

TECHNICAL & SERVICE MANUAL

Series SE Ceiling Concealed R410A

Indoor unit

[Model names]

SE-P1.6AKT

SE-P2AKT

SE-P2.5AKT

SE-P1.6AKLT

SE-P2AKLT

SE-P2.5AKLT

[Service Ref.]

SE-P1.6AKT.TH

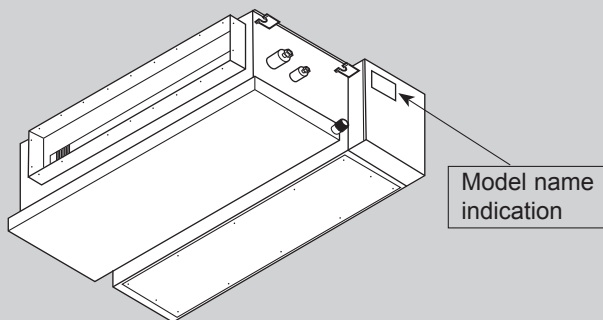
SE-P2AKT.TH

SE-P2.5AKT.TH

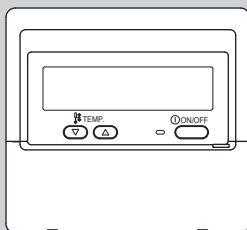
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SE-P2AKLT.TH

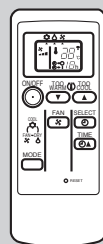
SE-P2.5AKLT.TH



INDOOR UNIT



SE-P1.6/2/2.5AKT

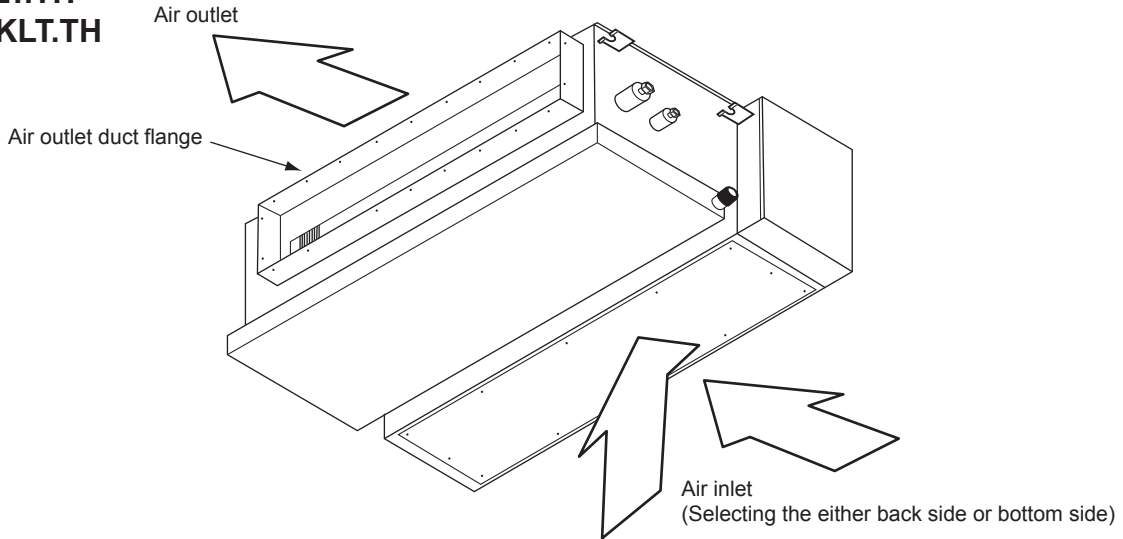


SE-P1.6/2/2.5AKLT

PART NAMES AND FUNCTIONS

Indoor Unit

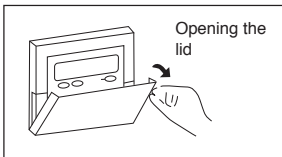
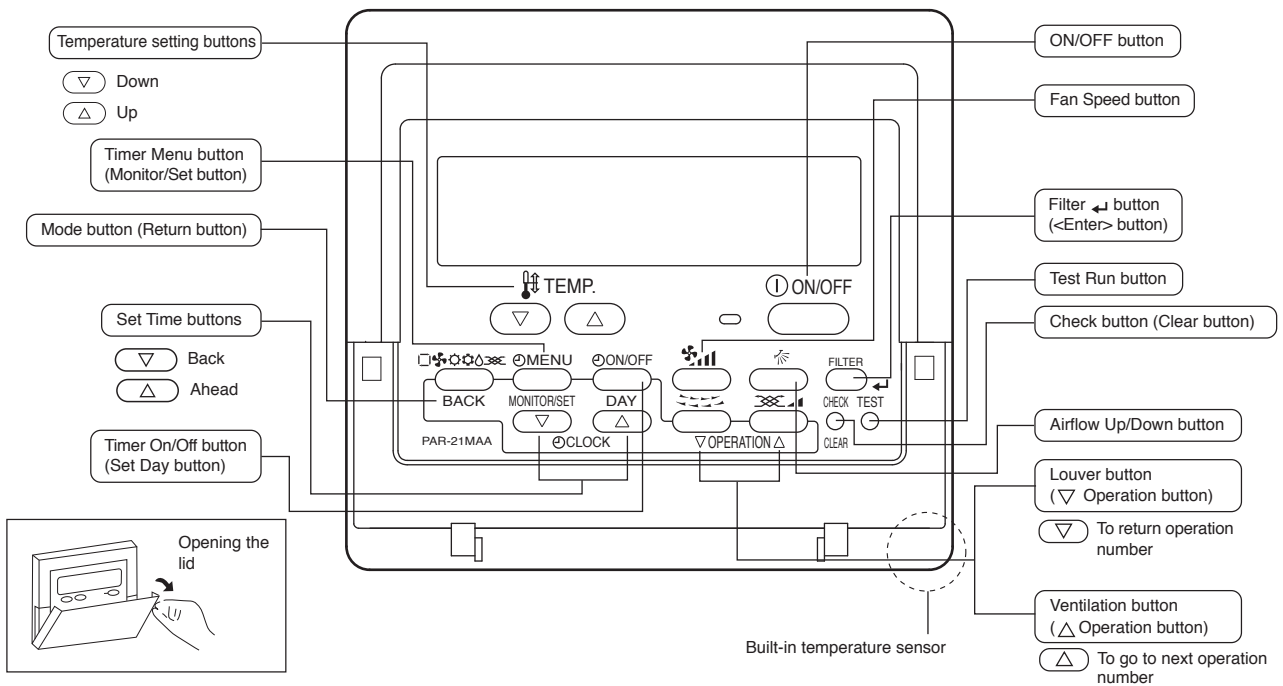
SE-P1.6AKT.TH
 SE-P2AKT.TH
 SE-P2.5AKT.TH
 SE-P1.6AKLT.TH
 SE-P2AKLT.TH
 SE-P2.5AKLT.TH



Wired remote controller

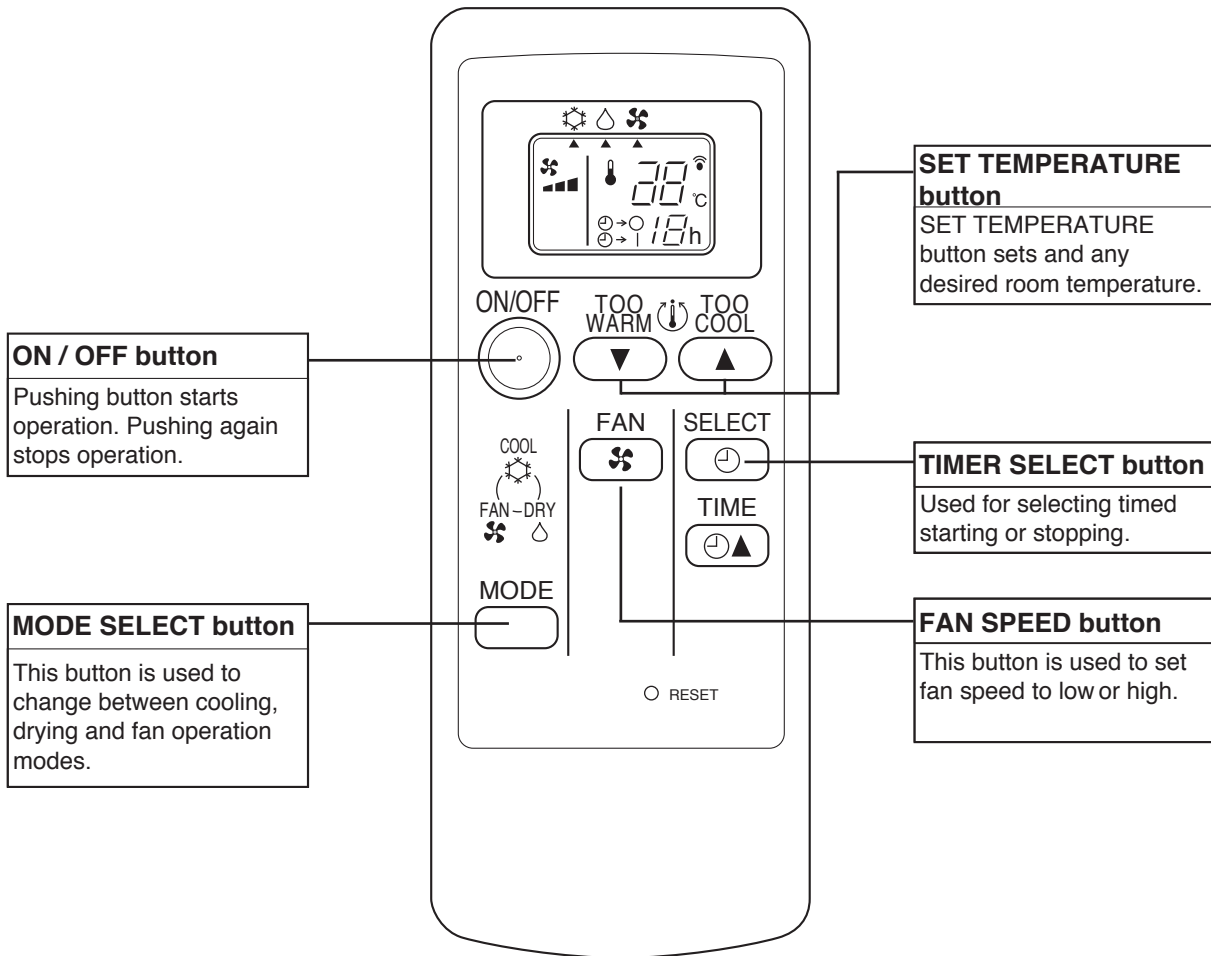
SE-P1.6AKT.TH SE-P2AKT.TH SE-P2.5AKT.TH

• Operation buttons



SE-P1.6AKLT.TH SE-P2AKLT.TH SE-2.5AKLT.TH

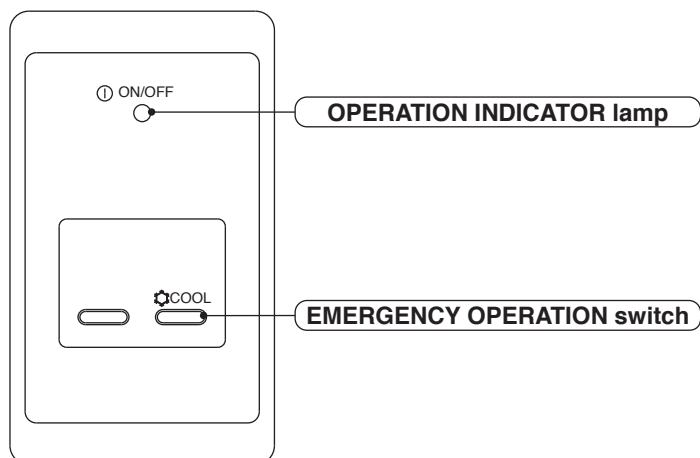
WIRELESS REMOTE CONTROLLER



Attention :

- Avoid operation of buttons with fingernails or other sharp objects. Sharp objects may scratch remote controller.

RECEIVING UNIT



SPECIFICATIONS

Model		Indoor unit		SE-P1.6AKT.TH, SE-P1.6AKLT.TH	
		Outdoor unit		SU-1.6VAK.TH-T	
Function				Cooling	
Power supply				1 phase, 220V, 50Hz	
Capacity	Capacity	W	3600		
	Air flow (High - Low)	m ³ /h	1020-720		
	External pressure	Pa	30 (Max. 50)		
Electrical data	Running current	A	5.5		
	Power input	W	1,200		
	Power factor	%	99		
	Starting current	A	38		
	Compressor motor current	A	4.59		
	Fan motor current (High - Low)	A	0.29-0.25		
Coefficient of performance (C.O.P)				3.00	
Compressor	Output	W	1000		
	Winding resistance (at 20°C)	Ω	C-R : 2.35 C-S : 3.81		
Indoor fan motor	Winding resistance (at 26°C)	Ω	WHT-BLK :165.7 BLK-BLU : 51.5 BLU-YLW :19.1 YLW-RED :48.2		
	Winding resistance (at 20°C)	Ω	WHT-BLK :171 BLK-RED :226		
Dimensions	Indoor unit	Width	mm	1100	
		Height	mm	270	
		Depth	mm	700	
	Outdoor unit	Width	mm	718	
		Height	mm	525	
		Depth	mm	255	
Weight	Indoor unit	kg	35		
	Outdoor unit	kg	35		
Special remarks	Sound level (High)	Indoor unit	dB	39	
		Outdoor unit	dB	50	
	Fan speed (High)	Indoor unit	rpm	811	
		Outdoor unit	rpm	850	
	Fan speed regulator	Indoor unit	2		
		Outdoor unit	1		
	Refrigerant filling capacity (R-410A)	kg	1.15		
	Refrigerant oil	ℓ	0.52		
	Thermistor	TH1 (at 25°C)	kΩ	5.4	
TH2 (at 25°C)		kΩ	5.4		

NOTE : Test conditions (JIS)

Cooling : Indoor D.B. 27°C W.B. 19°C

Outdoor D.B. 35°C W.B. 24°C

Model		Indoor unit	SE-P2AKT.TH, SE-P2AKLT.TH	SE-P2.5AKT.TH, SE-P2.5AKLT.TH	
		Outdoor unit	SU-P2VAK.TH-T	SU-2.5VAK.TH-T	
Function			Cooling		
Power supply			1 phase, 220V, 50Hz	1 phase, 220V, 50Hz	
Capacity	Capacity	W	5000	6400	
	Air flow	m ³ /h	1020-720	1200-720	
	External pressure	Pa	30(Max.50)		
	Running current	A	7.8	10.1	
Electrical data	Power input	W	1660	2200	
	Power factor	%	97	99	
	Starting current	A	43	63	
	Compressor motor current	A	6.90	8.87	
	Fan motor current	A	0.29-0.25	0.52-0.39	
Coefficient of performance (C.O.P)			3.01	2.91	
Compressor	Output	W	1300	1800	
	Winding resistance (at 20°C)	Ω	C-R:1.99 C-S:4.06	C-R:1.23 C-S:2.31	
Indoor fan motor	Winding resistance (at 26°C)	Ω	WHT-BLK :165.7 BLK-BLU : 51.5 BLU-YLW :19.1 YLW-RED :48.2	WHT-BLK :108 BLK-BLU : 29.1 BLU-YLW :26.3 YLW-RED :13.5	
	Winding resistance (at 20°C)	Ω	WHT-BLK :171 BLK-RED :226	WHT-BLK :71.5 BLK-RED :89.5	
Dimensions	Indoor unit	Width	mm	1100	
		Height	mm	270	
		Depth	mm	700	
	Outdoor unit	Width	mm	800	840
		Height	mm	550	880
		Depth	mm	285	330
Weight	Indoor unit	kg	35	36	
	Outdoor unit	kg	36	56	
Special remarks	Sound level (Hi)	Indoor unit	dB	39	43
		Outdoor unit	dB	52	54
	Fan speed (Hi)	Indoor unit	rpm	811	970
		Outdoor unit	rpm	860	810
	Fan speed regulator	Indoor unit		2	
		Outdoor unit		1	
	Refrigerant filling capacity (R410A)	kg	1.25	1.20	
	Refrigerant oil	ℓ	0.44	0.67	
	Thermistor	TH1 (at 25°C)	kΩ	5.4	
TH2 (at 25°C)		kΩ	5.4		

NOTE : Test conditions (JIS)

Cooling : Indoor D.B. 27°C W.B. 19°C

Outdoor D.B. 35°C W.B. 24°C

OUTLINES AND DIMENSIONS

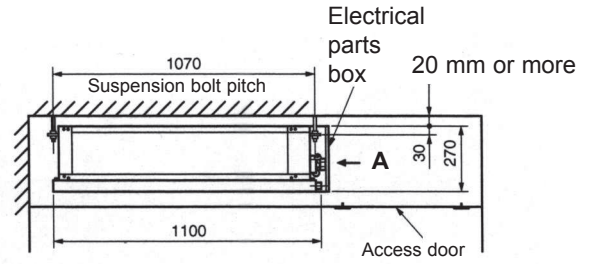
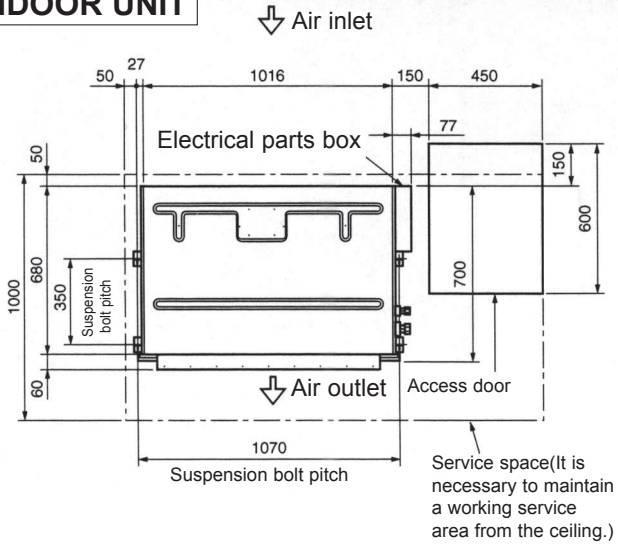
SE-P1.6AKT.TH
SE-P1.6AKLT.TH

SE-P2AKT.TH
SE-P2AKLT.TH

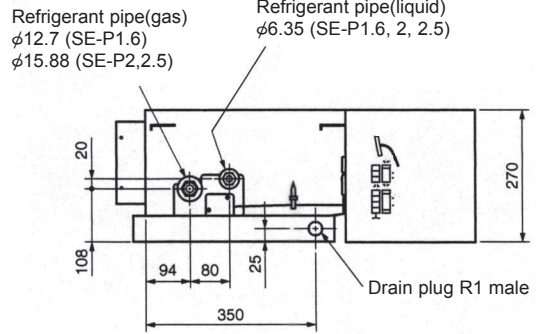
SE-P2.5AKT.TH
SE-P2.5AKLT.TH

Unit : mm

INDOOR UNIT



View A



WIRING DIAGRAM

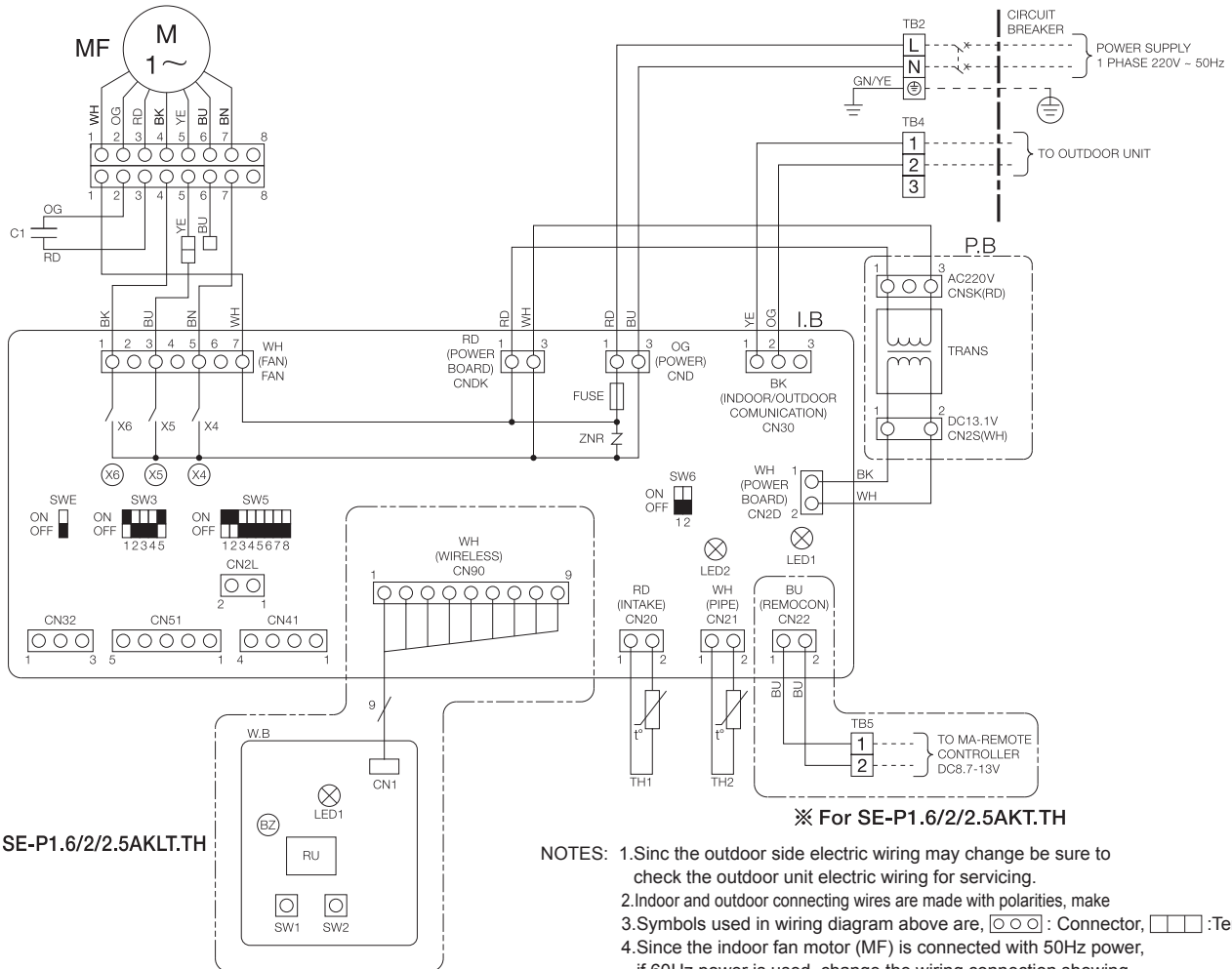
SE-P1.6AKT.TH
SE-P1.6AKLT.TH

SE-P2AKT.TH
SE-P2AKLT.TH

SE-P2.5AKT.TH
SE-P2.5AKLT.TH

[LEGEND]

SYMBOL	NAME	SYMBOL	NAME
P.B	INDOOR POWER BOARD	TB2	TERMINAL BLOCK (POWER SUPPLY)
I.B	INDOOR CONTROLLER BOARD	TB4	TERMINAL BLOCK (INDOOR/OUTDOOR CONNECTING LINE)
CN2L	CONNECTOR (LOSSNAY)	TB5	TERMINAL BLOCK (REMOTE CONTROLLER TRANSMISSION LINE)
CN32	CONNECTOR (REMOTE SWITCH)	TH1	ROOM TEMP. THERMISTOR (0°C/15kΩ, 25°C/5.4kΩ DETECT)
CN41	CONNECTOR (HA TERMINAL-A)	TH2	PIPE TEMP. THERMISTOR/LIQUID (0°C/15kΩ, 25°C/5.4kΩ DETECT)
CN51	CONNECTOR (CENTRALLY CONTROL)	W.B	WIRELESS REMOTE CONTROLLER BOARD
FUSE	FUSE (T6.3A/250V)	RU	RECEIVING UNIT
LED1	POWER SUPPLY (I.B)	BZ	BUZZER
LED2	POWER SUPPLY (R.B)	LED1	LED (RUN INDICATOR)
SW3	SWITCH (MODE SELECTION)	SW1	SWITCH (HEATING ON/OFF)
SW5	SWITCH (SYSTEM SELECTION)	SW2	SWITCH (COOLING ON/OFF)
SWE,SW6	SWITCH (EMERGENCY OPERATION)		
X4	RELAY (FAN MOTOR LL)		
X5	RELAY (FAN MOTOR LO)		
X6	RELAY (FAN MOTOR Hi)		
ZNR	VARISTOR		
C1	CAPACITOR (FAN MOTOR)		
MF	FAN MOTOR		



※ For SE-P1.6/2/2.5AKLT.TH

※ For SE-P1.6/2/2.5AKT.TH

- NOTES:**
1. Since the outdoor side electric wiring may change be sure to check the outdoor unit electric wiring for servicing.
 2. Indoor and outdoor connecting wires are made with polarities, make
 3. Symbols used in wiring diagram above are, : Connector, : Terminal(block).
 4. Since the indoor fan motor (MF) is connected with 50Hz power, if 60Hz power is used, change the wiring connection showing fig: ※ 1

<fig: ※ 1>



[Servicing] Fasten terminal of the terminal board "TB4" equips lock system. To remove the fastened terminal, pull it while pressing the protruding portion(locking level) of the terminal. The fastened terminal protruding portion should face upward

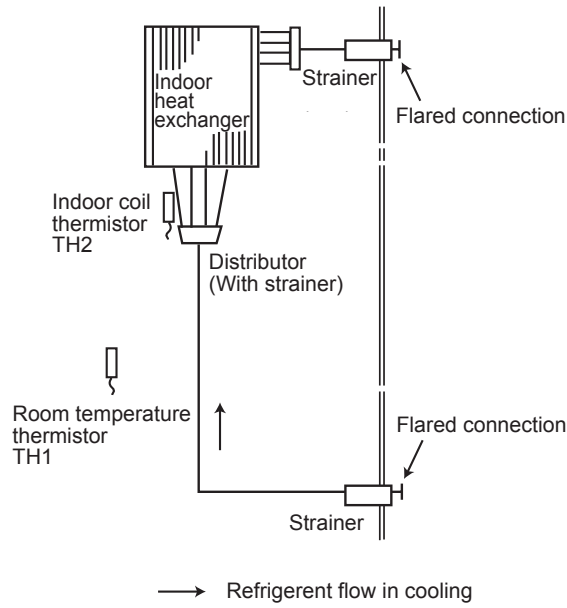
※ For details on how to operate self-diagnosis refer to the technical manuals etc

REFRIGERANT SYSTEM DIAGRAM

SE-P1.6AKT.TH SE-P2AKT.TH SE-P2.5AKT.TH
 SE-P1.6AKLT.TH SE-P2AKLT.TH SE-P2.5AKLT.TH

Unit : mm

INDOOR UNIT



Models	Piping Size O.D.: mm (in)	
	Gas	Liquid
SE-P1.6AKT.TH, SE-P1.6AKLT.TH	Ø12.7(1/2)	Ø6.35(1/4)
SE-P2AKT.TH, SE-P2AKLT.TH	Ø15.88(5/8)	Ø6.35(1/4)
SE-P2.5AKT.TH, SE-P2.5AKLT.TH	Ø15.88(5/8)	Ø6.35(1/4)