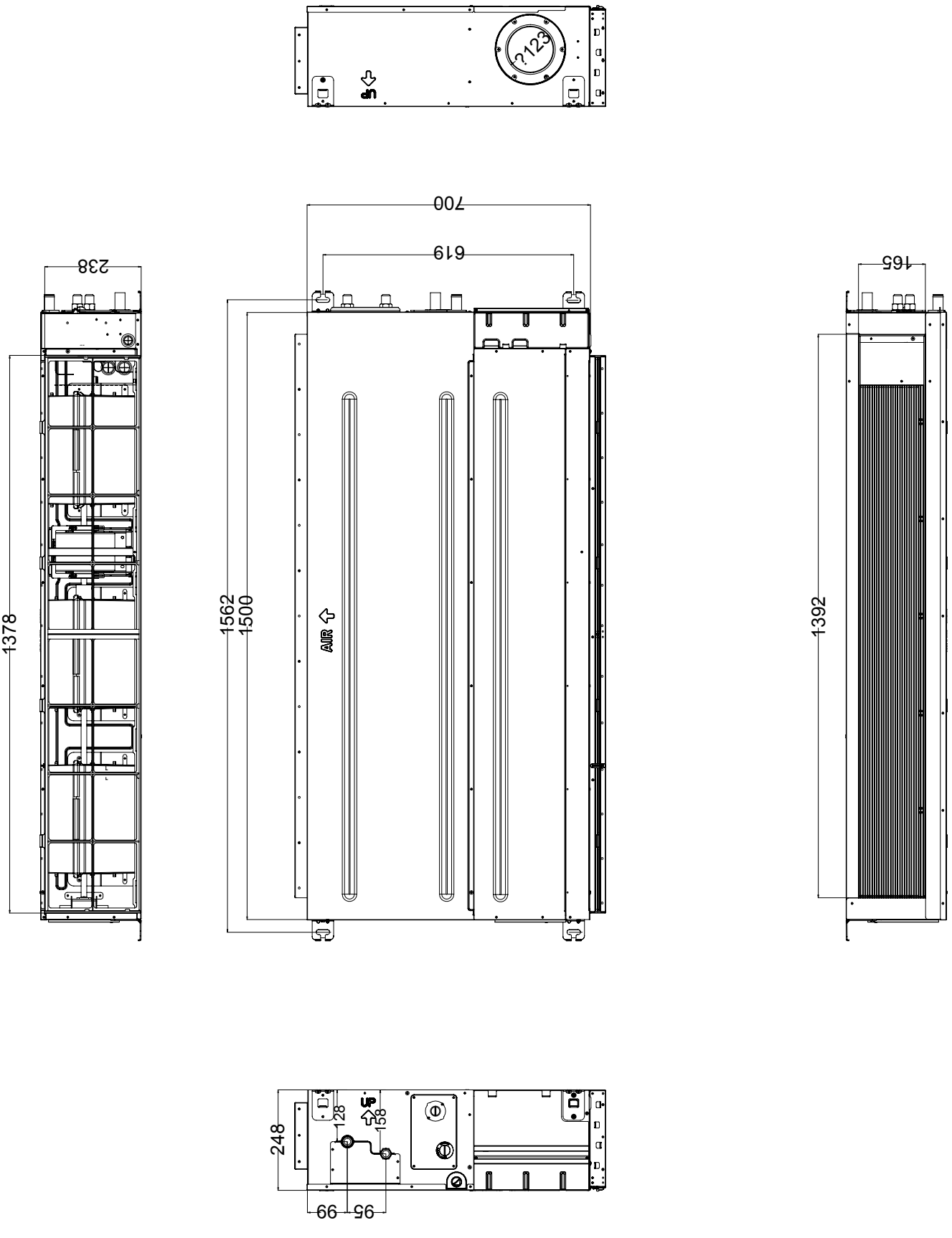




AD105S2SM3FA-1 AD105S2SM3FA(H)

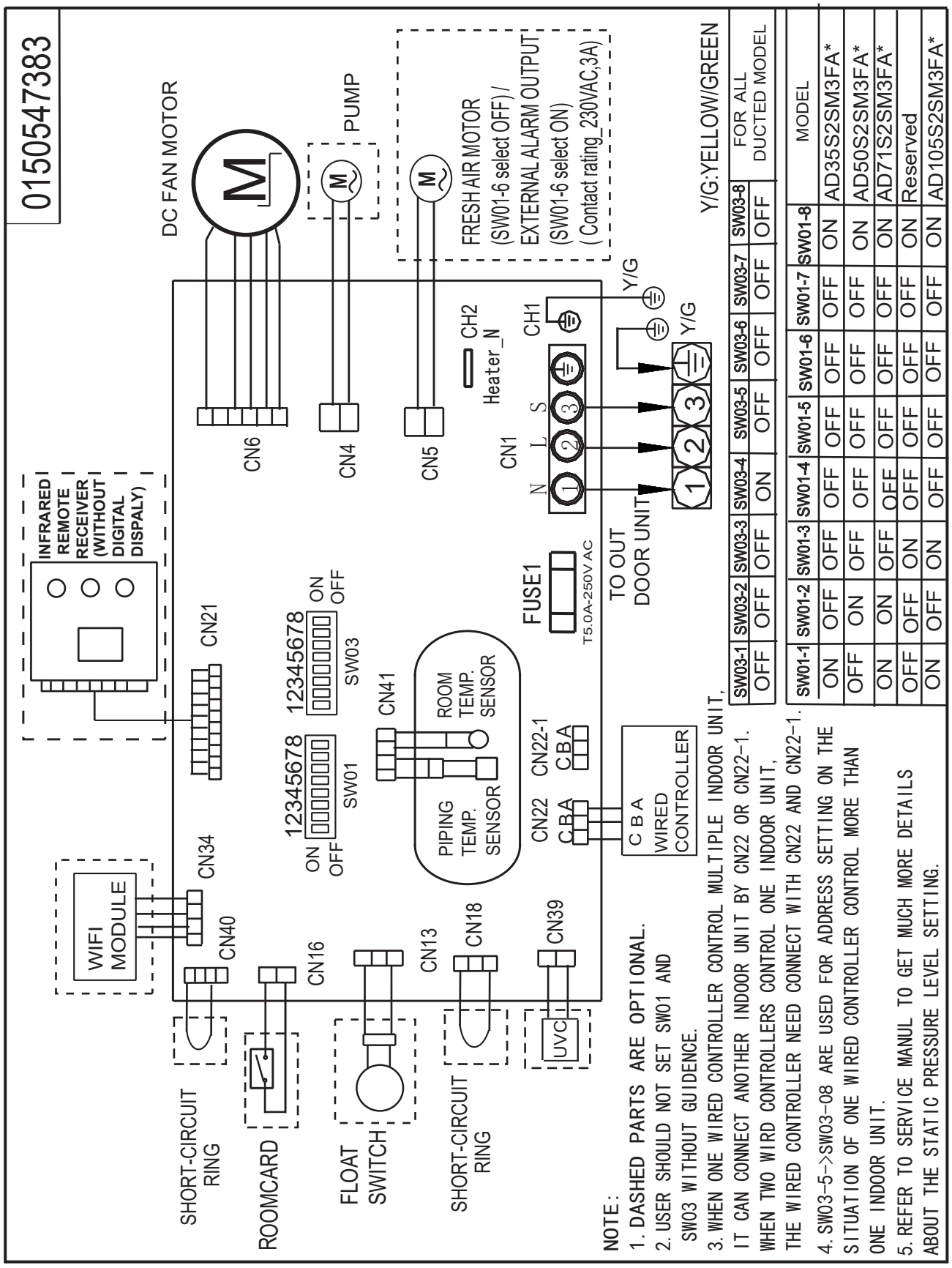


AD125S2SM8FA AD140S2SM8FA AD160S2SM3FA



5.3 Wiring Diagram

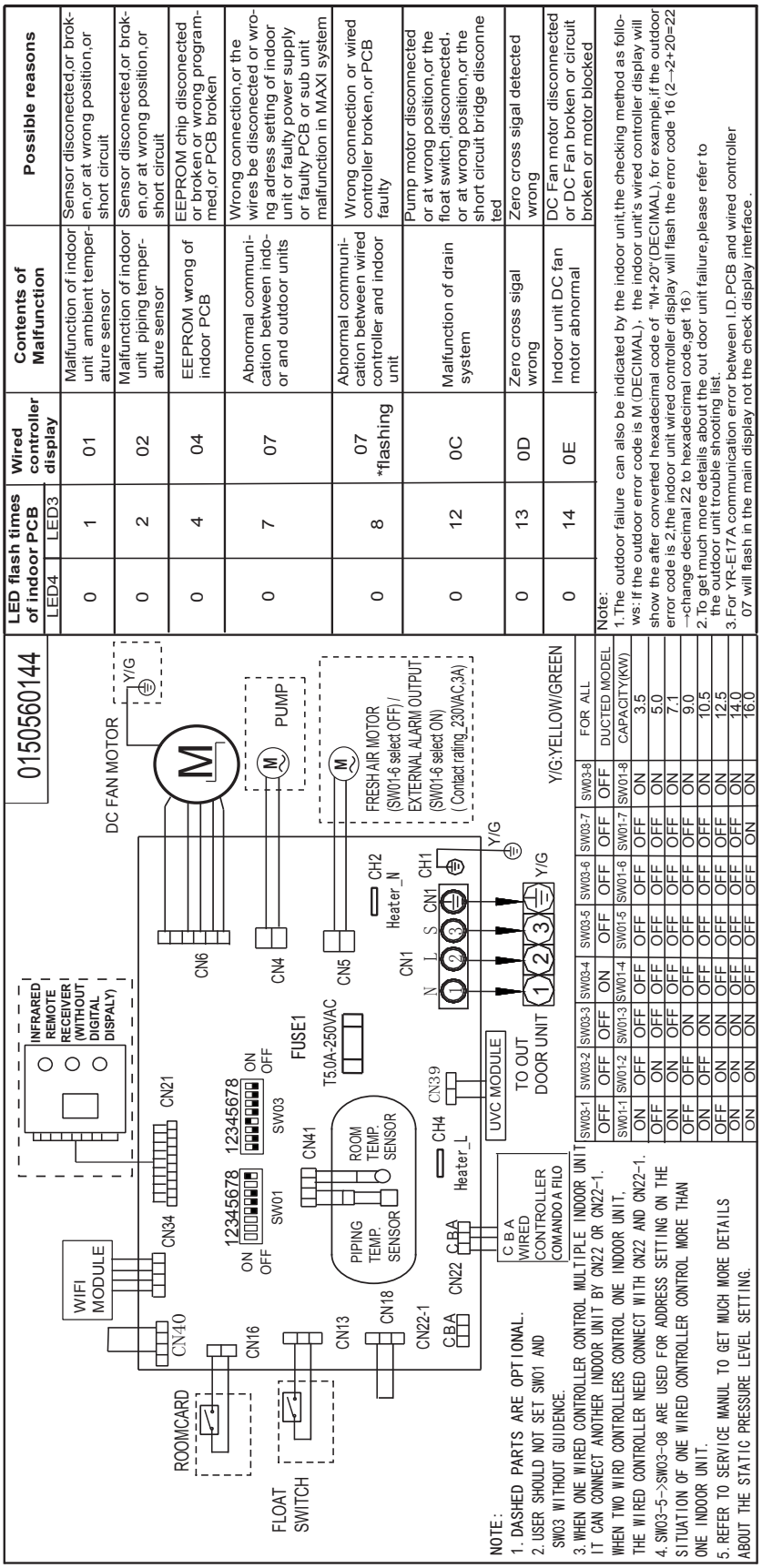
AD35S2SM3FA-1 AD502SM3FA -1 AD71S2SM3FA -1 AD105S2SM3FA-1



SW03-1	SW03-2	SW03-3	SW03-4	SW03-5	SW03-6	SW03-7	SW03-8	FOR ALL DUCTED MODEL
OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	

SW01-1	SW01-2	SW01-3	SW01-4	SW01-5	SW01-6	SW01-7	SW01-8	MODEL
ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	AD35S2SM3FA*
OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	AD50S2SM3FA*
ON	ON	OFF	OFF	OFF	OFF	OFF	ON	AD71S2SM3FA*
OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	Reserved
ON	OFF	ON	OFF	OFF	OFF	OFF	ON	AD105S2SM3FA*

AD35S2SM3FA(H) AD502SM3FA(H) AD71S2SM3FA(H) AD90S2SM3FA(H) AD105S2SM3FA(H) AD125S2SM8FA (H) AD140S2SM8FA (H) AD160S2SM3FA(H)

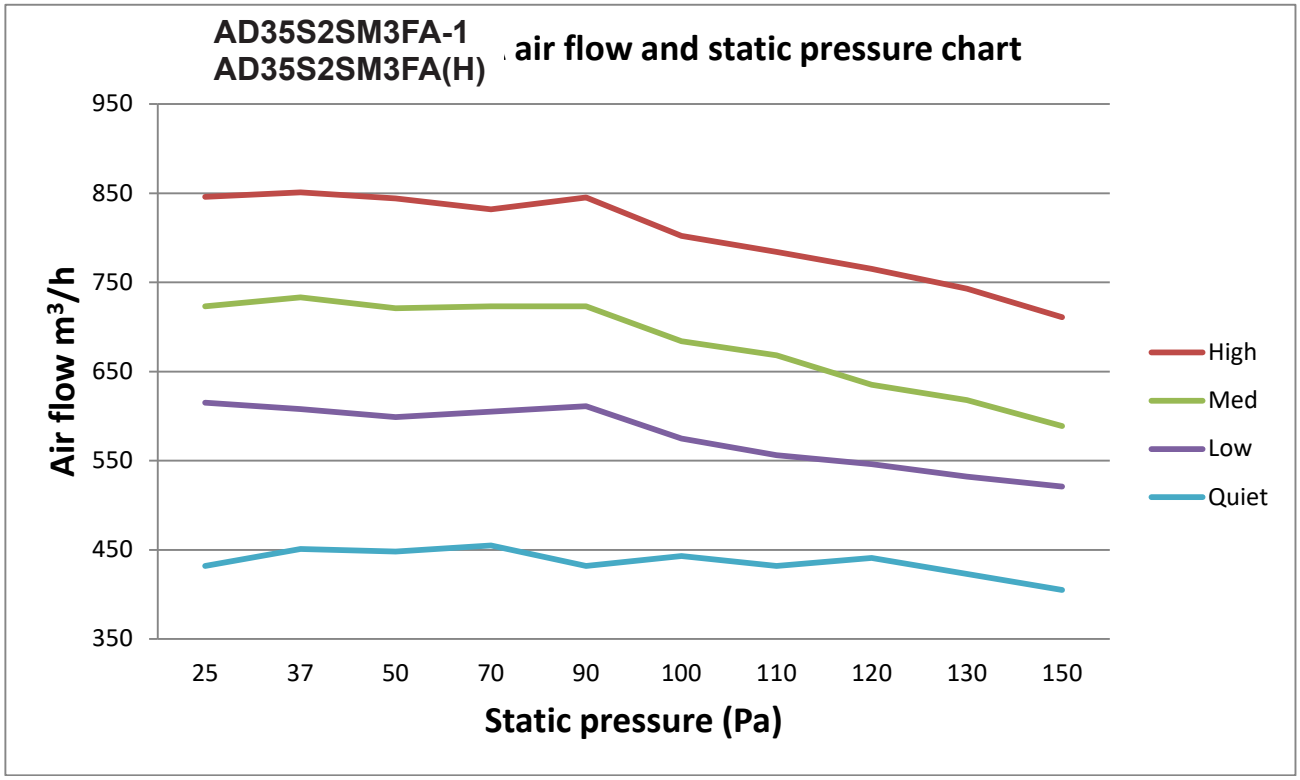


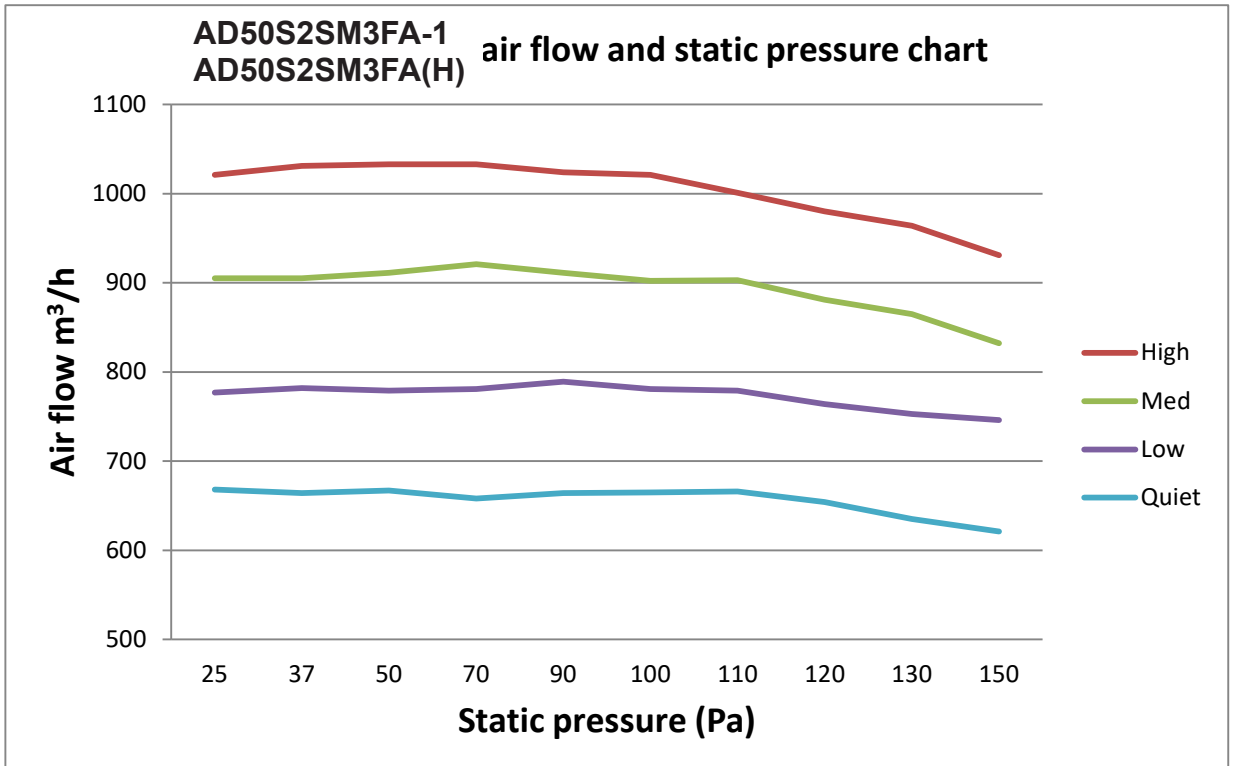
SW03-1	SW03-2	SW03-3	SW03-4	SW03-5	SW03-6	SW03-7	SW03-8	FOR ALL
OFF	OFF	OFF	ON	OFF	OFF	OFF	OFF	DUCTED MODEL
SW01-1	SW01-2	SW01-3	SW01-4	SW01-5	SW01-6	SW01-7	SW01-8	CAPACITY(KW)
ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	3.5
OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	5.0
ON	ON	OFF	OFF	OFF	OFF	OFF	ON	7.1
OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	9.0
ON	OFF	ON	OFF	OFF	OFF	OFF	ON	10.5
OFF	ON	ON	OFF	OFF	OFF	OFF	ON	12.5
ON	ON	ON	OFF	OFF	OFF	OFF	ON	14.0
ON	ON	ON	OFF	OFF	OFF	ON	ON	16.0

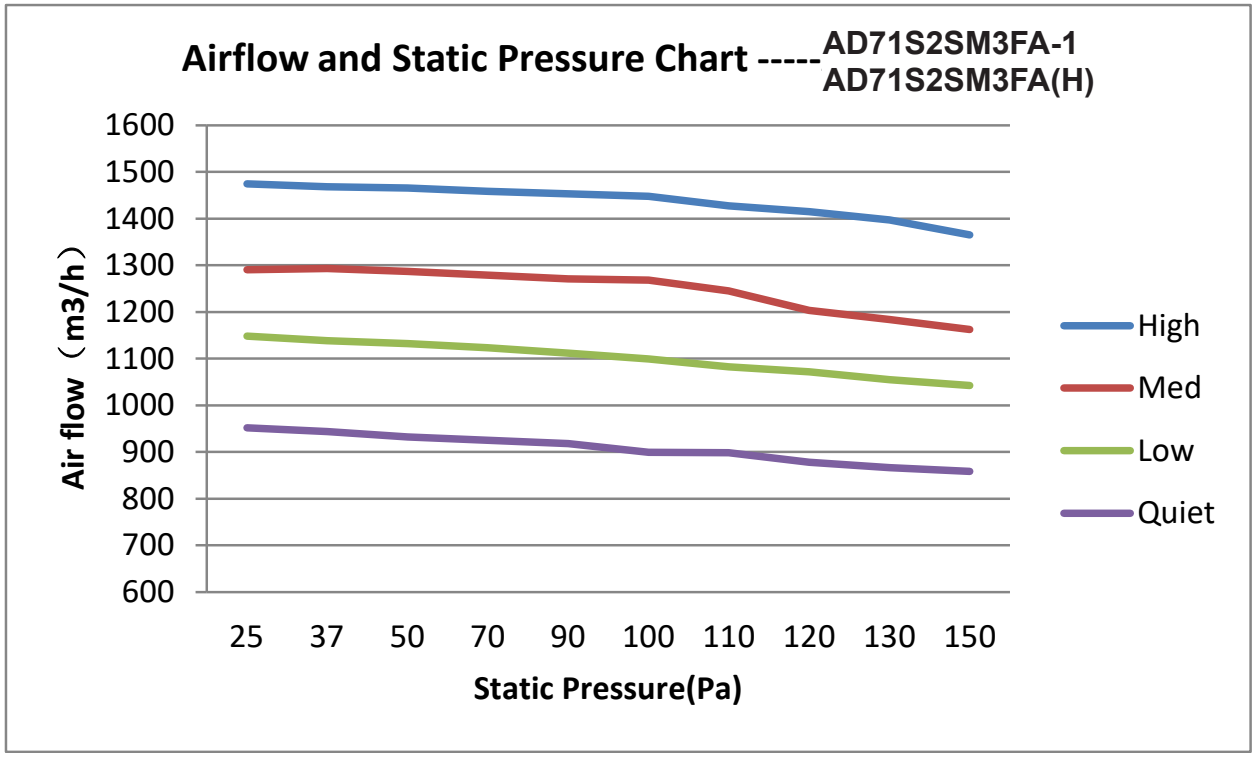
LED flash times of indoor PCB		Wired controller display	Contents of Malfunction	Possible reasons
LED4	LED3			
0	1	01	Malfunction of indoor unit ambient temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	2	02	Malfunction of indoor unit piping temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	4	04	EEPROM wrong of indoor PCB	EEPROM chip disconected or broken or wrong programmed,or PCB broken
0	7	07	Abnormal communication between indoor and outdoor units	Wrong connection,or the wires be disconected or wrong adress setting of indoor unit or faulty power supply or faulty PCB or sub unit malfunction in MAXI system
0	8	07 *flashing	Abnormal communication between wired controller and indoor unit	Wrong connection or wired controller broken,or PCB faulty
0	12	0C	Malfunction of drain system	Pump motor disconnected or at wrong position,or the float switch,disconnected. or at wrong position,or the short circuit bridge disconnected
0	13	0D	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	0E	Indoor unit DC fan motor abnormal	DC Fan motor disconnected or DC Fan broken or circuit broken or motor blocked

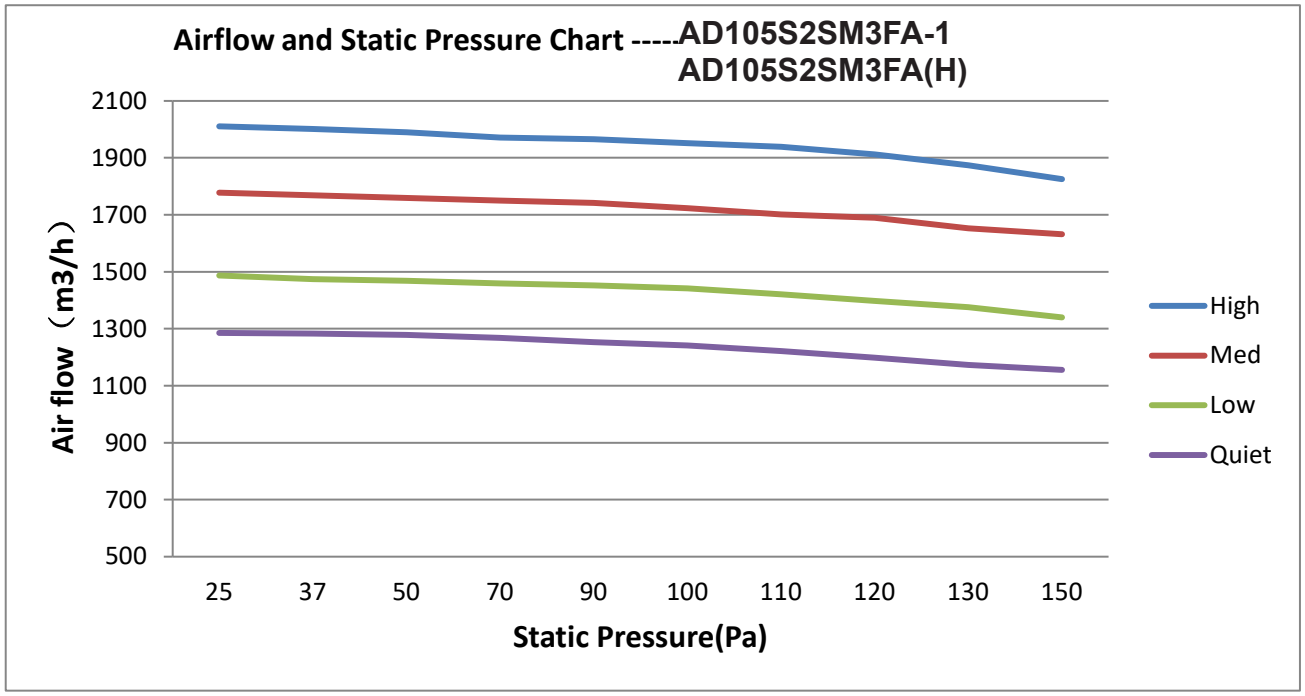
Note:
1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: If the outdoor error code is M(DECIMAL), the indoor unit's wired controller display will show the after converted hexadecimal code of "M+20"(DECIMAL), for example,if the outdoor error code is 2,the indoor unit wired controller display will flash the error code 16 (2→2+20=22 →change decimal 22 to hexadecimal code,get 16）
2. To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.
3.For YR-E17A communication error between I.D.PCB and wired controller 07 will flash in the main display not the check display interface .

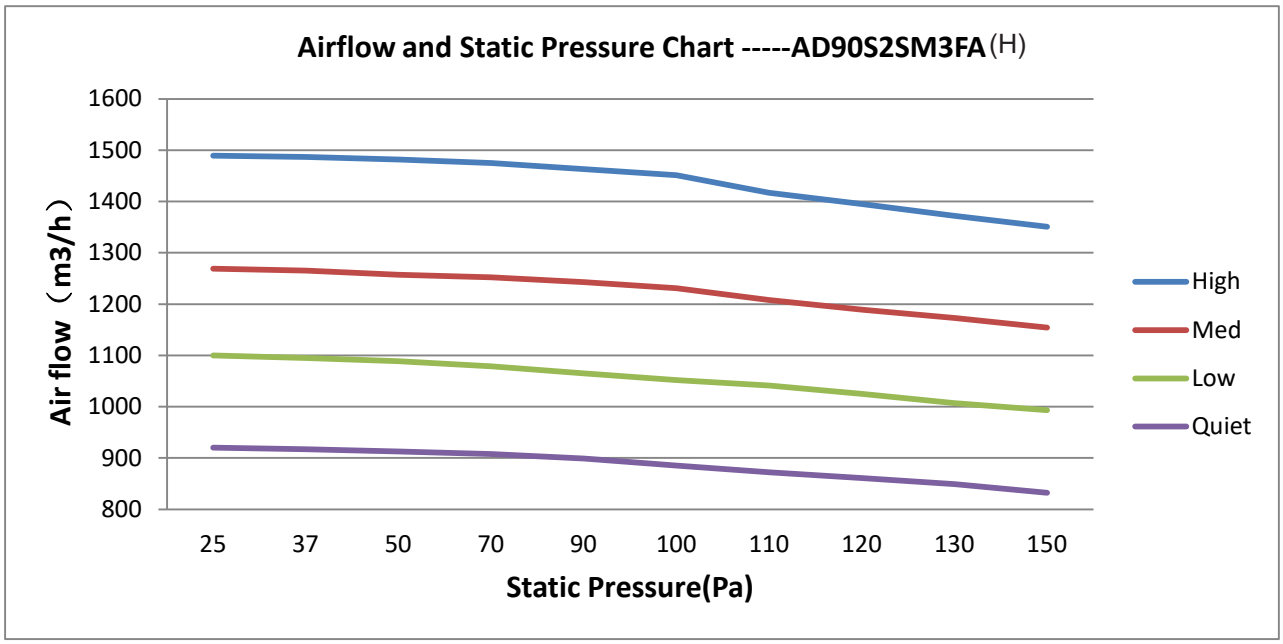
5.4 Airflow and Static Pressure Chart

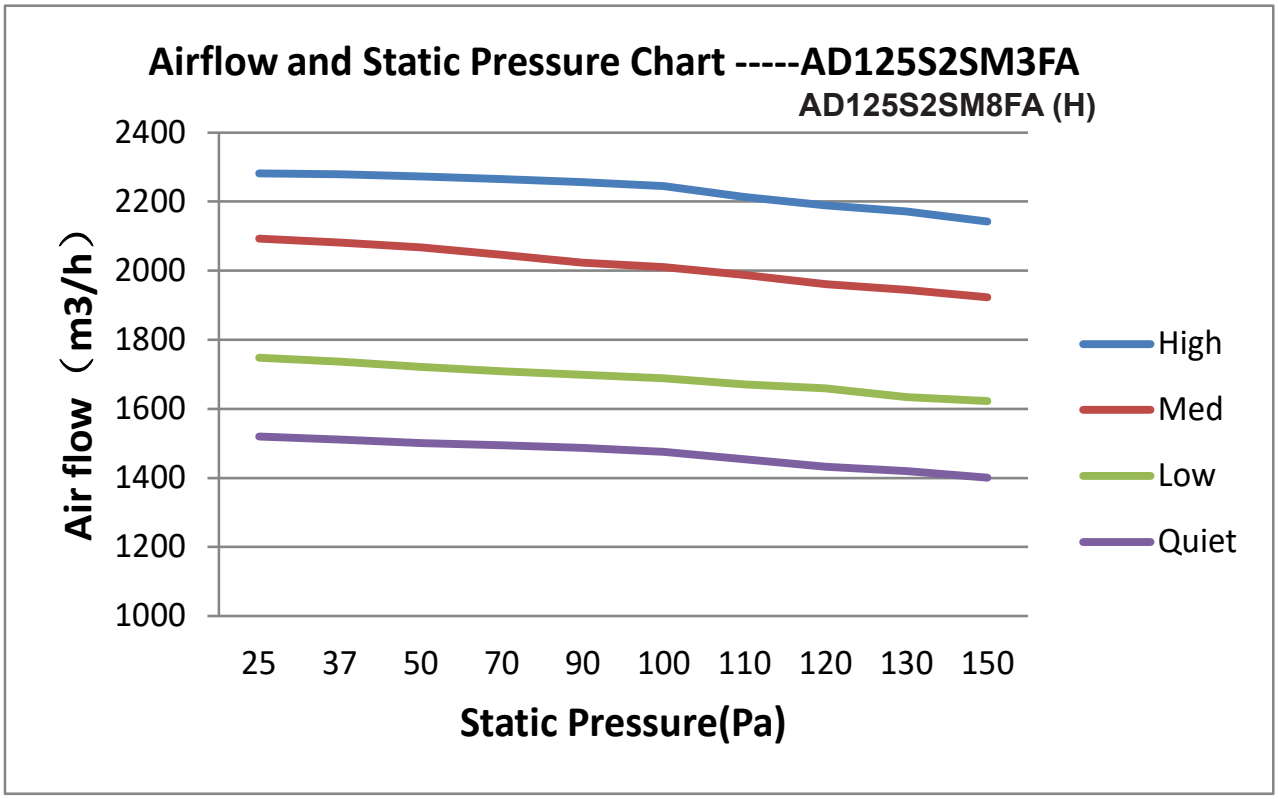


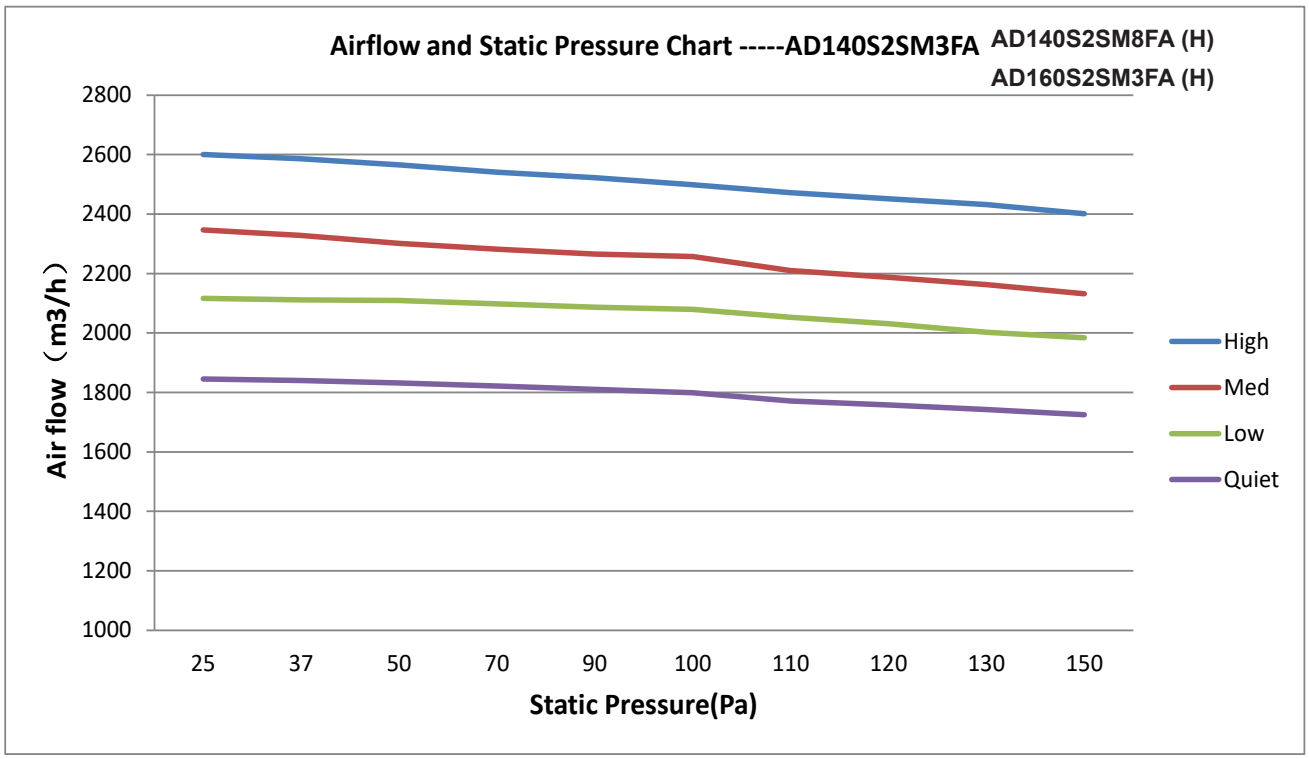



Airflow and Static Pressure Chart -----AD71S2SM3FA-1
AD71S2SM3FA(H)
Air flow（m3/h）
1600
1500
1400
1300
1200
1100
1000
900
800
700
600
25 37 50 70 90 100 110 120 130 150
Static Pressure(Pa)
High
Med
Low
Quiet

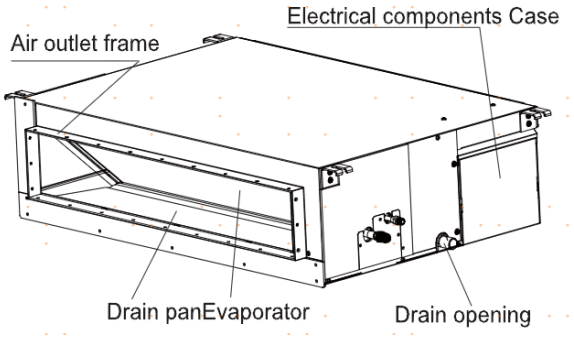

Airflow and Static Pressure Chart -----AD105S2SM3FA-1
AD105S2SM3FA(H)
Air flow（m3/h）
2100
1900
1700
1500
1300
1100
900
700
500
25 37 50 70 90 100 110 120 130 150
Static Pressure(Pa)
High
Med
Low
Quiet


Airflow and Static Pressure Chart -----AD90S2SM3FA(H)
Air flow（m3/h）
1600
1500
1400
1300
1200
1100
1000
900
800
25
37
50
70
90
100
110
120
130
150
Static Pressure(Pa)
High
Med
Low
Quiet


Airflow and Static Pressure Chart -----AD125S2SM3FA
AD125S2SM8FA (H)
Air flow（m3/h）
2400
2200
2000
1800
1600
1400
1200
1000
25
37
50
70
90
100
110
120
130
150
Static Pressure(Pa)
High
Med
Low
Quiet


Airflow and Static Pressure Chart -----AD140S2SM3FA
AD140S2SM8FA (H)
AD160S2SM3FA (H)
Air flow（m3/h）
2800
2600
2400
2200
2000
1800
1600
1400
1200
1000
25
37
50
70
90
100
110
120
130
150
Static Pressure(Pa)
High
Med
Low
Quiet

5.5 Instalaltion



AD35S2SM3FA-1 AD502SM3FA -1
AD71S2SM3FA -1 AD105S2SM3FA-1
AD35S2SM3FA(H) AD105S2SM3FA(H)
AD71S2SM3FA(H) AD125S2SM8FA (H)
AD90S2SM3FA (H) AD140S2SM8FA (H)
AD160S2SM3FA (H) AD502SM3FA(H)

Installation procedure

The machine is adaptive in following situation

1. Applicable ambient temperature range:

Cooling	Indoor temperature	max.DB/WB min.DB/WB	32/23°C 18/14°C
	Outdoor temperature	max.DB/WB min.DB/WB	46/26°C 10/6°C
Heating	Indoor temperature	max.DB/WB min.DB/WB	27°C 15°C
	Outdoor temperature	max.DB/WB min.DB/WB	24/18°C -15°C

2. If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similar qualified person.

3. If the fuse on the indoor PC board is broken please change it with the type of T5.0/250V(for series AD35/50/71S2SM3FA), T 3.15A/250V(For)

4. The wiring method should be in line with the local wiring standard.

5. The power cable should be:

H05RN-F 3G 4.0mm²(outdoor unit 1UH071/105N1ERG),or H05RN-F 3G 6.0mm²(outdoor unit 1UH125/140P1ERG), or H05RN-F 5G 4.0mm²(outdoor unit 1UH125/140P1EK/1U160S2SP1FB)

The connecting cable should be:

H05RN-F 4G 2.5mm2

All the cables shall have got the European authentication certificate. During installation, when the connecting cables break off, it must be assured that the grouding wire is the last one to be broken off.

6. The power cable and connect cable should be self-provided.

7. The breaker of the air conditioner should be all-pole switch, and the distance between its two contacts should be no less than 3mm.

8. The indoor unit installation height is at least 2.5m.

9. A leakage breaker must be installed.

10.For AD35~105, we can get the 10 different ESP through adjust wired controller YR-E17,

Stactic pressure grade	1	2	3	4	5	6	7	8	9	10
Stactic pressure	25pa	37pa	50pa	70pa	90pa	100pa	110pa	120pa	130pa	150pa

Adjsutment metchod bywired controller YR-E17: In the state of ON and non screen saving state, press Fan+ Set keys for 5s to enter static pressure grade adjustmentstate with static pressure icon flashing and current staticpressure
grade statically displaying. Press key↑↓ to changestatic pressure grade, then press Set key to confirm.
Details please refer to wired controller operation & installation manual.
Adjsutment metchod by Infrared remote controller+Infrared receiver RE-02: Step a:set the Infrared remote controller at condition: FAN mode, fan speed high Step b:then aim the remote controller at the infrared remote receiver RE-02, press HEALTH button 4+N times (1≤N≤10, integer) within 12 seconds, then the receiver will beep N+1 times, the static pressure level N is been set successfully.
Note: For Infrared remote controller YR-HQS01, need press ON/OFF button make the controller's at OFF status first, then open the button cover press FRESH button will enter FAN mode interface.

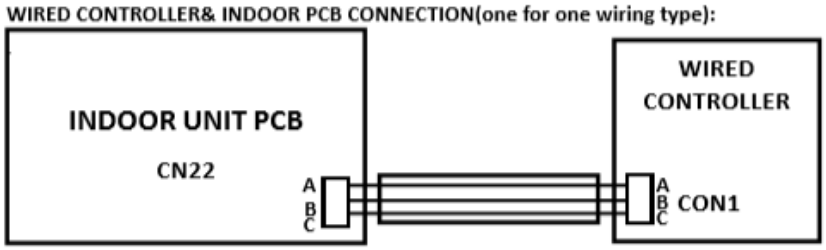
Wiring connections of wired controller:

There are three methods to connection wired controller and the indoor units:
A.One wired controller can control max. up to 16 sets of indoor units, and 3 pieces of polar wire must connect the wired controller and the master unit (the indoor unit connected with wired controller directly), the others connect with the master unit through 2 pieces of polar wire
B. One wired controller controls one indoor unit, and the indoor unit connects with the wired controller through 3 pieces of polar wire.
C. Two wired controllers control one indoor unit. The wired controller connected with indoor unit is called master one, the other is called slave one. Master wired controller and indoor unit; master and slave wired controllers are all connected through 3 pieces of polar wire.

Communication wiring:
The wired controller is equipped with special communication wiring in the accessories. 3-core terminal (1-white 2-yellow 3-red) is connected with the terminal A, B, C of wired controller respectively.
The communication wiring is 5 meter long; if the actual length is more than it, please distribute wiring according to below table:

Communication wiring length(m)	Dimensions of wiring
< 100	0.3mm2x3-core shielded wire
≥100 and <200	0.5mm2x3-core shielded wire
≥200 and <300	0.75mm2x3-core shielded wire
≥300 and <400	1.25mm2x3-core shielded wire
≥400 and <600	2mm2x3-core shielded wire

*One side of the shielded sheet of communication wire must be earthed.



Note: When do the wired controller & indoor PCB wiring work ,do not connect the shielded wired to the unit's shell,do not parallel wiring with strong electric lines within 0.3 meters, please keep strong lines and the signal lines separately

Installation procedure

NOTE

All wiring of this installation must comply with NATIONAL, STATE AND LOCAL REGULATIONS. These instructions do not cover all variations for every kind of installation circumstance. Should further information be desired or should particular problems occur, the matter should be referred to your local distributor.

WARNING

BE SURE TO READ THESE INSTRUCTIONS CAREFULLY BEFORE BEGINNING INSTALLATION. FAILURE TO FOLLOW THESE INSTRUCTIONS COULD CAUSE SERIOUS INJURY OR DEATH, EQUIPMENT MALFUNCTION AND/OR PROPERTY DAMAGE.

Preparation of indoor unit

Before or during the installation of the unit, assemble necessary optional panel etc. depending on the specific type.

Select places for installation satisfying following conditions and at the same time obtain the consent on the part of your client user.

a.Places where chilled or heated air circulates freely. When the installation height exceeds 3m warmed air stays close to the ceiling. In such cases, suggest your client users to install air circulators.

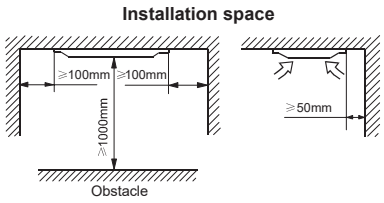
Places where perfect drainage can be prepared and sufficient drainage.

Places free from air disturbances to the suction port and blowout hole of the indoor unit, places where the fire alarm may not malfunction or short-circuit.

Places with the environmental dew-point temperature is lower than 28 and the relative humidity is less than 80 %. (When installing at a place under a high humidity environment, pay sufficient attention to the prevention of dewing such as thermal insulation of the unit.)

Ceiling height shall have the following height.

	AD35S2SM3FA-1 AD71S2SM3FA-1 AD105S2SM3FA-1 AD502SM3FA -1 AD35S2SM3FA(H) AD502SM3FA(H) AD71S2SM3FA(H) AD90S2SM3FA(H) AD105S2SM3FA(H) AD125S2SM8FA(H) AD140S2SM8FA(H) AD160S2SM3FA(H)
Combination with silent panel	366mm



Avoid installation and use at those places listed below.

a.Places exposed to oil splashes or steam (e.g. kitchens and machine plants).

Installation and use at such places incur deteriorations in the performance or corrosion with the heat exchanger or damage in molded synthetic resin parts.

b. Places where corrosive gas (such as sulfurous acid gas) or inflammable gas (thinner, gasoline etc.) in generated or remains. Installation and use at such places cause corrosion in the heat exchanger and damage in molded synthetic resin parts.

c. Places adjacent to equipment generating electromagnetic waves or high-frequency waves such as in hospitals. Generated noise may cause malfunctioning of the controller.

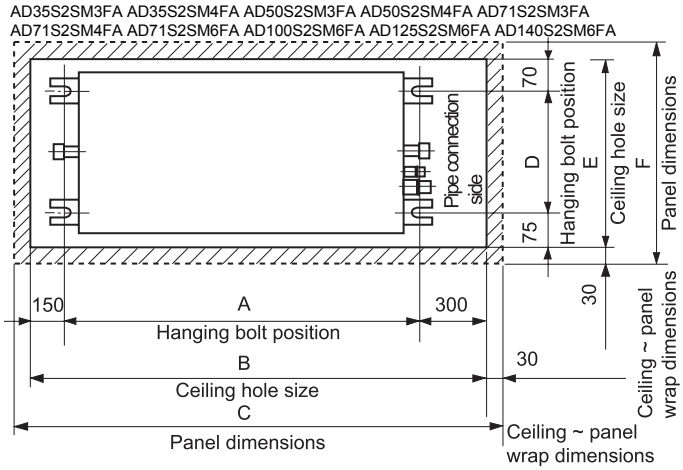
Pipe size

Model	Liquid side	Gas side
AD35S2SM3FA-1 AD35S2SM3FA(H)	φ6.35mm	φ9.52mm
AD502SM3FA -1 AD502SM3FA(H)	φ6.35mm	φ12.7mm
AD71S2SM3FA -1 AD71S2SM3FA(H) AD105S2SM3FA-1 AD105S2SM3FA(H) AD90S2SM3FA(H)	φ9.52mm	φ15.88mm
AD160S2SM3FA(H)	φ9.52mm	φ19.05mm

1. Preparation for suspending the unit

a. Size of hole at ceiling and position of hanging bolts

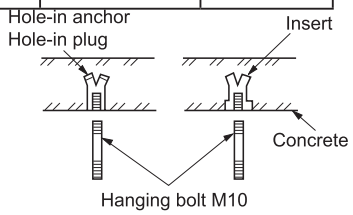
<Combination with silent panel >



Model \ Dimensions	A(mm)	B(mm)	C(mm)	D(mm)	E(mm)	F(mm)
AD35S2SM3FA-1AD35S2SM3FA(H)	762	1212	1272	620	765	825
AD502SM3FA -1 AD502SM3FA(H) AD71S2SM3FA -1 D71S2SM3FA(H) AD90S2SM3FA(H)	1162	1612	1672	620	765	825
AD105S2SM3FA-1 AD105S2SM3FA(H) AD125S2SM8FA(H) AD140S2SM8FA(H) AD160S2SM3FA(H)	1562	2012	2072	620	765	825

b.Hanger bolts installation

Use care of the piping direction when the unit is installed.

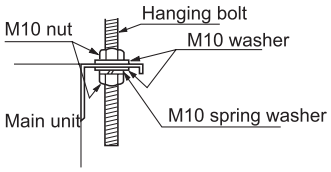


2.Installation of indoor unit

Fix the indoor unit to the hanger bolts.

If required it is possible to suspend the unit to the beam etc.

Directly by use of the bolts without using the hanger bolts.



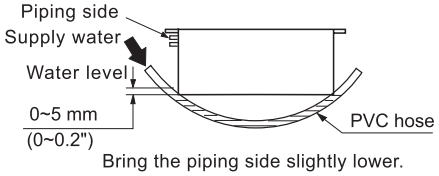
Note

When the dimensions of main unit and ceiling holes does not match, it can be adjusted with the slot holes of hanging bracket.

Adjusting to the levelness

(a) Adjust the out-of levelness using a level or by the following method. Make adjustment so that the relation between the lower surface of the unit proper and water level in the hose becomes as given below.

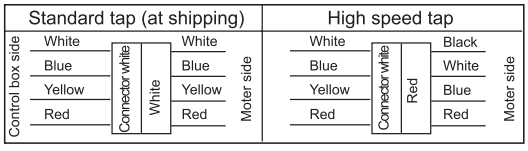
(b) Unless the adjustment to the levelness is made properly, malfunctioning or failure of the float switch may occur.



Tap selection on blower unit

(When the high performance filter is used.)

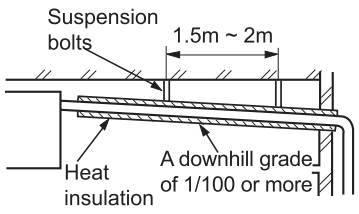
Taps of blower unit are set at the standard selection at the shipping from factory. Where the static pressure is raised by employing such option as the high performance filter, etc., change the connection of connectors provided at the flank of control box as shown below.



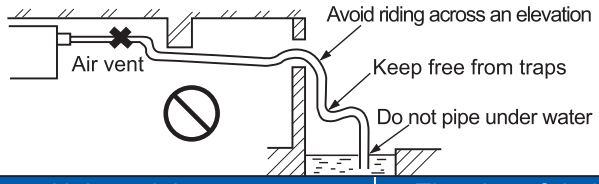
Drain Piping

(a) Drain piping should always be in a down hill grade (1/50-1/100) and avoid riding across an elevation or making traps.

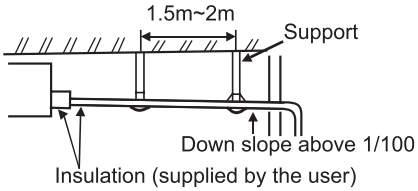
Good piping



Improper piping



For unit without water pump



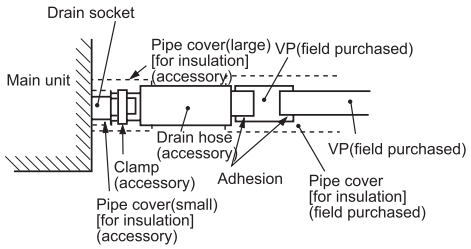
Unit model	The size of drain opening
AD35S2SM3FA-1 AD502SM3FA -1 AD71S2SM3FA -1 AD105S2SM3FA-1 AD35S2SM3FA(H) AD502SM3FA(H) AD71S2SM3FA(H) AD105S2SM3FA(H) AD90S2SM3FA(H) AD125S2SM8FA(H) AD140S2SM8FA(H) AD160S2SM3FA(H)	φ25mm

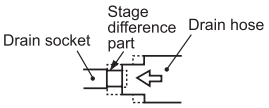
(b) When connecting the drain pipe to unit pay suffcient attention not to apply excess force to the piping on the unit side. Also fix the piping at a point as close as possible to the unit.

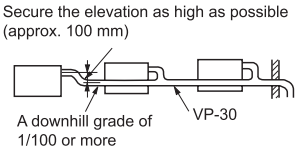
(c) For unit without water pump, please refer to the digram and select drain pipe size according to drain opening inner diameter size.
The drain pipe shall be slant downwards (greater than 1/100).
The horizontal length of the drain pipe shall be less than 20 m.
In case of long pipe, supports shall be provided every 1.5-2m to prevent wavy form.
Central piping shall be laid out according to the right figure.
Take care not to apply external force onto the drain pipe connection part.

(d) For unit with water pump drain pipeuse hard PVC general purpose pipe VP which can be purchased locally. When connecting, insert a PVC pipe end securely into the drain socket before tightening securely using the attached drain hose and clamp. Adhesive must not be used for connection of the drain socket and drain hose (accessory).

For unit with water pump



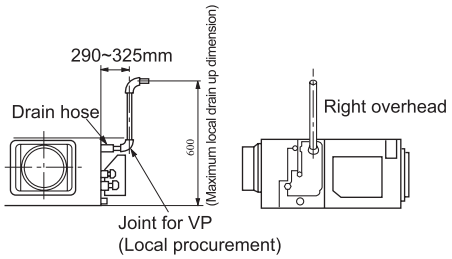




(e) When constructing drain piping for several units, position the common pipe about 100 mm below the drain outlet of each unit as shown in the sketch Use VP-30(11/4") or thicker pipe for this purpose.

(f) The hard PVC pipe put indoor side should be heat insulated. Do not ever provide an air vent.

(g) The height of the drain head can be elevated up to a point 500 mm above the ceiling, and when an obstacle exists in the ceiling space, elevate the piping to avoid the obstacle using an elbow or corresponding gadget. When doing this, if the stretch for the needed height is higher than 500mm, the back-flow quantity of drain at the event of interruption of the operation gets too much and it may cause overflow at the drain pan. Therefore, make the height of the drain pipe within the distance given in the sketch below.



(h) Avoid positioning the drain piping outlet at a place where generation of odor may be stimulated. Do not lead the drain piping direct into a sewer from where sulfur gas may generate.

Drainage Test

(1) Conduct a drainage test after completion of the electrical work.

(2) During the trial, make sure that drain flows properly through the piping and that no water leaks from connections.

(3) In case of a new building, conduct the test before it is furnished with the ceiling.

(4) Be sure to conduct this test even when the unit is installed in the heating season.

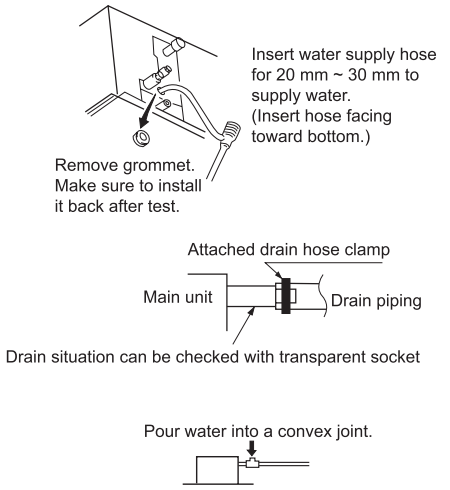
Procedures

(a) Supply about 1000 cc of water to the unit through the air outlet using a feed water pump.

(b) Check the drain while cooling operation.

Before the electrical work has not been completed, connect a convex joint in the drain pipe connection to provide a water inlet. Then, check if water leaks from the piping system and that drain flows through the drain pipe normally.

Drain Pipe



Installation Procedure

Calculate the draft and external static pressure and select the length, shape and blowout.

• Blowout duct

• 2-spot, 3-spot and 4-spot with φ200 type duct are the standard specifications.

Note (1) Shield the central blowout hole for 2-spot.

(2) Shield the blowout hole around the center or 3-spot.

• Limit the difference in length between spots at less than 2:1.

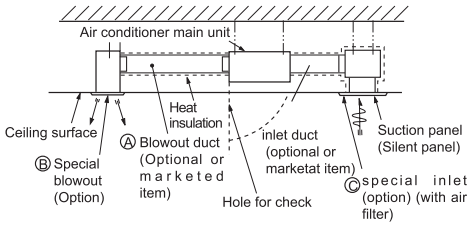
• Reduce the length of duct as much as possible.

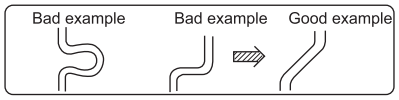
• Reduce the number of bends as much as possible. (Corner R should be as larger as possible.)

• Use a band. etc. to connect the main unit and the blowout duct flange.

• Conduct the duct installation work before finishing the ceiling.

Air Duct



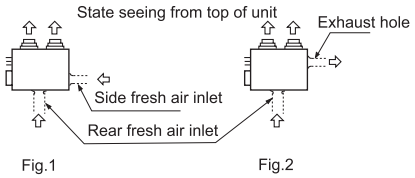


Connection of suction, exhaust ducts

a.Fresh air inlet

• Inlet can be selected from the side or rear faces depending on the working conditions.

• Use the rear fresh air inlet when the simultaneous intake and exhaust is conducted. (Side inlet cannot be used.)



b.Exhaust (Make sure to use also the suction.)

• Use the side exhaust port.

⚠ WARNING

DANGER OF BODILY INJURY OR DEATH

- TURN OFF ELECTRIC POWER AT CIRCUIT BREAKER OR POWER SOURCE BEFORE MAKING ANY ELECTRIC CONNECTIONS.
- GROUND CONN ECTIONS MUST BE COMPLETED BEFORE MAKING LINE VOLTAGE CONNECTIONS.

Precautions for electrical wiring

Electrical wiring work should be conducted only by authorized personnel.

Do not connect more than three wires to the terminal block. Always use round type crimped terminal lugs with insulated grip on the ends of the wires.

Use copper conductor only.

Selection of size of power supply and interconnecting wires

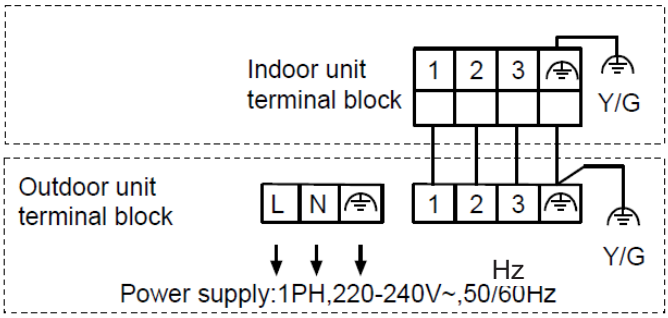
Select wire sizes and circuit protection from table below. (This table shows 20 m length wires with less than 2% voltage drop.)

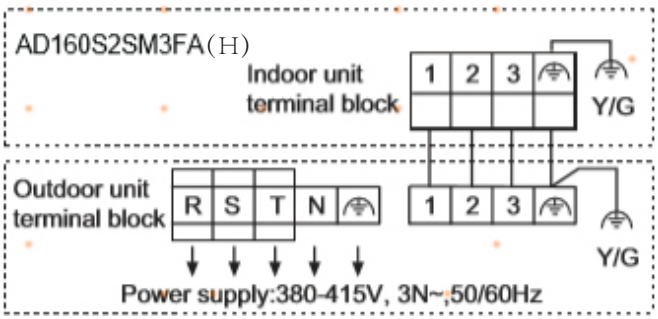
Model \ Item	Phase	Circuit breaker		Power source wire size (minimum)(mm^2)	Earth leakage breaker	
		Switch breaker(A)	Overcurrent protector rated capacity		Switch breaker(A)	Leak current(mA)
AD35S2SM3FA-1 AD35S2SM3FA(H) AD50S2SM3FA-1 AD50S2SM3FA(H) AD71S2SM3FA-1 AD71S2SM3FA(H)	1	40	26	4.0	40	30
AD105S2SM3FA-1 AD105S2SM3FA(H) AD90S2SM3FA(H) AD125S2SM8FA(H) AD140S2SM8FA(H) AD160S2SM3FA(H)	1	40	30	6.0	40	30

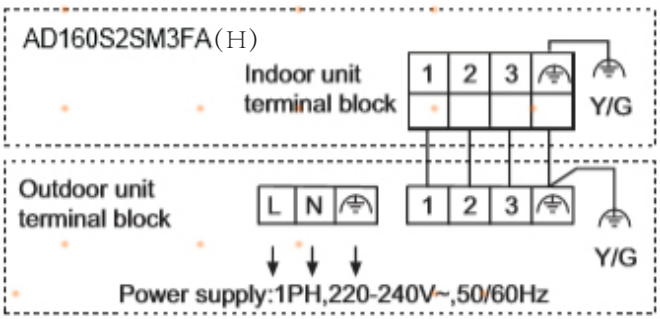
The specification of power cable is HO5RN-F3G 4.0mm^2
The specification of cable between indoor unit to outdoor unit is HO5RN-F4G 2.5mm^2

POWER SUPPLY & INDOOR-OUTDOOR CONNECTION:

Make wiring to supply power to the outdoor unit, so that the power for the indoor unit is supplied by outdoor unit terminal blocks.







6 . Indoor Units--Console Type

6.1 Specification

Item\Model				AF25S2SD1FA(H)/AF25S2SD1FA(D)	
Function			——	Cooling	Heating
Capacity			W	2500	2800
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.2	
Indoor unit	power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	centrifugal*1	
		Speed (H-M-L)	r/min	650/600/520/450/400	
		Fan motor output/ input power	W	30/40	
		Air-flows (H/M/L)	m³/h	450/400/350/300/250	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/ ϕ 7.0	
		Row	——	2	
		Total area	m²	0.193	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	700/210/600	
		Package	mmxmmxmm	783/303/695	
	Drainage pipe (material,I.D/O.D)		mm	PVC 20/26	
	Control type (Remote/Wired)			Remote YR-HQS01(S) or Wired YR-E17(O)	
	Fresh air hole dimension		mm	/	
	Electricity Heater		kW	none	
	Noise level(H-M-L)	Sound power level	dB(A)	52	
		Sound pressure level	dB(A)	42/38/34/31	
	weight (Net/Shipping)		kg/kg	16.5/18.5	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35(1/4)	
		Gas	mm	Φ9.52(3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27℃ DB/19℃ WB, indoor temperature (heating): 20℃ DB
Outdoor temperature (cooling): 35℃ DB/24℃ WB, outdoor temperature (heating): 7℃ DB/6℃ WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

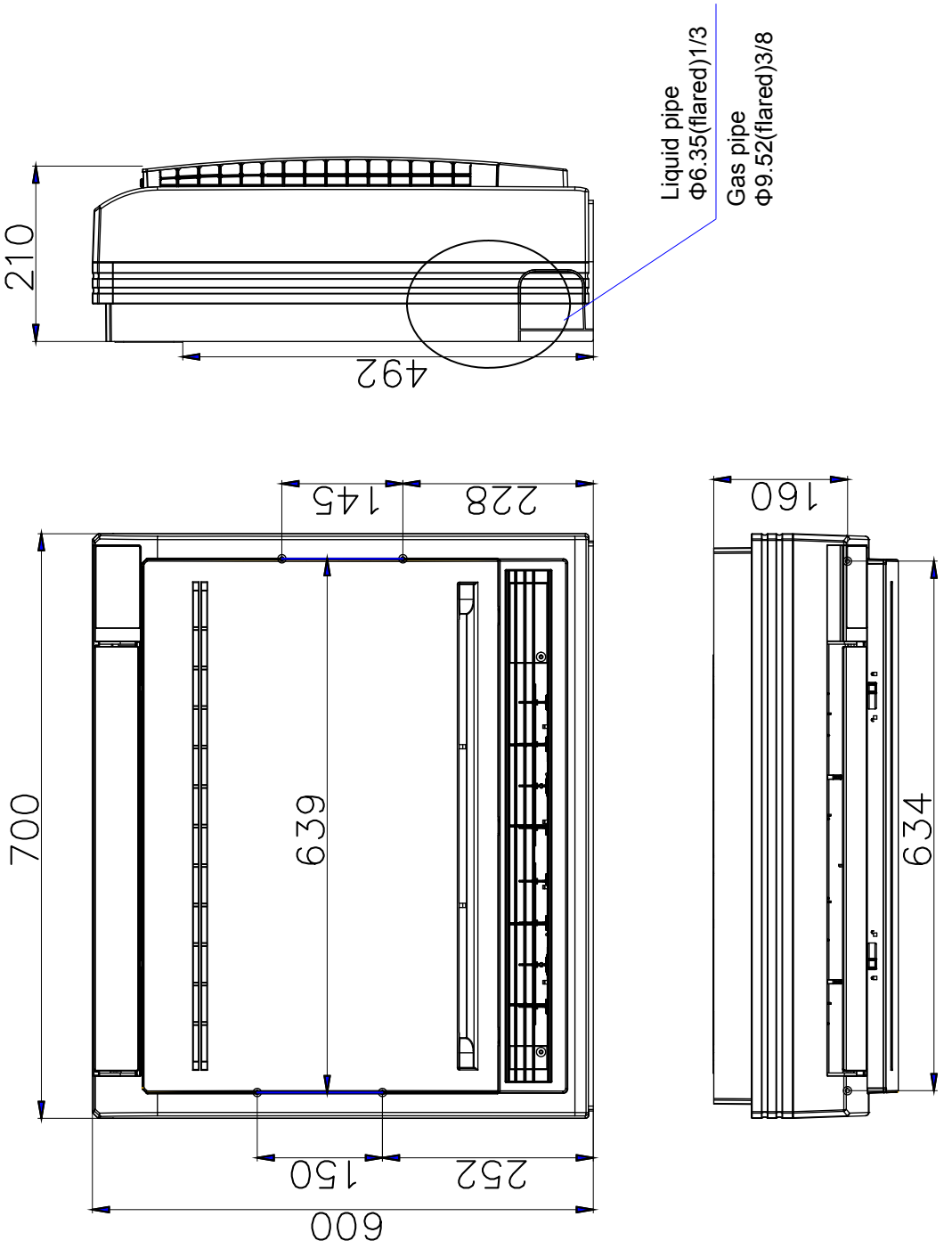
Item\Model				AF35S2SD1FA(H)/AF35S2SD1FA(D)	
Function			——	Cooling	Heating
Capacity			W	3400	3500
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.5	
indoor unit	power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	centrifugal*1	
		Speed (H-M-L)	r/min	700/650/570/500/450	
		Fan motor output/ input power	W	30/40	
		Air-flows (H/M/L)	m³/h	500/450/400/350/300	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/ ϕ 7.0	
		Row	——	2	
		Total area	m²	0.193	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	700/210/600	
		Package	mmxmmxmm	783/303/695	
	Drainage pipe (material,I.D/O.D)		mm	PVC 20/26	
	Control type (Remote/Wired)			Remote YR-HQS01(S) or Wired YR-E17(O)	
	Fresh air hole dimension		mm	/	
	Electricity Heater		kW	none	
	Noise level (H-M-L)	Sound power level	dB(A)	55	
		Sound pressure level	dB(A)	46/42/38/36	
	weight (Net/Shipping)		kg/kg	16.5/18.5	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ9.52 (3/8)	
	Connecting method			Flared	

Norminal condition: indoor temperature (cooling): 27℃ DB/19℃ WB, indoor temperature (heating): 20℃ DB
Outdoor temperature (cooling): 35℃ DB/24℃ WB, outdoor temperature (heating): 7℃ DB/6℃ WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

Item\Model				AF42S2SD1FA(H)/AF42S2SD1FA(D)	
Function			——	Cooling	Heating
Capacity			W	4200	4700
Sensible heat ratio			W	0.71	/
Dehumidifying capacity			10-³xm³/h	1.8	
indoor unit	power supply			1PH, 220-240V~, 50/60Hz	
	Fan	Type × Number	——	centrifugal*1	
		Speed (H-M-L)	r/min	800/750/670/600/550	
		Fan motor output/ input power	W	30/40	
		Air-flows (H/M/L)	m³/h	580/530/480/430/380	
	Heat exchanger	Type / Diameter	mm	inner grooved pipe/ ϕ 7.0	
		Row	——	2	
		Total area	m²	0.193	
		Temp.scope	°C	2.0-7.0	
	Dimension (LxWxH)	External	mmxmmxmm	700/210/600	
		Package	mmxmmxmm	783/303/695	
	Drainage pipe (material,I.D/O.D)		mm	PVC 20/26	
	Control type (Remote/Wired)			Remote YR-HQS01(S) or Wired YR-E17(O)	
	Fresh air hole dimension		mm	/	
	Electricity Heater		kW	none	
	Noise level (H-M-L)	Sound power level	dB (A)	58	
		Sound pressure level	dB (A)	49/46/43/41	
	weight (Net/Shipping)		kg/kg	16.5/18.5	
Piping	Refrigerant	Type		R32	
	Pipe	Liquid	mm	Φ6.35 (1/4)	
		Gas	mm	Φ9.52 (3/8)	
	Connecting method			Flared	

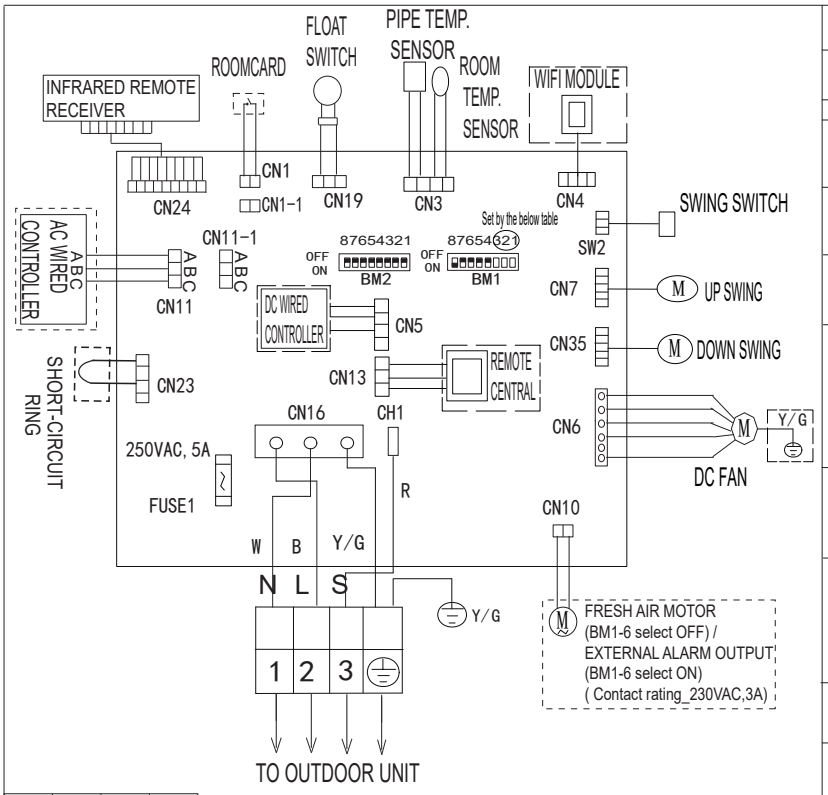
Norminal condition: indoor temperature (cooling): 27℃ DB/19℃ WB, indoor temperature (heating): 20℃ DB
Outdoor temperature (cooling): 35℃ DB/24℃ WB, outdoor temperature (heating): 7℃ DB/6℃ WB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter.

6.2 Dimension



6.3 Wiring diagram

AF25S2SD1FA(H) AF35S2SD1FA(H) AF42S2SD1FA(H)



BM1-1	BM1-2	BM1-3	CAPICITY(W)	
OFF	OFF	OFF	2500	AF25S2SD1FA(H)
ON	OFF	OFF	3500	AF35S2SD1FA(H)
OFF	ON	OFF	4200	AF42S2SD1FA(H)
ON	ON	OFF	7100	
OFF	OFF	ON	9000	
ON	OFF	ON	10500	
OFF	ON	ON	12500	
ON	ON	ON	14000	

BM1-4		BM1-5	
ON	Room card	ON	Cooling only available
OFF	Unavailable	OFF	Cooling & Heating

BM1-6	BM1-7	BM1-8	TYPE DEFINE
OFF	OFF	ON	Console

NOTE: 1.DASHED PARTS ARE OPTIONAL.
2. USER SHOULD NOT CHANGE THE DIP SWITCH BM1 AND BM2 WITHOUT GUIDANCE.

R:RED B:BLACK
W:WHITE
Y/G:YELLOW/GREEN
DC:DIRECT-CURRENT
AC:ALTERNATING-CURRENT
TEMP.:TEMPERATURE

INDOOR UNIT TROUBLE SHOOTING

LED flash times of indoor PCB		Malfunction display	Contents of Malfunction	Possible reasons
LED6	LED1			
0	1	E1	Malfunction of indoor unit ambient temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	2	E2	Malfunction of indoor unit piping temperature sensor	Sensor disconected, or broken,or at wrong position,or short circuit
0	4	E4	EEPROM wrong of indoor PCB	EEPROM chip disconected or broken or wrong programmed,or PCB broken
0	7	E7	Abnormal communication between indoor and outdoor units	Wrong connection,or the wires be disconected or wrong adress setting of indoor unit or faulty power supply or faulty PCB or slave unit malfunction in MAXI system
0	8	E8	Abnormal communication between wired controller and indoor unit	Wrong connection or wired controller broken,or PCB faulty
0	12	E10	Malfunction of drain system	Pump motor disconnected or at wrong position,or the float switch disconnected, or at wrong position,or the short circuit bridge disconnected
0	13	C1	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	E14	Indoor unit DC fan motor abnormal	DC Fan motor disconnected or DC Fan broken or circuit broken

Note:
1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED6 flash times stands for tens digit,and LED1 flash times stands for units digit, use this bidigitate figure minus 20,then will get the outdoor error code.For example,if the outdoor error code is 15,LED6 will flash 3 times firstly,two seconds later,LED1 will flash 5 times , and four seconds later the process will repeat again.
2.LED6 is a green one on the indoor PCB,LED1 is a yellow one.
3.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.

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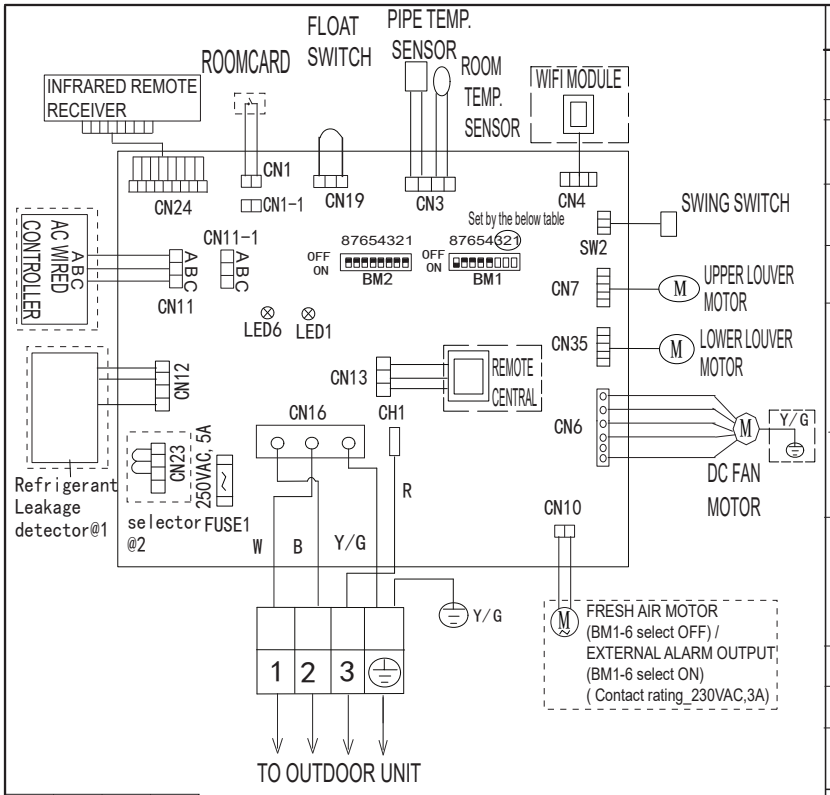
AF25S2SD1FA(D) AF35S2SD1FA(D) AF42S2SD1FA(D)



BM1-1	BM1-2	BM1-3	CAPICITY(W)
OFF	OFF	OFF	2500
ON	OFF	OFF	3500
OFF	ON	OFF	4200
ON	ON	OFF	7100
OFF	OFF	ON	9000
ON	OFF	ON	10500
OFF	ON	ON	12500
ON	ON	ON	14000

NOTE: 1.DASHED PARTS ARE OPTIONAL.
2. USER SHOULD NOT CHANGE THE DIP SWITCH BM1 AND BM2 WITHOUT GUIDANCE.
3.@1 and @2 MUST ALL CONNECT WHEN REFRIGERNT IS R32

BM1-4	Room card	BM1-5	Cooling Heating	BM1-6	BM1-7	BM1-8	TYPE DEFINE
ON	Available	ON	Cooling only available	OFF	OFF	ON	Console
OFF	Unavailable	OFF	Cooling & Heating				

R:RED B:BLACK
W:WHITE
Y/G:YELLOW/GREEN
DC:DIRECT-CURRENT
AC:ALTERNATING-CURRENT
TEMP.:TEMPERATURE

INDOOR UNIT TROUBLE SHOOTING

LED flash times of indoor PCB		Malfunction display	Contents of Malfunction	Possible reasons
LED6	LED1			
0	1	E1	Malfunction of indoor unit ambient temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	2	E2	Malfunction of indoor unit piping temperature sensor	Sensor disconected, or broken,or at wrong position,or short circuit
0	4	E4	EEPROM wrong of indoor PCB	EEPROM chip disconected or broken or wrong programmed,or PCB broken
0	7	E7	Abnormal communication between indoor and outdoor units	Wrong connection,or the wires be disconected or wrong adress setting of indoor unit or faulty power supply or faulty PCB or slave unit malfunction in MAXI system
0	8	E8	Abnormal communication between wired controller and indoor unit	Wrong connection or wired controller broken,or PCB faulty
0	12	E10	Malfunction of drain system	Pump motor disconnected or at wrong position,or the float switch,disconnected, or at wrong position,or the short circuit bridge disconnected
0	11	E11	R32 refrigerant leakage been detected	R32 refrigerant leakage, or false alarm of interfering gas
0	13	C1	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	E14	Indoor unit DC fan motor abnormal	DC Fan motor disconnected or DC Fan broken or circuit broken
0	19	E19	R32 refrigerant leakage sensor abnormal	Sensor disconected,or broken, or at wrong position,or short circuit

Note:
1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED6 flash times stands for tens digit,and LED1 flash times stands for units digit, use this bidigitate figure minus 20,then will get the outdoor error code.For example,if the outdoor error code is 15,LED6 will flash 3 times firstly,two seconds later,LED1 will flash 5 times , and four seconds later the process will repeat again.
2.LED6 is a green one on the indoor PCB,LED1 is a yellow one.
3.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.

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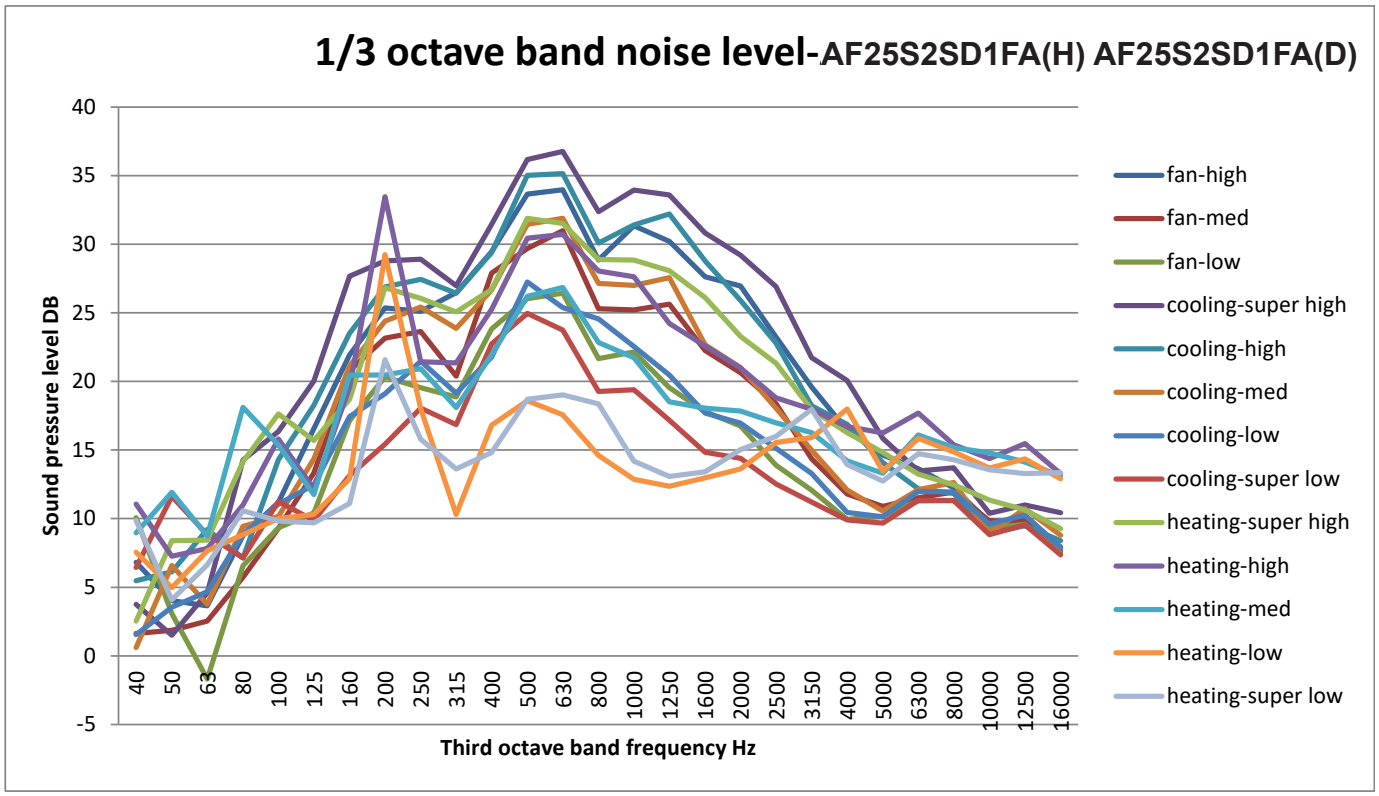
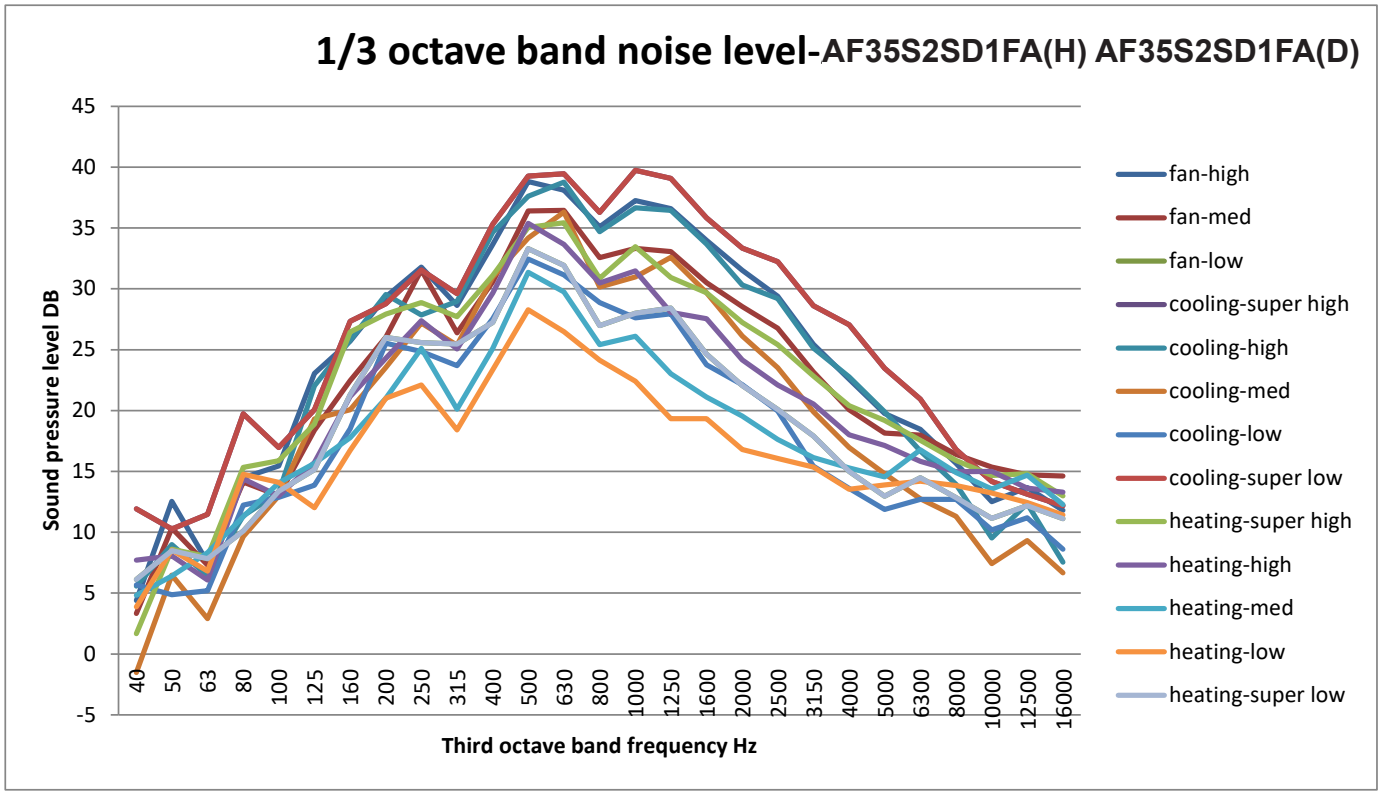
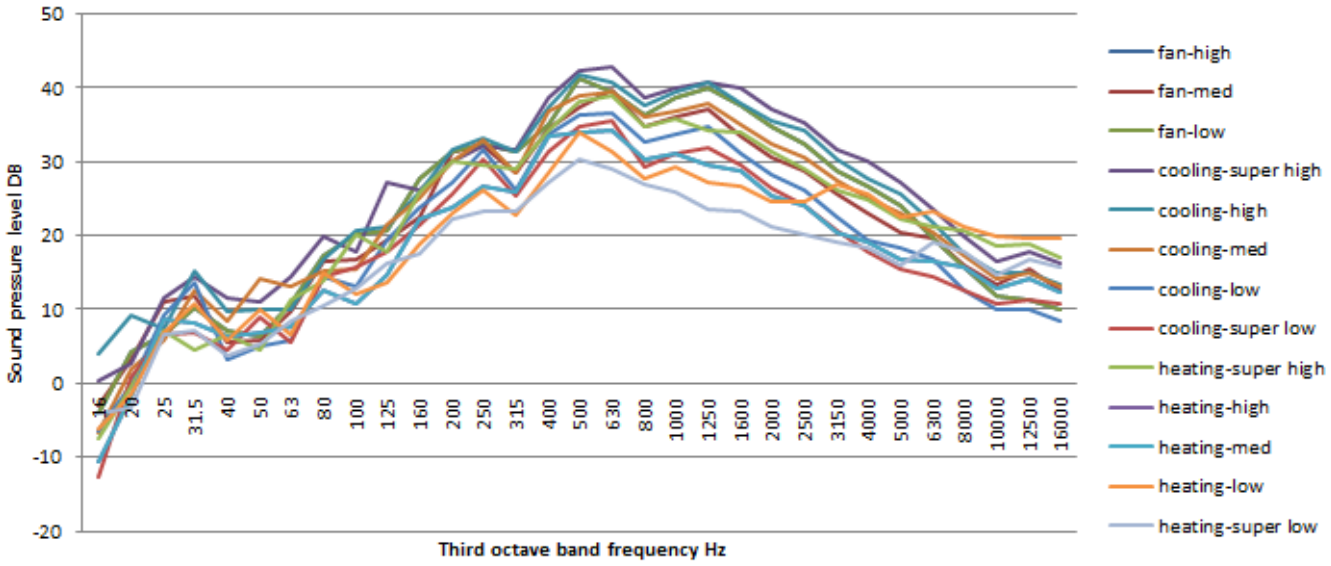
6.4 Sound pressure level



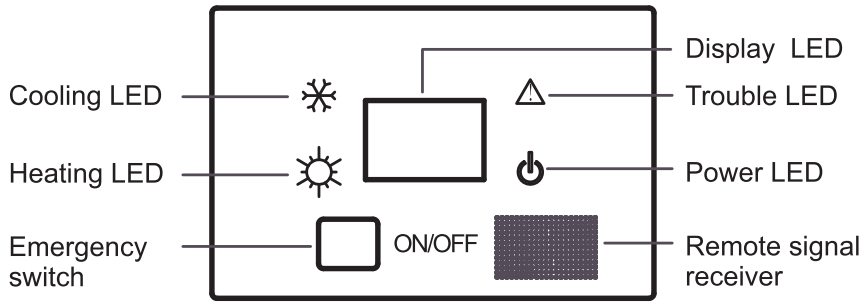


1/3 octave band noise level-AF42S2SD1FA(H) AF42S2SD1FA(D)



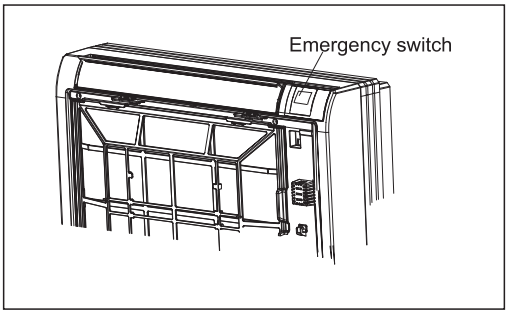
6.5 Installation

Special functions and instructions



Emergency operation of indoor unit

- When the remote controller is lost or damaged, the emergency switch can be operated under the panel. (as shown in the figure).
- In the OFF state, pressing the emergency switch can turn on automatic operation. Air conditioning automatically selects
- operation mode according to indoor temperature (cooling or heating).
  However, temperature setting and wind speed can not be changed. In the ON state, press this button to stop the air conditioner.



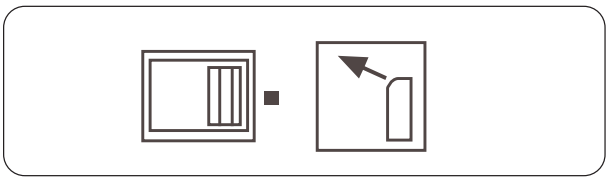
Indoor air supply control

CAUTION

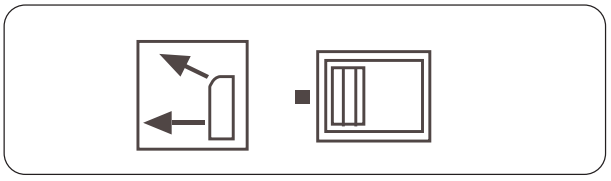
Before opening the front frille, be sure to stop the operation and tum the breaker OFF.

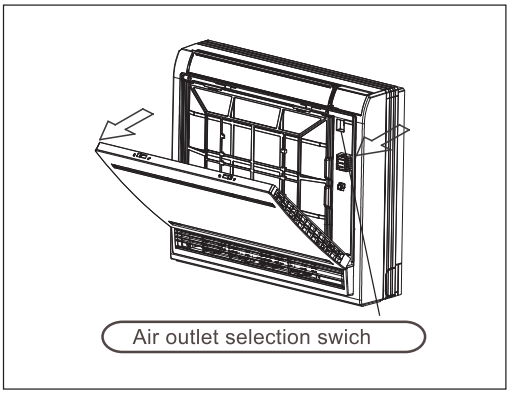
Do not touch the metal parts on the inside of the indoor unit, as it may result in injury.

- Regardless of the operating mode or situation, air blows from the upper air outlet.
- Use this swich when you do not want air coming out of lower air outlet.(While sleeping etc..)



- Air conditioner automatically decides the appropriate blowing pattern depending on the operating mode and situation.
  During Cool/Dry and Fan mode, so that cold air does not come
- into direct contact with people, air is blown upper air outlet.





Installation Procedure

CAUTIONS:

To ensure proper installation, read "Cautions" carefully before working. After installation, start the unit correctly and show customers how to operate and maintain the unit.

Meanings of Warning and Cautions:

⚠ **WARNING:** Serious injury or even death might happen, if it is not observed.

⚠ **CAUTION:** Injury to people of damages to machine might happen, if it is not observed.

⚠ **WARNING:**

- Installation shall be done by professional people, don't install unit by yourself. Incorrect installation will cause water leakage, electric shock or fire.
- Install unit as per the Manual. Incorrect installation will cause water leakage, electric shock or fire accident.
- Be sure to use specified accessaries and parts. Otherwise, water leakage, electric shock, fire accident or unit falling down may happen.
- Unit should be placed on a place strong enough to hold the unit. Or, unit will fall down causing injuries.
- When install the unit, take in consideration of storms, typhoom, earthquake. Incorrect installation may cause unit to fall down.
- All electric work shall be done by experienced people as per eocal code, regulations and this Manual.
- Use exclusive wire for the unit. Incorrect installation or undersized electric wire may cause electric shock or fire accident.
- All the wires and circuit shall be safe. Use exclusive wire firmly fixed. Be sure that external force will not affect terminal bolck and electric wire. Poor contact and installation may cause fire accident.
- Arrange wire correctly when connectin indoor and outdoor power supply. Fix terminal cover firmly to avoid overheat, electric shock or even fire accident.
- In case retrigerant leakage occurred during unit installation, keep a good ventilation in the room.
- Poisonous gas will occur when meet with fire.
- Check the unit upon installation. Be sure there is no leakage. Refrigerant will induce poisonous gas when meet heat source as heater, oven, etc.
- Cut power supply before touching terminal bolck.

⚠ **CAUTION:**

- Unit shall be grounded. But grounding shall not be connected to gas pipe water pipe, telephone line. Poor grounding will cause electric shock.
- Be sure to install a leakage breaker to avoid electric shock.
- Arrange water drainage according to this Manual. Cover pipe with insulation materials in case dew may occur. Unproper installation of water drainage will cause water leakage and wer your furniture.
- To maintain good picture or reduce noise, keep at least 1 m from T.V. radio, when install indoor and outdoor unit, connecting wire and power line. (If the radio wave is relatively strong, 1 m is not enough to reduce noise).
- Don't install unit in following places:
  (a) Oil mist or oil gas exists, such as kitchen, or, plastic parts may got aged, or water leakage.
  (b) Where there is corrosive gas. Copper tube and welded part may be damaged due to corrosion, causing leakage.
  (c) Where there is strong radiation. This will affect unit's control system, causing malfunction of the unit
  (d) Where flamable gas, dirt, and volatile matter (thinner, gasoline) exist, These matter might cause fire accident.
- Refer to paper pattern when installing unit.

Earthing

Cautions for the installation personnel

Don't fail to show customers how to operate unit.

Installation Procedure

❶ **BEFORE INSTALLATION** <Don't discard any accessories until comp>

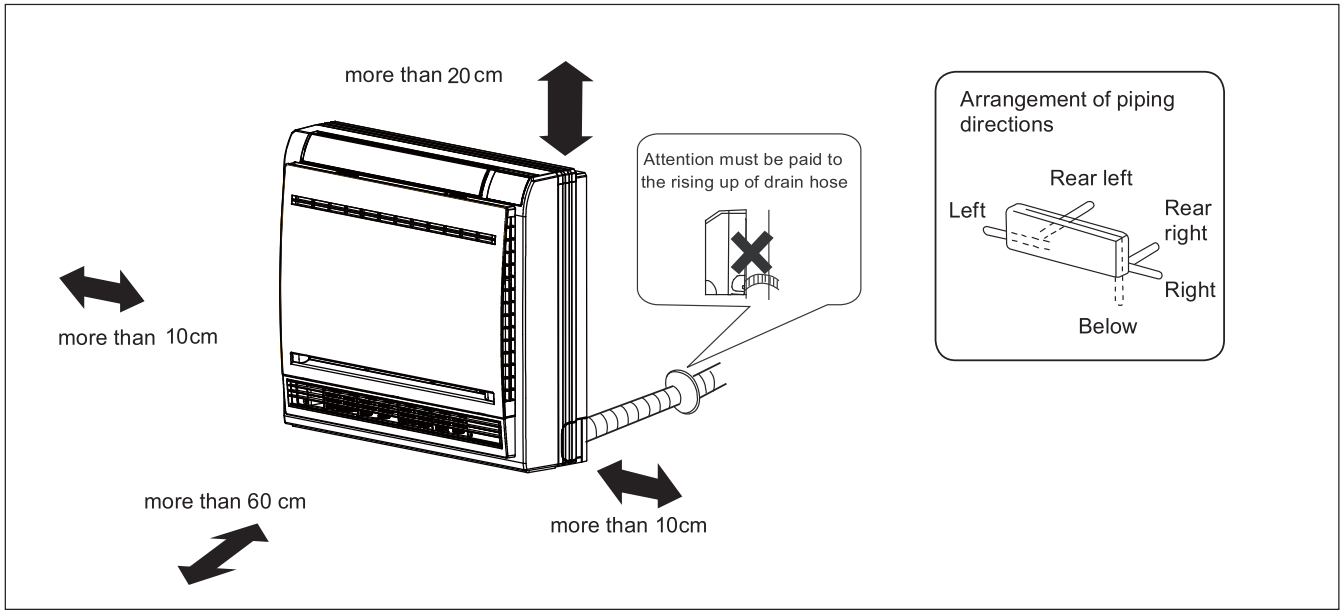
- Determine the way to carry unit to installation place.
- Don't remove packing until unit reaches installation place.
- If unpacking is unkavoidable, protect unit properly.

❷ **SELECTION OF INSTALLATION PLACE**

(1) Installation place shall meet the following and agreed by customers:

- Place where proper air flow can be ensured.
- No block to air flow.
- Water drainage is smpoth.
- Place strong enough to support unit weight.
- Place where inclination is not evident on ceiling.
- Enough space for mainenance.
- Indoor and outdoor unit piping length is within limit. (Refer to Installation Manual for outdoor unit.)
- Indoor and outdoor unit, power cable, inter unit cable are at least 1 m away fromT.V. radop. This is helpful to avoid picture disturbance and noise. (Even if 1 m iskept, noise can still appear if radio wave is strong)

❸ Drawing for the installation of indoor units

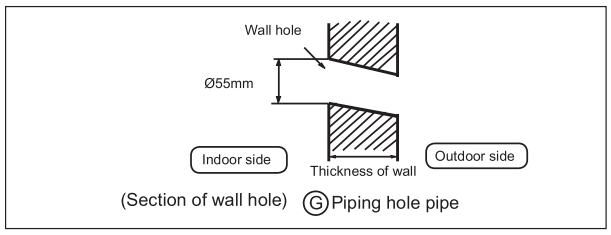


Installation Procedure

Indoor Unit Installation

(1)Making a Hole on the Wall and Fitting the Piping Hole Cover

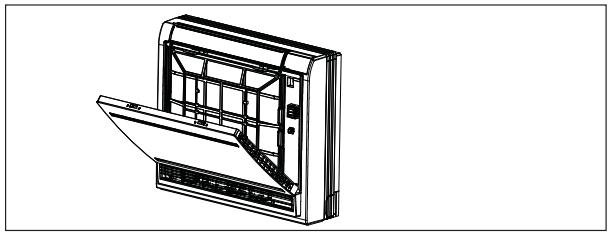
- Make a hole of 55mm in diameter, slightly descending to outside the wall.
- Install piping hole cover and seal it off with putty after installation.



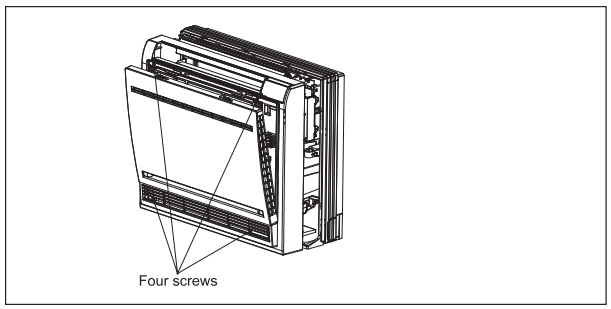
(2)Installation of the Indoor Unit

Removal of Front Grille

- Hole the front panel by the tabs on the both sides and lift it until it stops with a click.



- Loosen the marked four screws and open the grille.



Drawing of pipe

[Rear piping]

- Draw pipes and the drain hose, then fasten them with the adhesive tape.

[Left-Left-rear piping]

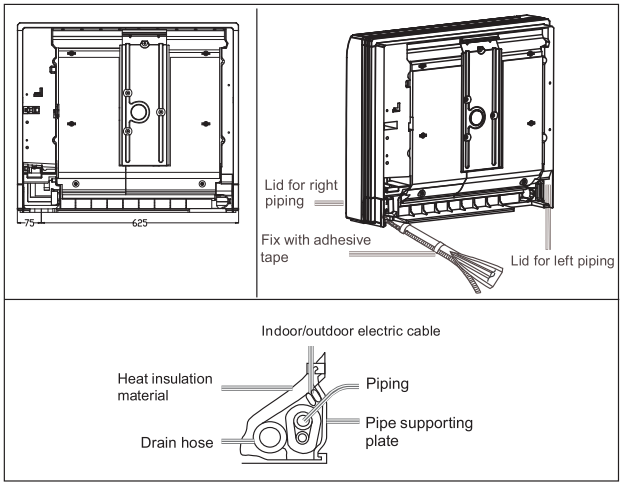
- In case of left side piping, cut away, with a nipper, the lid for left piping.
- In case of left-rear piping, bend the pipes according to the piping direction to the mark of hole for left-rear piping which is marked on heat insulation materials.

1.Insert the drain hose into the dent of heat insulation materials of indoor unitl.

2.Insert the indoor/outdoor electric cable from backside of indoor unit, and pull it out on the front side, then connect them.

3.Coat the flaring seal face with refrigerant oil and connect pipes.

Cover the connection part with heat insulaiton materials closely, and make sure fixing with adhesive tape.



- Indoor/outdoor electric cable and drain hose must be hound with efrigerant piping by protecting tape.

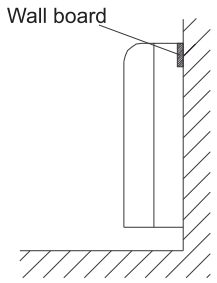
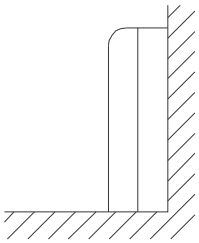
[Other direction piping]

- Cut away, with a nipper, the lid for piping according to the piping direction and then bend the pipe according to the position of wall hole, When bending,be careful not to crash pipes.
- Connect beforehand the indoor/outdoor electric cable, and then pull out the connected to the heat insulation of connecting part specially.

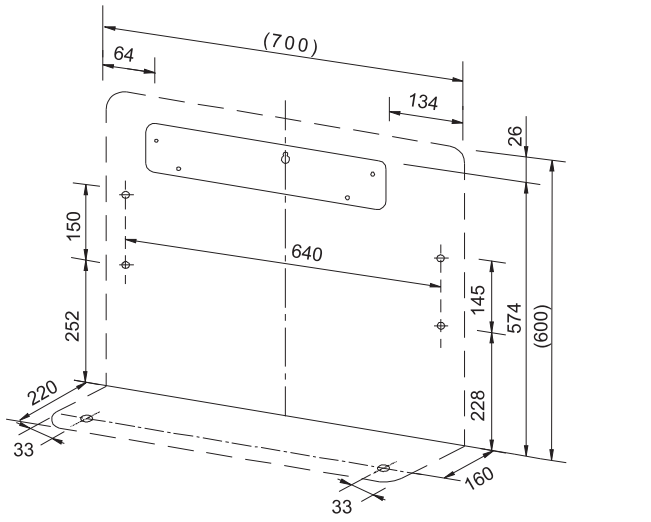
Installation Procedure

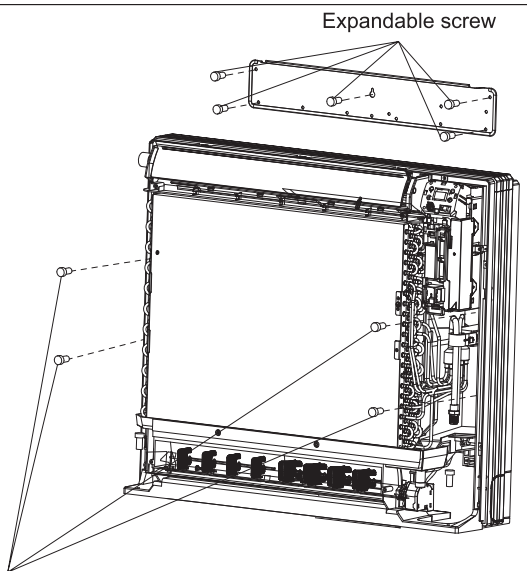
Fixing the indoor unit body

Indoor installation can be done in any of the following two ways:

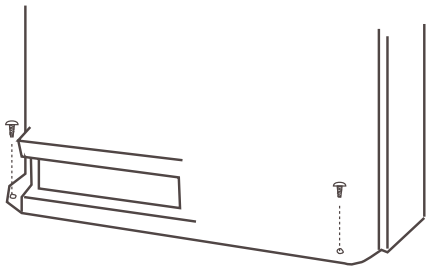
Hanging wall	Console mode
	

•Fix the wall board,then use four screws to fix the unit on the wall. As the figure shown.





• Remove the front panel, then use two fastening screws to fix the unit on the floor. As the figure shown.

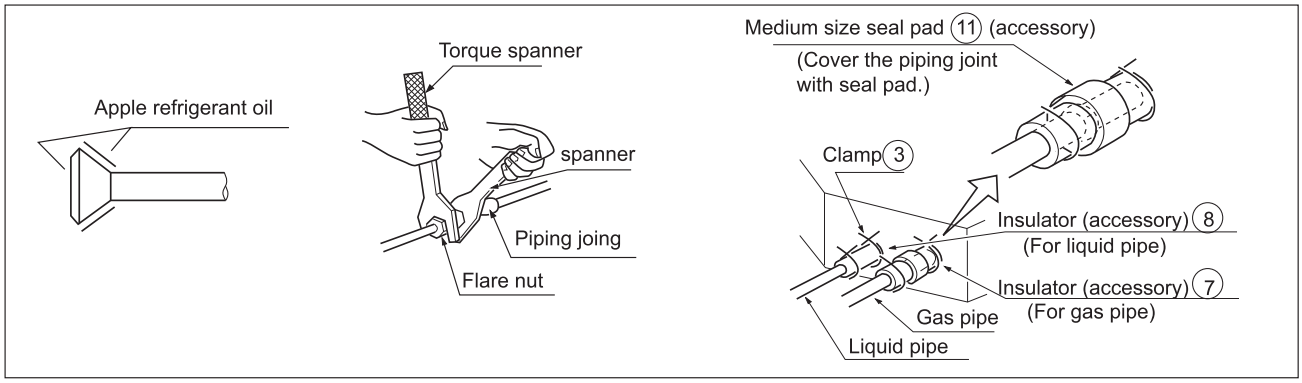


• Once refrigerant piping and drain piping connections are complete, fill the gap of the through hole with putty. A
the front panel and front grille in their orginal positions once all connections are complete.

Installation Procedure

❺ REFRIGERANT PIPING (As for outdoor piping, please refer to installation Manual of outdoor unit.)

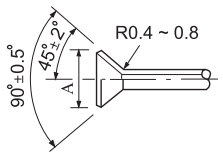
- Outdoor is precharged with refrigerant.
- Be sure to see the Fig.1, when connecting and removing piping from unit.
- For the size of the flare nut, please refer to Table 1.
- Apply refrigerant oil at both inside and outsid of flare nut. Tighten it band tight 3-4 turns then tighten it.
- Use torque specified in Table 1. (Too much force may damage flare nut, causing gas leakage).
- Check piping joints for gas leakage. Insulate piping as shown in Fig. below.
- Cover joint of gas piping and insulator with seal.



Pipe size

Model	Liquid side	Gas side
AF25S2SD1FA(H) AF35S2SD1FA(H) AF50S2SD1FA(H)	Ø6.35mm	Ø9.52mm

Table 1

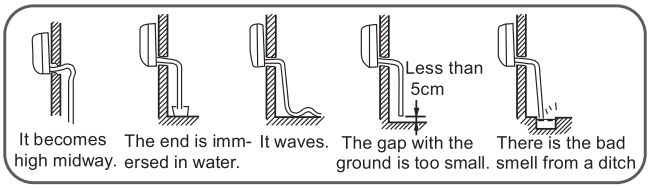
Pipe size	Tighten torque	A(mm)	Flare shape
Φ6.35	1420~1720N.cm (144~176kgf.cm)	8.3~8.7	
Φ9.52	3270~3990N.cm (333~407kgf.cm)	12.0~12.4	
Φ12.7	4950~6030N.cm (490~500kgf.cm)	12.4~16.6	
Φ15.88	6180~7540N.cm (630~770kgf.cm)	18.6~19.0	
Φ19.05	9720~11860 N.cm (990~1210 kgf.cm)	22.9~23.3	

❻ INSTALLATION OF WATER DRAINAGE PIPE

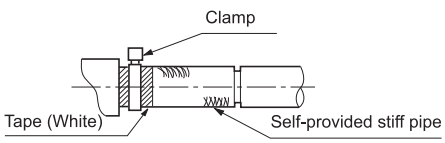
(1) Install water drainage pipe

- Pipe dia, shall be equal or larger than that of unit piping.(pipe of polyethylene; size: 20mm; O.D:26mm)
- Drain pipe should be short, with a downward slope at least 1/100 to prevent air bag from happening.
- If downward slope can't be made, take other measures to lift it up.

- Please install the drain hose so as to be downward slope without fail.
- Please don't do the drainage as shown below.
- Please pour water in the drain pan of the indoor unit, and confirm that drainage is carried out surely to outdoor.
- In case that the attached drain hose is in a room, please apply heat insulation to it without fail.



- Use the self-provided stiff pipe and clamp with unit. Insert water pipe into water plug until it reaches the white tape.
- Insulate drain hose in the room.

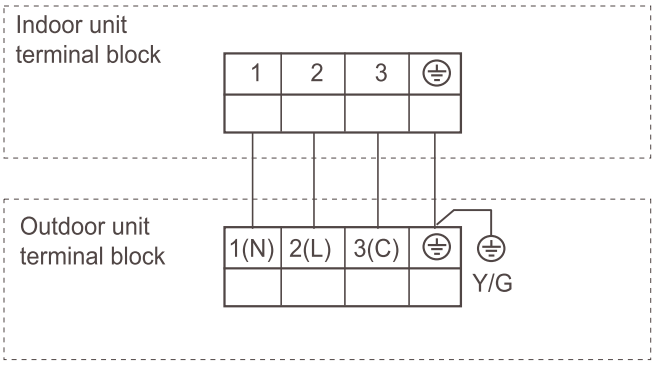


Installation Procedure

Wiring connection

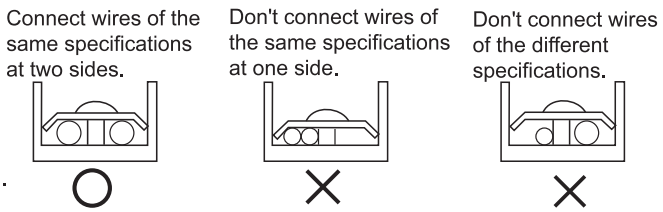
Make wiring to supply power to the outdoor unit, so that the power for the indoor unit is supplied by terminals.
The specification of power cable is H05RN-F3G 4.0mm ^{2}
The specification of cable between indoor unit to outdoor unit is H05RN-F4G 2.5mm ^{2}

AF25S2SD1FA
AF35S2SD1FA
AF42S2SD1FA



⚠ WARNING:

Obscrve the following when connecting power supply terminal block:
Don't connect wires of different specifications to the same terminal block.
(Loose wire may cause overheating of circuit)
Connect wires of same specifications as shown in right Fig.



❽ WIRING EXAMPLE

As for outdoor unit circuit, please see Installation Manual of outdoor unit.
Note: All electric wires have their own poles, poles must match that on terminal block.

Pay special care to the following and check after installation

Item to the checked	Unproper installation may cause	Check
Is indoor unit firmly installed?	Unit might fall down, make vibration or noise.	
Is gas leakage check performed?	This may lead to gas shortage.	
Is unit properly insulated?	Dew or water drop may occur.	
Is water drainage smooth?	Dew or water drop may occur.	
Is power voltage meet that stipulated on the nameplate?	Problem may occur or parts got burned.	
Is wiring and piping correctly arranged?	Problem may occur or parts got burned.	
Is unit safely grounded?	There might be a danger of electric shock.	
Is wire size correct?	Problem may occur or parts got burned.	
Are there any obstacles on air inlet and outlet grill of indoor and outdoor unit?	This may cause poor cooling.	
Is record made for piping length and refrigerant charging amount?	It is hard to control refrigerant charging amount.	

Attention: after finishing installation,confirm no refrigerant leakage.

7 . Indoor Units--Cabinet

7.1 Specification

Item			Model		AP140S2SK1FA(H)/1U140S2SN1FA	
Function					cooling	heating
Capacity				KW	13.4(3.5-14)	15(4.0-15.5)
Sensible heat ratio					0.76	
Total power input				KW	5.83(1.0-6.5)	5.45(1.0-6.5)
Max. power input				W	6500	6500
EER or COP				W/W	2.3(A)	2.75(A)
Dehumidifying capacity				10^{-3}×m³/h	3.8	
Power cable					2.5 mm2	
Power source				N, V, Hz	1ph, 220-240, 50/60	
Running /Max.Running current				A / A	25.6/30	24.1/30
Start Current				A	2	
Circuit breaker				A	5	
Indoor unit	Unit model (color)				AP140S2SK1FA(H)/INDOOR UNIT	
	Fan	Type × Number			CENTRIFUGALX1	
		Speed(H-M-L)		r/min	520/450/380	
		Fan motor output/ input power		W	130/180	
		Air-flow(H-M-L)		m³/h	1850/1500/1350	
	Heat exchanger	Type / Diameter		mm	inner grooved pipe/φ7.0	
		Row			2	
		Total Area		m²	/	
	Dimension	External	(L×W×H)	mm×mm×mm	600*350*1850	
		Package	(L×W×H)	mm×mm×mm	680*423*2022	
	Drainage pipe (material , I.D./O.D.)			mm	/	
	Controller			Wired	/	
	(O-Optional,S-Standard)			Infrared	YR-HQS01(O)	
	Fresh air hole dimension			mm	NONE	
	Electricity Heater			kW	NONE	
	Sound power Noise level (H-M-L)			dB(A)	66	
	Sound pressure Noise level (H-M-L)			dB(A)	52/49/46	
	Pipe	Liquid Pipe	mm		9.52	
		Gas Pipe	mm		15.88	
		Connecting Method			flared	
	Weight (Net / Shipping)			kg / kg	50/61	

Item			Model			AP140S2SK1FA(H)/1U140S2SN1FA	
PIPING		Refrigerant	Type / Charge		g	R32/2300	
			Recharge quantity		g/m	45	
		Pipe	Liquid		mm	9.52	
			Gas		mm	15.88	
		Between I.D&O.D	MAX.Drop		m	30	
			MAX.Piping length		m	70	
cooling		Pdesignc(kW)	13.4	SEER/ CLASS	5.6/A+	QCE(Annual electricity consumption for cooling)kWh	837
heating	Average	Pdesignh(-10°C)	8.5kW		3.93/A	QHE(Annual electricity consumption for heating)kWh	3018
	Warmer	Pdesignh(2°C)	4.59kW		4.84/A++		1327
	Colder	Pdesignh(-22°C)	/		/		/
Tdesignh:-10°C			Tbivalent:-10°C	TOL:-10°C		Elbu:0	
Max. cooling condition			Indoor temperature: 32°C/23°C	Max. heating condition		Indoor temperature:27°C/-°C	
			Outdoor temperature:46°C/-°C			Outdoor temperature:24°C/18°C	

Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model		AP140S2SK1FA(H)/1U140S2SN1FB	
Function						cooling	heating
Capacity					KW	13.4（3.5-14）	15(4.0-15.5)
Sensible heat ratio						0.76	
Total power input					KW	5.40(1.0-6.5)	5.43(1.0-6.5)
Max. power input					W	6500	6500
EER or COP					W/W	2.48(A)	2.76(A)
Dehumidifying capacity					10^{-3}×m³/h	3.83	
Power cable						2.5 mm2	
Power source					N, V, Hz	1ph, 220-240, 50/60	
Running /Max.Running current					A / A	7.9/10	8.0/10
Start Current					A	2	
Circuit breaker					A	5	
Indoor unit	Unit model (color)					AP140S2SK1FA(H)/INDOOR UNIT	
	Fan	Type × Number				CENTRIFUGALX1	
		Speed(H-M-L)			r/min	520/450/380	
		Fan motor output/ input power			W	130/180	
		Air-flow(H-M-L)			m³/h	1850/1500/1350	
	Heat exchanger	Type / Diameter			mm	inner grooved pipe/φ7.0	
		Row				2	
		Total Area			m²	/	
	Dimension	External	(L×W×H)		mm×mm×mm	600*350*1850	
		Package	(L×W×H)		mm×mm×mm	680*423*2022	
	Drainage pipe (material , I.D./O.D.)				mm	/	
	Controller				Wired	/	
	(O-Optional,S-Standard)				Infrared	YR-HQS01(O)	
	Fresh air hole dimension				mm	NONE	
	Electricity Heater				kW	NONE	
	Sound power Noise level (H-M-L)				dB(A)	66	
	Sound pressure Noise level (H-M-L)				dB(A)	52/49/46	
	Pipe	Liquid Pipe	mm			9.52	
		Gas Pipe	mm			15.88	
		Connecting Method				flared	
	Weight (Net / Shipping)				kg / kg	50/61	

Item			Model			AP140S2SK1FA(H)/1U140S2SN1FB	
PIPING		Refrigerant	Type / Charge		g	R32/2300	
			Recharge quantity		g/m	45	
		Pipe	Liquid		mm	9.52	
			Gas		mm	15.88	
		Between I.D&O.D	MAX.Drop		m	30	
			MAX.Piping length		m	70	
cooling		Pdesignc(kW)	13.4	SEER/ CLASS	5.6/A+	QCE(Annual electricity consumption for cooling)kWh	837
heating	Average	Pdesignh(-10°C)	8.5kW		3.93/A	QHE(Annual electricity consumption for heating)kWh	3018
	Warmer	Pdesignh(2°C)	4.59kW		4.84/A++		1327
	Colder	Pdesignh(-22°C)	/		/		/
Tdesignh:-10°C			Tbivalent:-10°C	TOL:-10°C		Elbu:0	
Max. cooling condition			Indoor temperature: 32°C/23°C	Max. heating condition		Indoor temperature:27°C/-°C	
			Outdoor temperature:46°C/-°C			Outdoor temperature:24°C/18°C	

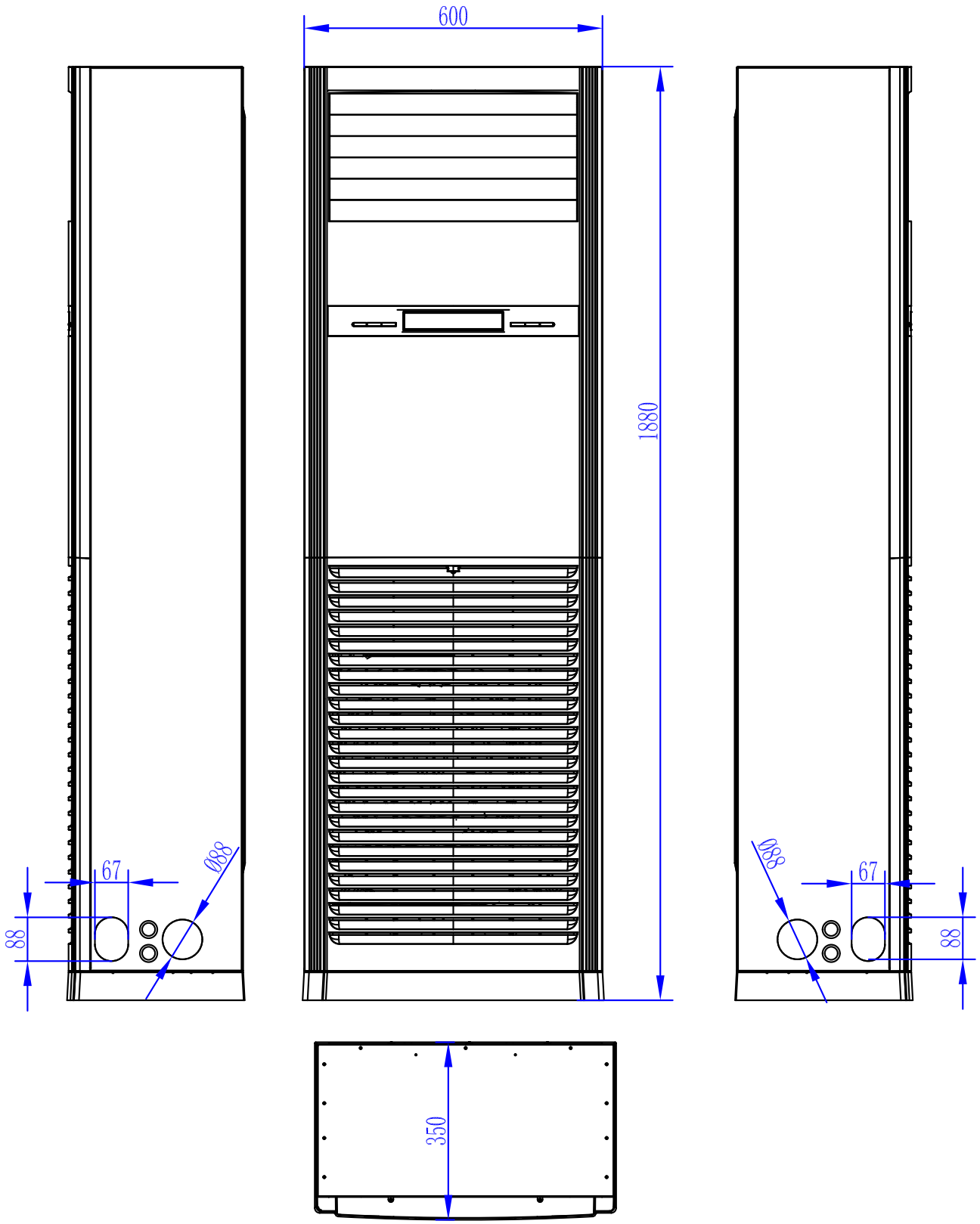
Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

Item				Model		AP160S2SK1FA(H)/1U160S2SP1FB	
Function						cooling	heating
Capacity					KW	15（4.5-16)	16(5-17)
Sensible heat ratio						0.76	
Total power input					KW	5.16(1.6-6.4)	6.40(1.6-5.48)
Max. power input					W	6400	6400
EER or COP					W/W	2.5(A)	3.1(A)
Dehumidifying capacity					10^{-3}×m³/h	3.83	
Power cable						2.5 mm2	
Power source					N, V, Hz	3ph, 380-415, 50/60	
Running /Max.Running current					A / A	7.9/10	8.0/10
Start Current					A	2	
Circuit breaker					A	5	
Indoor unit	Unit model (color)					AP160S2SK1FA(H)/INDOOR UNIT	
	Fan	Type × Number				CENTRIFUGAL	
		Speed(H-M-L)			r/min	520/450/350	
		Fan motor output/ input power			W	130/210	
		Air-flow(H-M-L)			m³/h	1850/1500/1350	
	Heat exchanger	Type / Diameter			mm	inner grooved pipe/φ7.0	
		Row				2	
		Total Area			m²	/	
	Dimension	External	(L×W×H)		mm×mm×mm	600*350*1850	
		Package	(L×W×H)		mm×mm×mm	693*438*2035	
	Drainage pipe (material , I.D./O.D.)				mm	16	
	Controller				Wired	/	
	(O-Optional,S-Standard)				Infrared	YR-HQS01(O)	
	Fresh air hole dimension				mm	NONE	
	Electricity Heater				kW	NONE	
	Sound power Noise level (H-M-L)				dB(A)	68	
	Sound pressure Noise level (H-M-L)				dB(A)	55/52/49	
	Pipe	Liquid Pipe	mm			9.52	
		Gas Pipe	mm			19.05	
		Connecting Method				flared	
	Weight (Net / Shipping)				kg / kg	50/61	

Item			Model			AP160S2SK1FA(H)/1U160S2SP1FB	
PIPING		Refrigerant	Type / Charge		g	R32/3500	
			Recharge quantity		g/m	60	
		Pipe	Liquid		mm	9.52	
			Gas		mm	19.05	
		Between I.D&O.D	MAX.Drop		m	30	
			MAX.Piping length		m	70	
cooling		Pdesignc(kW)	15	SEER/ CLASS	5.6/A+	QCE(Annual electricity consumption for cooling)kWh	880
heating	Average	Pdesignh(-10°C)	11kW		4/A+	QHE(Annual electricity consumption for heating)kWh	3859
	Warmer	Pdesignh(2°C)	4.59kW		4.84/A++		1327
	Colder	Pdesignh(-22°C)	/		/		/
Tdesignh:-10°C			Tbivalent:-10°C	TOL:-10°C		Elbu:0	
Max. cooling condition			Indoor temperature: 32°C/23°C	Max. heating condition		Indoor temperature:27°C/-°C	
			Outdoor temperature:46°C/-°C			Outdoor temperature:24°C/18°C	

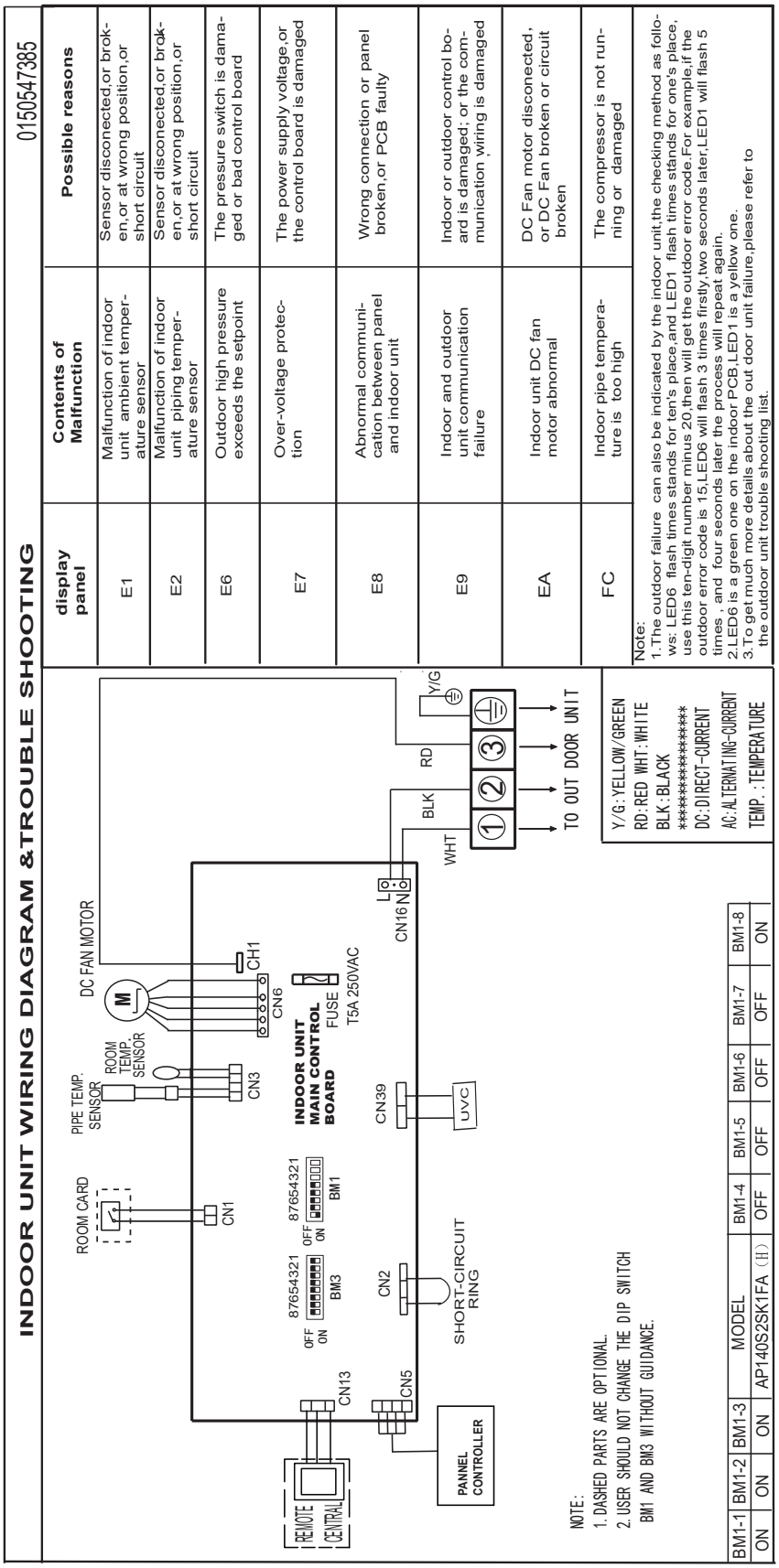
Norminal condition: indoor temperature (cooling): 27°CDB/19°CWB, indoor temperature (heating): 20°CDB
Outdoor temperature(cooling): 35°CDB/24°CWB, outdoor temperature(heating): 7°CDB/6°CWB
The noise level will be measured in the third octave band limited values, using a Real Time Analyser calibrated sound intensity meter. It is a sound pressure noise level.

7.2 Dimension

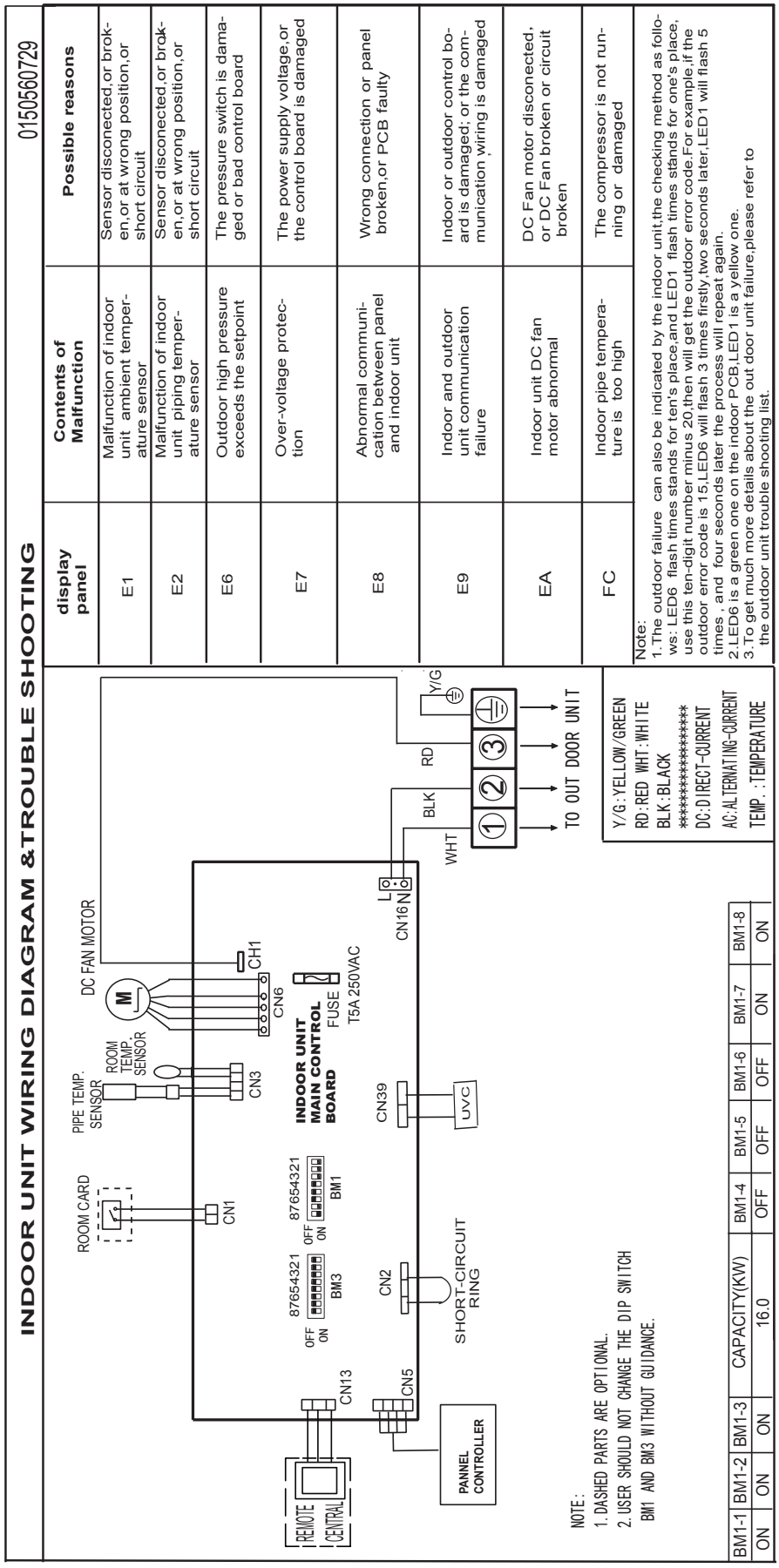


7.3 Wiring Diagram

AP140S2SK1FA(H)



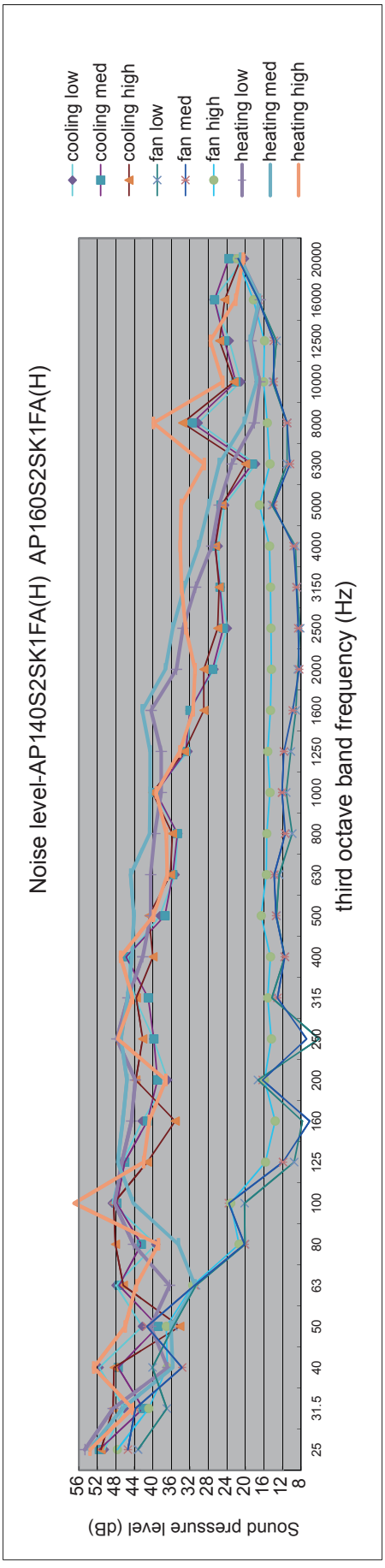
AP160S2SK1FA(H)



display panel	Contents of Malfunction	Possible reasons
E1	Malfunction of indoor unit ambient temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
E2	Malfunction of indoor unit piping temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
E6	Outdoor high pressure exceeds the setpoint	The pressure switch is damaged or bad control board
E7	Over-voltage protection	The power supply voltage,or the control board is damaged
E8	Abnormal communication between panel and indoor unit	Wrong connection or panel broken,or PCB faulty
E9	Indoor and outdoor unit communication failure	Indoor or outdoor control board is damaged; or the communication wiring is damaged
EA	Indoor unit DC fan motor abnormal	DC Fan motor disconected, or DC Fan broken or circuit broken
FC	Indoor pipe temperature is too high	The compressor is not running or damaged

Note:
1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED6 flash times stands for ten's place,and LED1 flash times stands for one's place, use this ten-digit number minus 20,then will get the outdoor error code.For example,if the outdoor error code is 15,LED6 will flash 3 times firstly,two seconds later,LED1 will flash 5 times , and four seconds later the process will repeat again.
2.LED6 is a green one on the indoor PCB,LED1 is a yellow one.
3.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.

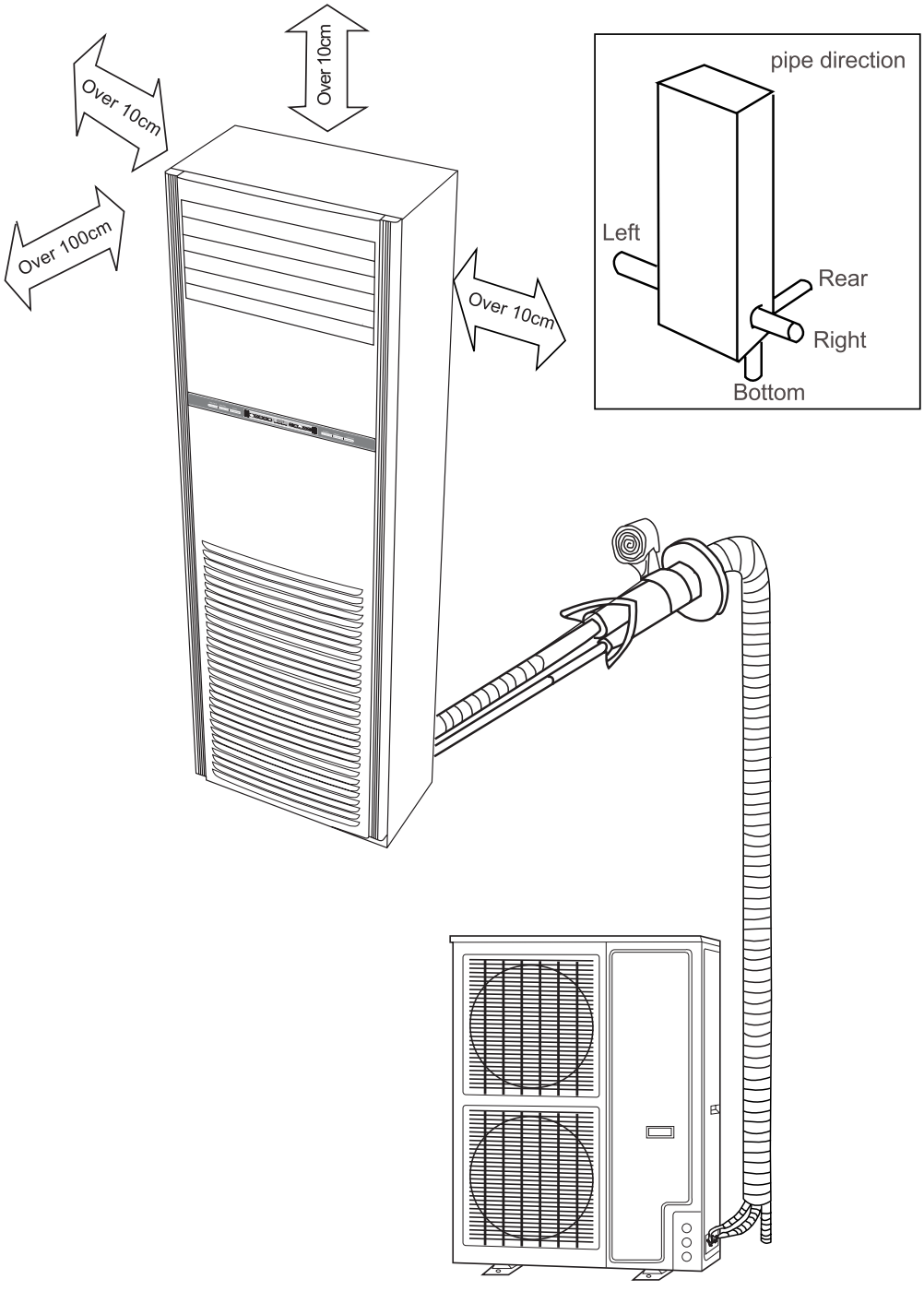
7.4 Sound Pressure Level



7.5 Installation

Indoor & Outdoor Unit Connection

Installation figure please refers to AP60KS1ERA(S)



Installation Procedure

Tools necessary

1. Screw driver
2. Hacksaw
3. 70mm dia. hole core drill
4. Spanner (dia. 22, 36mm)
5. Spanner (16, 18, 22, 36mm)
6. Pipe cutter
7. Flaring tool
8. Knife
9. Nipper
10. Gas leakage detector or soap water
11. Measuring tape
12. Reamer
13. Refrigerant oil

Installation accessories

Following parts shall be field supplied

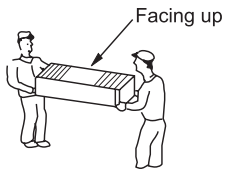
Part name
Adhesive tape
Pipe clip
Connecting hose
Insulation material
Putty
Drain hose

Installation Procedure

Before installation

- Try to bring the packed unit to the installation place.
- When it is inevitable to unpack the unit, be careful not to damage the unit. Wrap it with nylon etc.
- After unpacking, be sure to put it with the front side of the unit facing up.
- When delivering, don't hold plastic parts like inlet and outlet grill etc.

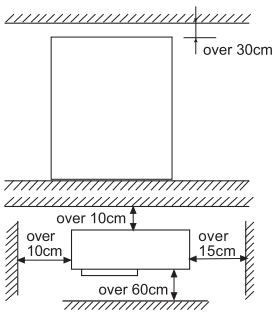
Delivery



Installation of outdoor unit

Selection of outdoor unit installation place

- Place strong enough to support the unit and will not cause vibration and noise.
- Place where discharged wind and noise doesn't cause a nuisance to the neighbors.
- Place where is less affected by rain or direct sunlight and is sufficiently ventilated, or to install a shield.
- Place with enough space for smooth air flow.



Fixing of the outdoor unit

- Fix outdoor unit using M10 bolt to concrete floor horizontally.
- If installed on the wall or on top of a roof, bracket should be fixed securely to resist earthquake or storms.
- Use rubber pad during installation against unit vibration.

Installation Procedure

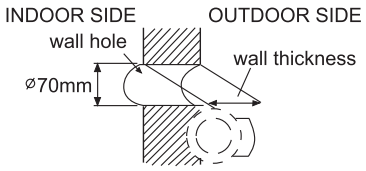
Selection of indoor unit installation place

- Place where it is easy to route drainage pipe and outdoor piping.
- Place away from heat source and with less direct sunlight.
- Place where cool and warm air could be delivered evenly to every corner of the room.
- Place near power supply socket. Leave enough space around the unit (refer to installation drawings).

Installation of indoor unit

1.Position of the wall hole

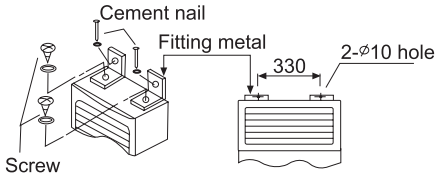
Wall hole should be decided according to installtion place and piping direction. (refer to installation drawings)



(Cross section of wall hole)

2.Making a wall hole

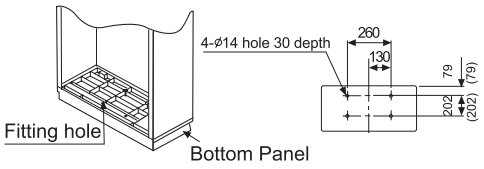
Drill a hole of 70mm dia. with a little slope towards outside. Install piping hole cover and seal it with putty after installation.

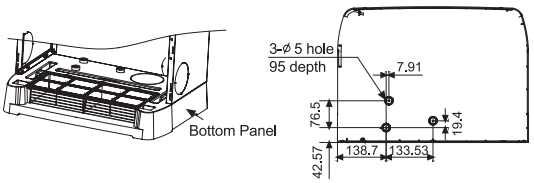


3.Fixing of indoor unit

With the unit set up vertically, fix the fitting metal to the unit with screws, then fix the fitting metal to the wall with cement nail and washer, as shown right:

Moreover, if wanting to fix the unit more firmly, you should fix the bottom panel to the ground with concrete bolts, as shown right:





Installation Procedure

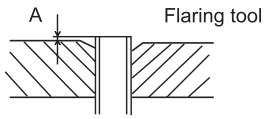
Connecting method

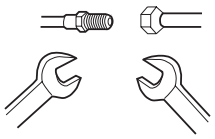
- Apply refrigerant oil at half union and flare nut.
- To bend a pipe, give the roundness as large as possible not to crash the pipe.
- When connecting pipe, hold the pipe centre to centre then screw nut on by hand, refer to Fig.
- Be careful not to let sundries, such as sands enter the pipe.

Pipe cutting and flaring

- Be sure to carry out deburring after pipe cutting with a pipe cutter.
- Insert flaring tool to make a flare.

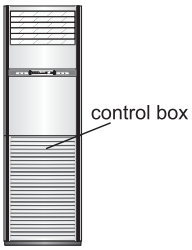
Forced fastening without centering may damage the threads and cause a gas leakage.

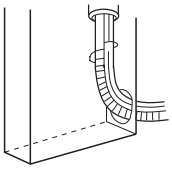




	Pipe dia.	Dimension A	Fastening torque
Liquid pipe	∅9.52mm (3/8")	1.0 ~ 1.8(mm)	32.7-39.9N.m
Gas pipe	∅15.88mm(5/8")	1.2 ~ 2.0(mm)	61.8-75.4N.m

Correct	Incorrect				
					
	Lean	Damaged flare	Crack	Partial	Too outside



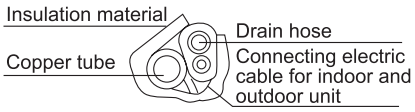


Piping connection of indoor unit

1.Arrangement of piping and drainage pipe

- After opening inlet grill, you will see a control box as shown in the Fig. Remove the cover before wiring work.

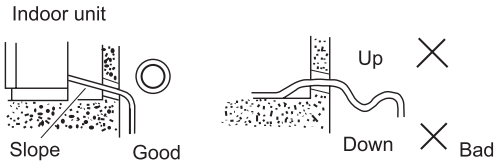
- Cut away, with a hammer or a saw, the lid for piping according to piping direction.



- According to the piping method, connect the piping on indoor unit with union of connecting pipe.
  Arrange the piping as per the wall hole and bind drain hose, connecting electric cable and piping together with polyethylene tape.
  Insert the bound piping, connecting electric cable and drain hose through wall hole to connect with outdoor unit.

2.Arrangement of drain hose

- Drain hose shall be placed in under place.
- There should be a slope when arrange drain hose. Avoid up and down waves in drain hose.
- If humidity is high, drain pipe(especially in room and indoor unit) must be covered with insulation material.



Piping connection of outdoor unit.

Connect the connecting pipe and inlet / outlet liquid pipe according to the piping method.

Vacuumizing

Discharge the air out of the indoor unit and the refrigerant pipe by vacuumizing.

(1) Fasten all the nuts of the indoor and outdoor pipes to make these parts out of leakage.

(2) Under the condition of the complete close of the indoor and outdoor valve center (both liquid and gas side), dismount the service valve cap. Vacuumizing through the charge mouth of the service valve.

(3) After vacuumizing, fasten the service valve and dismount the cap of the big and small stop valve, then loosen the stop valve center completely and fasten the big and small stop valve.

Installation Procedure

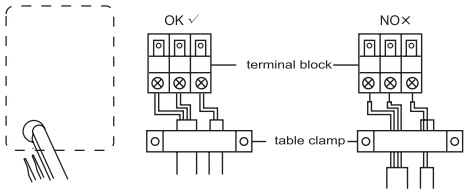
Note:

- Electrical wiring must be done by qualified person.
- The power supply connects from the outdoor unit.
- The connecting cable and power cable are self-provided.
- Use copper wire only.
- Air conditioner must use an exclusive line (over 30A)
- When installing air conditioner in a wet place, try to use a circuit breaker against current leakage.
- When installing in other places, use circuit breaker as far as possible.
- The breaker of the air conditioner should be all-pole switch; and the distance between its two contacts should be no less than 3 mm.
- Such means for disconnection must be incorporation in the fixed wiring

The parameter of connecting cable is H05RN-F 4G 2.5mm^2.
The parameter of the power cable should be over H07RN-F 5G 4.0mm^2

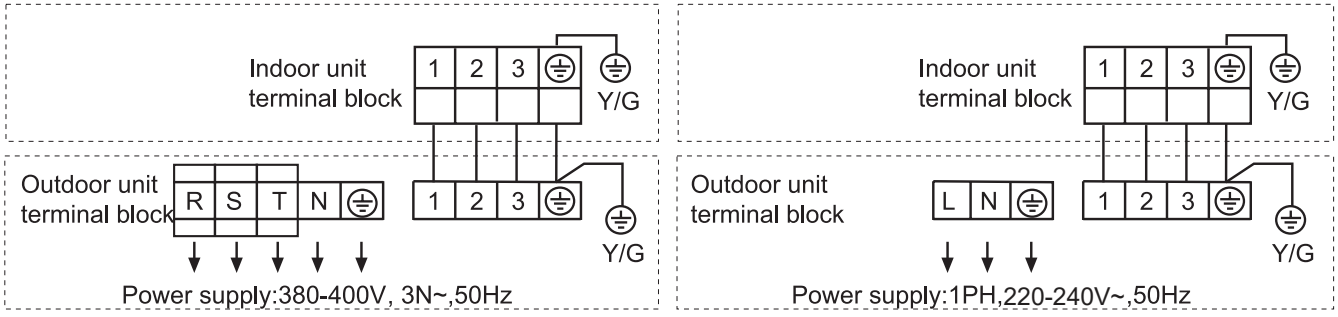
Wiring of indoor unit

- Insert the cable from outside the wall hole where piping already exist.
- Pull it out from front.
- Loosen terminal screws and insert cable end fully into terminal block, then tighten it.
- Pull the cable gently to make sure it is tight.
- Replace cover after wiring.



Wiring of outdoor unit

- Insert the cable from inside the wall hole where piping already exists.
- Pull it out from front.
- Loose terminal screw and insert cable end fully into terminal block, then tighten it.
- Pull the cable gently to make sure it is tight.
- Replace cover after wiring.

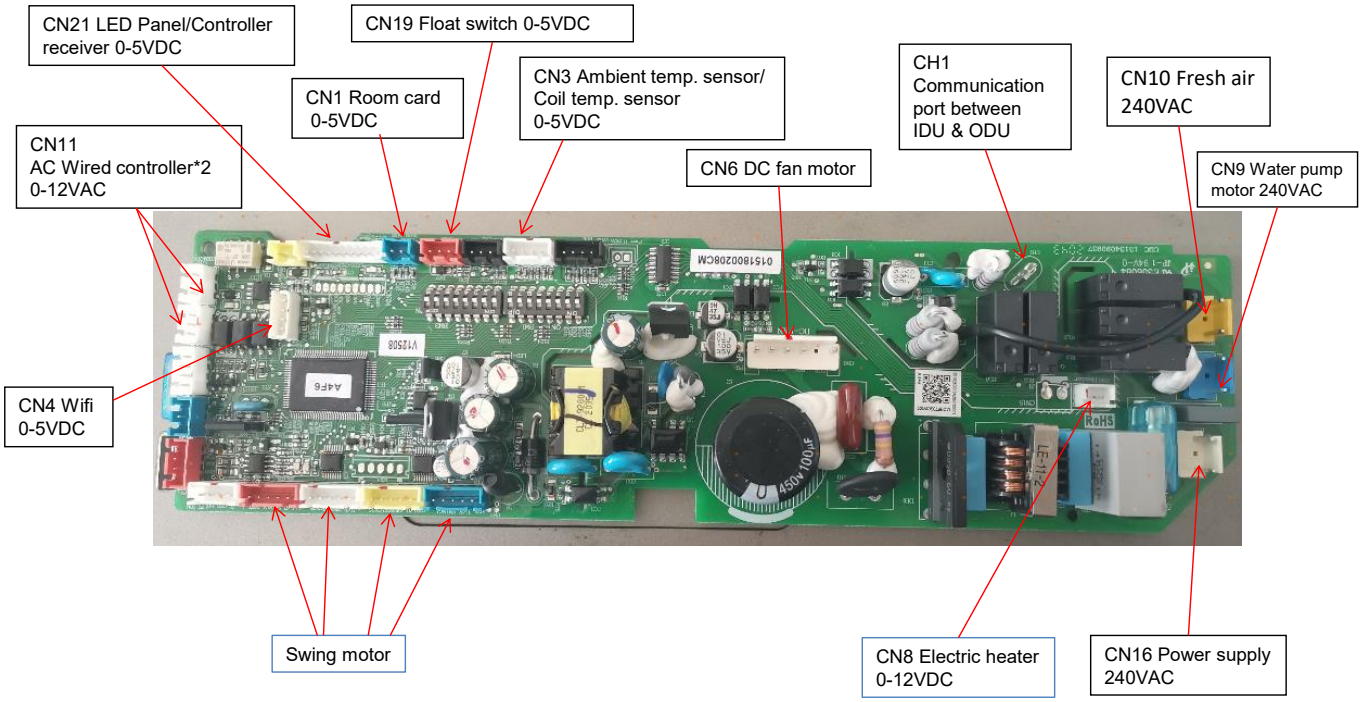


Note:

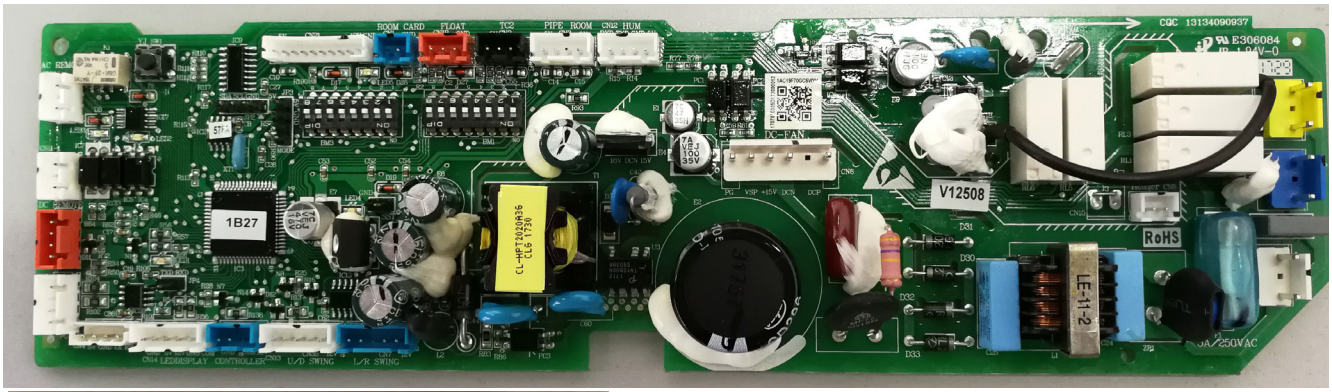
When connecting indoor and outdoor wire, check the number on indoor and outdoor terminal blocks. Incorrect wiring may damage air conditioner's controller or cause operation failure.

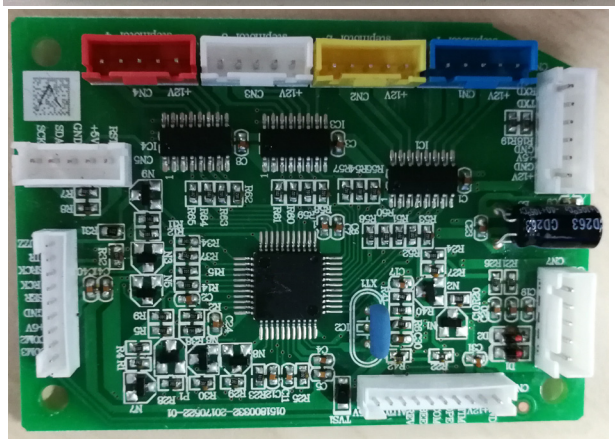
8 . Electric Control and Troubleshooting

PCB(0151800208CM) AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1
AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA(H)

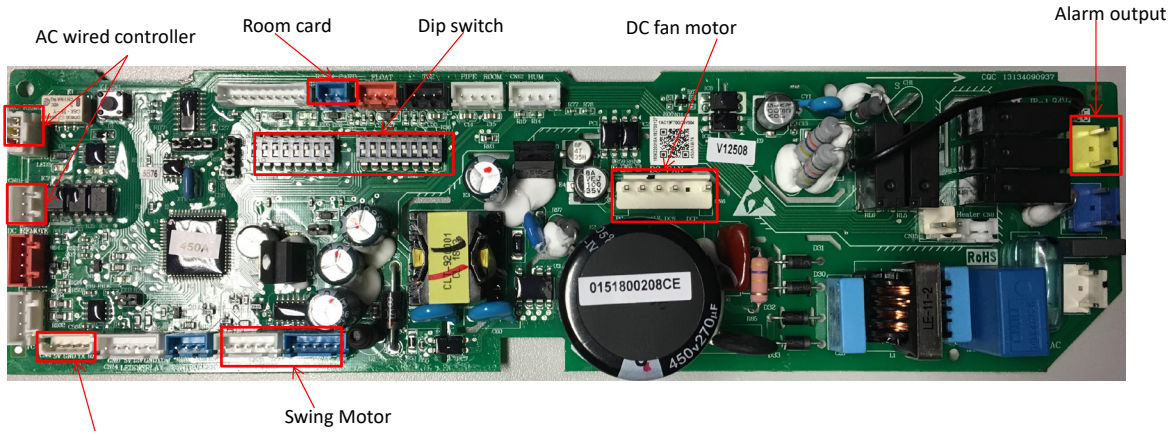


PCB (0151800244AE+0151800332)
AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA(H)

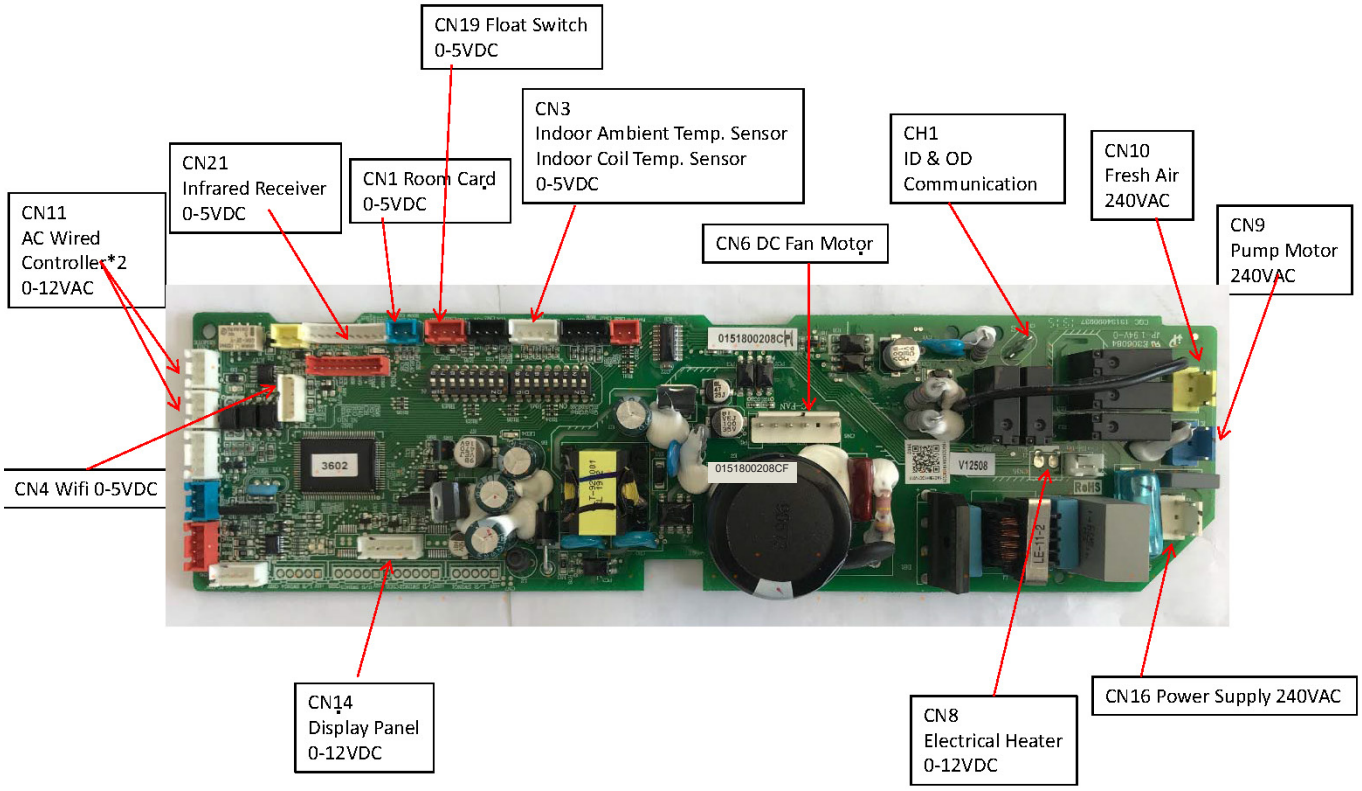




PCB (0151800208CE) AB71S2SG1FA(H) (Manufactured before 6th May, 2021)

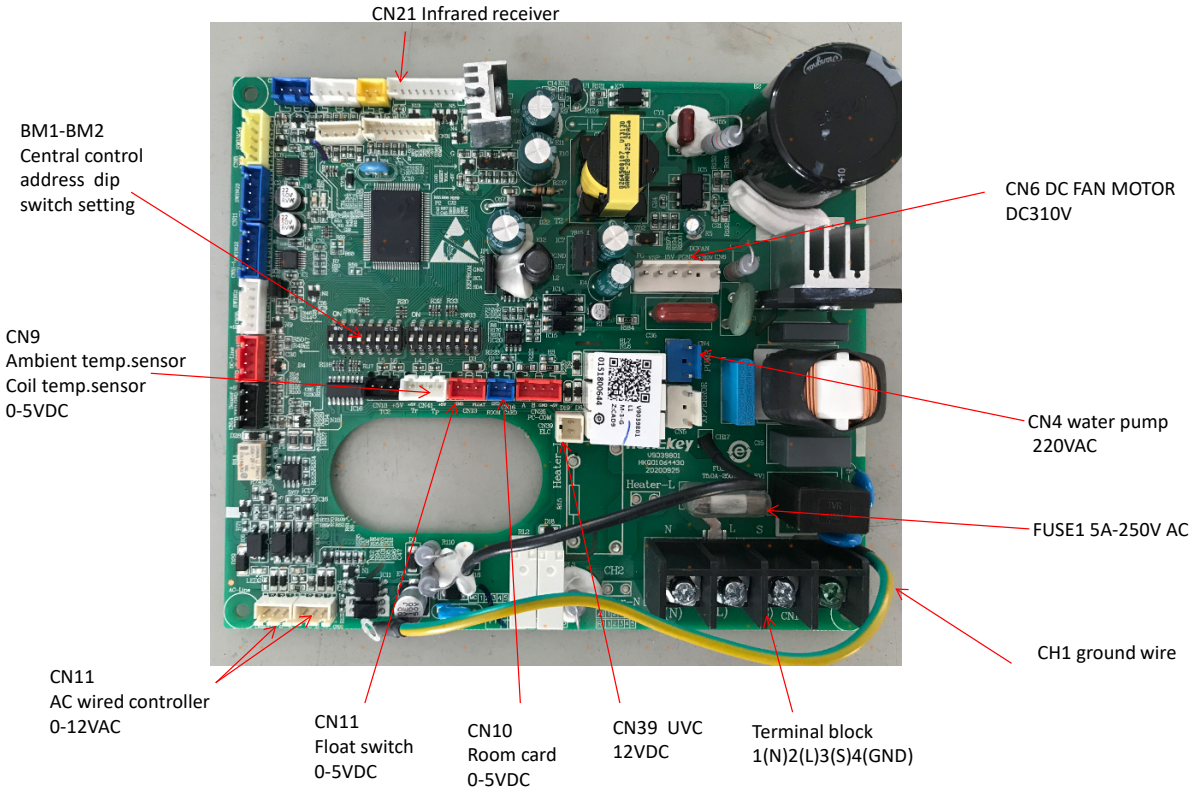


AB71S2SG1FA(H)
ABH105H1ERG(H) ABH125K1ERG(H) ABH140K1ERG(H) ABH160K1ERG(H)
PCB CODE 0151800208CFA

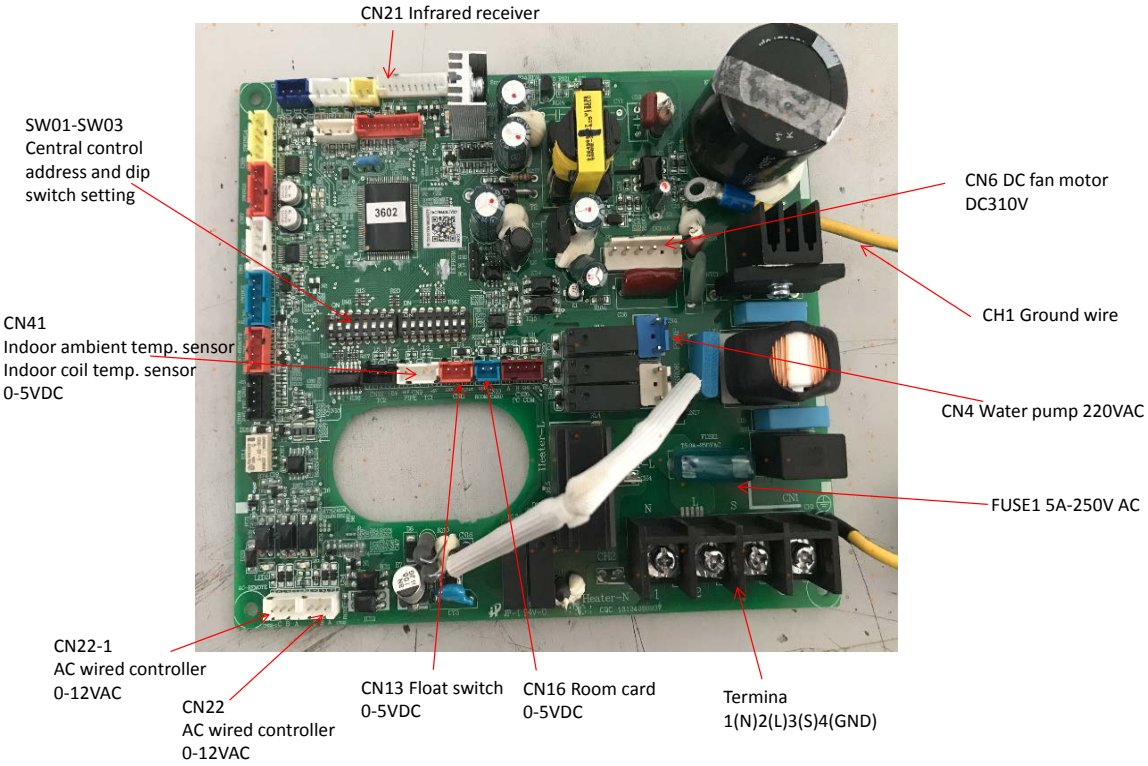


AD25S2SS1FA-1 AD35S2SS1FA-1 AD50S2SS1FA-1 AD71S2SS1FA-1 AD25S2SS1FA(H)
AD35S2SS1FA(H) AD50S2SS1FA(H) AD71S2SS1FA(H)
AD35S2SM3FA-1 AD50S2SM3FA-1 AD71S2SM3FA-1 AD105S2SM3FA-1
AD35S2SM3FA(H) AD50S2SM3FA(H) AD71S2SM3FA(H) AD105S2SM3FA(H)

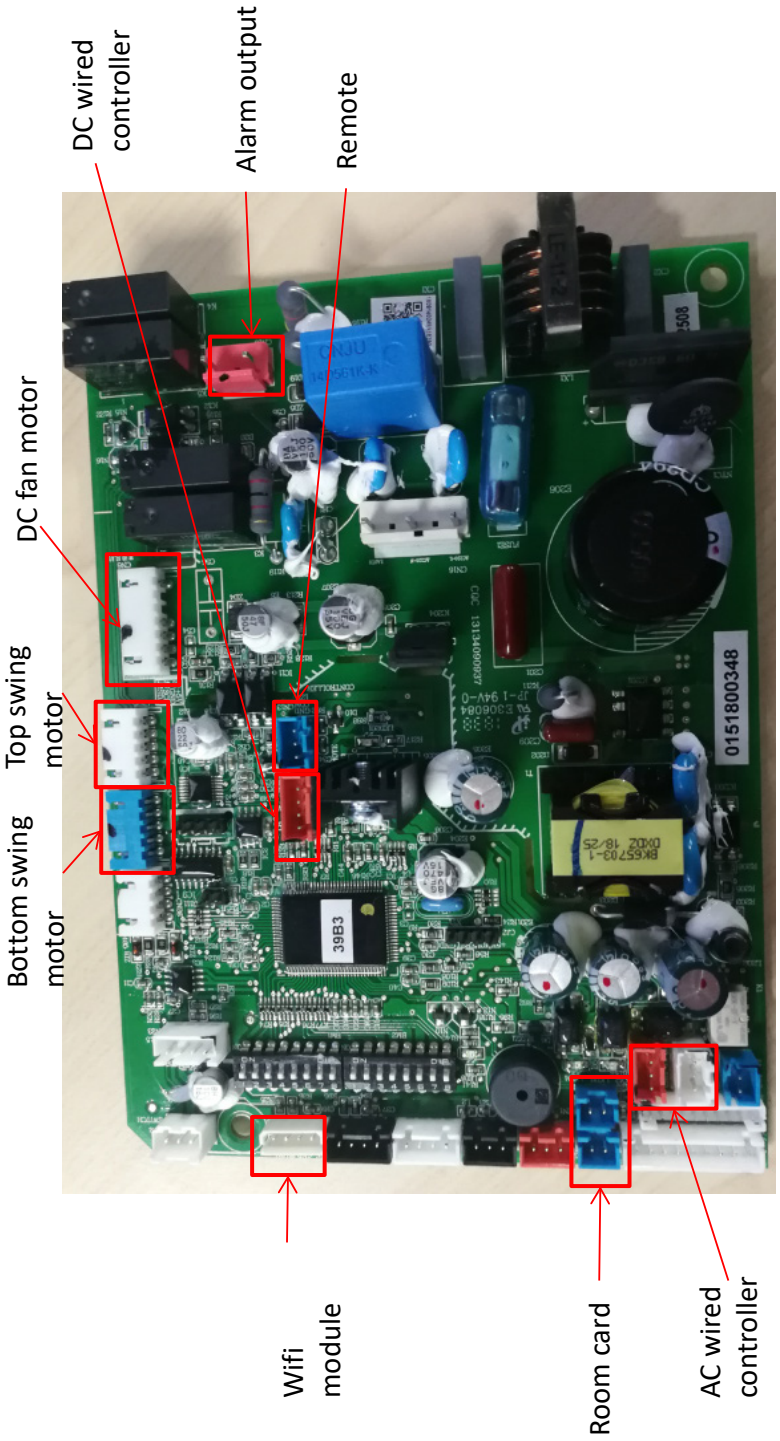
PCB code 0151800644



AD25/35/S2SS1FA AD35S2SS1FA AD25S2SS2FA AD35S2SS1FA AD50S2SS1FA AD50S2SS2FA
AD71S2SS1FA AD71S2SS2FA AD50S2SM1FA AD71S2SM3ERA AD90S2SM3FA AD105S2SM3FA
(For above models that manufactured after Nov. 2020)
AD100S2SM6FA AD125S2SM8FA AD140S2SM8FA AD160S2SM3FA
AD90S2SM3FA(H) AD125S2SM8FA(H) AD140S2SM8FA(H) AD160S2SM3FA(H)
PCB code 0151800644

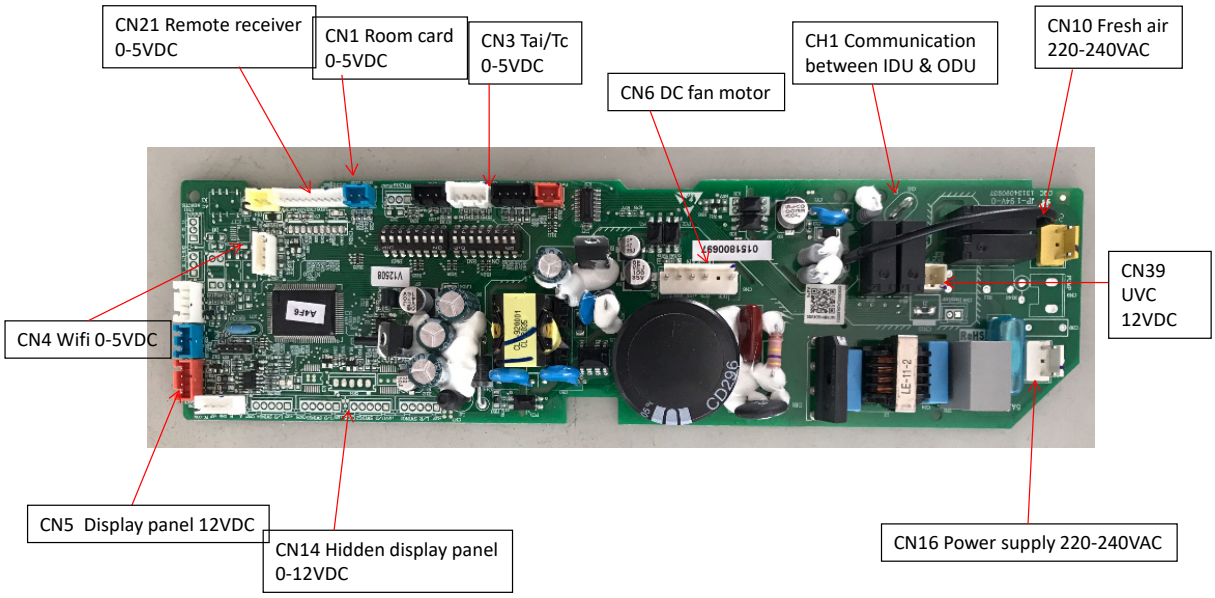


PCB 0151800348 AF25S2SD1FA(H) AF35S2SD1FA(H) AF50S2SD1FA(H)
AF25S2SD1FA(D) AF35S2SD1FA(D) AF50S2SD1FA(D)



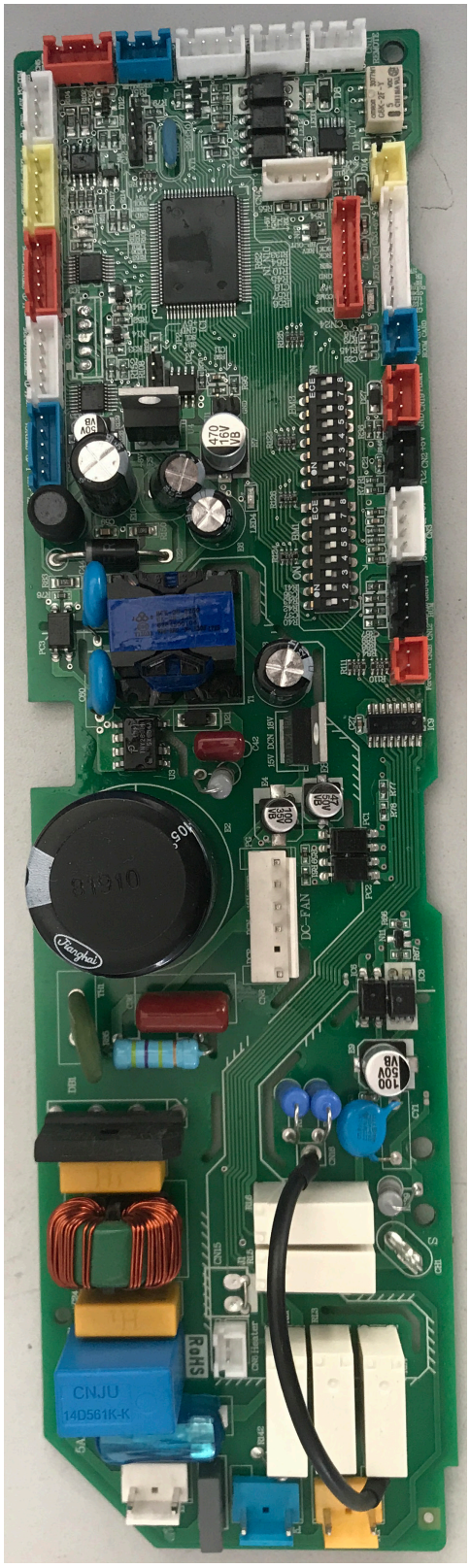
PCB 0151800697

AP140S2SK1FA(H) AP160S2SK1FA(H)



PCB 0151800459H

AC35S2SG1FA(H) AC50S2SG1FA(H) AC105S2SH1FA(H) AC125S2SK1FA(H) AC140S2SK1FA(H) AC160S2SK1FA(H)



8.1 Indoor unit Dip Switch Setting

AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1 AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA(H)

PCB 0151800208CM dip switch setting BM1

BM1-1	BM1-2	BM1-3	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8	Description
OFF	OFF	OFF	---	---	---	---	---	1Hp Indoor Unit
ON	OFF	OFF	---	---	---	---	---	1.2Hp Indoor Unit
OFF	ON	OFF	---	---	---	---	---	2Hp Indoor Unit
---	---	---	OFF	---	---	---	---	Room Card Unavailable(Default)
---	---	---	ON	---	---	---	---	Room Card Available
---	---	---	---	OFF	---	---	---	Heat Pump(Default)
---	---	---	---	ON	---	---	---	Cooling Only
---	---	---	---	---	OFF	---	---	Fresh Air (Default)
---	---	---	---	---	ON	---	---	External Alarm Output
---	---	---	---	---	---	OFF	---	Without Filter Clean Remind (Default)
---	---	---	---	---	---	ON	---	With Filter Clean Remind
---	---	---	---	---	---	---	OFF	Reserved

PCB 0151800208CM dip switch setting BM3

BM3-1	BM3-2	BM3-3	BM3-4	Description
OFF	ON	OFF	OFF	Cassette
BM3-5	BM3-6	BM3-7	BM3-8	Address of Wire Controlled Indoor Unit
OFF	OFF	OFF	OFF	Master Unit(Default)
OFF	OFF	OFF	ON	1# Slave Unit
OFF	OFF	ON	OFF	2# Slave Unit
OFF	OFF	ON	ON	3# Slave Unit
OFF	ON	OFF	OFF	4# Slave Unit
OFF	ON	OFF	ON	5# Slave Unit
OFF	ON	ON	OFF	6# Slave Unit
OFF	ON	ON	ON	7# Slave Unit
ON	OFF	OFF	OFF	8# Slave Unit
ON	OFF	OFF	ON	9# Slave Unit
ON	OFF	ON	OFF	10# Slave Unit
ON	OFF	ON	ON	11# Slave Unit
ON	ON	OFF	OFF	12# Slave Unit
ON	ON	OFF	ON	13# Slave Unit
ON	ON	ON	OFF	14# Slave Unit
ON	ON	ON	ON	15# Slave Unit

Note:

For old PCB 0151800244AE, olny the dip switch SW3-2 and SW3-3 are different from the new PCB 0151800208CM SW3-2 and SW3-3 on 0151800244AE are switced as OFF/OFF, whcih means the function reserved.

AB71S2SG1FA(H) ABH105H1ERG(H) ABH125K1ERG(H) ABH140K1ERG(H) ABH160K1ERG(H)

PCB code 0151800208CFA

SW1 (1-ON, 0-OFF)								
Capacity (SW1-1→SW1-3)			Room card	Running mode	Fresh air /Trouble alarm	Filter remindng	Location	Description
SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	
1	1	0	---	---	---	---	---	
1	0	1	---	---	---	---	---	Capacity: 10.5kW
0	1	1	---	---	---	---	---	Capacity: 12.5kW
1	1	1	---	---	---	---	---	Capacity: 14.0kW
1	1	1	---	---	---	1	---	Capacity: 16.0kW
---	---	---	0	---	---	---	---	Room card invalid (default)
---	---	---	1	---	---	---	---	Room card valid
---	---	---	---	0	---	---	---	Heat pump (default)
---	---	---	---	1	---	---	---	Cooling only
---	---	---	---	---	0	---	---	Fresh air function
---	---	---	---	---	1	---	---	Trouble alarm
---	---	---	---	---	---	0	---	Without filter reminding
---	---	---	---	---	---	1	---	With filter reminding
---	---	---	---	---	---	---	0	Used in American
---	---	---	---	---	---	---	1	Not used in American(default)

SW3-2	SW3-3	Unit Type
ON	ON	Cassette

SW3-5	SW3-6	SW3-7	SW3-8	Address of Wire Controlled Indoor Unit
OFF	OFF	OFF	OFF	0 (master)
OFF	OFF	OFF	ON	1(slave)
OFF	OFF	ON	OFF	2(slave)
OFF	OFF	ON	ON	3(slave)
OFF	ON	OFF	OFF	4(slave)
OFF	ON	OFF	ON	5(slave)
OFF	ON	ON	OFF	6(slave)
OFF	ON	ON	ON	7(slave)
ON	OFF	OFF	OFF	8(slave)
ON	OFF	OFF	ON	9(slave)
ON	OFF	ON	OFF	10(slave)
ON	OFF	ON	ON	11(slave)
ON	ON	OFF	OFF	12(slave)
ON	ON	OFF	ON	13(slave)
ON	ON	ON	OFF	14(slave)
ON	ON	ON	ON	15(slave)

Note: For old PCB 0151800208CE, olny the dip switch SW3-2 and SW3-3 are different from the new PCB 0151800208CFA SW3-2 and SW3-3 on 0151800244AE are switced as OFF/OFF, whcih means the function reserved.

AC35S2SG1FA(H) AC50S2SG1FA(H) AC105S2SH1FA(H) AC125S2SK1FA(H) AC140S2SK1FA(H) AC160S2SK1FA(H)
PCB 0151800459H dip switch setting BM1

BM1-1	BM1-2	BM1-3	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8	Description
ON	OFF	OFF	---	---	---	---	---	AC35S2SG1FA
OFF	ON	OFF	---	---	---	---	---	AC50S2SG1FA
ON	ON	OFF	---	---	---	---	---	AC71S2SG1FA
ON	OFF	ON	---	---	---	---	---	AC105S2SH1FA
OFF	ON	ON	---	---	---	---	---	AC125S2SK1FA
ON	ON	ON	---	---	---	---	---	AC140S2SK1FA
ON	ON	ON	---	---	---	ON	---	AC160S2SK1FA
---	---	---	OFF	---	---	---	---	Room Card Unavailable(Default)
---	---	---	ON	---	---	---	---	Room Card Available
---	---	---	---	OFF	---	---	---	Heat Pump(Default)
---	---	---	---	ON	---	---	---	Cooling Only
---	---	---	---	---	OFF	---	---	Fresh Air (Default)
---	---	---	---	---	ON	---	---	External Alarm Output
---	---	---	---	---	---	OFF	---	Without Filter Clean Remind (Default)
---	---	---	---	---	---	ON	---	With Filter Clean Remind
---	---	---	---	---	---	---	OFF	Reserved

PCB 0151800459H dip switch setting BM3

BM3-1	BM3-2	BM3-3	BM3-4	Description
OFF	OFF	OFF	OFF	Reserved
BM3-5	BM3-6	BM3-7	BM3-8	Address of Wire Controlled Indoor Unit
OFF	OFF	OFF	OFF	Master Unit(Default)
OFF	OFF	OFF	ON	1# Slave Unit
OFF	OFF	ON	OFF	2# Slave Unit
OFF	OFF	ON	ON	3# Slave Unit
OFF	ON	OFF	OFF	4# Slave Unit
OFF	ON	OFF	ON	5# Slave Unit
OFF	ON	ON	OFF	6# Slave Unit
OFF	ON	ON	ON	7# Slave Unit
ON	OFF	OFF	OFF	8# Slave Unit
ON	OFF	OFF	ON	9# Slave Unit
ON	OFF	ON	OFF	10# Slave Unit
ON	OFF	ON	ON	11# Slave Unit
ON	ON	OFF	OFF	12# Slave Unit
ON	ON	OFF	ON	13# Slave Unit
ON	ON	ON	OFF	14# Slave Unit
ON	ON	ON	ON	15# Slave Unit

AD25S2SS1FA-1 AD35S2SS1FA-1 AD50S2SS1FA-1 AD71S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA(H) AD50S2SS1FA(H) AD71S2SS1FA(H) AD35S2SM3FA-1 AD50S2SM3FA-1 AD71S2SM3FA-1 AD105S2SM3FA-1 AD35S2SM3FA(H) AD50S2SM3FA(H) AD71S2SM3FA(H) AD105S2SM3FA(H) AD125S2SM8FA (H) AD140S2SM8FA (H) AD160S2SM3FA (H)

PCB 0151800644 dip switch setting SW01(BM1)

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	Description
ON	OFF	OFF	OFF	OFF	OFF	OFF	ON	3.5 KW Indoor Unit
OFF	ON	OFF	OFF	OFF	OFF	OFF	ON	5.0 KW Indoor Unit
ON	ON	OFF	OFF	OFF	OFF	OFF	ON	7.1 KW Indoor Unit
OFF	OFF	ON	OFF	OFF	OFF	OFF	ON	9.0 KW Indoor Unit
ON	OFF	ON	OFF	OFF	OFF	OFF	ON	10.5 KW Indoor Unit
OFF	ON	ON	OFF	OFF	OFF	OFF	ON	12.5 KW Indoor Unit
ON	ON	ON	OFF	OFF	OFF	OFF	ON	14.0 KW Indoor Unit
ON	ON	ON	OFF	OFF	OFF	ON	ON	16.0 KW Indoor Unit
---	---	---	OFF	---	---	---	---	Room Card Unavailable(Default)
---	---	---	ON	---	---	---	---	Room Card Available
---	---	---	---	OFF	---	---	---	Heat Pump(Default)
---	---	---	---	ON	---	---	---	Cooling Only
---	---	---	---	---	OFF	---	---	Fresh Air (Default)
---	---	---	---	---	ON	---	---	External Alarm Output
---	---	---	---	---	---	OFF	---	Without Filter Clean Remind (Default)
---	---	---	---	---	---	ON	---	With Filter Clean Remind
---	---	---	---	---	---	---	ON	Non-American Model

PCB 0151800644 dip switch setting SW03(BM3)

SW3-1	SW3-2	SW3-3	SW3-4	Description
OFF	---	---	---	1 swing motor(Default)
ON	---	---	---	2 swing motor
---	OFF	---	---	Reserved
---	---	OFF	---	Reserved
---	---	---	OFF	4 grade static pressure
---	---	---	ON	10 grade static pressure(Default)

SW3-5	SW3-6	SW3-7	SW3-8	Address of Wire Controlled Indoor Unit
OFF	OFF	OFF	OFF	Master Unit(Default)
OFF	OFF	OFF	ON	1# Slave Unit
OFF	OFF	ON	OFF	2# Slave Unit
OFF	OFF	ON	ON	3# Slave Unit
OFF	ON	OFF	OFF	4# Slave Unit
OFF	ON	OFF	ON	5# Slave Unit
OFF	ON	ON	OFF	6# Slave Unit
OFF	ON	ON	ON	7# Slave Unit
ON	OFF	OFF	OFF	8# Slave Unit
ON	OFF	OFF	ON	9# Slave Unit
ON	OFF	ON	OFF	10# Slave Unit
ON	OFF	ON	ON	11# Slave Unit
ON	ON	OFF	OFF	12# Slave Unit
ON	ON	OFF	ON	13# Slave Unit
ON	ON	ON	OFF	14# Slave Unit
ON	ON	ON	ON	15# Slave Unit

AD90S2SM3FA(F)

PCB 0151800267 dip switch setting BM1

BM1-1	BM1-2	BM1-3	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8	Description
OFF	OFF	OFF	---	---	---	---	---	25K Indoor Unit
ON	OFF	OFF	---	---	---	---	---	35K Indoor Unit
OFF	ON	OFF	---	---	---	---	---	50K Indoor Unit
ON	ON	OFF	---	---	---	---	---	71K Indoor Unit
OFF	OFF	ON	---	---	---	---	---	90K Hp Indoor Unit
ON	OFF	ON	---	---	---	---	---	4Hp Indoor Unit
OFF	ON	ON	---	---	---	---	---	5Hp Indoor Unit
ON	ON	ON	---	---	---	---	---	6Hp Indoor Unit
---	---	---	OFF	---	---	---	---	Room Card Unavailable(Default)
---	---	---	ON	---	---	---	---	Room Card Available
---	---	---	---	OFF	---	---	---	Heat Pump(Default)
---	---	---	---	ON	---	---	---	Cooling Only
---	---	---	---	---	OFF	---	---	Fresh Air (Default)
---	---	---	---	---	ON	---	---	External Alarm Output
---	---	---	---	---	---	OFF	---	Without Filter Clean Remind (Default)
---	---	---	---	---	---	ON	---	With Filter Clean Remind
---	---	---	---	---	---	---	OFF	Esp Duct (USA)
---	---	---	---	---	---	---	ON	Eu. &Australia

BM3-1	BM3-2	BM3-3	Description
OFF	OFF	OFF	Reserved

BM3-4	Description
OFF	Slim duct
ON	Medium ESP duct

BM3-5	BM3-6	BM3-7	BM3-8	Address of Wire Controlled Indoor Unit
OFF	OFF	OFF	OFF	Master Unit(Default)
OFF	OFF	OFF	ON	1# Slave Unit
OFF	OFF	ON	OFF	2# Slave Unit
OFF	OFF	ON	ON	3# Slave Unit
OFF	ON	OFF	OFF	4# Slave Unit
OFF	ON	OFF	ON	5# Slave Unit
OFF	ON	ON	OFF	6# Slave Unit
OFF	ON	ON	ON	7# Slave Unit
ON	OFF	OFF	OFF	8# Slave Unit
ON	OFF	OFF	ON	9# Slave Unit
ON	OFF	ON	OFF	10# Slave Unit
ON	OFF	ON	ON	11# Slave Unit
ON	ON	OFF	OFF	12# Slave Unit
ON	ON	OFF	ON	13# Slave Unit
ON	ON	ON	OFF	14# Slave Unit
ON	ON	ON	ON	15# Slave Unit

AF25S2SD1FA(H) AF35S2SD1FA(H) AF50S2SD1FA(H)

PCB 0151800348dip switch setting BM1

BM1-1	BM1-2	BM1-3	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8	Description
OFF	OFF	OFF	---	---	---	---	---	AF25S2SD1FA(H)
ON	OFF	OFF	---	---	---	---	---	AF25S2SD1FA(H)
OFF	ON	OFF	---	---	---	---	---	AF42S2SD1FA
ON	ON	OFF	---	---	---	---	---	24000
OFF	OFF	ON	---	---	---	---	---	28000
ON	OFF	ON	---	---	---	---	---	36000
OFF	ON	ON	---	---	---	---	---	48000
ON	ON	ON	---	---	---	---	---	60000
---	---	---	OF	---	---	---	---	Room card unavailable(default)
---	---	---	ON	---	---	---	---	Room card available
---	---	---	---	OFF	---	---	---	Heat pump(default)
---	---	---	---	ON	---	---	---	cooling only
---	---	---	---	---	OFF	---	---	Fresh Air (Default)
---	---	---	---	---	ON	---	---	External Alarm Output
---	---	---	---	---	---	OFF	---	Without Filter Clean Remind (Default)
---	---	---	---	---	---	ON	---	With Filter Clean Remind
---	---	---	---	---	---	---	OFF	American unit
---	---	---	---	---	---	---	ON	Not american unit

PCB 0151800348 dip switch setting BM2

BM2-1	BM2-2	BM2-3	BM2-4	Description
OFF	OFF	OFF	OFF	Reserved
BM2-5	BM2-6	BM2-7	BM2-8	Address of Wire Controlled Indoor Unit
OFF	OFF	OFF	OFF	0#(master)(default)
OFF	OFF	OFF	ON	1# (slave)
OFF	OFF	ON	OFF	2# (slave)
OFF	ON	ON	ON	3# (slave)
OFF	ON	OFF	OFF	4# (slave)
OFF	ON	OFF	ON	5# (slave)
OFF	ON	ON	OFF	6# (slave)
OFF	ON	ON	ON	7# (slave)
ON	OFF	OFF	OFF	8# (slave)
ON	OFF	OFF	ON	9# (slave)
ON	OFF	ON	OFF	10# (slave)
ON	OFF	ON	ON	11# (slave)
ON	ON	OFF	OFF	12# (slave)
ON	ON	OFF	ON	13# (slave)
ON	ON	ON	OFF	14# (slave)
ON	ON	ON	ON	15# (slave)

AF25S2SD1FA(D) AF35S2SD1FA(D) AF42S2SD1FA(D)

PCB 0151800348 dip switch setting BM1

BM1-1	BM1-2	BM1-3	BM1-4	BM1-5	BM1-6	BM1-7	BM1-8	Description
OFF	OFF	OFF	---	---	---	OFF	---	AF25S2SD1FA(D)
ON	OFF	OFF	---	---	---	OFF	---	AF35S2SD1FA(D)
OFF	ON	OFF	---	---	---	OFF	---	AF42S2SD1FA(D)
ON	ON	OFF	---	---	---	OFF	---	24000
OFF	OFF	ON	---	---	---	OFF	---	28000
ON	OFF	ON	---	---	---	OFF	---	36000
OFF	ON	ON	---	---	---	OFF	---	48000
ON	ON	ON	---	---	---	OFF	---	60000
ON	ON	ON	---	---	---	ON	---	80000
---	---	---	OFF	---	---	---	---	Room card unavailable(default)
---	---	---	ON	---	---	---	---	Room card available
---	---	---	---	OFF	---	---	---	Heat pump(default)
---	---	---	---	ON	---	---	---	cooling only
---	---	---	---	---	OFF	---	---	Fresh Air /Without Filter Clean Remind(Default)
---	---	---	---	---	ON	---	---	External Alarm Output /With Filter Clean Remind
---	---	---	---	---	---	---	OFF	American unit
---	---	---	---	---	---	---	ON	Not american unit

PCB 0151800348 dip switch setting BM2

BM2-1	BM2-2	BM2-3	BM2-4	Description
OFF	OFF	OFF	OFF	Reserved
BM2-5	BM2-6	BM2-7	BM2-8	Address of Wire Controlled Indoor Unit
OFF	OFF	OFF	OFF	0#(master)(default)
OFF	OFF	OFF	ON	1# (slave)
OFF	OFF	ON	OFF	2# (slave)
OFF	ON	ON	ON	3# (slave)
OFF	ON	OFF	OFF	4# (slave)
OFF	ON	OFF	ON	5# (slave)
OFF	ON	ON	OFF	6# (slave)
OFF	ON	ON	ON	7# (slave)
ON	OFF	OFF	OFF	8# (slave)
ON	OFF	OFF	ON	9# (slave)
ON	OFF	ON	OFF	10# (slave)
ON	OFF	ON	ON	11# (slave)
ON	ON	OFF	OFF	12# (slave)
ON	ON	OFF	ON	13# (slave)
ON	ON	ON	OFF	14# (slave)
ON	ON	ON	ON	15# (slave)

AP140S2SK1FA(H) AP160S2SK1FA(H) PCB CODE:0151800697

SW1-1	SW1-2	SW1-3	SW1-4	SW1-5	SW1-6	SW1-7	SW1-8	Description
ON	ON	ON	---	---	---	---	---	Indoor capacity selection
---	---	---	ON	---	---	---	---	Room card function valid
---	---	---	OFF	---	---	---	---	Room card function invalid (default)
---	---	---	---	ON	---	---	---	Cooling only
---	---	---	---	OFF	---	---	---	Heat pump (default)
---	---	---	---	---	ON	---	---	Malfunction alarm & filter reminding
---	---	---	---	---	OFF	---	---	fresh air (default)
---	---	---	---	---	---	ON	---	Reserved
---	---	---	---	---	---	OFF	---	Outdoor capacity selection 1U140S2SN1FA/B(default)
---	---	---	---	---	---	---	ON	Non-American area (default)
---	---	---	---	---	---	---	OFF	American area

SW2-1	SW2-2	SW2-3	SW2-4	SW2-5	SW2-6	SW2-7	SW2-8	Description
OFF	---	---	---	---	---	---	---	Reserved
---	OFF	---	---	---	---	---	---	Reserved
---	---	OFF	---	---	---	---	---	Reserved
---	---	---	OFF	---	---	---	---	Reserved
---	---	---	---	OFF	OFF	OFF	OFF	Address of Wire Controlled Indoor Unit

8.2 Control with YCJ-A002

Model list

Model	PCB	Port
AB25S2SC2FA(H) AB35S2SC2FA(H)	0151800244AE	No Function
AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1 AB50S2SC2FA(H)	0151800208CM	CN13
AB71S2SG1FA(H)	0151800208CE (Before 6th May,2021)	No Function
	0151800208CFA (After 6th May,2021)	CN13
ABH105H1ERG(H) ABH125K1ERG(H) ABH140K1ERG(H) ABH160K1ERG(H)	0151800208CFA	CN13
AD25S2SS1FA-1 AD35S2SS1FA-1 AD50S2SS1FA-1 AD71S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA(H) AD50S2SS1FA(H) AD71S2SS1FA(H) AD35S2SM3FA-1 AD50S2SM3FA-1 AD71S2SM3FA-1 AD105S2SM3FA-1 AD35S2SM3FA(H) AD50S2SM3FA(H) AD71S2SM3FA(H) AD90S2SM3FA(H) AD105S2SM3FA(H)	0151800644	CN9
AD160S2SM3FA(H)	0151800644	CN9
AF25S2SD1FA(H) AF35S2SD1FA(H) AF50S2SD1FA(H)	0151800348	CN13
AC35S2SG1FA(H) AC50S2SG1FA(H) AC71S2SG1FA(H) AC105S2SH1FA(H) AC125S2SK1FA(H) AC140S2SK1FA(H) AC160S2SK1FA(H)	0151800459H	CN13

YCJ-A002 part code--0151800130

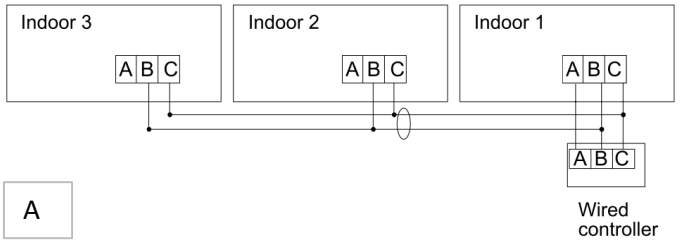
BM1		Description
0:OFF	1:ON	
0	0	Single Split model
1	0	VRF model
0	1	Modbus RTU standard protocol
1	1	BMS system

SW1(1 mean ON, 0 mean OFF)								Definition: unitary air conditioner
[1]	[2]	[3]	[4]	[5]	[6]	[7]	[8]	
-	0	0	0	0	0	0	0	Single mode address =1
-	0	0	0	0	0	0	1	Single mode address =2
-	---							----
-	0	1	0	0	1	1	0	Single mode address =39
-	0	1	0	0	1	1	1	Single mode address =40
-	---							----
-	0	1	1	1	1	1	1	Single mode address =63
-	1	0	0	0	0	0	0	Single mode address =64
-	---							----
-	1	1	1	1	1	1	0	Single mode address =127
-	1	1	1	1	1	1	1	Single mode address =128

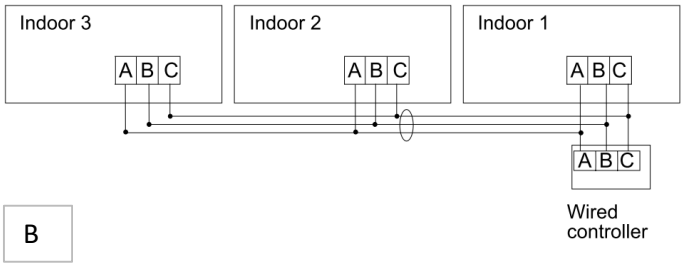
8.3 Wired Controller Group Control

Model	PCB	Group control method
AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1 AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA(H)	0151800208CM	B
AD25S2SS1FA-1 AD35S2SS1FA-1 AD50S2SS1FA-1 AD71S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA(H) AD50S2SS1FA(H) AD71S2SS1FA(H) AD35S2SM3FA-1 AD50S2SM3FA-1 AD71S2SM3FA-1 AD105S2SM3FA-1 AD35S2SM3FA(H) AD50S2SM3FA(H) AD71S2SM3FA(H) AD105S2SM3FA(H)	0151800644	B
AB71S2SG1FA(H) ABH105H1ERG(H) ABH125K1ERG(H) ABH140K1ERG(H) ABH160K1ERG(H)	0151800208CFA	B
AC35S2SG1FA(H) AC50S2SG1FA(H) AC71S2SG1FA(H) AC105S2SH1FA(H)	0151800459H	B
AC125S2SK1FA(H) AC140S2SK1FA(H) AC160S2SK1FA(H)		
AD160S2SM3FA(H)	0151800644	B
AF25S2SD1FA(H) AF35S2SD1FA(H) AF50S2SD1FA(H)	0151800348	B

Group control method



A



B

Model	PCB	Wired controller connection port
AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1 AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA(H)	0151800208CM	CN11 CN11-1
AD25S2SS1FA-1 AD35S2SS1FA-1 AD50S2SS1FA-1 AD71S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA(H) AD50S2SS1FA(H) AD71S2SS1FA(H) AD35S2SM3FA-1 AD50S2SM3FA-1 AD71S2SM3FA-1 AD105S2SM3FA-1 AD35S2SM3FA(H) AD50S2SM3FA(H) AD71S2SM3FA(H) AD105S2SM3FA(H)	0151800644	CN22 CN22-1
AB71S2SG1FA(H)	0151800208CFA	CN11 CN11-1
AC35S2SG1FA(H) AC50S2SG1FA(H) AC71S2SG1FA(H) AC105S2SH1FA(H) AC125S2SK1FA(H) AC140S2SK1FA(H) AC160S2SK1FA(H)	0151800459H	CN11 CN11-1
AF25S2SD1FA(H) AF35S2SD1FA(H) AF50S2SD1FA(H)	0151800348	CN11 CN11-1

8.4 Indoor unit Function

1.3.1 Sign Definition

Indoor					Outdoor				
Tai	Tc1	Tc2	Tm	Tao	Toci	Tc	Te	Ts	Td
Ambient Temp	Outlet Pipe Temp.	Inlet Pipe Temp	Mid Coil Temp	Ambient Temp	Thick Pipe of Heat Exchanger	Mid Condenser Temp.	Defrost Temp	Compressor Suction Temp.	Compressor Discharging Temp.
Tcomp1,2			Tset						
Temp. Compensation			Set Temp.						

1.3.2 Dry Operation

Tai ＜ 16°C, indoor unit stops running and sends stop-unit signal to outdoor.

Tai≤Tset, indoor motor runs at low speed and sends stop-unit signal to outdoor

1.3.3 Fan Operation

Indoor fan motor will run as the fan speed set on the remote controller or the wired controller and indoor unit will send the stop-unit signal to outdoor.

1.3.4 Auto Operation

A: If the unit enters Auto mode for the first time, the system will adjust the operation mode according to the room temp. and the set temp.

When Tai ≥ Tset, entering auto cooling mode;

When Tai ＜ Tset, entering auto heating mode.

B: Auto cooling mode is as the same as the cooling mode. After the thermostat is OFF for 15 minutes, if Tai+ 1+Tcomp2 ＜ Tset, the unit will enter auto heating mode, or the unit will still stay at auto cooling mode and stop when it reaches the set temperature; while the indoor motor will be at low speed.

C: Auto heating mode is as the same as the heating mode. After the thermostat is OFF for 15 minutes, if Tai≥Tset+1 +Tcomp1, the unit will enter auto cooling mode, or the unit will still stay at auto heating mode;

D: In this mode, the Sleep function is available, run as cooling sleep in cooling mode and as heating sleep in heating mode. Once sleep mode is set, the mode will not change after the unit stops for 15 minutes when it arrives Tset.

E: Mode conversion will be confirmed after compressor has stopped for 10 minutes.

1.3.5 Abnormal Operation

A: When outdoor modes from the request of indoor unit conflict, the one entering firstly will take priority.

B: After indoor receives the ON command from wired controller, it will firstly confirm the outdoor current operation mode. If they are the same modes, indoor unit will run as the request of remote controller. If they are different modes, the system will forbid to operate, and indoor will keep the OFF mode and send the “standby” signal to wired controller until outdoor stops or outdoor mode the requested mode of wired controller are the same, the unit will run as the requested mode of wired controller.

C: After indoor receives the ON command from remote controller, it will firstly confirm the outdoor current operation mode. If they are the same mode, indoor unit will run as the request of remote controller. If they are different modes, the system will forbid to operate, and indoor will keep the OFF mode. After setting on remote controller, if the buzzer sounds two times, that shows abnormal operation. Indoor will run until the outdoor mode and the requested mode of remote controller are the same.

D: In AUTO mode, when the indoor unit occurs abnormal operation, the indoor unit will keep OFF state, and the buzzer will not sound until the outdoor mode and the requested mode of indoor unit are the same.

F: COOL (included AUTO COOL), DRY, FAN are not abnormal mode.

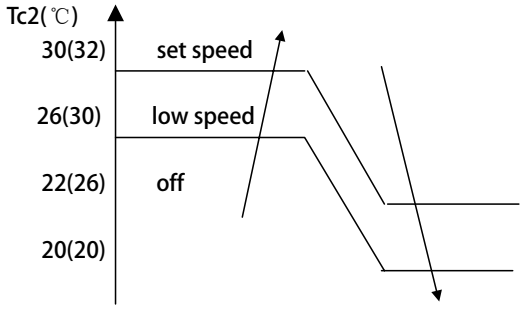
G: HEAT and FAN are not abnormal mode.

1.3.6 Control for Discontinuous Operation

After the unit starts up in cooling/heating mode, in 5 minutes, the compressor run/stop will not be controlled by the room temp., but after changing the set temp., if compressor stop condition can be met, the system will stop compressor immediately.

1.3.7 Anti-Cold Air Control

In heating mode, after compressor startup, the system will control indoor fan motor according to indoor coil temperature. Detailed operation is as below:



Note:

1) The data in the parentheses is the control point when Tao>10°C;

2) Indoor unit will send "pre-heat" signal to wired controller in anti-cold air period.

1.3.8. Fan Motor Control in Defrosting

A. On receiving outdoor defrosting signal, indoor unit will stop after blowing remaining heat at slow speed for 20 seconds.

B. In defrosting period, indoor fan motor stops running.

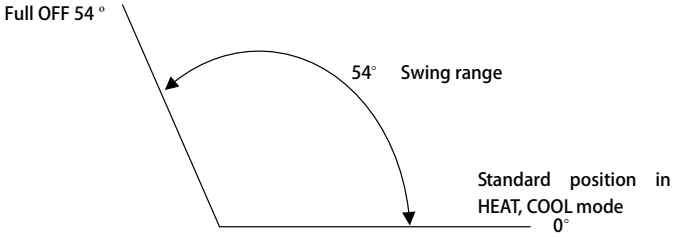
C. Defrosting is over, and indoor motor will run as anti-cold air state.

1.3.9 Blowing Remaining Heat Operation

When the unit shuts off in heating mode or the thermostat is OFF, indoor motor will stop running after running at low speed for 30 seconds.

1.3.10 Swing Motor Control

Indoor unit will control the swing motor according to the swing signal from the wired controller.



1.3.11 Water Pump Control

A.Cooling and dry mode: The water pump will work when the compressor startup and will stop after 5min the compressor stops. When switching to heating or other mode, the water pump will runs for 5min then work based on its current working mode.

B.Cooling standby, heating, fan mode: Water pump will not work when floating switch closed. If floating switch disconnected, indoor units will detect this signal and last for 2 seconds, water pump starts to work. When floating switch returns to the closed state, the pump will continue to run for 5min then stops.

C. If the “disconnecting” signal from floating switch is detected for 5min, compressor will stops; then water pump keep running for another 5min; if floating switch still disconnects, then system will show a drain system failure; Water pump still runs until receiving the signal of floating switch closed for continuously 5min then stops

1.3.12 Compulsory Defrosting Operation

A: After indoor receives the compulsory defrosting signal, it will send continously the signal to outdoor for 10 times, in this period, indoor unit will work normally and it will enter defrosting operation until it receives the enter-defrost signal from outdoor unit.

B: Wired control type: In heating mode, make a jumper for D2 to enter compulsory defrosting.

C: Remote control type: In heating mode, high speed, 30°C, press SLEEP button 6 times, and the buzzer will sound 3 times, then enter the manual defrosting.

1.3.13 Trial Operation

A: Enter condition

a: Wired control type: In OFF state of COOL or HEAT mode, press ON/OFF button for over 5 seconds to enter the cooling or heating trial operation;

b: Remote control type: In OFF state, keep pressing ON/OFF button until 5 seconds later, the buzzer sounds twice, then enter the cooling or heating trial operation;

B: Response in trial operation

a: Cooling trial operation: indoor sends S-CODE=SD to outdoor, indoor: at high speed, set temp: 16°C;

b: Heating trial operation: indoor sends S-CODE=SF to outdoor, indoor: at high speed, set temp: 30°C;

c: In this period, anti-freezed and overheat functions are invalid.

C: Quit condition

a: Receiving the signal of cancelling trial operation from wired controller or remote controller;

b: After trial operation has run for 20 minutes, it will quit trial operation automatically and enter the normal mode with the set temp.: 24°C.

1.3.14 Timer Operation

A: Wired control type: wired controller will control the unit ON/OFF;

B: Remote control type: indoor unit will confirm the unit ON or OFF according to the current clock and the timer clock set by remote controller. When setting timer function, the timer LED will be ON.

1.3.15 SLEEP Function

A: Wired control type unit is without sleep function;

B: Remote control type unit consists of cooling sleep and heating sleep, after the sleep is set, the unit will change mode; the sleep will begin to count.

a: In cooling/dry mode, after running for 1 hour, the set temp. will increase 1°C, another 1 hour later, the set temp. will increase 1°C again, then 6 hours (or set time-2) later , it will stop.

b: In heating mode, after running for 1 hour, the set temp. will reduce 2°C, another 1 hour later, the set temp. will reduce 2°C again, then 3 hours later, the set temp. will increase 1°C, and another 3 hours(or set time-5), it will stop.

c: When setting sleep function, indoor motor is forced at low speed.

1.3.16 Healthy Negative Ion Function

When receiving the healthy signal from the wired controller or remote controller, if fan motor is running, the negative ion will work;

If the fan motor stops, the negative ion generator will stop.

1.3.17 Auto-Restart Function

A: Wired control type:

YR-E17: Please refer to the DIP switch setting SW4: ON means auto-restart unavailable; OFF means auto-restart available(SW4=OFF is factory default setting)

B: Remote control type:

YR-HQS01:

In 5 seconds, press SLEEP button 10 times continuously, the buzzer will beep 4 times and enter auto-restart function. In 5 seconds, press SLEEP 10 times continuously, the buzzer will beep twice and quit auto-restart functioh

C: Memory information: ON/OFF state, mode, fan speed, set temp., health, swing position;

D: If the memory includes timer or sleep function, when being electrified again, timer and sleep will be cancelled;

E: If the memory includes auto mode, when the jumper shows cooling only type, auto mode will change to cooling mode.

1.3.18 Room Card Function

Room Card Function

1) Room card function (SW1-4) switched off

a.Indoor unit restart in 24ºC AUTO mode (manufactured before 30th Nov. 2020)

b.Indoor unit cannot be controlled by room card (manufactured before 30th Nov. 2020)

Note: before 30th Nov. 2020, most indoor units run as “a” and a few as “b”

c.If room card function switched off, indoor unit could be switched on/off by remote controller, wired controller, central controller and dry contact (When dry contact close the unit switched ON, when dry contact disconnect the unit switched OFF). (manufactured before 30th Nov. 2020). Details as following:

When the dry contact close, the unit will operate as per the state set by controller during the previous operation (EE memory separated), that will remember operating modes, fan speed, temperature setting, healthy mode, swing position etc. Timer and sleep mode will be canceled when the unit startup again.

When dry contact disconnect, indoor unit can be controlled by controller when turned off.

2) Room card function (SW1-4) switched on

If room card function valid, the indoor unit will only runs when the room card connect first then switched ON by remote controller, wired controller or central controller. (The indoor unit stops when the room card disconnects, or switched OFF by remote controller, wired controller or central controller.)

When dry contact close, the indoor unit will be at stand-by state, indoor unit will be ON and run as per the controller setting state when it’s switched on by wireless controller or auto start.

When dry contact disconnect, the indoor unit will switched off immediately and cannot be controlled by controller.

Model	PCB	Room Card Connection Port	Dip Switch
AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1	0151800208CM(After 6th May,2021)	CN1	BM1-4

AD25S2SS1FA-1 AD35S2SS1FA-1 AD50S2SS1FA-1 AD71S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA(H) AD50S2SS1FA(H) AD71S2SS1FA(H) AD35S2SM3FA-1 AD50S2SM3FA-1 AD71S2SM3FA-1 AD105S2SM3FA-1 AD35S2SM3FA(H) AD50S2SM3FA(H) AD71S2SM3FA(H) AD105S2SM3FA(H)	0151800644	CN16	BM1-4
AF25S2SD1FA(H) AF35S2SD1FA(H) AF50S2SD1FA(H)	0151800348	CN1, CN1-1	BM1-4

Note: For console type indoor unit, if need room card function, both CN1,CN1-1 should be shorted.

1.3.19 Setting Method of Temperature Compensation Tcomp

A. Wired control type unit: this function is not available

B. Remote control type unit:

In cooling or heating mode, there is always with the temp. compensation.

In heating mode: In 24°C heating mode, press SLEEP(or SWING) button 7 times continuously within 5 seconds, indoor buzzer sounds twice, that shows temp. compensation works. Switch on the unit in heating mode by the remote controller, press TEMP button to set the set temp., so temperature compensation=the current set temp. - 24°C. For example, if the set temp. is 24°C, the temp. compensation is 0°C; if the set temp. is 25°C, the temp. compensation is 1°C. The max. compensation temp. is 6°C (the set temp. is 30°C). If you want to cancel it, set the temp. as 24°C.

In cooling mode: In 24°C cooling mode, press SLEEP(or SWING) button 7 times continuously within 5 seconds, indoor buzzer sounds twice, that shows temp. compensation works. Switch on the unit in heating mode by the remote controller, press TEMP button to set the set temp., so temperature compensation=24°C-the current set temp. For example, if the set temp is 24°C, the temp. compensation is 0°C; if the set temp. is 23°C, the temp. compensation is -1°C. The max. compensation temp is -8°C (the set temp is 16°C). If you want to cancel it, set the temp as 24°C.

So the temp. compensation range is +8°C~-6°C.

1.3.20 Anti-Freezed Protection

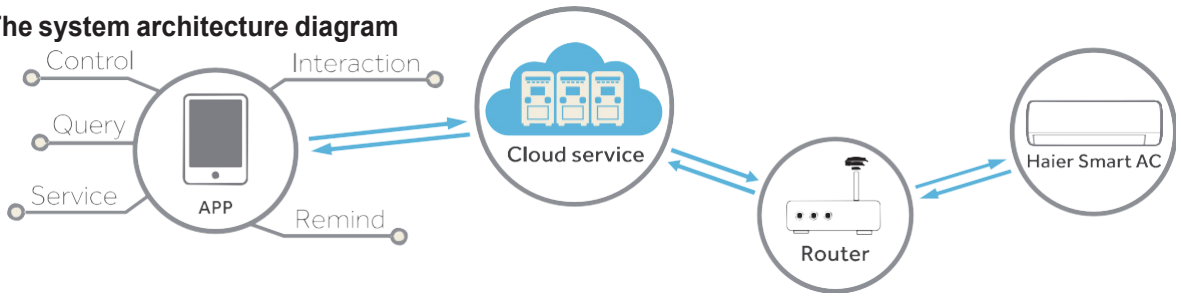
When compressor has run for over 5 minutes, to prevent indoor evaporator freezing (in cooling/dry mode), if indoor mid-coil temp is below -1 degree for over 5 minutes, indoor EEV will close, and compressor will stop. When indoor mid-coil temp is over about 10 degree, the unit will be normal.

1.3.21 Overload Protection in Heating Mode

It is valid only in heating mode, if indoor mid-coil temp. is over about 65 degree continuously for 10 seconds, indoor will stop; while when indoor mid-coil temp. is below 52 degree for 3 seconds, indoor will resume.

1.3.22 Candy WIFI and 56°C function

The system architecture diagram



The application environment

Smart mobile phone and wireless router are necessary for the appliacation. Wireless router must be able to connect to the Internet. Smart mobile phone requires IOS or Android system:

IOS system
must support IOS 9.0 or above

Android system
must support Android 5.0 or above

Configuration method

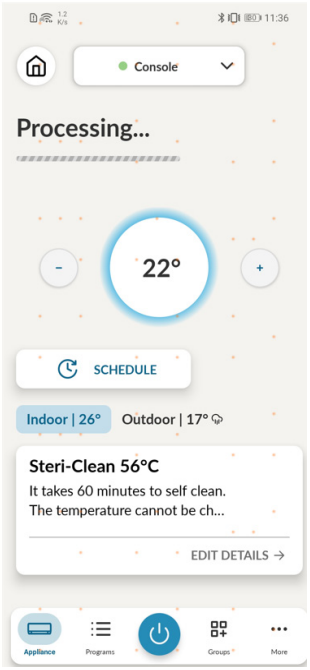
Scan the QR code below to download “hOn” APP.

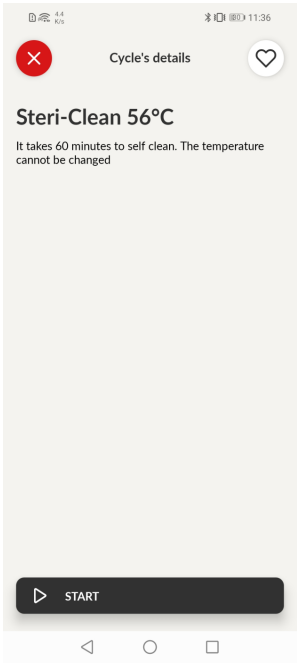
Other Download options: Please search hOn APP on: - App Store (IOS)

-Google Play (Android)

-Huawei AppGallery (Android)

After App Download, please register, connect the air conditioner and enjoy using hOn to manage your device. Please refer to the HELP section inside the APP for more details about how to register, connect the unit, and other operations.





56°C Steri-clean Operation

1. Enter condition: In the CANDY WIFI to select the steri-clean 56°C.
2. the operation process:

Stage I: frosting and defrosting Steri-clean function

The running time is 9 minutes.

At this stage, the indoor unit fan motor stops after running at the preset wind speed for 2 minutes; The outdoor unit operates in cooling mode, and the compressor operates at a self-cleaning frequency; The expansion valve operates according to the opening of self-cleaning;

Stage II: high temperature sterilization at 56°C. Maintain the surface of the heat exchanger at a temperature above 56 °C for more than 30 minutes to eliminate bacteria on the surface of the heat exchanger. In this stage, the indoor unit fan motor adjusts the wind speed according to the coil emperature ; The outdoor unit fan motor and compressor operate according to the set speed and frequency from cooling to heating; The opening of expansion valve shall be controlled according to the heating procedure; The four-way valve is open.

Exit conditions:

1. The indoor coil temperature is more than 56°C for 30min;
2. The compressor runs for 60 minutes in total.

If any of the above conditions is met, it will exit the Steri-clean process.

1.3.23 UVC function:

UVC ON:

regardless of the operation mode, the indoor fan motor runs for 3 minutes. After receiving the health signal from the controller, it will be ON.

UVC OFF:

1. During the opening process of negative ions, it is detected that the indoor fan fails or the fan stops, and the negative ions are closed
2. The unit receives the shutdown signal, and the anion follows the whole machine to shut down before the fan is shut down
3. After receiving the health off signal from the controller, the anion is off.

UVC function selection:

Select the function by judging whether TC2 is short circuited,

When TC2 is short circuited, the function of fresh air terminal is changed to negative ion function

When TC2 is disconnected, select whether it is fresh air or fault linkage function according to the dial code

8.5 The UVC health module description

1. Characteristics

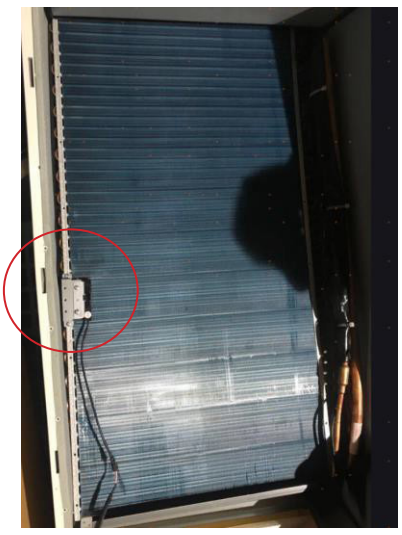
The main body of the health module is an ultraviolet lamp with a wavelength range of 270-280nm. It has the function of sterilization. The luminous angle of the ultraviolet lamp bead is 30°. The rated input current is 100 ± 5mA, peak current no more than 150mA, rated input Voltage DC12V ± 0.5V.

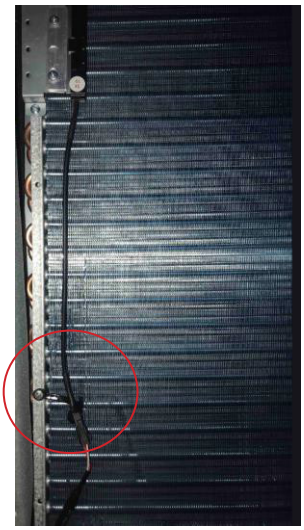
Under normal working condition, the service life is more than 15000 hours, and L50 (that is, the time when the output light power of LED decays to half) is more than 10000 hours.

2. Installation position

For duct models, the health module is installed on the evaporator bracket and connected to the PCB through the wiring. During normal operation, the health module is in the sealed space composed of the evaporator bracket, the bottom plate group, the evaporator, the drain pan and the partition plate.

For cabinet model, the health module is fixed on the evaporator tube plate with screws. During normal operation, the health module is in the air outlet channel composed of the evaporator, the left and right side plates and the evaporator baffle.





Thus it can sterilize the outlet air, and has the low risk of ultraviolet leakage.

When the temperature is 23°C ~ 27°C, the relative humidity is 43% ~ 47%; the ozone concentration is less than 0.10mg/m3 at 5cm away from the air outlet of the air conditioner under rated working voltage. The UV test intensity is less than 5uw / cm2 at 5cm around the air conditioner where the health module is installed.

The results show that the sterilization rate meets the requirements of the national standard. In the 30m3 closed experimental cabins, the sterilization rate is more than 70% after simulated operation for 1H and more than 90% after operation for 2h.

3. Precautions
Ultraviolet radiation is harmful to human body:
1. It can cause skin redness, swelling, pain and desquamation. Long time irradiation can cause skin cancer and skin tumor.
2. It can cause conjunctivitis and keratitis of the eyes, redness, swelling, pain and tears of the eyes. Long time application may induce cataract.

Therefore, in order to avoid UV damage to human body, please turn off the power before maintenance.
Remark
Use the health key of the remote control or wired controller to turn on or off the UV light health module

Haier

8.6 Diagnostic Code

AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1H
AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA (H)

INDOOR UNIT TROUBLE SHOOTING

LED flash times of indoor PCB		Wired controller display	Contents of Malfunction	Possible reasons
LED5	LED1			
0	1	01	Malfunction of indoor unit ambient temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	2	02	Malfunction of indoor unit piping temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	4	04	EEPROM wrong of indoor PCB	EEPROM chip disconected or broken or wrong programmed,or PCB broken
0	7	07	Abnormal communication between indoor and outdoor units	Wrong connection,or the wires be disconected or wrong adress setting of indoor unit or faulty power supply or faulty PCB or slave unit malfunction in MAXI system
0	8	/	Abnormal communication between wired controller and indoor unit	Wrong connection or wired controller broken,or PCB faulty
0	12	0C	Malfunction of drain system	Pump motor disconnected or at wrong position,or the float switch,disconnected，or at wrong position,or the short circuit bridge disconne ted
0	13	0D	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	0E	Indoor unit DC fan motor abnormal	DC Fan motor disconnected or DC Fan broken or circuit broken

Note:
1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED5 flash times stands for tens digit,and LED1 flash times stands for units digit, use this bidigitate figure minus 20,then will get the outdoor error code.For example,if the outdoor error code is 15,LED5 will flash 3 times firstly,two seconds later,LED1 will flash 5 times , and four seconds later the process will repeat again.
2.LED5 is a red one on the indoor PCB,LED1 is a yellow one.
3.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.

0150515407

AD50S2SS1FA-1 AD71S2SS1FA-1 AD35S2SM3FA-1 AD50S2SM3FA-1
AD50S2SS1FA(H) AD71S2SS1FA(H) AD35S2SM3FA(H) AD50S2SM3FA(H)

INDOOR UNIT TROUBLE SHOOTING

LED flash times of indoor PCB		Wired controller display	Contents of Malfunction	Possible reasons
LED4	LED3			
0	1	01	Malfunction of indoor unit ambient temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	2	02	Malfunction of indoor unit piping temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	4	04	EEPROM wrong of indoor PCB	EEPROM chip disconected or broken or wrong programmed,or PCB broken
0	7	07	Abnormal communication between indoor and outdoor units	Wrong connection,or the wires be disconected or wrong adress setting of indoor unit or faulty power supply or faulty PCB or slave unit malfunction in MAXI system
0	8	/	Abnormal communication between wired controller and indoor unit	Wrong connection or wired controller broken,or PCB faulty
0	12	0C	Malfunction of drain system	Pump motor disconnected or at wrong position,or the float switch,disconnected，or at wrong position,or the short circuit bridge disconnected
0	13	0D	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	0E	Indoor unit DC fan motor abnormal	DC Fan motor disconnected or DC Fan broken or circuit broken

Note:

1.The outdoor failure can also be indicated by the indoor unit,the checking method as follows: If the outdoor error code is M（DECIMAL)， the indoor unit's wired controller display will show the after converted hexadecimal code of "M+20"(DECIMAL), for example,if the outdoor error code is 2,the indoor unit wired controller display will flash the error code 16 (2→2+20=22 →change decimal 22 to hexadecimal code,get 16）

2.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.

0150521239

AD71S2SM3FA -1 AD105S2SM3FA-1 AD71S2SM3FA(H) AD105S2SM3FA (H)

INDOOR UNIT TROUBLE SHOOTING

LED flash times of indoor PCB		Wired controller display	Contents of Malfunction	Possible reasons
LED4	LED3			
0	1	01	Malfunction of indoor unit ambient temper-ature sensor	Sensor disconected, or brok-en,or at wrong position, or short circuit
0	2	02	Malfunction of indoor unit piping temper-ature sensor	Sensor disconected, or brok-en,or at wrong position, or short circuit
0	4	04	EEPROM wrong of indoor PCB	EEPROM chip disconected or broken or wrong program-med, or PCB broken
0	7	07	Abnormal communi-cation between indo-or and outdoor units	Wrong connection, or the wires be disconected or wrong adress setting of indoor unit or faulty power supply or faulty PCB or slave unit malfunction in MAXI system
0	8	07*flashing	Abnormal communi-cation between wired controlleer and indoor unit	Wrong connection or wired controller broken, or PCB faulty
0	12	0C	Malfunction of drain system	Pump motor disconnected or at wrong position, or the float switch disconnected or at wrong position, or the short circuit bridge disconne ted
0	13	0D	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	0E	Indoor unit DC fan motor abnormal	DC Fan motor disconnected or DC Fan broken or circuit broken or motor blocked

Note:

1.The outdoor failure can also be indicated by the indoor unit, the checking method as follows: If the outdoor error code is M (DECIMAL), the indoor unit's wired controller display will show the after converted hexadecimal code of "M+20" (DECIMAL) , for example, if the outdoor error code is 2, the indoor unit wired controller display will flash the error code 16 (2-2+20=22-change decimal 22 to hexadecimal code, get 16)

2.To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.

3. For YR-E17, communication error between I.D.PCB and wired controller, 07 will flash in the main display not the check display interface.

AF25S2SD1FA(H) AF35S2SD1FA(H) AF42S2SD1FA(H)

LED flash times of indoor PCB		panel display	Contents of Malfunction	Possible reasons
LED4	LED3			
0	1	E1	Malfunction of indoor unit ambient temper-ature sensor	Sensor disconected, or brok-en,or at wrong position, or short circuit
0	2	E2	Malfunction of indoor unit piping temper-ature sensor	Sensor disconected, or brok-en,or at wrong position, or short circuit
0	4	E4	EEPROM wrong of indoor PCB	EEPROM chip disconected or broken or wrong program-med, or PCB broken
0	7	E7	Abnormal communi-cation between indo-or and outdoor units	Wrong connection, or the wires be disconected or wrong adress setting of indoor unit or faulty power supply or faulty PCB or slave unit malfunction in MAXI system
0	8	E8	Abnormal communi-cation between wired controlleer and indoor unit	Wrong connection or wired controller broken, or PCB faulty
0	12	E10	Malfunction of drain system	Pump motor disconnected or at wrong position, or the float switch disconnected or at wrong position, or the short circuit bridge disconne ted
0	13	C1	Zero cross sigal wrong	Zero cross sigal detected wrong
0	14	E14	Indoor unit DC fan motor abnormal	DC Fan motor disconnected or DC Fan broken or circuit broken

AP140S2SK1FA(H) AP160S2SK1FA(H)

LED flash times of indoor PCB		Malfunction display	Contents of Malfunction	Possible reasons
LED6	LED1			
0	1	E1	Malfunction of indoor unit ambient temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	2	E2	Malfunction of indoor unit piping temperature sensor	Sensor disconected,or broken,or at wrong position,or short circuit
0	6	E6	Outdoor high pressure exceeds the setpoint	The pressure switch is dama-ged or bad control board
0	7	E7	Over-voltage protection	The power supply voltage,or the control board is damaged
0	8	E8	Abnormal communication between wired controller and indoor unit	Wrong connection or wired controller broken,or PCB faulty
0	9	E9	Indoor and outdoor unit communication failure	Indoor or outdoor control board is damaged; or the communication wiring is damaged
0	14	EA	Indoor unit DC fan motor abnormal	DC Fan motor disconected,or DC Fan broken or circuit broken
0	/	FC	Indoor pipe temperature is too high	The compressor is not running or damaged

Note:

1. The outdoor failure can also be indicated by the indoor unit,the checking method as follows: LED6 flash times stands for ten's place,and LED1 flash times stands for one's place, use this tendigit number minus 20,then will get the outdoor error code.For example,if the outdoor error code is 15,LED6 will flash 3 times firstly,two seconds later,LED1 will flash 5 times , and four seconds later the process will repeat again.
2. LED6 is a green one on the indoor PCB,LED1 is a yellow one.
3. To get much more details about the out door unit failure,please refer to the outdoor unit trouble shooting list.

Outdoor display	Fault Discription	Slim ESP duct (PCB code 0151800267)			Slim duct & Medium ESP duct (PCB code 0151800644)		
		Timer lamp flash time(I.D. PCB LED4)	Running lamp flash time(I.D. PCB LED3)	Panel display--for P1B-890IA/D P1B-1210IA/D	Timer lamp flash time(I.D. PCB LED4	"Running lamp flash time(I.D. PCB LED3)"	Panel display--for P1B-890IA/D P1B-1210IA/D
27	Input current sampling circuit fault	4	7	E20	4	7	F27
28	No wiring of the compressor	4	8	E20	4	8	F28
37	Compressor oevercurrent detected by compressor driver module	5	7	E20	5	7	F37
38	Driver module temp.sensor abnornal	5	8	E20	5	8	F38
39	Mid-condensor temp.sensor TC abnormal	5	9	E20	5	9	F39
42	High pressure switch abnormal	6	2	E20	6	2	F42
43	Low pressure switch abnormal	6	3	E20	6	3	F43
44	Outdoor condenser temperature TC too high protection	6	4	E20	6	4	F44
45	System low pressure protection	6	5	E20	6	5	F45

Single Split Outdoor unit Trouble shooting

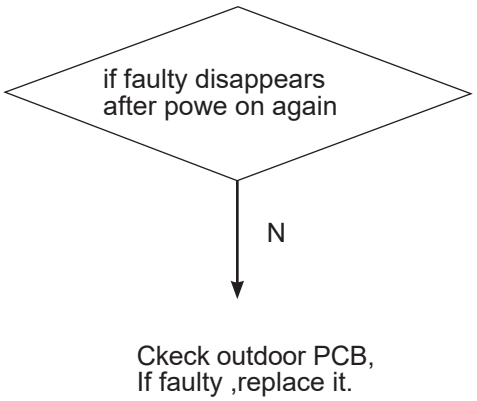
Outdoor display	Fault Discription	AF25S2SD1FA(H) AF35S2SD1FA(H) AF42S2SD1FA(H)		
		Timer lamp flash time(I.D. PCB LED6)	Running lamp flash time(I.D. PCB LED1)	Panel display
1	Outdoor unit EEPROM malfunction	2	1	F01
2	IPM hardware overcurrent	2	2	F02
3	Compressor over current during deceleration	2	3	F03
4	Communication abnormal between control board and compressor driver module	2	4	F04
5	Compressor overcurrent detected by control board	2	5	F05
6	DC voltage or AC voltage high	2	6	F06
7	Compressor current sampling circuit fault	2	7	F07
8	Discharging temperature too high protection	2	8	F08
9	DC fan motor fault	2	9	F09
10	Outdoor defrosting temp. sensor Te abnormal	3	0	F10
11	Suction temp. sensor Ts abnormal	3	1	F11
12	Ambient temp. sensor Ta abnormal	3	2	F12
13	Discharge temp. sensor Td abnormal	3	3	F13
14	PFC circuit too high voltage	3	4	F14
15	Communication abnornal between indoor&outdoor unit	3	5	F15
16	Lack of refrigerant or discharging pipe is blocked	3	6	F16
17	4-way valve converse failure	3	7	F17
18	Loss of synchronism detection	3	8	F18
19	DC voltage or AC voltage low	3	9	F19
19	Module PWM select circuit error	3	9	F19
20	Indoor pipe temperature too high protection	4	0	F20
21	Indoor pipe temperature too low protection	4	1	F21
22	PFC circuit loop overcurrent	4	2	F22
23	Temperature too high for compressor drivrer module	4	3	F23
24	Compressor start failure	4	4	F24
25	Compressor U-phase over-current	4	5	F25
25	Compressor V-phase over-current	4	5	F25
25	Compressor W-phase over-current	4	5	F25
25	Module input overcurrent	4	5	F25
26	Lack phase of driver module	4	6	F26
27	Input current sampling circuit fault	4	7	F27
28	No wiring of the compressor	4	8	F28
37	Compressor oevercurrent detected by compressor driver module	5	7	F37
38	Driver module temp.sensor abnornal	5	8	F38
39	Mid-condensor temp.sensor TC abnormal	5	9	F39
42	High pressure switch abnormal	6	2	F42
43	Low pressure switch abnormal	6	3	F43
44	Outdoor condenser temperature TC too high protection	6	4	F44
45	System low pressure protection	6	5	F45

Single Split Outdoor unit Trouble shooting

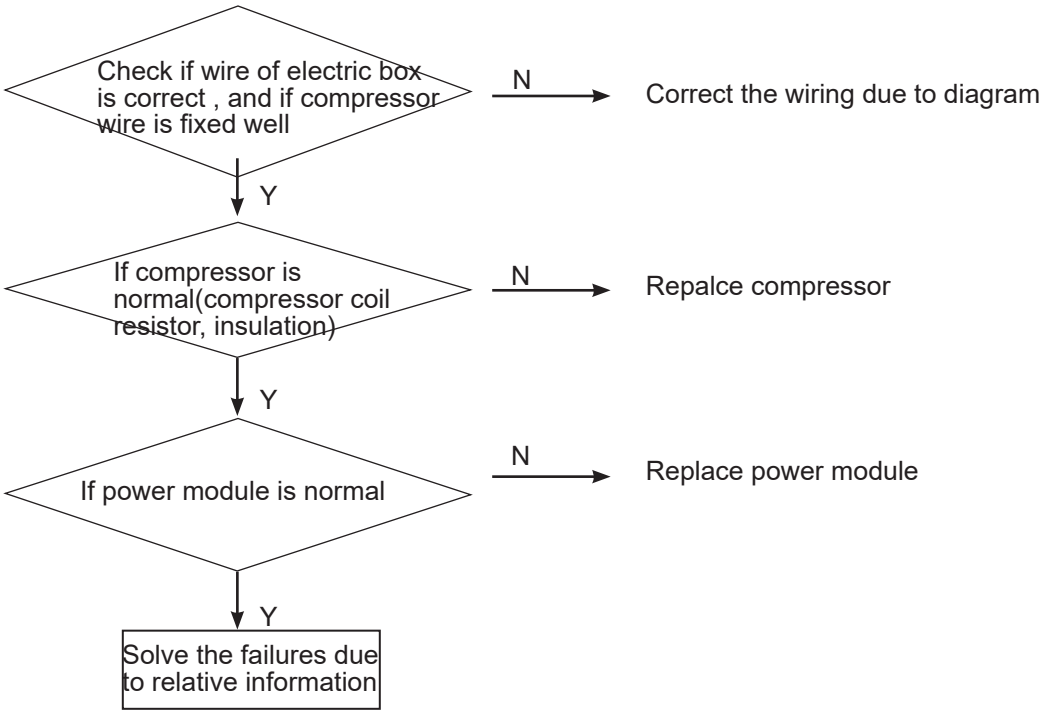
Outdoor display	Fault Discription	Cassette		
		Timer lamp flash time	Running lamp flash time	Panel display
1	Outdoor unit EEPROM malfunction	2	1	15
2	IPM hardware overcurrent	2	2	16
3	Compressor over current during deceleration	2	3	17
4	Communication abnormal between control board and compressor driver module	2	4	18
5	Compressor overcurrent detected by control board	2	5	19
6	DC voltage or AC voltage high	2	6	1A
7	Compressor current sampling circuit fault	2	7	1B
8	Discharging temperature too high protection	2	8	1C
9	DC fan motor fault	2	9	1D
10	Outdoor defrosting temp. sensor Te abnormal	3	0	1E
11	Suction temp. sensor Ts abnormal	3	1	1F
12	Ambient temp. sensor Ta abnormal	3	2	20
13	Discharge temp. sensor Td abnormal	3	3	21
14	PFC circuit too high voltage	3	4	22
15	Communication abnornal between indoor&outdoor unit	3	5	23
16	Lack of refrigerant or discharging pipe is blocked	3	6	24
17	4-way valve converse failure	3	7	25
18	Loss of synchronism detection	3	8	26
19	DC voltage or AC voltage low	3	9	27
19	Module PWM select circuit error	3	9	27
20	Indoor pipe temperature too high protection	4	0	28
21	Indoor pipe temperature too low protection	4	1	29
22	PFC circuit loop overcurrent	4	2	2A
23	Temperature too high for compressor drivrer module	4	3	2B
24	Compressor start failure	4	4	2C
25	Compressor U-phase over-current	4	5	2D
25	Compressor V-phase over-current	4	5	2D
25	Compressor W-phase over-current	4	5	2D
25	Module input overcurrent	4	5	2D
26	Lack phase of driver module	4	6	2E
27	Input current sampling circuit fault	4	7	2F
28	No wiring of the compressor	4	8	30
37	Compressor oevercurrent detected by compressor driver module	5	7	39
38	Driver module temp.sensor abnornal	5	8	3A
39	Mid-condensor temp.sensor TC abnormal	5	9	3B
42	High pressure switch abnormal	6	2	3E
43	Low pressure switch abnormal	6	3	3F
44	Outdoor condenser temperature TC too high protection	6	4	40
45	System low pressure protection	6	5	41

8.7 Trouble Shooting

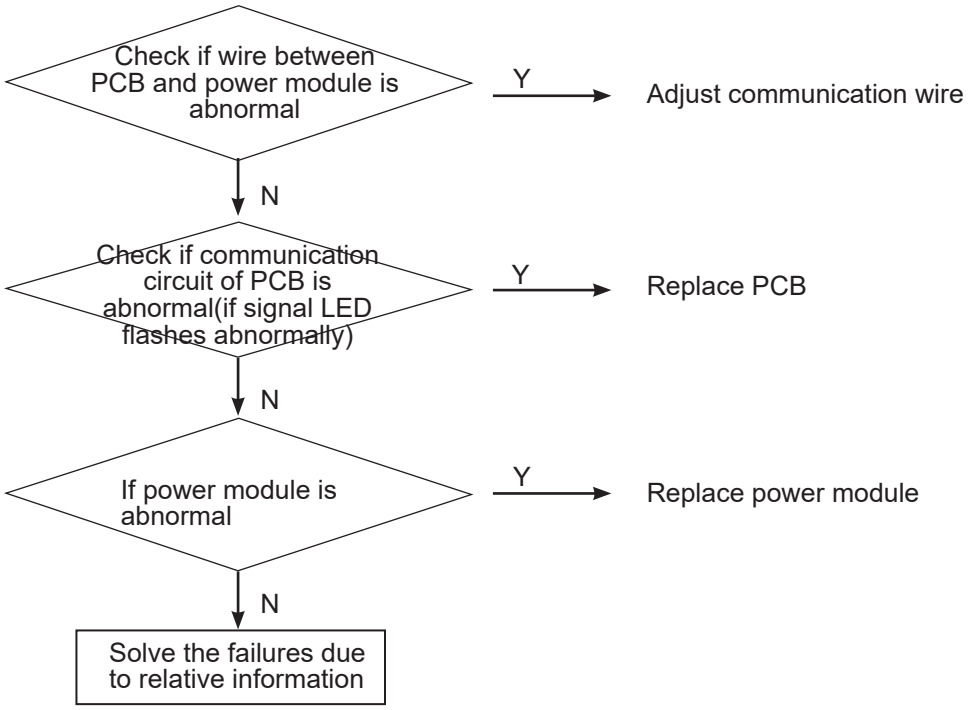
[1] Outdoor EEPROM Failure



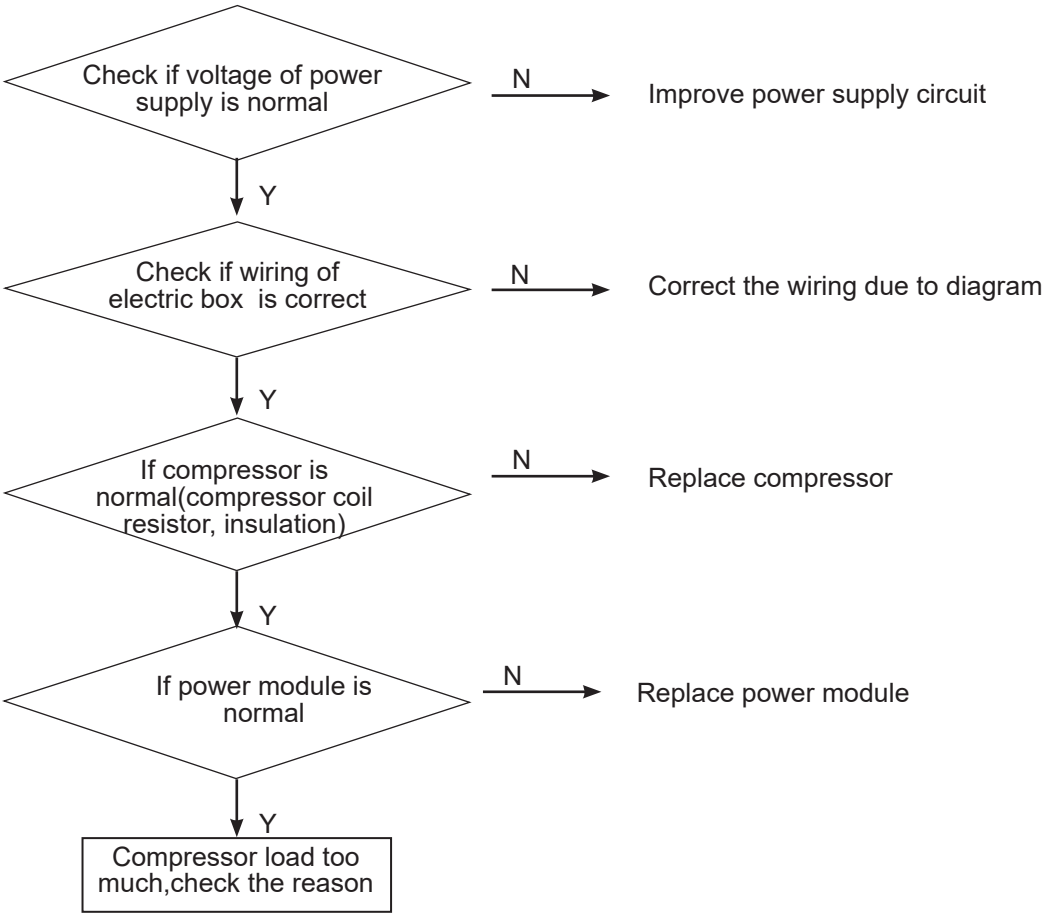
[2] IPM Over Current or Short Circuit



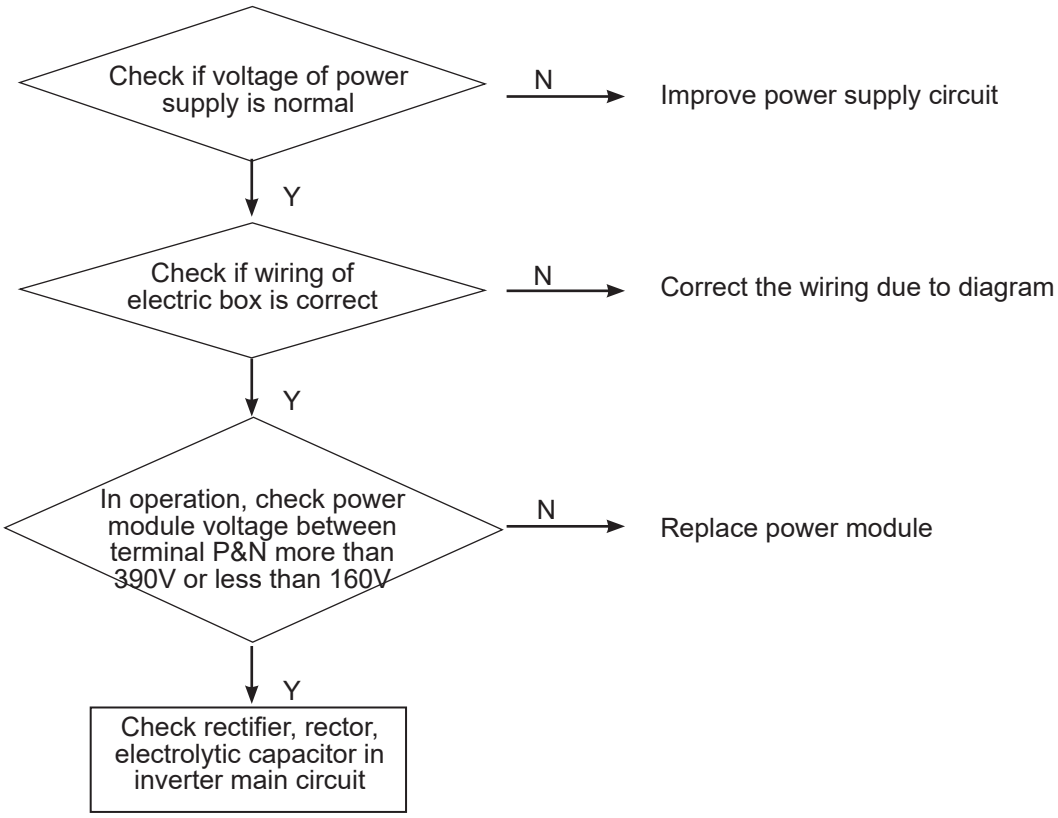
[4] Communication Failure Between Module Ans Ecu



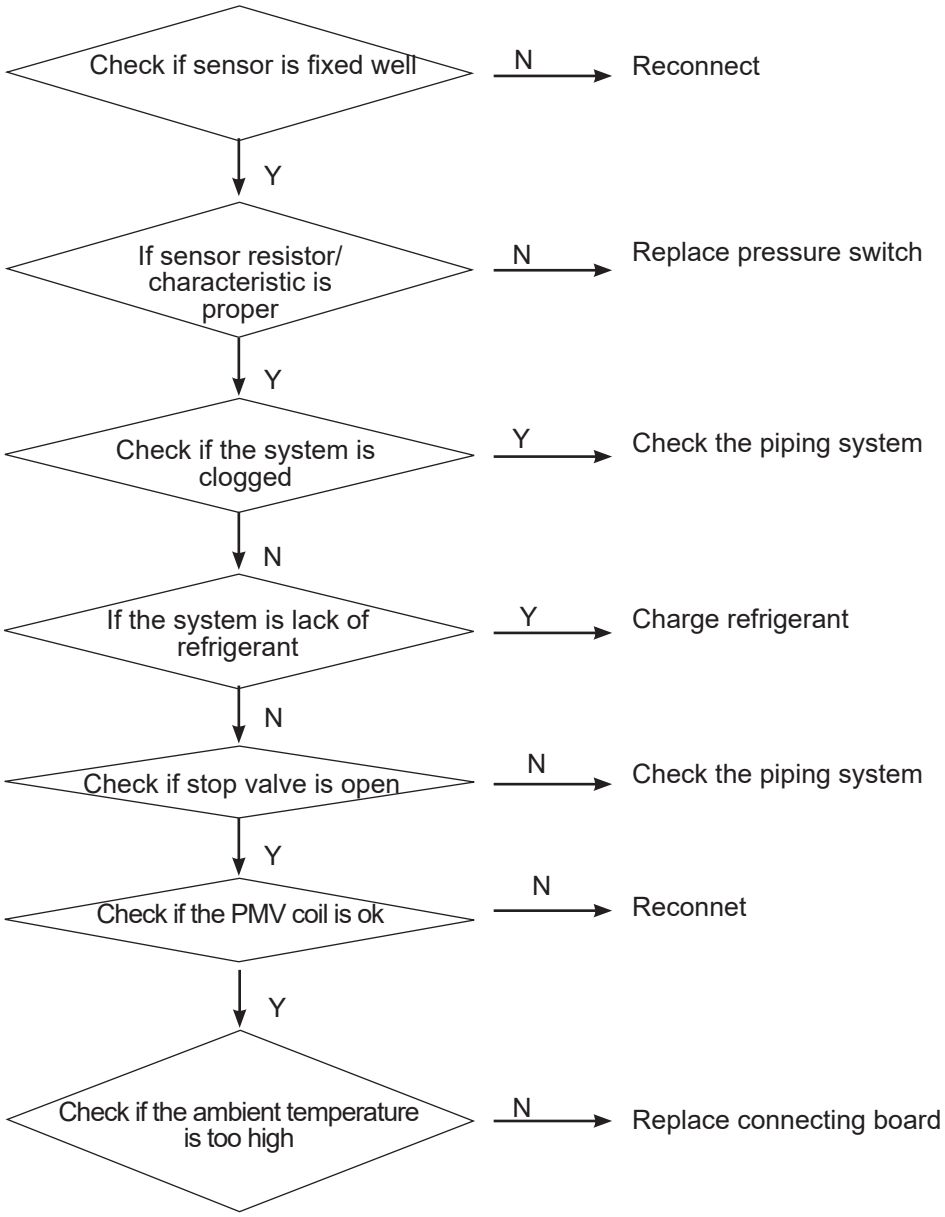
[5] Module Operated Overload



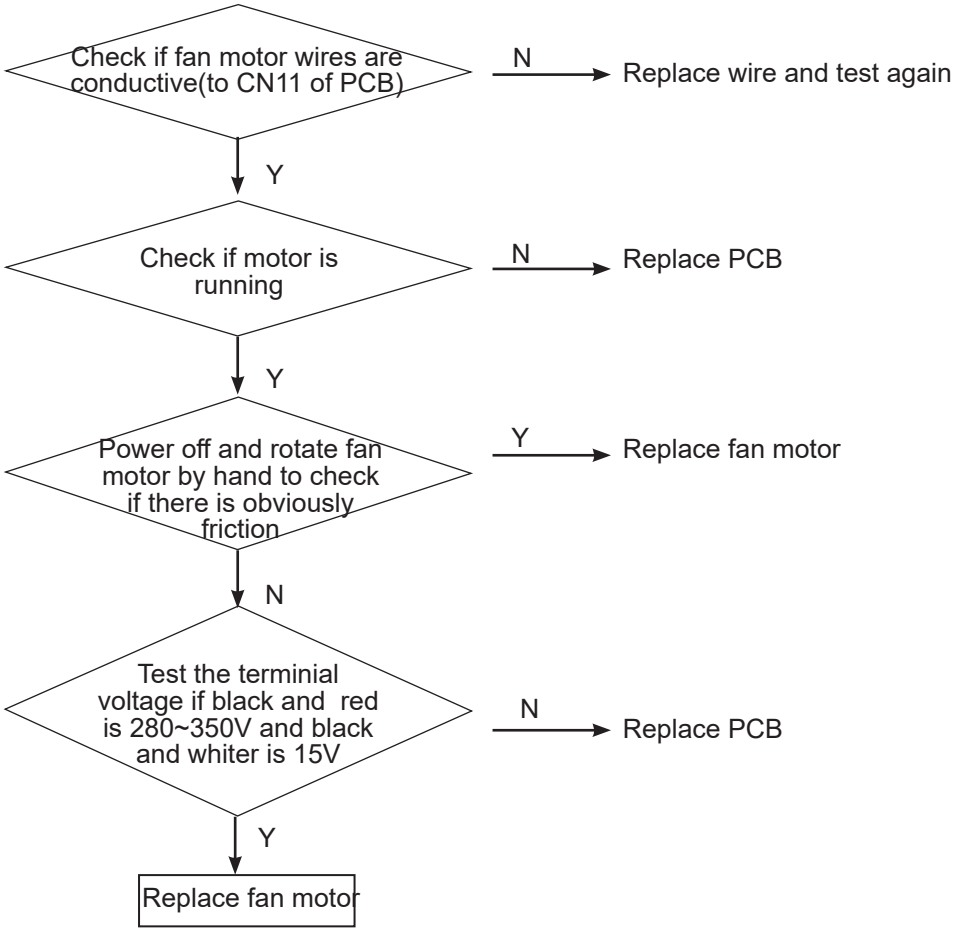
[6] Voltage too High or Low



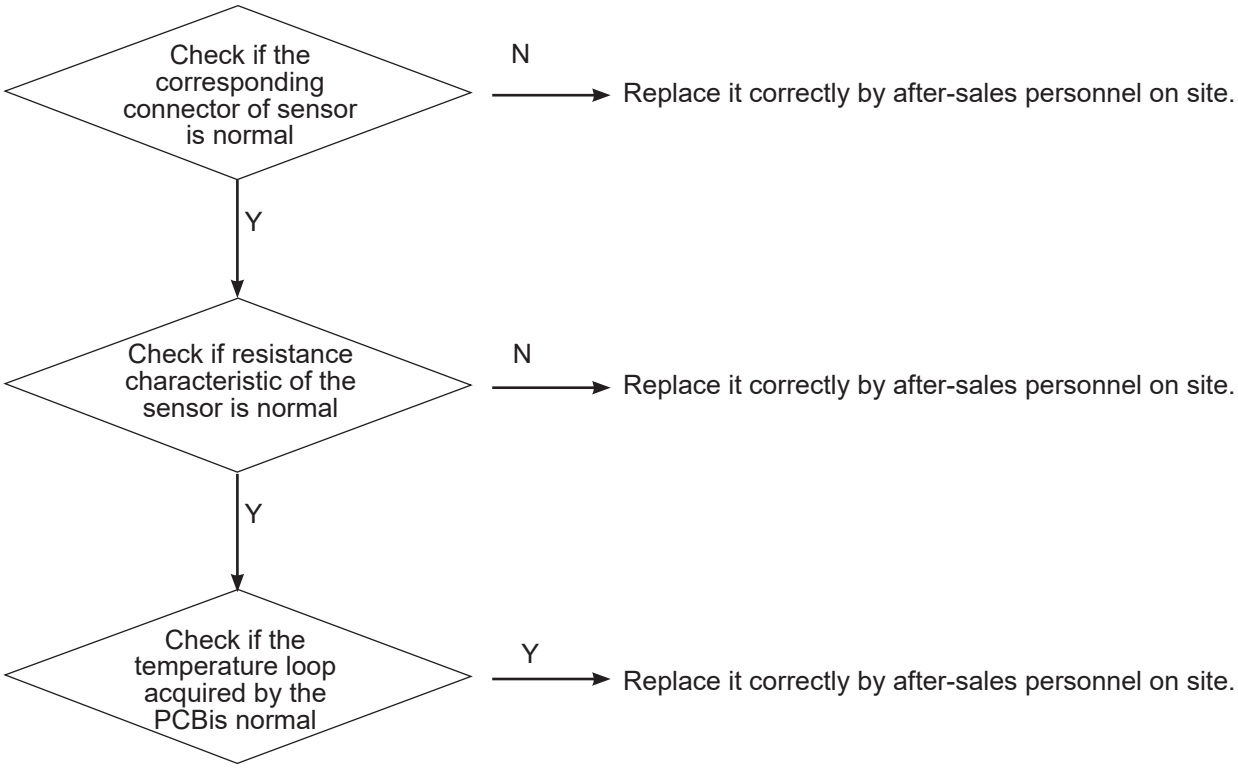
[8] Discharging Temperature Overheating



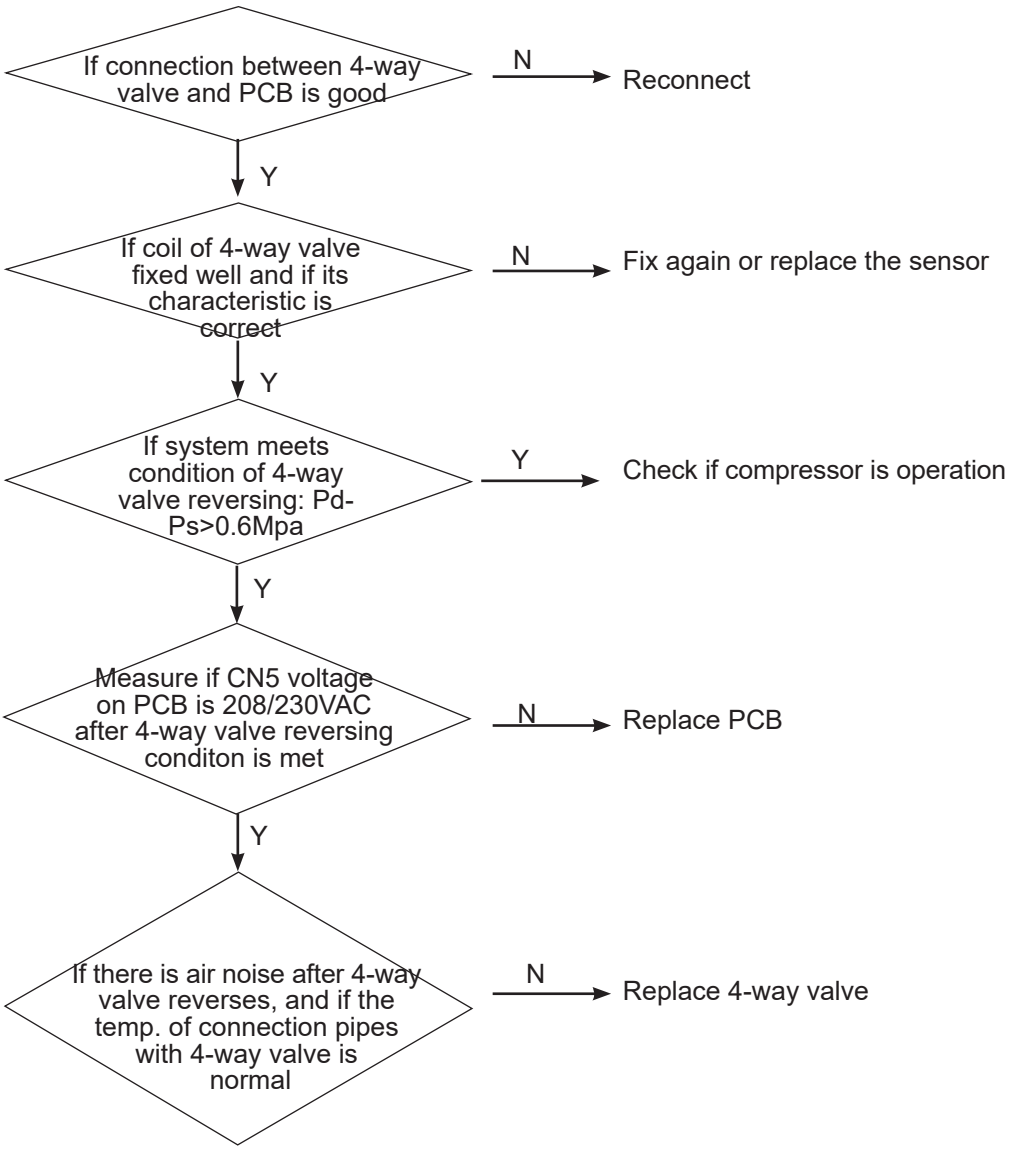
[9] DC Fan Motor Failure



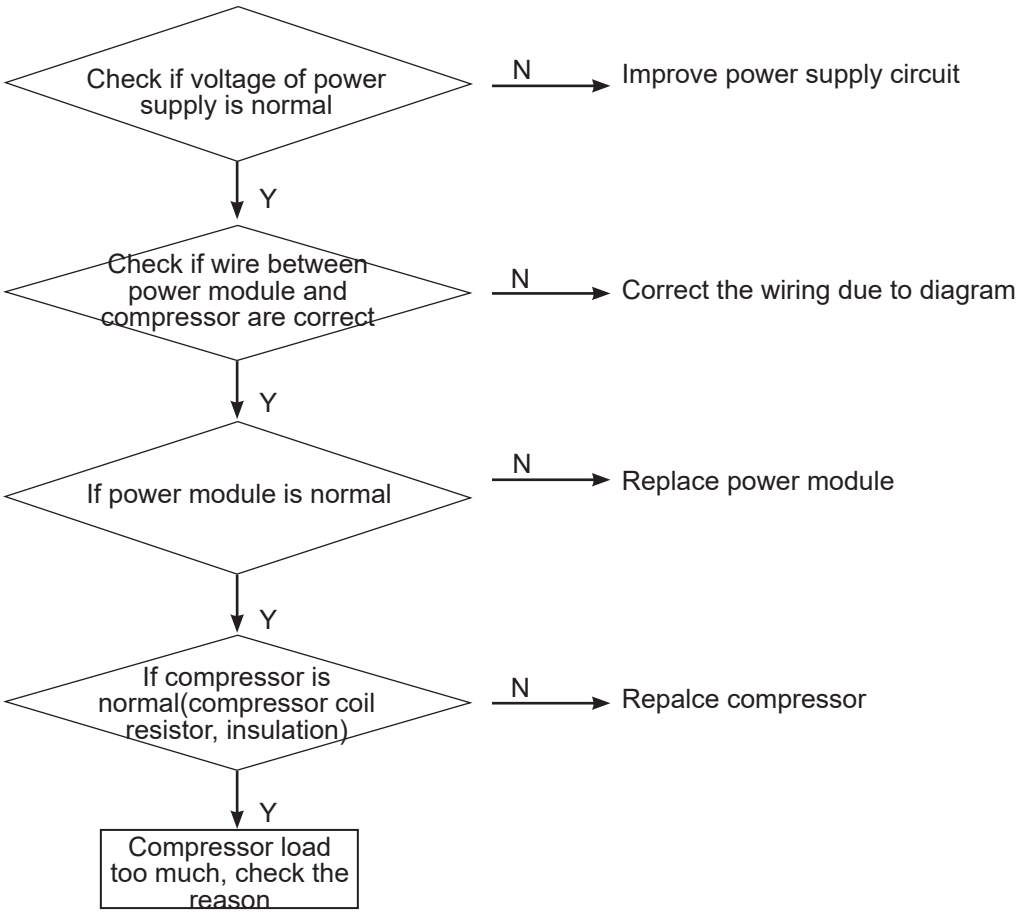
[10~13,28~36,38~41] Temperature Sensor Failure



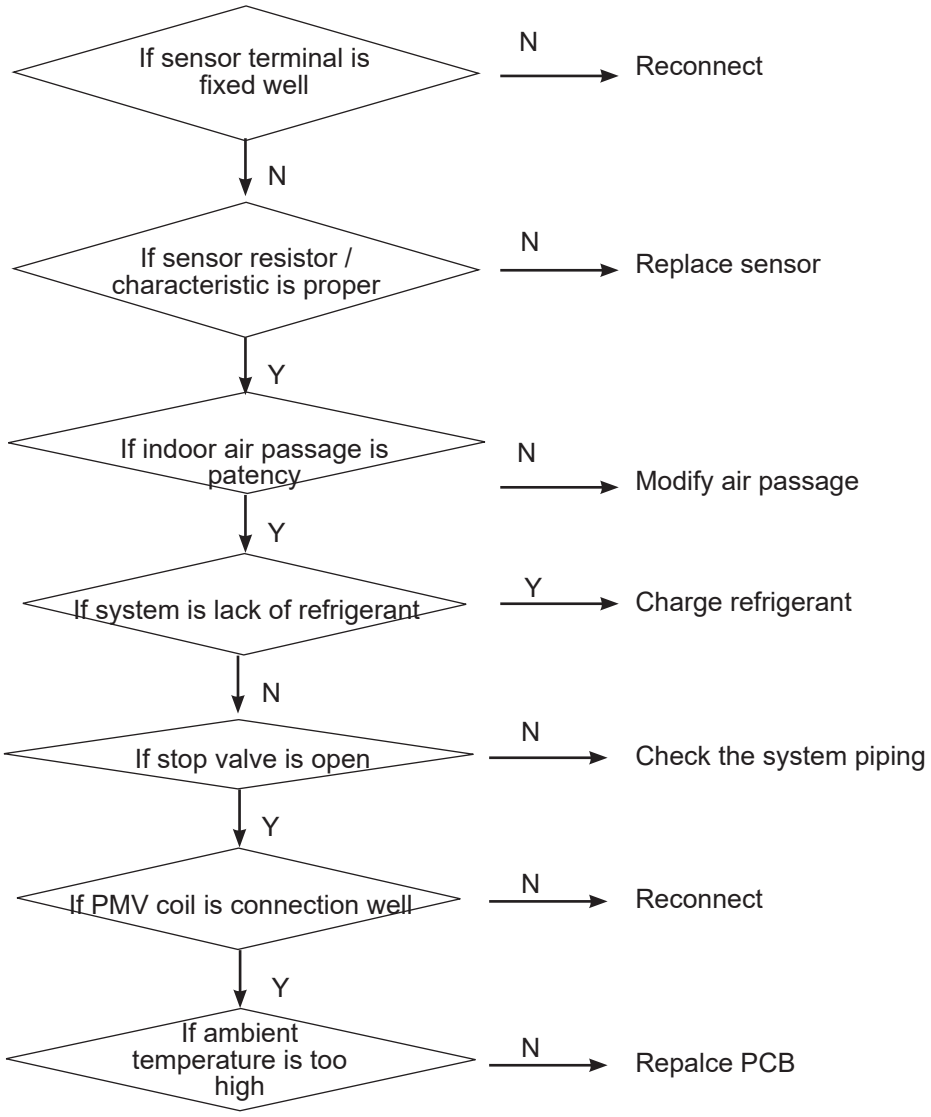
[17] 4-Way Valve Reversing Failure



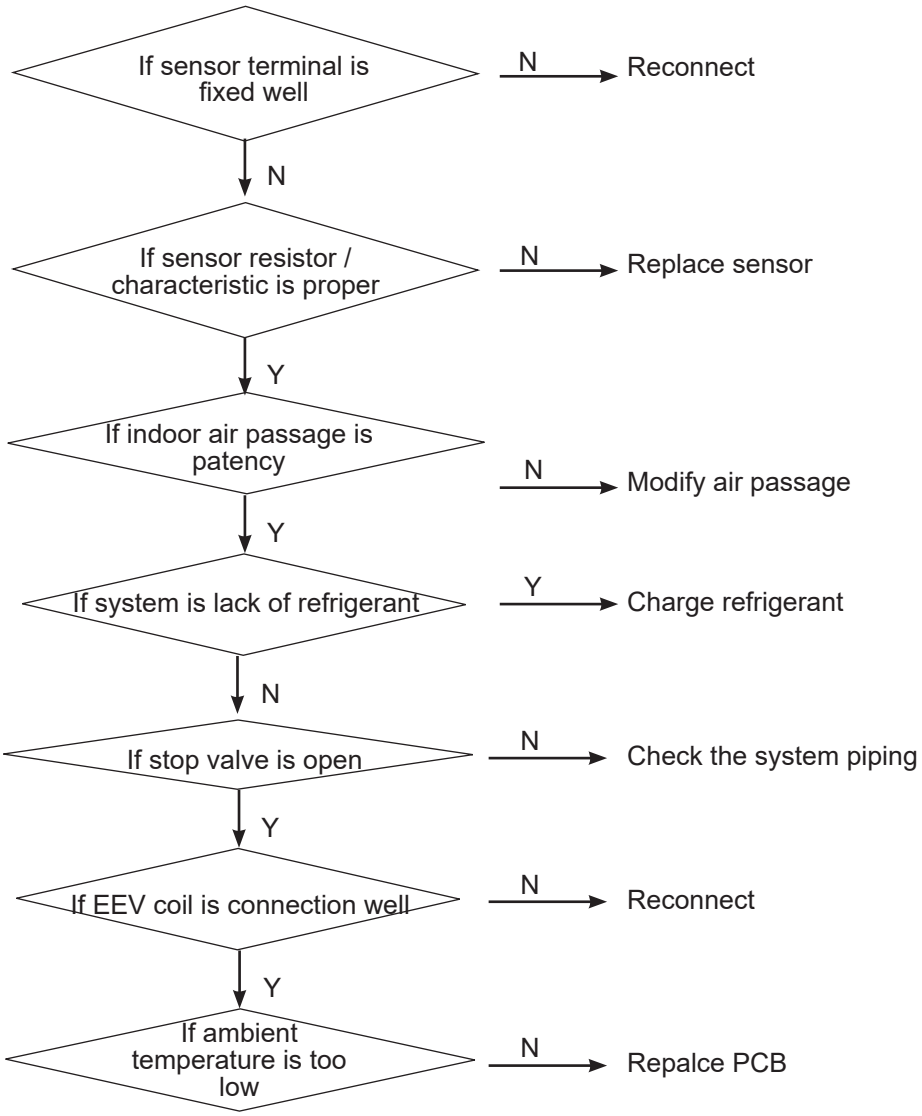
[18] Compressor Out Of Control Circuit



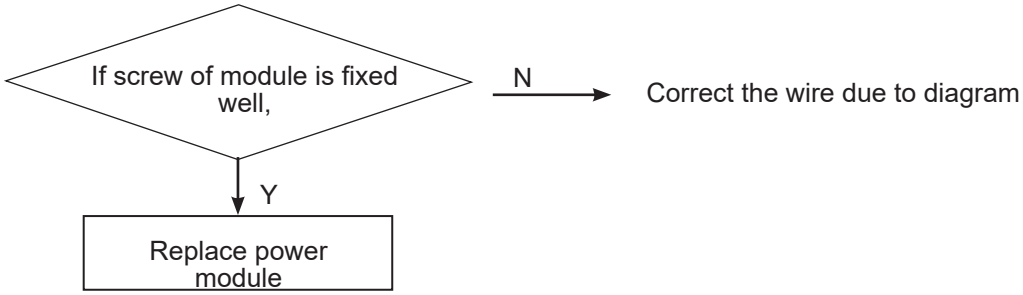
[20] Indoor Thermal Overload



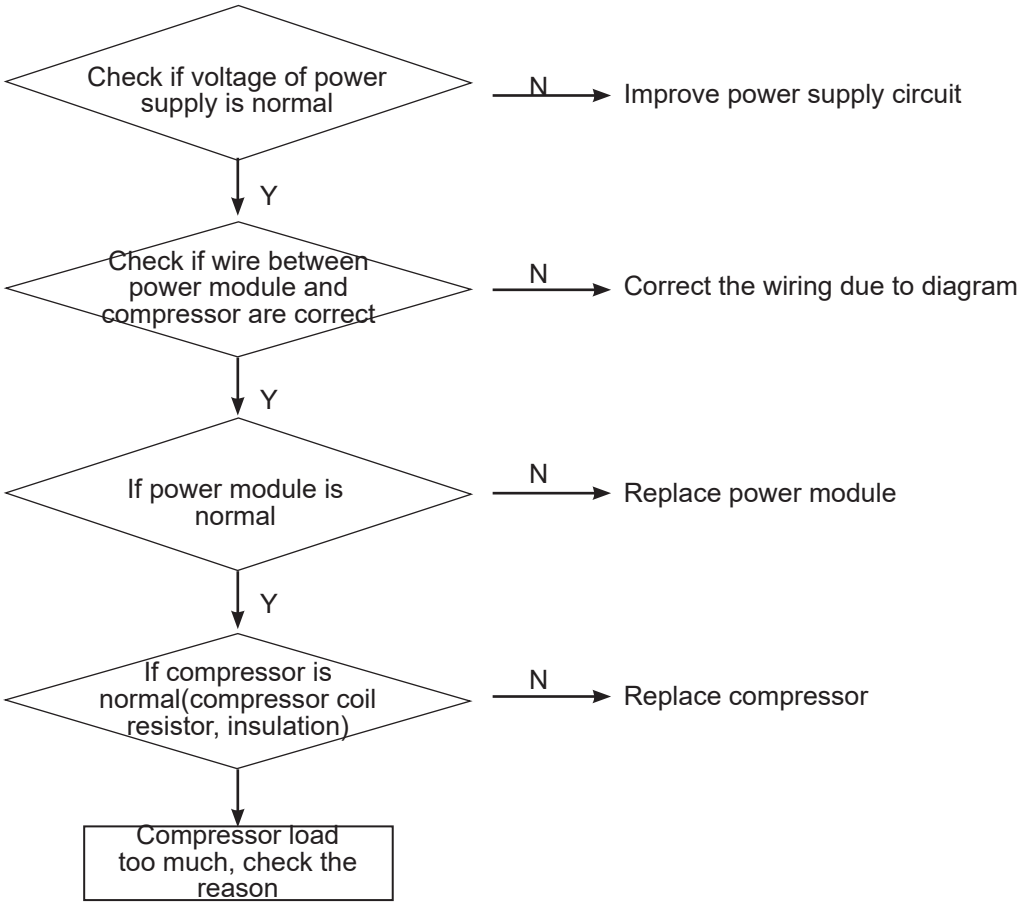
[21] Indoor Frosted



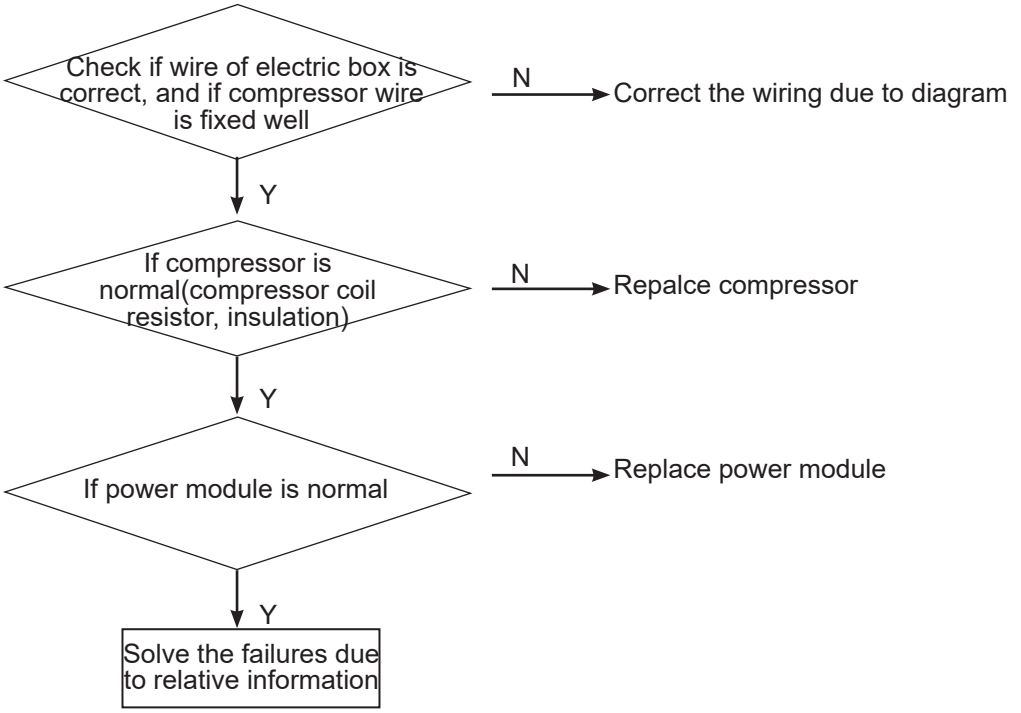
[23] Module Thermal Overload



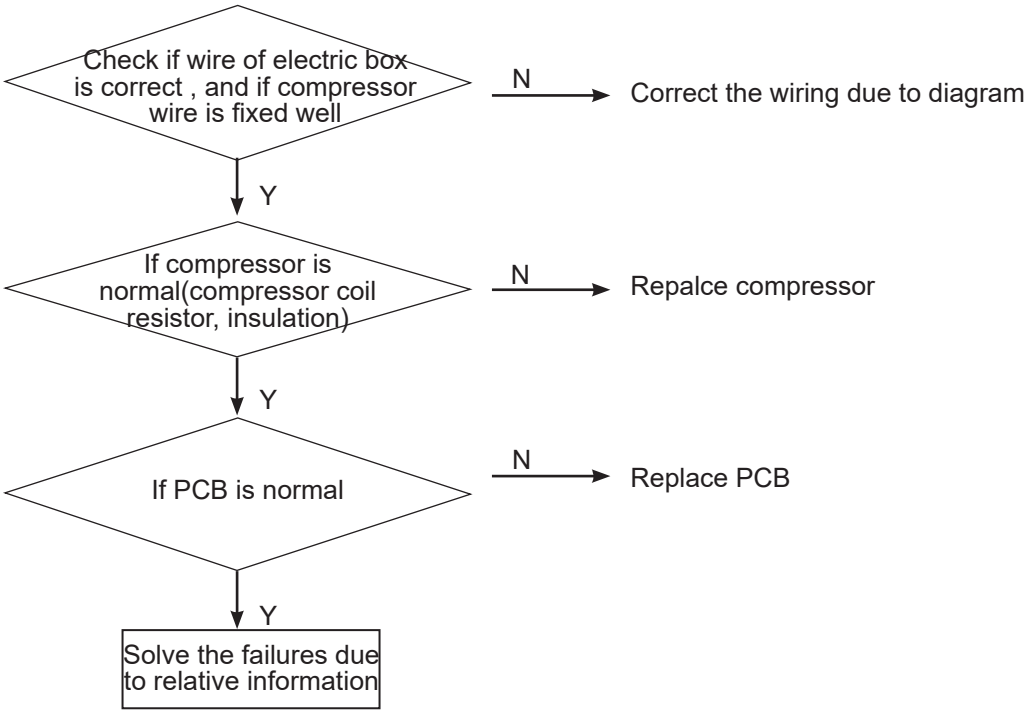
[24] Compressor Startup Failure



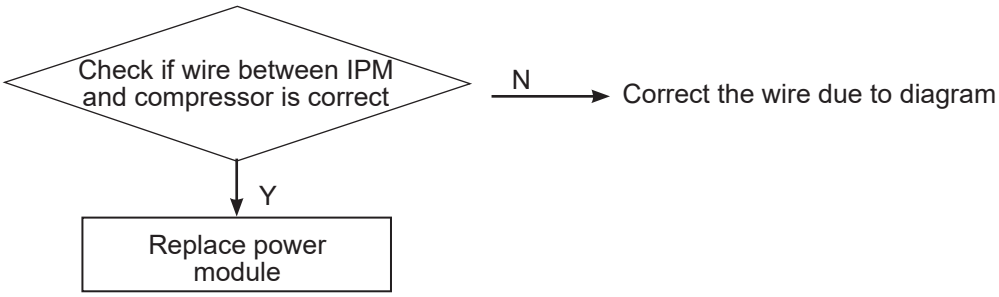
[25] Module Input Over-Current



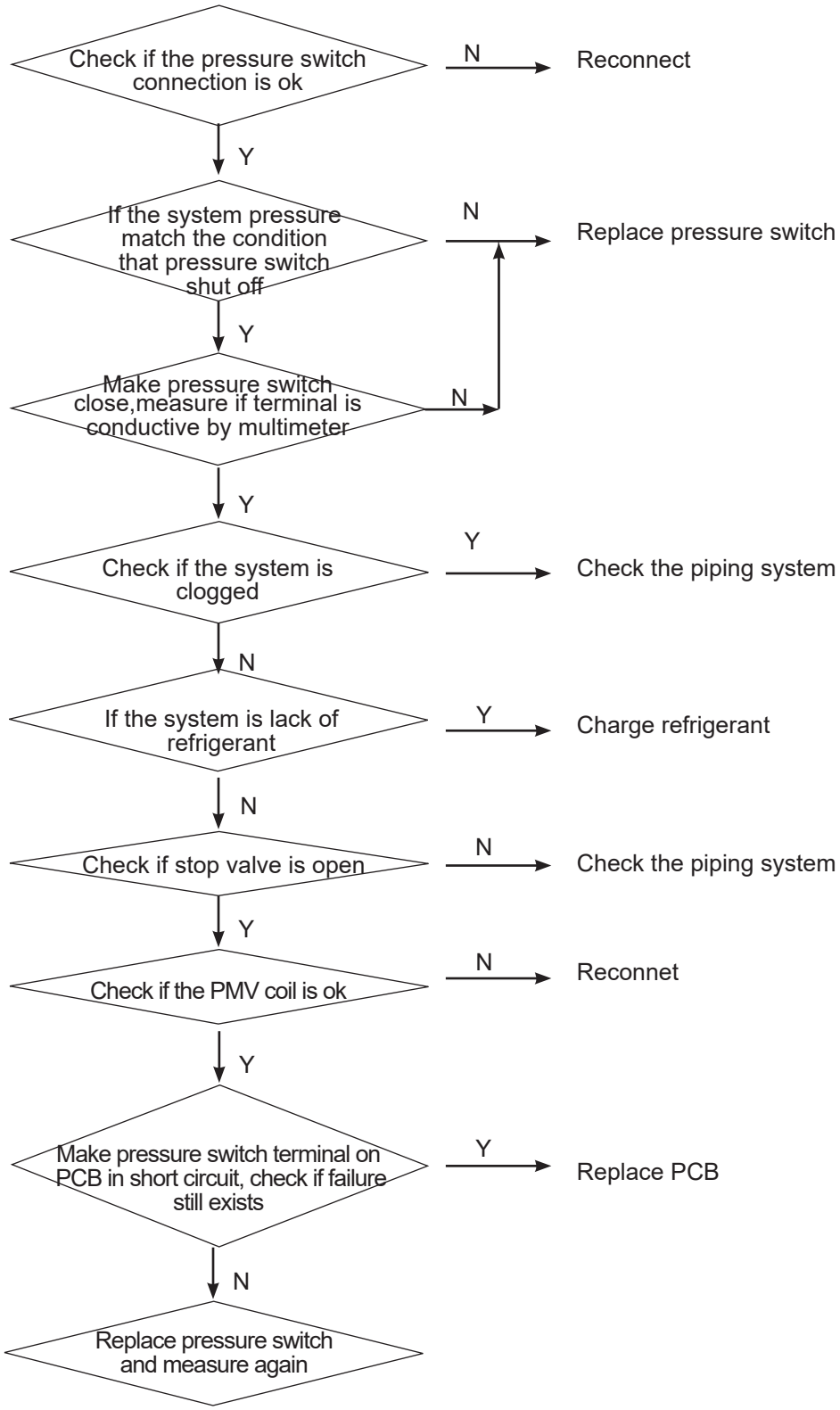
[26] MCU Reset



[27] Module Current Detect Circuit Failure



[42,43] High Or Low Pressure Switch Shut Off Failure



Appendix I Sensor Characteristic

Model	Function	Part Code	Characteristic
AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1	Indoor Ambient Temperature Sensor	001A3900159	R25=23KΩ±3% B25/50=4200K±3%
AD25S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA-1 AD35S2SS1FA(H) AD50S2SS1FA-1 AD50S2SS1FA(H) AD71S2SS1FA-1 AD71S2SS1FA(H) AD35S2SM3FA-1 AD35S2SM3FA(H)	Indoor Coil Temperature Sensor	001A3900006	R25=10KΩ±3% B25/50=3700K±3%
AB71S2SG1FA	Indoor Ambient Temperature Sensor	0150402268	R25=10KΩ±3% B25/50=3700K±3%
	Indoor Coil Temp. Sensor	0010401922	R25=10KΩ±3% B25/50=3700K±3%
AD50S2SM3FA-1 AD50S2SM3FA(H) AD71S2SM3FA-1 AD71S2SM3FA(H) AD105S2SM3FA-1 AD105S2SM3FA(H) AD125S2SM8FA(H) AD140S2SM8FA(H) AD160S2SM3FA(H)	Indoor Ambient Temperature Sensor	001A3900159	R25=23KΩ±3% B25/50=4200K±3%
	Indoor Coil Temp. Sensor	0010401922	R25=10KΩ±3% B25/50=3700K±3%
AF25S2SD1FA(H) AF35S2SD1FA(H) AF42S2SD1FA(H) AF25S2SD1FA(D) AF35S2SD1FA(D) AF42S2SD1FA(D)	Indoor Ambient Temperature Sensor	001A3900159	R25=23KΩ±3% B25/50=4200K±3%
	Indoor Coil Temperature Sensor	001A3900006	R25=10KΩ±3% B25/50=3700K±3%
AC71S2SG1FA(H) AC105S2SH1FA(H) AC125S2SK1FA(H) AC140S2SK1FA(H) AC160S2SK1FA(H)	Indoor Ambient Temperature Sensor	001A3900159	R25=23KΩ±3% B25/50=4200K±3%
	Indoor Coil Temperature Sensor	001A3900006	R25=10KΩ±3% B25/50=3700K±3%
AP140S2SK1FA(H) AP160S2SK1FA(H)	Indoor Ambient Temperature Sensor	0010451323A	R25=23KΩ±3% B25/50=4200K±3%
	Indoor Coil Temperature Sensor	0010401922	R25=10KΩ±3% B25/50=3700K±3%

R25=10KΦ±3% B25/50=3700K±3%		R25=10KΦ±3% B25/50=3700K±3%	
T (°C)	Rnom (KΦ)	T (°C)	Rnom (KΦ)
-20	90.79	31	7.83
-19	85.72	32	7.52
-18	80.96	33	7.23
-17	76.51	34	6.95
-16	72.33	35	6.68
-15	68.41	36	5.43
-14	64.73	37	5.6
-13	61.27	38	5.59
-12	58.02	39	5.73
-11	54.97	40	5.52
-10	52.1	41	5.32
-9	49.4	42	5.12
-8	46.86	43	4.93
-7	44.46	44	4.9
-6	42.21	45	4.58
-5	40.08	46	4.42
-4	38.08	47	4.26
-3	36.19	48	4.11
-2	34.41	49	3.97
-1	32.73	50	3.83
0	31.14	51	3.7
1	29.64	52	3.57
2	28.22	53	3.45
3	26.4	54	3.33
4	25.61	55	3.22
5	24.41	56	3.11
6	23.27	57	3.11
7	22.2	58	2.9
8	21.18	59	2.81
9	20.21	60	2.72
10	19.3	61	2.63
11	18.43	62	2.54
12	17.61	63	2.49
13	16.83	64	2.38
14	16.09	65	2.3
15	15.38	66	2.23
16	14.71	67	2.16
17	14.08	68	2.09
18	13.48	69	2.03
19	12.9	70	1.96
20	12.36	71	1.9
21	11.84	72	1.85
22	11.34	73	1.79
23	10.87	74	1.73
24	10.43	75	1.68
25	10	76	1.63
26	9.59	77	1.58
27	9.21	78	1.54
28	8.84	79	1.49
29	8.48	80	1.45
30	8.15		

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R25=23KΩ±3%B25/50=4200K±3%							
T (°C)	Rnom (KΩ)	T (°C)	Rnom (KΩ)	T (°C)	Rnom (KΩ)	T(°C)	Rnom (KΩ)
-10	149.07	27	20.94	64	4.52	101	1.32
-9	140.35	28	20.00	65	4.36	102	1.28
-8	132.20	29	19.10	66	4.21	103	1.25
-7	124.59	30	18.24	67	4.05	104	1.21
-6	117.46	31	17.43	68	3.91	105	1.18
-5	110.79	32	16.66	69	3.77	106	1.14
-4	104.54	33	15.93	70	3.64	107	1.11
-3	98.69	34	15.24	71	3.51	108	1.08
-2	93.20	35	14.58	72	3.39	109	1.05
-1	88.06	36	13.95	73	3.28	110	1.02
0	83.23	37	13.35	74	3.16	111	0.99
1	78.70	38	12.79	75	3.06	112	0.96
2	74.45	39	12.25	76	2.95	113	0.93
3	70.46	40	11.73	77	2.85	114	0.91
4	66.70	41	11.24	78	2.76	115	0.88
5	63.18	42	10.78	79	2.66	116	0.86
6	59.86	43	10.33	80	2.58	117	0.84
7	56.74	44	9.91	81	2.49	118	0.81
8	53.80	45	9.51	82	2.41	119	0.79
9	51.03	46	9.12	83	2.33	120	0.77
10	48.42	47	8.76	84	2.26	121	0.75
11	45.97	48	8.41	85	2.18	122	0.73
12	43.65	49	8.07	86	2.11	123	0.71
13	41.46	50	7.75	87	2.05	124	0.69
14	39.40	51	7.45	88	1.98	125	0.67
15	37.46	52	7.16	89	1.92	126	0.66
16	35.62	53	6.88	90	1.86	127	0.64
17	33.89	54	6.62	91	1.80	128	0.62
18	32.25	55	6.36	92	1.74	129	0.61
19	30.70	56	6.12	93	1.69	130	0.59
20	29.23	57	5.89	94	1.64	131	0.58
21	27.84	58	5.67	95	1.59	132	0.56
22	26.53	59	5.46	96	1.54	133	0.55
23	25.29	60	5.25	97	1.49	134	0.53
24	24.11	61	5.06	98	1.45		
25	23.00	62	4.87	99	1.41		
26	21.94	63	4.70	100	1.36		

Appendix II Model With water pump list

Type	Model	With Pump
4-way cassette	AB25S2SC2FA-1 AB35S2SC2FA-1 AB50S2SC2FA-1 AB25S2SC2FA(H) AB35S2SC2FA(H) AB50S2SC2FA(H) ABH105H1ERG(H) ABH125K1ERG(H) ABH140K1ERG(H) ABH160K1ERG(H)	Yes
Low ESP Duct	AD25S2SS1FA-1 AD35S2SS1FA-1 AD50S2SS1FA-1 AD71S2SS1FA-1 AD25S2SS1FA(H) AD35S2SS1FA(H) AD50S2SS1FA(H) AD71S2SS1FA(H)	Yes
Medium ESP Duct	AD35S2SM3FA-1 AD50S2SM3FA-1 AD71S2SM3FA -1 AD105S2SM3FA-1 AD35S2SM3FA(H) AD50S2SM3FA(H) AD71S2SM3FA (H) AD90S2SM3FA(H) AD105S2SM3FA(H) AD160S2SM3FA(H)	Yes
Console	AF25S2SD1FA(H) AF35S2SD1FA(H) AF42S2SD1FA(H) AF25S2SD1FA(D) AF35S2SD1FA(D) AF42S2SD1FA(D)	No
Convertible	AC35S2SG1FA(H) AC50S2SG1FA(H) AC71S2SG1FA(H) AC105S2SH1FA(H) AC125S2SK1FA(H) AC140S2SK1FA(H) AC160S2SK1FA(H)	No
Cabinet	AP140S2SK1FA(H) AP160S2SK1FA(H)	No

Appendix III Filter information

RANGE	PIC	HAIER MODEL	Material	Effect
SUPER MATCH R32 COMPACT CASSETTE		AB25S2SC2FA-1		
		AB35S2SC2FA-1		
		AB50S2SC2FA		
		PB-620KB	Nylon	No rating. Can filter dust
SUPER MATCH R32 SLIM DUCT (Drain Pump Included)	 	AD25S2SS1FA-1 AD25S2SS1FA(H)	High density PET	No rating. Can filter dust
		AD35S2SS1FA-1 AD35S2SS1FA(H)	High density PET	No rating. Can filter dust
		P1B-890IA		
		AD50S2SS1FA-1 AD50S2SS1FA(H)	High density PET	No rating. Can filter dust
		AD71S2SS1FA-1 AD71S2SS1FA(H)	High density PET	No rating. Can filter dust
		P1B-1210IA		
SUPER MATCH R32 MEDIUM ESP DUCT (150Pa) (Drain Pump Included)		AD35S2SM3FA-1 AD35S2SM3FA(H)	High density PET	No rating. Can filter dust
		AD50S2SM3FA-1 AD50S2SM3FA(H)	High density PET	No rating. Can filter dust
		AD71S2SM3FA-1 AD71S2SM3FA(H)	High density PET	No rating. Can filter dust
		AD105S2SM3FA-1 AD105S2SM3FA(H)	High density PET	No rating. Can filter dust
SUPER MATCH R32 CONSOLE		AF25S2SD1FA(H)	High density PET	No rating. Can filter dust
		AF35S2SD1FA(H)	High density PET	No rating. Can filter dust
		AF42S2SD1FA(H)	High density PET	No rating. Can filter dust

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