

Air Conditioner

SVC MANUAL(Exploded View)

MODEL : ZTNWGALA1 [UT**F NA0]
ZTNW**GALH1 [UT**FH NA0]
ZTNW**GBLA1 [UT**F NB0, CT**F NB0]
ZTNW**GBLH1 [UT**FH NB0]**

CAUTION

Before Servicing the unit, read the safety precautions in General SVC manual.
Only for authorized service personnel.

1. Specification

Model Name				ZTNW24GBLA1 CT24F NB0	ZTNW30GBLA1 UT30F NB0	ZTNW18GBLH1 UT18FH NB0
				TPB	TPB	TPB
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	220-240, 1, 50
Power and Communication Cable (included Earth)	IDU ↔ ODU	VCTF-SB	mm³ x Cores	0.75 x 4	0.75 x 4	0.75 x 4
Power Consumption		H / M / L	W	36 / 26 / 21	40 / 33 / 26	33 / 26 / 22
Running Current		H / M / L	A	0.5 / 0.46 / 0.44	0.52 / 0.49 / 0.46	0.49 / 0.46 / 0.44
		Max.	A	0.7	0.7	0.7
Air Flow Rate	Air Flow Rate	H / M / L	m³/min	18 / 15.5 / 14	19 / 17 / 15.5	17.0 / 15.5 / 14.0
	RPM	H / M / L	rev./m	480 / 420 / 380	500 / 460 / 420	460 / 420 / 380
Casing Color			-	Steel Gray	Steel Gray	Steel Gray
Dimensions	Body	W x H x D	mm	840 x 204 x 840	840 x 204 x 840	840 x 204 x 840
	Shipping	W x H x D	mm	922 x 276 x 917	922 x 276 x 917	922 x 276 x 917
Weight	Body		kg	21.1	21.1	21.1
	Shipping		kg	26.5	26.5	26.5
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 8 x 21) x 1	(3 x 8 x 21) x 1	(3 x 8 x 21) x 1
	Face Area		m²	0.33	0.33	0.33
Fan	Type		-	3D Turbo Fan	3D Turbo Fan	3D Turbo Fan
Fan Motor	Type		-	BLDC	BLDC	BLDC
	Drive		-	Internal	Internal	Internal
	Output		W x No.	50.25 x 1	50.25 x 1	50.25 x 1
Sound Pressure Level	Cooling	H / M / L	dB(A)	38 / 36 / 34	40 / 37 / 35	37 / 36 / 34
	Heating	H / M / L	dB(A)	38 / 36 / 34	40 / 37 / 35	37 / 36 / 34
Sound Power Level	Cooling	Max.	dB(A)	53	57	52
	Heating	Max.	dB(A)	-	-	-
Refrigerant			-	R410A or R32	R410A or R32	R410A or R32
Piping Connections	Liquid		mm	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 6.35 (1/4)
	Gas		mm	Ø 15.88 (5/8)	Ø 15.88 (5/8)	Ø 12.7 (1/2)
	Connections Method		-	Flared	Flared	Flared
Drain	O.D. / I.D. (Drain Pump only)		mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0	Ø 32.0 / 25.0
max allowable pressure	High / Low Pressue Parts		Mpa	4.32 / 2.4	4.32 / 2.4	4.32 / 2.4
Safety Devices			-	Fuse	Fuse	Fuse
			-	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor
decoration Panel	Model Name		-	PT-AAGW0	PT-AAGW0	PT-AAGW0
	Color		-	White	White	White
	Dimensions	Body	mm	950 x 35 x 950	950 x 35 x 950	950 x 35 x 950
		Shipping	mm	1006 x 102 x 1006	1006 x 102 x 1006	1006 x 102 x 1006
	Weight	Body	kg	7.1	7.1	7.1
		Shipping	kg	9.1	9.1	9.1
continuous operating temperature range	Cooling		°C(WB)	23 ~ 12	23 ~ 12	23 ~ 12
	Heating		°C(DB)	30 ~ 16	30 ~ 16	30 ~ 16
Available Warranty tempera- ture Range	Cooling		°C(WB)	23 ~ 12	23 ~ 12	23 ~ 12
	Heating		°C(DB)	30 ~ 16	30 ~ 16	30 ~ 16

Note:

1. All data are based on the following conditions:

- Cooling Temperature : Indoor 27 °C(80.6 °F) DB / 19 °C(66.2 °F) WB
Outdoor 35 °C(95 °F) DB / 24 °C(75.2 °F) WB
- Heating Temperature : Indoor 20 °C(68 °F) DB / 15 °C(59 °F) WB
Outdoor 7 °C(44.6 °F) DB / 6 °C(42.8 °F) WB
- Piping Length : Interconnected Pipe Length = 7.5 m
- Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.

2. Wiring cable size must comply with the applicable local and national code.

3. Due to our policy of innovation some specifications may be changed without notification.

4. Sound Level Values are measured at Anechoic chamber.

Therefore, these values can be increased(maximum 3 dB(A)) owing to ambient conditions during operation.

Model Name				ZTNW36GALA1 UT36F NAO	ZTNW42GALA1 UT42F NAO	ZTNW48GALA1 UT48F NAO	ZTNW60GALA1 UT60F NAO
				TMA	TMA	TMA	TMA
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	220-240, 1, 50	220-240, 1, 50
Power and Communication Cable (included Earth)	IDU ↔ ODU	VCTF-SB	mm³ x Cores	0.75 x 4	0.75 x 4	0.75 x 4	0.75 x 4
Power Consumption		H / M / L	W	60 / 50 / 45	60 / 50 / 45	80 / 60 / 50	80 / 60 / 50
Running Current		H / M / L	A	0.62 / 0.58 / 0.55	0.62 / 0.58 / 0.55	0.71 / 0.62 / 0.58	0.71 / 0.62 / 0.58
		Max.	A	1.0	1.0	1.0	1.0
Air Flow Rate	Air Flow Rate	H / M / L	m³/min	27.5 / 25 / 22.5	27.5 / 25 / 22.5	30 / 27.5 / 25	30 / 27.5 / 25
	RPM	H / M / L	rev./m	520 / 480 / 440	520 / 480 / 440	560 / 520 / 480	560 / 520 / 480
Casing Color			-	Steel Gray	Steel Gray	Steel Gray	Steel Gray
Dimensions	Body	W x H x D	mm	840 x 288 x 840	840 x 288 x 840	840 x 288 x 840	840 x 288 x 840
	Shipping	W x H x D	mm	922 x 360 x 917	922 x 360 x 917	922 x 360 x 917	922 x 360 x 917
Weight	Body		kg	25.3	25.3	25.3	25.3
	Shipping		kg	30.7	30.7	30.7	30.7
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 12 x 21) x 1	(3 x 12 x 21) x 1	(3 x 12 x 21) x 1	(3 x 12 x 21) x 1
	Face Area		m²	0.49	0.49	0.49	0.49
Fan	Type		-	3D Turbo Fan	3D Turbo Fan	3D Turbo Fan	3D Turbo Fan
Fan Motor	Type		-	BLDC	BLDC	BLDC	BLDC
	Drive		-	Internal	Internal	Internal	Internal
	Output		W x No.	136 x 1	136 x 1	136 x 1	136 x 1
Sound Pressure Level	Cooling	H / M / L	dB(A)	44 / 42 / 41	44 / 42 / 41	46 / 44 / 42	46 / 44 / 42
	Heating	H / M / L	dB(A)	44 / 42 / 41	44 / 42 / 41	46 / 44 / 42	46 / 44 / 42
Sound Power Level	Cooling	Max.	dB(A)	61	61	62	62
	Heating	Max.	dB(A)	-	61	63	63
Refrigerant			-	R410 or R32	R410 or R32	R410 or R32	R410 or R32
Piping Connections	Liquid		mm	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas		mm	Ø 15.88 (5/8)	Ø 15.88 (5/8)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Connections Method		-	Flared	Flared	Flared	Flared
Drain	O.D. / I.D. (Drain Pump only)		mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0	Ø 32.0 / 25.0	Ø 32.0 / 25.0
max allowable pressure	High / Low Pressue Parts		Mpa	4.32 / 2.4	4.32 / 2.4	4.32 / 2.4	4.32 / 2.4
Safety Devices			-	Fuse	Fuse	Fuse	Fuse
			-	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor
decoration Panel	Model Name		-	PT-AAGW0	PT-AAGW0	PT-AAGW0	PT-AAGW0
	Color		-	White	White	White	White
	Dimensions	Body	mm	950 x 35 x 950	950 x 35 x 950	950 x 35 x 950	950 x 35 x 950
		Shipping	mm	1006 x 102 x 1006	1006 x 102 x 1006	1006 x 102 x 1006	1006 x 102 x 1006
	Weight	Body	kg	7.1	7.1	7.1	7.1
		Shipping	kg	9.1	9.1	9.1	9.1
continuous operating temperature range	Cooling		°C(WB)	23 ~ 12	23 ~ 12	23 ~ 12	23 ~ 12
	Heating		°C(DB)	30 ~ 16	30 ~ 16	30 ~ 16	30 ~ 16
Available Warranty tem- perature Range	Cooling		°C(WB)	23 ~ 12	23 ~ 12	23 ~ 12	23 ~ 12
	Heating		°C(DB)	30 ~ 16	30 ~ 16	30 ~ 16	30 ~ 16

Note:

1. All data are based on the following conditions:

- Cooling Temperature : Indoor 27 °C(80.6 °F) DB / 19 °C(66.2 °F) WB
Outdoor 35 °C(95 °F) DB / 24 °C(75.2 °F) WB
- Heating Temperature : Indoor 20 °C(68 °F) DB / 15 °C(59 °F) WB
Outdoor 7 °C(44.6 °F) DB / 6 °C(42.8 °F) WB
- Piping Length : Interconnected Pipe Length = 7.5 m
- Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.

2. Wiring cable size must comply with the applicable local and national code.

3. Due to our policy of innovation some specifications may be changed without notification.

4. Sound Level Values are measured at Anechoic chamber.

Therefore, these values can be increased(maximum 3 dB(A)) owing to ambient conditions during operation.

Model Name				ZTNW24GALH1 UT24FH NAO	ZTNW30GALH1 UT30FH NAO	ZTNW36GALH1 UT36FH NAO	ZTNW42GALH1 UT42FH NAO
				TMA	TMA	TMA	TMA
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50	220-240, 1, 50	220-240, 1, 50
Power and Communication Cable (included Earth)	IDU ↔ ODU	VCTF-SB	mm³ x Cores	0.75 x 4	0.75 x 4	0.75 x 4	0.75 x 4
Power Consumption		H / M / L	W	43 / 35 / 28	43 / 35 / 28	70 / 59 / 50	70 / 59 / 50
Running Current		H / M / L	A	0.53 / 0.51 / 0.48	0.53 / 0.51 / 0.48	0.67 / 0.61 / 0.58	0.67 / 0.61 / 0.58
		Max.	A	1.0	1.0	1.0	1.0
Air Flow Rate	Air Flow Rate	H / M / L	m³/min	23.8 / 21.4 / 19.0	23.8 / 21.4 / 19.0	28 / 25 / 23	28 / 25 / 23
	RPM	H / M / L	rev./m	460 / 420 / 380	460 / 420 / 380	540 / 500 / 460	540 / 500 / 460
Casing Color			-	Steel Gray	Steel Gray	Steel Gray	Steel Gray
Dimensions	Body	W x H x D	mm	840 x 288 x 840	840 x 288 x 840	840 x 288 x 840	840 x 288 x 840
	Shipping	W x H x D	mm	922 x 360 x 917	922 x 360 x 917	922 x 360 x 917	922 x 360 x 917
Weight	Body		kg	25.3	25.3	27.2	27.2
	Shipping		kg	30.7	30.7	32.6	32.6
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 12 x 21) x 1	(3 x 12 x 21) x 1	(3 x 18 x 22) x 1	(3 x 18 x 22) x 1
	Face Area		m²	0.49	0.49	0.53	0.53
Fan	Type		-	3D Turbo Fan	3D Turbo Fan	3D Turbo Fan	3D Turbo Fan
Fan Motor	Type		-	BLDC	BLDC	BLDC	BLDC
	Drive		-	Internal	Internal	Internal	Internal
			W x No.	136 x 1	136 x 1	136 x 1	136 x 1
Sound Pressure Level	Cooling	H / M / L	dB(A)	42 / 41 / 40	42 / 41 / 40	44 / 42 / 41	44 / 42 / 41
	Heating	H / M / L	dB(A)	42 / 41 / 40	42 / 41 / 40	44 / 42 / 41	44 / 42 / 41
Sound Power Level	Cooling	Max.	dB(A)	56	56	59	59
	Heating	Max.	dB(A)	-	-	-	60
Refrigerant			-	R410A or R32	R410A or R32	R410 or R32	R410 or R32
Piping Connections	Liquid		mm	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas		mm	Ø 15.88 (5/8)	Ø 15.88 (5/8)	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Connections Method		-	Flared	Flared	Flared	Flared
Drain	O.D. / I.D. (Drain Pump only)		mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0	Ø 32.0 / 25.0	Ø 32.0 / 25.0
max allowable pressure	High / Low Pressue Parts		Mpa	4.32 / 2.4	4.32 / 2.4	4.32 / 2.4	4.32 / 2.4
Safety Devices			-	Fuse	Fuse	Fuse	Fuse
			-	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor
decoration Panel	Model Name		-	PT-AAGW0	PT-AAGW0	PT-AAGW0	PT-AAGW0
	Color		-	White	White	White	White
	Dimensions	Body	mm	950 x 35 x 950	950 x 35 x 950	950 x 35 x 950	950 x 35 x 950
		Shipping	mm	1006 x 102 x 1006	1006 x 102 x 1006	1006 x 102 x 1006	1006 x 102 x 1006
	Weight	Body	kg	7.1	7.1	7.1	7.1
		Shipping	kg	9.1	9.1	9.1	9.1
continuous operating temperature range	Cooling		°C(WB)	23 ~ 12	23 ~ 12	23 ~ 12	23 ~ 12
	Heating		°C(DB)	30 ~ 16	30 ~ 16	30 ~ 16	30 ~ 16
Available Warranty tem- perature Range	Cooling		°C(WB)	23 ~ 12	23 ~ 12	23 ~ 12	23 ~ 12
	Heating		°C(DB)	30 ~ 16	30 ~ 16	30 ~ 16	30 ~ 16

Note:

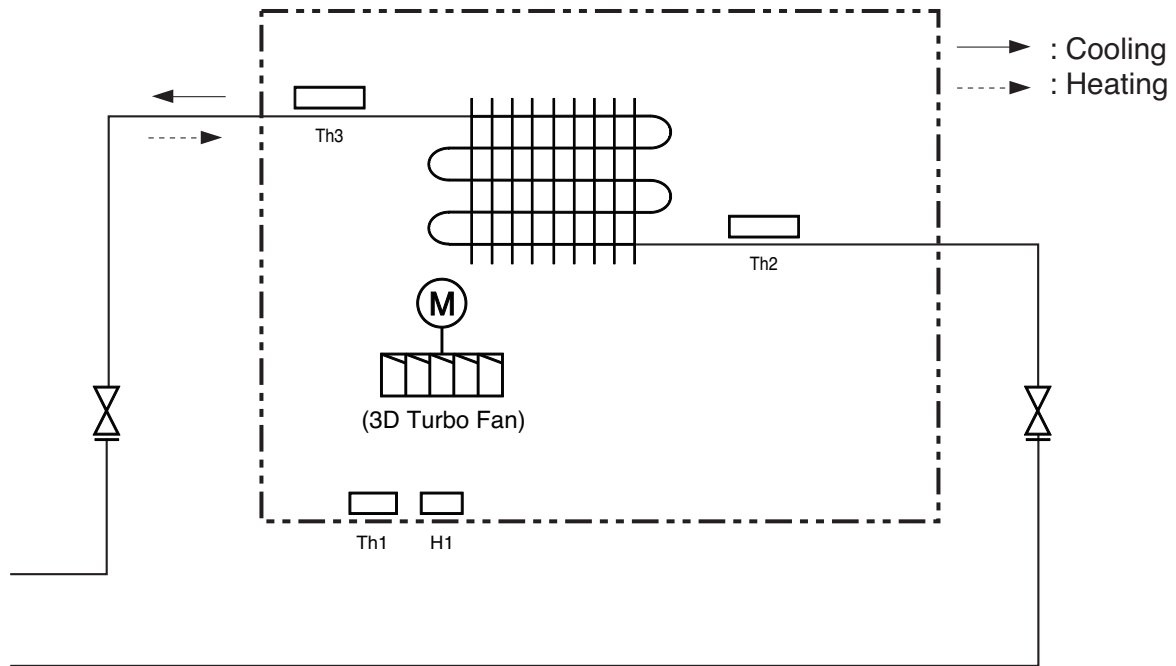
- All data are based on the following conditions:
 - Cooling Temperature : Indoor 27 °C(80.6 °F) DB / 19 °C(66.2 °F) WB
Outdoor 35 °C(95 °F) DB / 24 °C(75.2 °F) WB
 - Heating Temperature : Indoor 20 °C(68 °F) DB / 15 °C(59 °F) WB
Outdoor 7 °C(44.6 °F) DB / 6 °C(42.8 °F) WB
 - Piping Length : Interconnected Pipe Length = 7.5 m
 - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
- Wiring cable size must comply with the applicable local and national code.
- Due to our policy of innovation some specifications may be changed without notification.
- Sound Level Values are measured at Anechoic chamber.
Therefore, these values can be increased(maximum 3 dB(A)) owing to ambient conditions during operation.

Model Name				ZTNW48GALH1 UT48FH NAO	ZTNW60GALH1 UT60FH NAO
				TMA	TMA
Power Supply			V, Ø, Hz	220-240, 1, 50	220-240, 1, 50
Power and Communication Cable (included Earth)	IDU ↔ ODU	VCTF-SB	mm³ x Cores	0.75 x 4	0.75 x 4
Power Consumption		H / M / L	W	81 / 60 / 50	81 / 60 / 50
Running Current		H / M / L	A	0.72 / 0.62 / 0.58	0.72 / 0.62 / 0.58
		Max.	A	1.0	1.0
Air Flow Rate	Air Flow Rate	H / M / L	m³/min	30 / 27 / 24	30 / 27 / 24
	RPM	H / M / L	rev./m	570 / 520 / 470	570 / 520 / 470
Casing Color			-	Steel Gray	Steel Gray
Dimensions	Body	W x H x D	mm	840 x 288 x 840	840 x 288 x 840
	Shipping	W x H x D	mm	922 x 360 x 917	922 x 360 x 917
Weight	Body		kg	27.2	27.2
	Shipping		kg	32.6	32.6
Heat Exchanger	(Row x Column x Fins per inch) x No.		-	(3 x 18 x 22) x 1	(3 x 18 x 22) x 1
	Face Area		m²	0.53	0.53
Fan	Type		-	3D Turbo Fan	3D Turbo Fan
Fan Motor	Type		-	BLDC	BLDC
	Drive		-	Internal	Internal
	Output		W x No.	136 x 1	136 x 1
Sound Pressure Level	Cooling	H / M / L	dB(A)	45 / 43 / 41	45 / 43 / 41
	Heating	H / M / L	dB(A)	45 / 43 / 41	45 / 43 / 41
Sound Power Level	Cooling	Max.	dB(A)	61	61
	Heating	Max.	dB(A)	61	61
Refrigerant			-	R410 or R32	R410 or R32
Piping Connections	Liquid		mm	Ø 9.52 (3/8)	Ø 9.52 (3/8)
	Gas		mm	Ø 15.88 (5/8)	Ø 15.88 (5/8)
	Connections Method		-	Flared	Flared
Drain	O.D. / I.D. (Drain Pump only)		mm	Ø 32.0 / 25.0	Ø 32.0 / 25.0
max allowable pressure	High / Low Pressue Parts		Mpa	4.32 / 2.4	4.32 / 2.4
Safety Devices			-	Fuse	Fuse
			-	Thermal Protector for Fan Motor	Thermal Protector for Fan Motor
decoration Panel	Model Name		-	PT-AAGW0	PT-AAGW0
	Color		-	White	White
	Dimensions	Body	mm	950 x 35 x 950	950 x 35 x 950
		Shipping	mm	1006 x 102 x 1006	1006 x 102 x 1006
	Weight	Body	kg	7.1	7.1
		Shipping	kg	9.1	9.1
continuous operating temperature range	Cooling		°C(WB)	23 ~ 12	23 ~ 12
	Heating		°C(DB)	30 ~ 16	30 ~ 16
Available Warranty tem- perature Range	Cooling		°C(WB)	23 ~ 12	23 ~ 12
	Heating		°C(DB)	30 ~ 16	30 ~ 16

Note:

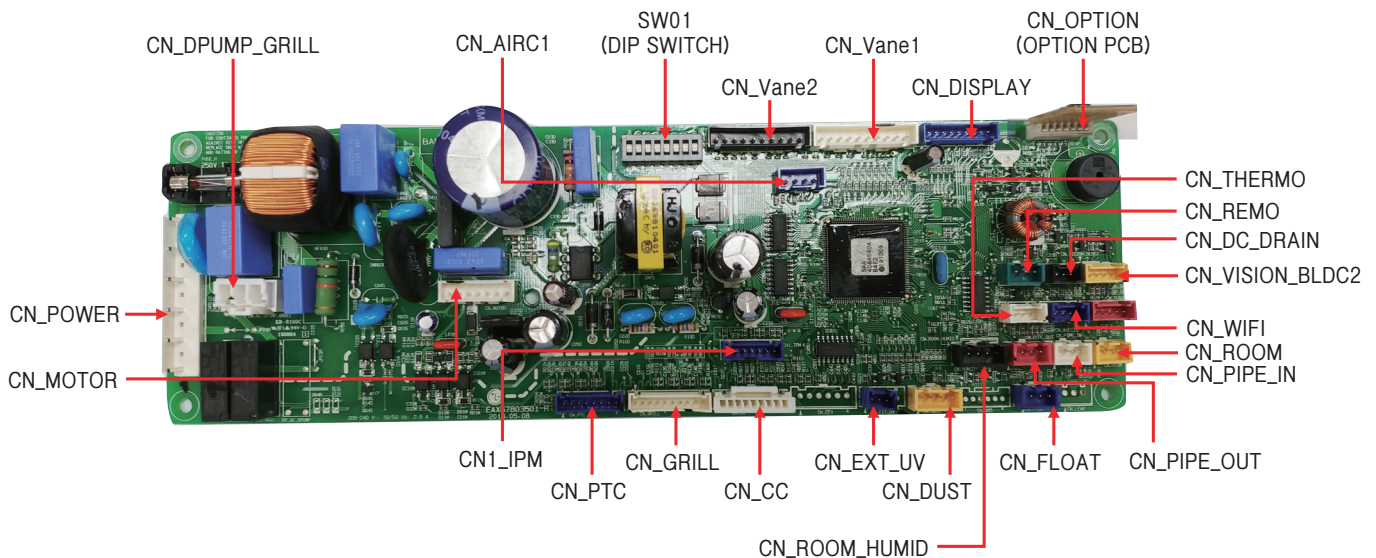
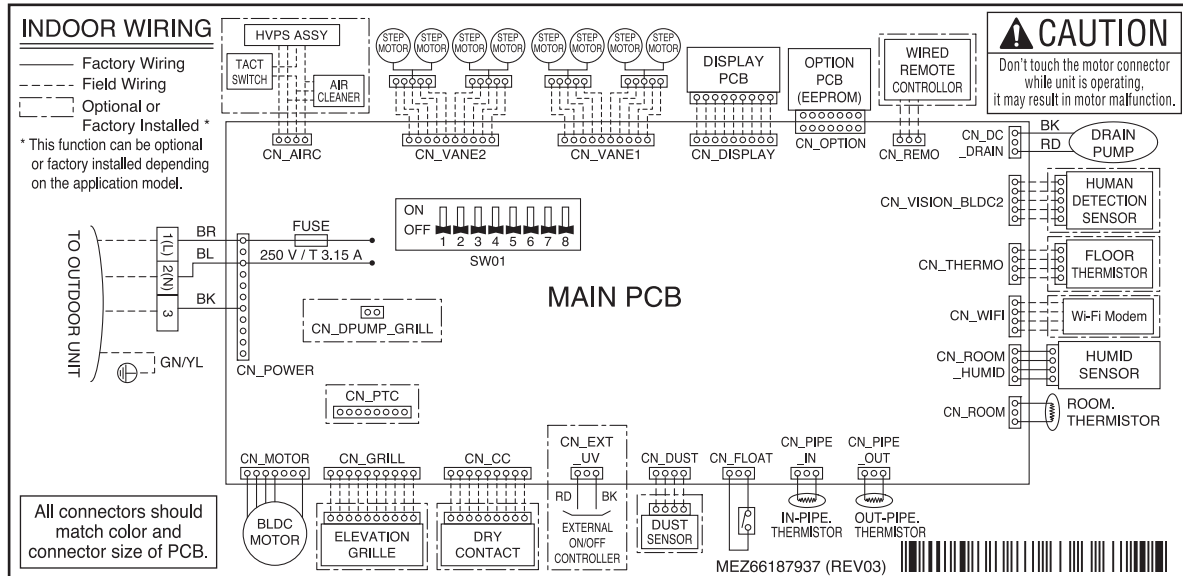
- All data are based on the following conditions:
 - Cooling Temperature : Indoor 27 °C(80.6 °F) DB / 19 °C(66.2 °F) WB
Outdoor 35 °C(95 °F) DB / 24 °C(75.2 °F) WB
 - Heating Temperature : Indoor 20 °C(68 °F) DB / 15 °C(59 °F) WB
Outdoor 7 °C(44.6 °F) DB / 6 °C(42.8 °F) WB
 - Piping Length : Interconnected Pipe Length = 7.5 m
 - Difference Limit of Elevation (Outdoor ~ Indoor Unit) is Zero.
- Wiring cable size must comply with the applicable local and national code.
- Due to our policy of innovation some specifications may be changed without notification.
- Sound Level Values are measured at Anechoic chamber.
Therefore, these values can be increased(maximum 3 dB(A)) owing to ambient conditions during operation.

2. Piping Diagrams



LOC.	Description	PCB Coonnector
Th1	Thermistor for Indoor air temperature	CN_ROOM
Th2	Thermistor for evaporator inlet temperature	CN_PIPE_IN
Th3	Thermistor for evaporator outlet temperature	CN_PIPE_OUT
H1	Humid Sensor	CN_ROOM_HUMID

3. Wiring Diagrams



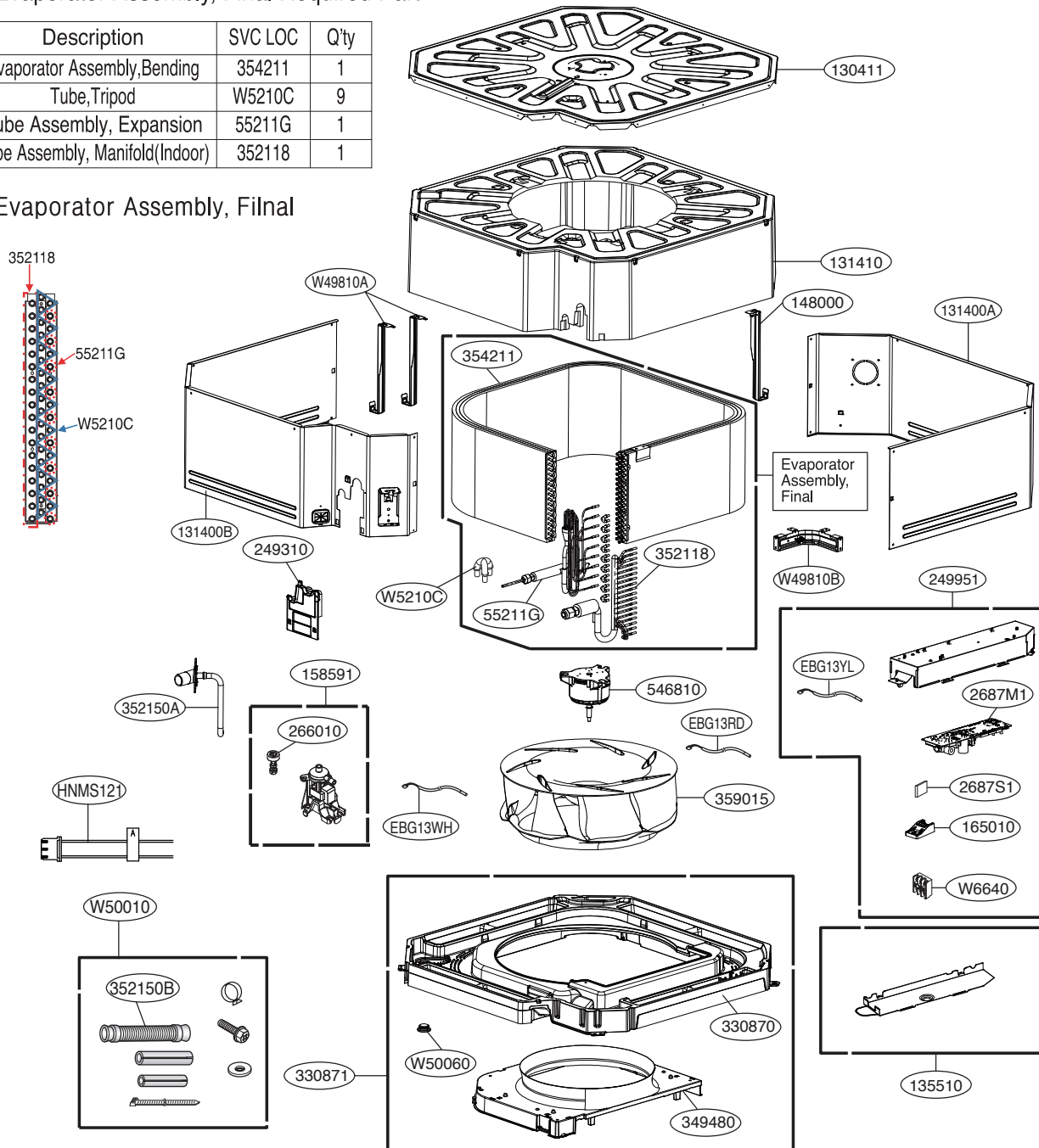
4. Exploded View

ZTNW36GALH1 / ZTNW42GALH1 / ZTNW48GALH1 / ZTNW60GALH1

● Evaporator Assembly, Final Required Part

Description	SVC LOC	Q'ty
Evaporator Assembly, Bending	354211	1
Tube, Tripod	W5210C	9
Tube Assembly, Expansion	55211G	1
Tube Assembly, Manifold(Indoor)	352118	1

● Evaporator Assembly, Final



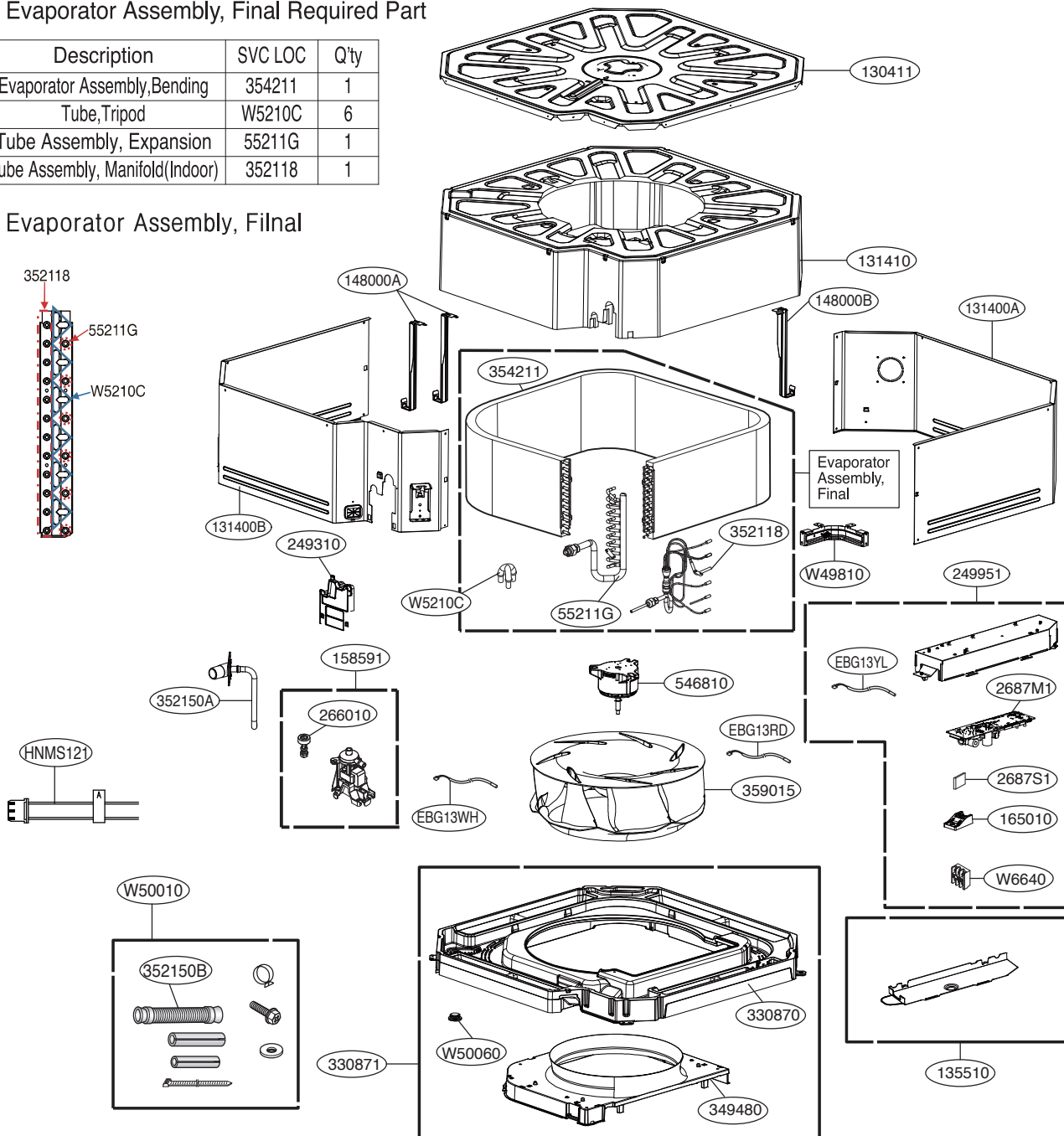
Location No.	Description	Sensor Information	Housing Color
EBG13YL	Thermistor1(CN_ROOM)	Air-Inlet	Yellow
EBG13WH	Thermistor2(CN_PIPE_IN)	Eva-in	White
EBG13RD	Thermistor3(CN_PIPE_OUT)	Eva-out	Red
165010	Sensor(CN_ROOM_HUMID)	Humidity	Black

ZTNWGALA1 [UT**F NA0]**
ZTNW24GALH1 [UT24FH NA0]
ZTNW30GALH1 [UT30FH NA0]

● Evaporator Assembly, Final Required Part

Description	SVC LOC	Q'ty
Evaporator Assembly, Bending	354211	1
Tube, Tripod	W5210C	6
Tube Assembly, Expansion	55211G	1
Tube Assembly, Manifold(Indoor)	352118	1

● Evaporator Assembly, Final



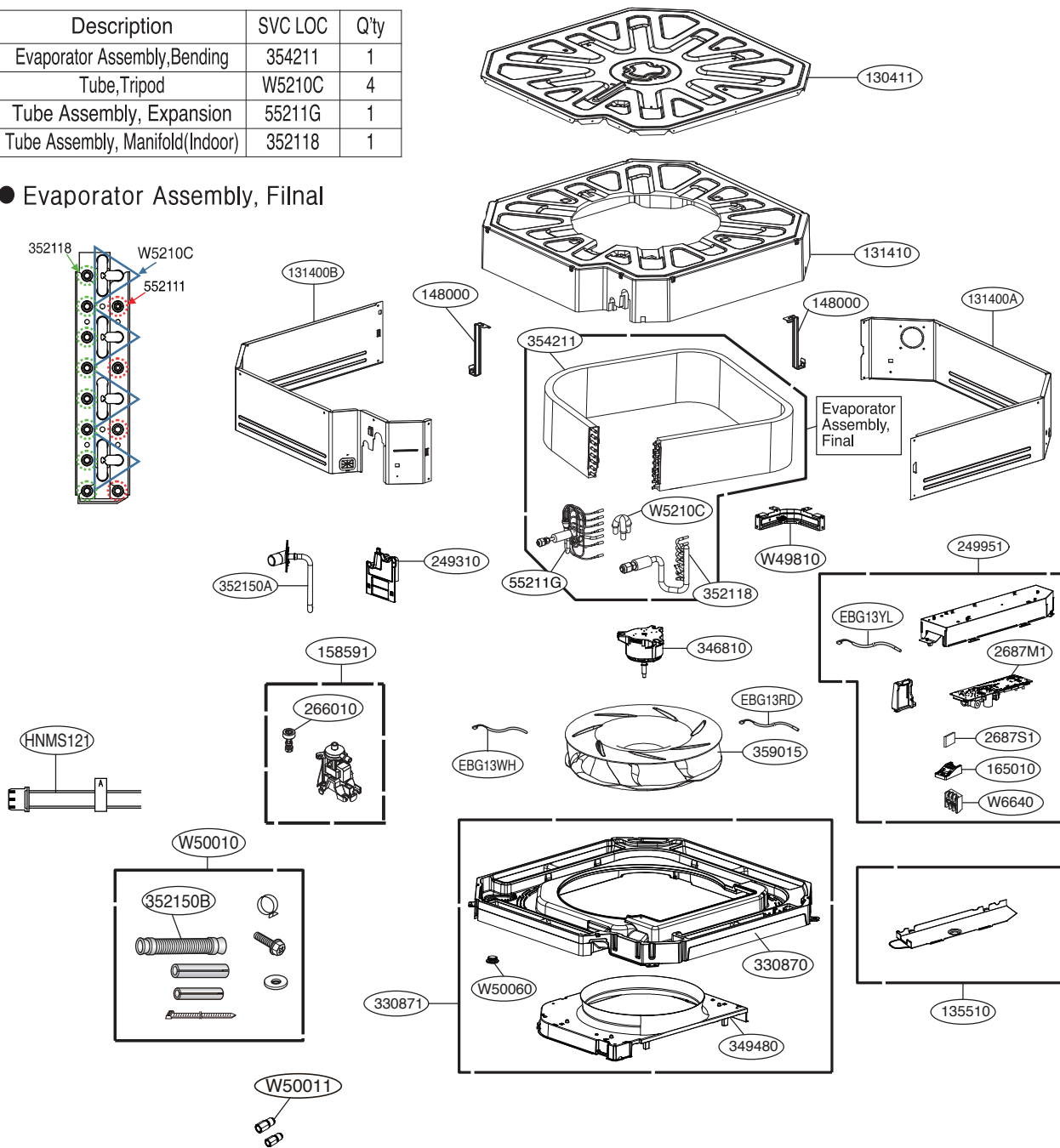
Location No.	Description	Sensor Information	Housing Color
EBG13YL	Thermistor1(CN_ROOM)	Air-Inlet	Yellow
EBG13WH	Thermistor2(CN_PIPE_IN)	Eva-in	White
EBG13RD	Thermistor3(CN_PIPE_OUT)	Eva-out	Red
165010	Sensor(CN_ROOM_HUMID)	Humidity	Black

ZTNW24GBLA1 [CT24F NB0]

● Evaporator Assembly, Final Required Part

Description	SVC LOC	Q'ty
Evaporator Assembly,Bending	354211	1
Tube,Tripod	W5210C	4
Tube Assembly, Expansion	55211G	1
Tube Assembly, Manifold(Indoor)	352118	1

● Evaporator Assembly, Final



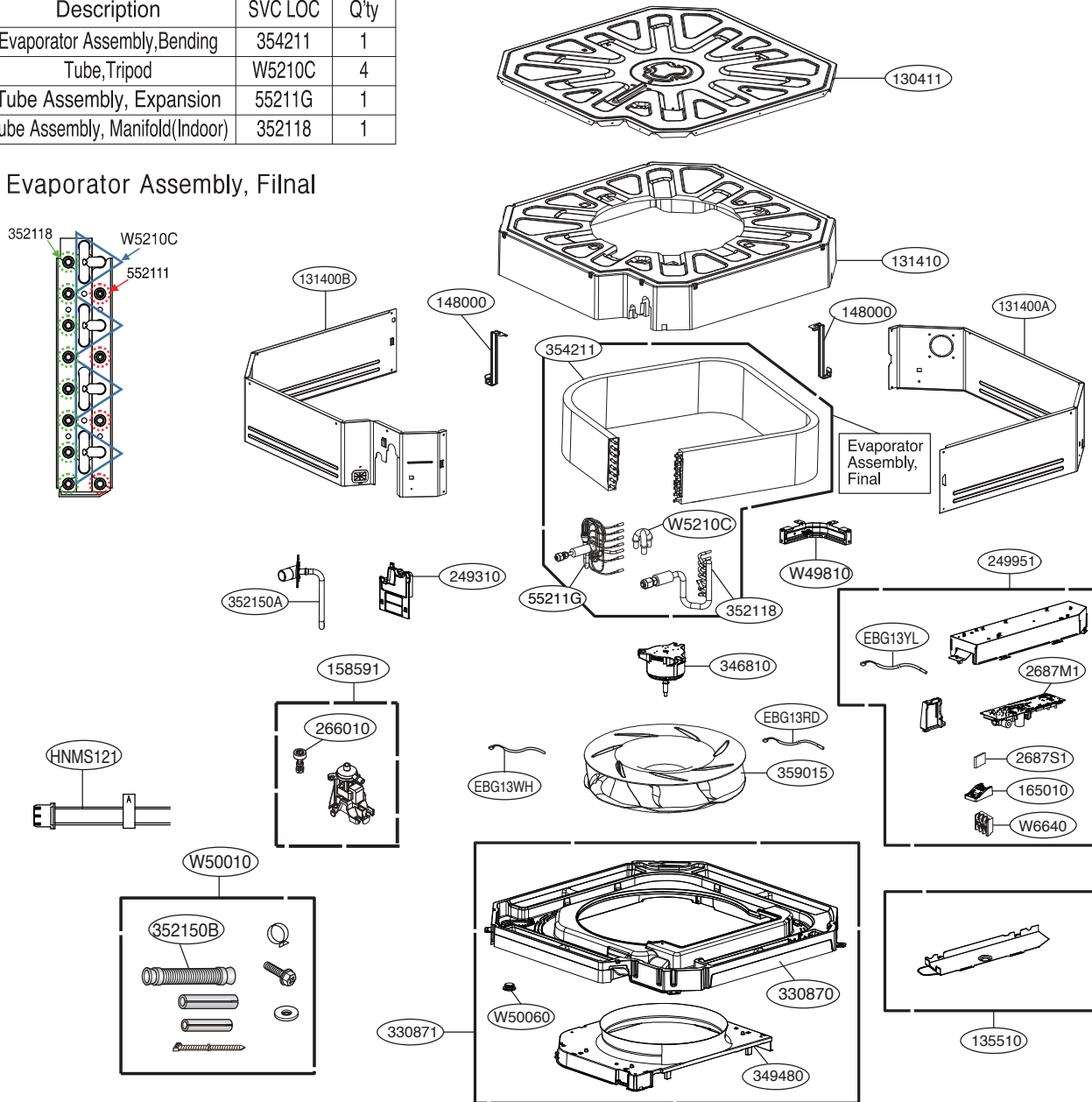
Location No.	Description	Sensor Information	Housing Color
EBG13YL	Thermistor1(CN_ROOM)	Air-Inlet	Yellow
EBG13WH	Thermistor2(CN_PIPE_IN)	Eva-in	White
EBG13RD	Thermistor3(CN_PIPE_OUT)	Eva-out	Red
165010	Sensor(CN_ROOM_HUMID)	Humidity	Black

ZTNW30GBLA1 [UT30F NB0] **ZTNW**GBLH1 [UT**FH NB0]**

● Evaporator Assembly, Final Required Part

Description	SVC LOC	Q'ty
Evaporator Assembly,Bending	354211	1
Tube,Tripod	W5210C	4
Tube Assembly, Expansion	55211G	1
Tube Assembly, Manifold(Indoor)	352118	1

● Evaporator Assembly, Final



Location No.	Description	Sensor Information	Housing Color
EBG13YL	Thermistor1(CN_ROOM)	Air-Inlet	Yellow
EBG13WH	Thermistor2(CN_PIPE_IN)	Eva-in	White
EBG13RD	Thermistor3(CN_PIPE_OUT)	Eva-out	Red
165010	Sensor(CN_ROOM_HUMID)	Humidity	Black



P/NO : MFL71683703