

<Outdoor unit operation monitor function>

Digital indicator LED3 displays 2 digit number or code to inform operation condition and the meaning of error code by controlling DIP SW2 on outdoor controller.

Operation indicator SW2 : Indicator change of self diagnosis

SW2 setting	Display detail	Explanation for display	Unit
ON 1 2 3 4 5 6			

<Digital indicator LED3 working details>
(Be sure that 1 to 6 in the SW2 are set to OFF.)
(1) Display when the power supply is ON.
When the power supply is ON, blinking displays by turns.
Wait for 4 minutes at the longest.
(2) When the display lights (Normal operation)
① Operation mode display

LED3

(Lighting)

SW2

ON

1 2 3 4 5 6

(Initial setting)

The tens digit : Operation mode

Display	Operation Model
O	OFF / FAN
C	COOLING / DRY
H	HEATING
d	DEFROSTING

The ones digit : Relay output

Display	Warming-up Compressor	Compressor	4-way valve	Solenoid valve (SV1, 2)
0	—	—	—	—
1	—	—	—	ON
2	—	—	ON	—
3	—	—	ON	ON
4	—	ON	—	—
5	—	ON	—	ON
6	—	ON	ON	—
7	—	ON	ON	ON
8	ON	—	—	—
A	ON	—	ON	—

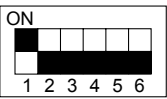
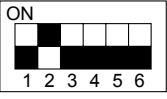
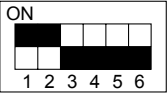
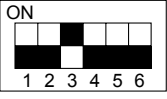
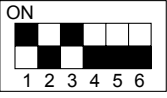
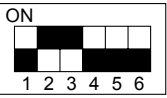
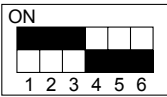
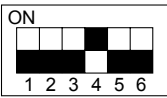
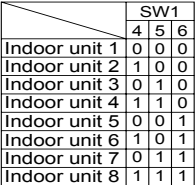
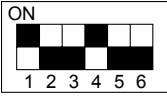
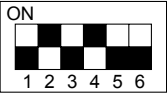
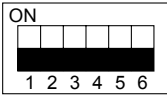
② Display during error postponement
Postponement code is displayed when compressor stops due to the work of protection device.
Postponement code is displayed while error is being postponed.

(3) When the display blinks
Inspection code is displayed when compressor stops due to the work of protection devices.

Display	Inspection unit
0	Outdoor unit, Branch box unit
1	Indoor unit

Display	Contents to be inspected (During operation)
U2	Discharge/compressor temperature fault
U7	Low-discharge superheating fault, Erroneous connection of refrigerant pipes or the connecting wires
U1	High pressure fault (63H operates)
UL	Low pressure fault (63L operates)
U6	Abnormality of power modules
UF	Compressor overcurrent shutoff (Start up locked)
UH	Current sensor fault (P. B.)
UP	Compressor overcurrent shutoff fault
U3	Discharge/compressor thermistor (TH4) open or short-circuit
U4	Outdoor unit thermistors (TH3, TH6, TH7, and H8), 63HS, and branch box thermistors open or short-circuit
U5	HEATSINK temperature fault
U8	Abnormality in outdoor fan motor
U9	Voltage fault, current sensor fault (P.B.)
PA	Forced compressor stop (Overlap malfunction of drain pump in indoor unit and linear expansion valve in branch box.)

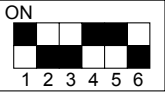
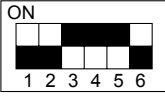
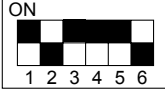
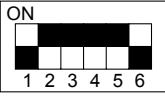
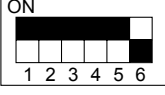
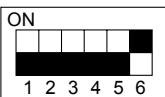
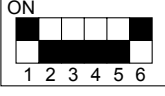
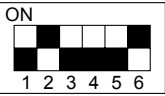
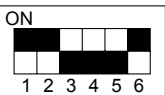
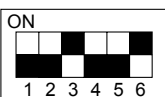
Display	Contents to be inspected (When power is turned on)
F3	63L connector(red) is open.
F5	63H connector(yellow) is open.
F9	2 connectors (63H/63L) are open.
E8	Branch box/outdoor communication error (Signal receiving error) (Outdoor unit) Indoor/branch box communication error (Signal receiving error) (Branch box)
E9	Branch box/outdoor communication error (Transmitting error) (Outdoor unit) Indoor/branch box communication error (Transmitting error) (Branch box)
EA	• Miswiring of indoor - branch box/branch box - outdoor unit connecting wire • Too many indoor units/branch box are in the system.
Eb	Miswiring of indoor - branch box/branch box - outdoor unit connecting wire(converse wiring or disconnection)
EC	Startup time over
E0~E7	Communication error except for outdoor unit

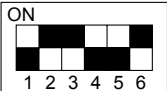
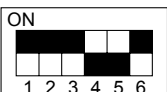
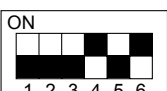
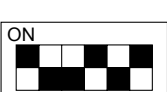
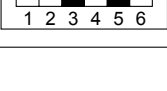
SW2 setting	Display detail	Explanation for display	Unit
	Pipe temperature / Liquid (TH3) – 40~194	– 40~194 (When the coil thermistor detects 0°F or below, “–” and temperature are displayed by turns.) (Example) When –10°F; 0.5 secs. 0.5secs. 2 secs. –□ → 10 → □□	°F
	Discharge/Compressor temperature (TH4) 37~327	37~327 (When the discharge/compressor thermistor detects 100°F or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 105°F; 0.5 secs. 0.5secs. 2 secs. □1 → 05 → □□	°F
	Output step of outdoor FAN 0~10	0~10	Step
	The number of ON / OFF times of compressor 0~9999	0~9999 (When the number of times is 100 or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 42500 times (425 × 100 times); 0.5 secs. 0.5secs. 2 secs. □4 → 25 → □□	100 times
	Compressor integrating operation times 0~9999	0~9999 (When it is 100 hours or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 2450 hours (245 × 10 hours); 0.5 secs. 0.5secs. 2 secs. □2 → 45 → □□	10 hours
	Compressor operating current 0~50	0~50 * Omit the figures after the decimal fractions.	A
	Compressor operating frequency 0~225	0~255 (When it is 100Hz or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 125Hz; 0.5 secs. 0.5secs. 2 secs. □1 → 25 → □□	Hz
	LEV opening pulse 0~500 	0~500 (When it is 100 pulse or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 150 pulse; 0.5 secs. 0.5secs. 2 secs. □1 → 50 → □□	Pulse
	Error postponement code history (1) of outdoor unit	Postponement code display Blinking: During postponement Lighting: Cancellation of postponement “00” is displayed in case of no postponement.	Code display
	Operation mode on error occurring	Operation mode of when operation stops due to error is displayed by setting SW2 like below. (SW2) 	Code display

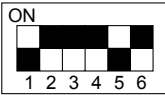
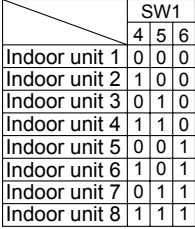
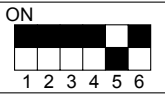
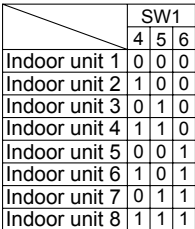
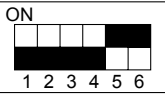
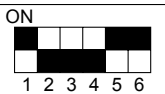
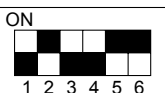
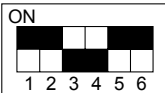
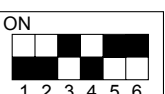


SW2 setting	Display detail	Explanation for display	Unit
	Pipe temperature / Liquid (TH3) on error occurring – 40~194	– 40~194 (When the coil thermistor detects 0°F or below, “–” and temperature are displayed by turns.) (Example) When –15°F; 0.5 secs. 0.5secs. 2 secs. –□ → 15 → □□	°F
	Compressor temperature (TH4) or discharge temperature (TH4) on error occurring 3~217	3~217 (When the temperature is 100°C or more, the hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 130°C; 0.5 secs. 0.5secs. 2 secs. □1 → 30 → □□	°C
	Compressor operating current on error occurring 0~50	0~50	A
	Error code history (1) (latest) Alternate display of abnormal unit number and code	When no error history, “ 0 ” and “–” are displayed by turns.	Code display
	Error code history (2) Alternate display of error unit number and code	When no error history, “ 0 ” and “–” are displayed by turns.	Code display
	Thermo ON time 0~999	0~999 (When it is 100 minutes or more, the hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 245 minutes; 0.5 secs. 0.5secs. 2 secs. □2 → 45 → □□	Minute
	Test run elapsed time 0~120	0~120 (When it is 100 minutes or more, the hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 105 minutes; 0.5 secs. 0.5secs. 2 secs. □1 → 05 → □□	Minute
	Capacity code of indoor unit (Qj) 	The capacity code of indoor unit is displayed. 	Code display

SW2 setting	Display detail	Explanation for display	Unit																																																
ON <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr></table>													1	2	3	4	5	6	Capacity setting display	Displayed as an outdoor capacity code. <table><tr><th>Capacity</th><th>Code</th></tr><tr><td>MXZ-8B48NA</td><td>28</td></tr></table>	Capacity	Code	MXZ-8B48NA	28	Code display																										
1	2	3	4	5	6																																														
Capacity	Code																																																		
MXZ-8B48NA	28																																																		
ON <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr></table>													1	2	3	4	5	6	Outdoor unit setting information	• The tens digit (Total display for applied setting) <table><tr><th>Setting details</th><th>Display details</th></tr><tr><td>H·P / Cooling only</td><td>0 : H·P 1 : Cooling only</td></tr><tr><td>Single phase / 3 phase</td><td>0 : Single phase 2 : 3 phase</td></tr></table> • The ones digit <table><tr><th>Setting details</th><th>Display details</th></tr><tr><td>Defrosting switch</td><td>0 : Normal 1 : For high humidity</td></tr></table> (Example) MXZ-8B48NA, "00" is displayed.	Setting details	Display details	H·P / Cooling only	0 : H·P 1 : Cooling only	Single phase / 3 phase	0 : Single phase 2 : 3 phase	Setting details	Display details	Defrosting switch	0 : Normal 1 : For high humidity	Code display																				
1	2	3	4	5	6																																														
Setting details	Display details																																																		
H·P / Cooling only	0 : H·P 1 : Cooling only																																																		
Single phase / 3 phase	0 : Single phase 2 : 3 phase																																																		
Setting details	Display details																																																		
Defrosting switch	0 : Normal 1 : For high humidity																																																		
ON <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr></table>													1	2	3	4	5	6	Indoor pipe temperature / Liquid – 38~190 <table><tr><td></td><td></td><td>SW1</td></tr><tr><td></td><td></td><td>4 5 6</td></tr><tr><td>Indoor unit 1</td><td>0</td><td>0 0</td></tr><tr><td>Indoor unit 2</td><td>1</td><td>0 0</td></tr><tr><td>Indoor unit 3</td><td>0</td><td>1 0</td></tr><tr><td>Indoor unit 4</td><td>1</td><td>1 0</td></tr><tr><td>Indoor unit 5</td><td>0</td><td>0 1</td></tr><tr><td>Indoor unit 6</td><td>1</td><td>0 1</td></tr><tr><td>Indoor unit 7</td><td>0</td><td>1 1</td></tr><tr><td>Indoor unit 8</td><td>1</td><td>1 1</td></tr></table>			SW1			4 5 6	Indoor unit 1	0	0 0	Indoor unit 2	1	0 0	Indoor unit 3	0	1 0	Indoor unit 4	1	1 0	Indoor unit 5	0	0 1	Indoor unit 6	1	0 1	Indoor unit 7	0	1 1	Indoor unit 8	1	1 1	– 38~190 (When the temperature is 0°F or less, "–" and temperature are displayed by turns.)	°F
1	2	3	4	5	6																																														
		SW1																																																	
		4 5 6																																																	
Indoor unit 1	0	0 0																																																	
Indoor unit 2	1	0 0																																																	
Indoor unit 3	0	1 0																																																	
Indoor unit 4	1	1 0																																																	
Indoor unit 5	0	0 1																																																	
Indoor unit 6	1	0 1																																																	
Indoor unit 7	0	1 1																																																	
Indoor unit 8	1	1 1																																																	
ON <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr></table>													1	2	3	4	5	6	Indoor pipe temperature / Cond. / Eva. Indoor – 38~190 <table><tr><td></td><td></td><td>SW1</td></tr><tr><td></td><td></td><td>4 5 6</td></tr><tr><td>Indoor unit 1</td><td>0</td><td>0 0</td></tr><tr><td>Indoor unit 2</td><td>1</td><td>0 0</td></tr><tr><td>Indoor unit 3</td><td>0</td><td>1 0</td></tr><tr><td>Indoor unit 4</td><td>1</td><td>1 0</td></tr><tr><td>Indoor unit 5</td><td>0</td><td>0 1</td></tr><tr><td>Indoor unit 6</td><td>1</td><td>0 1</td></tr><tr><td>Indoor unit 7</td><td>0</td><td>1 1</td></tr><tr><td>Indoor unit 8</td><td>1</td><td>1 1</td></tr></table>			SW1			4 5 6	Indoor unit 1	0	0 0	Indoor unit 2	1	0 0	Indoor unit 3	0	1 0	Indoor unit 4	1	1 0	Indoor unit 5	0	0 1	Indoor unit 6	1	0 1	Indoor unit 7	0	1 1	Indoor unit 8	1	1 1	– 38~190 (When the temperature is 0°F or less, "–" and temperature are displayed by turns.)	°F
1	2	3	4	5	6																																														
		SW1																																																	
		4 5 6																																																	
Indoor unit 1	0	0 0																																																	
Indoor unit 2	1	0 0																																																	
Indoor unit 3	0	1 0																																																	
Indoor unit 4	1	1 0																																																	
Indoor unit 5	0	0 1																																																	
Indoor unit 6	1	0 1																																																	
Indoor unit 7	0	1 1																																																	
Indoor unit 8	1	1 1																																																	
ON <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr></table>													1	2	3	4	5	6	Branch box pipe temperature / gas – 38~190 <table><tr><td></td><td></td><td>SW1</td></tr><tr><td></td><td></td><td>4 5 6</td></tr><tr><td>Indoor unit 1</td><td>0</td><td>0 0</td></tr><tr><td>Indoor unit 2</td><td>1</td><td>0 0</td></tr><tr><td>Indoor unit 3</td><td>0</td><td>1 0</td></tr><tr><td>Indoor unit 4</td><td>1</td><td>1 0</td></tr><tr><td>Indoor unit 5</td><td>0</td><td>0 1</td></tr><tr><td>Indoor unit 6</td><td>1</td><td>0 1</td></tr><tr><td>Indoor unit 7</td><td>0</td><td>1 1</td></tr><tr><td>Indoor unit 8</td><td>1</td><td>1 1</td></tr></table>			SW1			4 5 6	Indoor unit 1	0	0 0	Indoor unit 2	1	0 0	Indoor unit 3	0	1 0	Indoor unit 4	1	1 0	Indoor unit 5	0	0 1	Indoor unit 6	1	0 1	Indoor unit 7	0	1 1	Indoor unit 8	1	1 1	– 38~190 (When the temperature is 0°F or less, "–" and temperature are displayed by turns.)	°F
1	2	3	4	5	6																																														
		SW1																																																	
		4 5 6																																																	
Indoor unit 1	0	0 0																																																	
Indoor unit 2	1	0 0																																																	
Indoor unit 3	0	1 0																																																	
Indoor unit 4	1	1 0																																																	
Indoor unit 5	0	0 1																																																	
Indoor unit 6	1	0 1																																																	
Indoor unit 7	0	1 1																																																	
Indoor unit 8	1	1 1																																																	
ON <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr></table>													1	2	3	4	5	6	Targeted evaporating temperature : ETm (Cooling) – 38~190 Targeted high pressure : Pdm (Heating) 0~711	ETm : – 38~190, Pdm : 0~711 (When the temperature is 0°F or less, "–" and temperature are displayed by turns.)	°F PSIG																														
1	2	3	4	5	6																																														
ON <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr><tr><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr></table>													1	2	3	4	5	6	Indoor room temperature 46~102 <table><tr><td></td><td></td><td>SW1</td></tr><tr><td></td><td></td><td>4 5 6</td></tr><tr><td>Indoor unit 1</td><td>0</td><td>0 0</td></tr><tr><td>Indoor unit 2</td><td>1</td><td>0 0</td></tr><tr><td>Indoor unit 3</td><td>0</td><td>1 0</td></tr><tr><td>Indoor unit 4</td><td>1</td><td>1 0</td></tr><tr><td>Indoor unit 5</td><td>0</td><td>0 1</td></tr><tr><td>Indoor unit 6</td><td>1</td><td>0 1</td></tr><tr><td>Indoor unit 7</td><td>0</td><td>1 1</td></tr><tr><td>Indoor unit 8</td><td>1</td><td>1 1</td></tr></table>			SW1			4 5 6	Indoor unit 1	0	0 0	Indoor unit 2	1	0 0	Indoor unit 3	0	1 0	Indoor unit 4	1	1 0	Indoor unit 5	0	0 1	Indoor unit 6	1	0 1	Indoor unit 7	0	1 1	Indoor unit 8	1	1 1	46~102 (When the temperature is 100°F or more, the hundreds digit, tens digit and ones digit are displayed by turns.)	°F
1	2	3	4	5	6																																														
		SW1																																																	
		4 5 6																																																	
Indoor unit 1	0	0 0																																																	
Indoor unit 2	1	0 0																																																	
Indoor unit 3	0	1 0																																																	
Indoor unit 4	1	1 0																																																	
Indoor unit 5	0	0 1																																																	
Indoor unit 6	1	0 1																																																	
Indoor unit 7	0	1 1																																																	
Indoor unit 8	1	1 1																																																	

SW2 setting	Display detail	Explanation for display	Unit																																								
	Indoor setting temperature 62~86 <table border="1" data-bbox="518 304 715 535"> <thead> <tr> <th></th><th colspan="3">SW1</th></tr> <tr> <th></th><th>4</th><th>5</th><th>6</th></tr> </thead> <tbody> <tr> <td>Indoor unit 1</td><td>0</td><td>0</td><td>0</td></tr> <tr> <td>Indoor unit 2</td><td>1</td><td>0</td><td>0</td></tr> <tr> <td>Indoor unit 3</td><td>0</td><td>1</td><td>0</td></tr> <tr> <td>Indoor unit 4</td><td>1</td><td>1</td><td>0</td></tr> <tr> <td>Indoor unit 5</td><td>0</td><td>0</td><td>1</td></tr> <tr> <td>Indoor unit 6</td><td>1</td><td>0</td><td>1</td></tr> <tr> <td>Indoor unit 7</td><td>0</td><td>1</td><td>1</td></tr> <tr> <td>Indoor unit 8</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>		SW1				4	5	6	Indoor unit 1	0	0	0	Indoor unit 2	1	0	0	Indoor unit 3	0	1	0	Indoor unit 4	1	1	0	Indoor unit 5	0	0	1	Indoor unit 6	1	0	1	Indoor unit 7	0	1	1	Indoor unit 8	1	1	1	62~86	°F
	SW1																																										
	4	5	6																																								
Indoor unit 1	0	0	0																																								
Indoor unit 2	1	0	0																																								
Indoor unit 3	0	1	0																																								
Indoor unit 4	1	1	0																																								
Indoor unit 5	0	0	1																																								
Indoor unit 6	1	0	1																																								
Indoor unit 7	0	1	1																																								
Indoor unit 8	1	1	1																																								
	Outdoor pipe temperature / 2-phase (TH6) – 38~190	– 38~190 (When the temperature is 0°F or less, “–” and temperature are displayed by turns.)	°F																																								
	Outdoor temperature (TH7) – 38~190	– 38~190 (When the temperature is 0°F or less, “–” and temperature are displayed by turns.)	°F																																								
	Outdoor heatsink temperature (TH8) – 40~327	– 40~327 (When the temperature is 0°F or less, “–” and temperature are displayed by turns.) (When the thermistor detects 100°F or more, hundreds digit, tens digit and ones digit are displayed by turns.)	°F																																								
	Discharge superheat. SHd 0~255	0~255 (When the temperature is 100°C or more, hundreds digit, tens digit and ones digit are displayed by turns.)	°C																																								
	Sub-cool. SC (cooling mode) 0~130	0~130 (When the temperature is 100°C or more, hundreds digit, tens digit and ones digit are displayed by turns.)	°C																																								
	Input current of outdoor unit	0~500 (When it is 100 or more, hundreds digit, tens digit and ones digit are displayed by turns.)	0.1 A																																								
	High pressure 63HS	0~815 (When it is 100 or more, hundreds digit, tens digit and ones digit are displayed by turns.)	PSIG																																								
	Targeted operation frequency 0~255	0~255 (When it is 100Hz or more, hundreds digit, tens digit and ones digit are displayed by turns.)	Hz																																								
	DC bus voltage 180~370	180~370 (When it is 100V or more, hundreds digit, tens digit and ones digit are displayed by turns.)	V																																								

SW2 setting	Display detail	Explanation for display	Unit																																								
	Target Sub-cool (Cooling mode) : SCm	0~255	℃																																								
	Error postponement code history (2) of outdoor unit	Postponement code display Blinking: During postponement Lighting: Cancellation of postponement “00” is displayed in case of no postponement.	Code display																																								
	Error postponement code history (3) of outdoor unit	Postponement code display Blinking: During postponement Lighting: Cancellation of postponement “00” is displayed in case of no postponement.	Code display																																								
	Error code history (3) (Oldest) Alternate display of abnormal unit number and code	When no error history, “0” and “-” are displayed by turns.	Code display																																								
	Error thermistor display [When there is no error thermistor, “-” is displayed.]	3 : Outdoor pipe temperature /Liquid (TH3) 7 : Outdoor outside temperature (TH7) 8 : Outdoor heatsink (TH8) 23 : Branch box pipe temperature / Gas (TH-A~E) 63 : High pressure sensor (63HS)	Code display																																								
	Operation frequency on error occurring 0~255	0~255 (When it is 100Hz or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 125Hz; 0.5 secs. 0.5secs. 2 secs. 1 → 25	Hz																																								
	Fan step on error occurring 0~10	0~10	Step																																								
	LEV opening pulse on error occurring 0~500 <table border="1" style="font-size: small;"> <thead> <tr> <th></th><th colspan="3">SW1</th></tr> <tr> <th></th><th>4</th><th>5</th><th>6</th></tr> </thead> <tbody> <tr><td>Indoor unit 1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Indoor unit 2</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>Indoor unit 3</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>Indoor unit 4</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>Indoor unit 5</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>Indoor unit 6</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>Indoor unit 7</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>Indoor unit 8</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>		SW1				4	5	6	Indoor unit 1	0	0	0	Indoor unit 2	1	0	0	Indoor unit 3	0	1	0	Indoor unit 4	1	1	0	Indoor unit 5	0	0	1	Indoor unit 6	1	0	1	Indoor unit 7	0	1	1	Indoor unit 8	1	1	1	0~500 (When it is 100 pulse or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 130 pulse; 0.5 secs. 0.5secs. 2 secs. 1 → 30	Pulse
	SW1																																										
	4	5	6																																								
Indoor unit 1	0	0	0																																								
Indoor unit 2	1	0	0																																								
Indoor unit 3	0	1	0																																								
Indoor unit 4	1	1	0																																								
Indoor unit 5	0	0	1																																								
Indoor unit 6	1	0	1																																								
Indoor unit 7	0	1	1																																								
Indoor unit 8	1	1	1																																								
	Indoor room temperature on error occurring 8~39 <table border="1" style="font-size: small;"> <thead> <tr> <th></th><th colspan="3">SW1</th></tr> <tr> <th></th><th>4</th><th>5</th><th>6</th></tr> </thead> <tbody> <tr><td>Indoor unit 1</td><td>0</td><td>0</td><td>0</td></tr> <tr><td>Indoor unit 2</td><td>1</td><td>0</td><td>0</td></tr> <tr><td>Indoor unit 3</td><td>0</td><td>1</td><td>0</td></tr> <tr><td>Indoor unit 4</td><td>1</td><td>1</td><td>0</td></tr> <tr><td>Indoor unit 5</td><td>0</td><td>0</td><td>1</td></tr> <tr><td>Indoor unit 6</td><td>1</td><td>0</td><td>1</td></tr> <tr><td>Indoor unit 7</td><td>0</td><td>1</td><td>1</td></tr> <tr><td>Indoor unit 8</td><td>1</td><td>1</td><td>1</td></tr> </tbody> </table>		SW1				4	5	6	Indoor unit 1	0	0	0	Indoor unit 2	1	0	0	Indoor unit 3	0	1	0	Indoor unit 4	1	1	0	Indoor unit 5	0	0	1	Indoor unit 6	1	0	1	Indoor unit 7	0	1	1	Indoor unit 8	1	1	1	8~39	℃
	SW1																																										
	4	5	6																																								
Indoor unit 1	0	0	0																																								
Indoor unit 2	1	0	0																																								
Indoor unit 3	0	1	0																																								
Indoor unit 4	1	1	0																																								
Indoor unit 5	0	0	1																																								
Indoor unit 6	1	0	1																																								
Indoor unit 7	0	1	1																																								
Indoor unit 8	1	1	1																																								

SW2 setting	Display detail	Explanation for display	Unit
	Indoor pipe temperature / Liquid on error occurring – 39~88 	– 39~88 (When the temperature is 0°C or less, “–” and temperature are displayed by turns.) (Example) When –15°C; 0.5 secs. 0.5secs. 2 secs. –□ → 15 → □□	°C
	Indoor pipe temperature / Cond./ Eva. on error occurring – 39~88 	– 39~88 (When the temperature is 0°C or less, “–” and temperature are displayed by turns.) (Example) When –15°C; 0.5 secs. 0.5secs. 2 secs. –□ → 15 → □□	°C
	Outdoor pipe temperature / 2-phase (TH6) on error occurring – 39~88	– 39~88 (When the temperature is 0°C or less, “–” and temperature are displayed by turns.) (Example) When –15°C; 0.5 secs. 0.5secs. 2 secs. –□ → 15 → □□	°C
	Outdoor outside temperature (TH7) on error occurring – 39~88	– 39~88 (When the temperature is 0°C or less, “–” and temperature are displayed by turns.) (Example) When –15°C; 0.5 secs. 0.5secs. 2 secs. –□ → 15 → □□	°C
	Outdoor heatsink temperature (TH8) on error occurring – 40~200	– 40~200 (When the temperature is 0°C or less, “–” and temperature are displayed by turns.) (When the temperature is 100°C or more, hundreds digit, tens digit and ones digit are displayed by turns.)	°C
	Discharge superheat on error occurring SHd 0~255	0~255 (When the temperature is 100°C or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 150°C; 0.5 secs. 0.5secs. 2 secs. □1 → 50 → □□	°C
	Sub-cool on error occurring. SC 0~130	0~130 (When the temperature is 100°C or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 115°C; 0.5 secs. 0.5secs. 2 secs. □1 → 15 → □□	°C



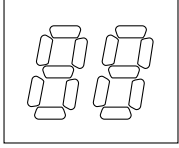
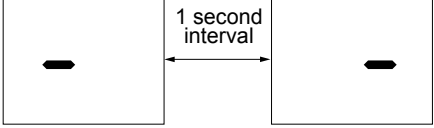
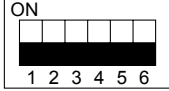
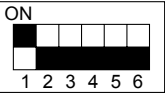
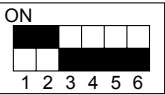
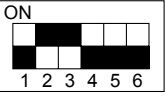
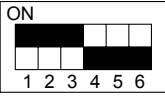
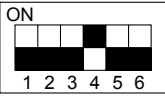
SW2 setting	Display detail	Explanation for display	Unit																																																					
ON 123456	Thermo ON time until error stops 0~999	0~999 (When it is 100 minutes or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 415 minutes; 0.5 secs. 0.5secs. 2 secs. □4 → 15 → □□	Minute																																																					
ON 123456	Target rotation of outdoor fan motor	0~999	rpm																																																					
ON 123456	Sub-cool (Heating mode) <table><tr><td></td><td colspan="3">SW1</td></tr><tr><td></td><td>4</td><td>5</td><td>6</td></tr><tr><td>Indoor unit 1</td><td>0</td><td>0</td><td>0</td></tr><tr><td>Indoor unit 2</td><td>1</td><td>0</td><td>0</td></tr><tr><td>Indoor unit 3</td><td>0</td><td>1</td><td>0</td></tr><tr><td>Indoor unit 4</td><td>1</td><td>1</td><td>0</td></tr><tr><td>Indoor unit 5</td><td>0</td><td>0</td><td>1</td></tr><tr><td>Indoor unit 6</td><td>1</td><td>0</td><td>1</td></tr><tr><td>Indoor unit 7</td><td>0</td><td>1</td><td>1</td></tr><tr><td>Indoor unit 8</td><td>1</td><td>1</td><td>1</td></tr></table>		SW1				4	5	6	Indoor unit 1	0	0	0	Indoor unit 2	1	0	0	Indoor unit 3	0	1	0	Indoor unit 4	1	1	0	Indoor unit 5	0	0	1	Indoor unit 6	1	0	1	Indoor unit 7	0	1	1	Indoor unit 8	1	1	1	0~130	℃													
	SW1																																																							
	4	5	6																																																					
Indoor unit 1	0	0	0																																																					
Indoor unit 2	1	0	0																																																					
Indoor unit 3	0	1	0																																																					
Indoor unit 4	1	1	0																																																					
Indoor unit 5	0	0	1																																																					
Indoor unit 6	1	0	1																																																					
Indoor unit 7	0	1	1																																																					
Indoor unit 8	1	1	1																																																					
ON 123456	Code of the difference between room temperature and set temperature ("ΔTj": 0 - 99 °C) ■ Tens digit of code: current ΔTj ■ Units digit of code: ΔTj a minute ago	Code of the difference between room temperature and set temperature ("ΔTj") <table><tr><td rowspan="2">ΔTj</td><td>Cooling</td><td>Heating</td></tr><tr><td>ΔTj = room temp. - Set temp.</td><td>ΔTj = Set temp. - room temp.</td></tr><tr><td>0</td><td>ΔTj ≤ -0.5</td><td>ΔTj ≤ -0.5</td></tr><tr><td>1</td><td>-1.0 < ΔTj ≤ -0.5</td><td>-0.5 < ΔTj ≤ 0.0</td></tr><tr><td>2</td><td>-0.5 < ΔTj ≤ -0.5</td><td>0.0 < ΔTj ≤ 0.5</td></tr><tr><td>3</td><td>0.0 < ΔTj ≤ 0.0</td><td>0.5 < ΔTj ≤ 1.0</td></tr><tr><td>4</td><td>0.5 < ΔTj ≤ 0.5</td><td>1.0 < ΔTj ≤ 1.5</td></tr><tr><td>5</td><td>1.0 < ΔTj ≤ 1.0</td><td>1.5 < ΔTj ≤ 2.0</td></tr><tr><td>6</td><td>1.5 < ΔTj ≤ 0.5</td><td>2.0 < ΔTj ≤ 2.5</td></tr><tr><td>7</td><td>2.0 < ΔTj ≤ 2.0</td><td>2.5 < ΔTj ≤ 3.0</td></tr><tr><td>8</td><td>2.5 < ΔTj ≤ 2.5</td><td>3.0 < ΔTj ≤ 3.5</td></tr><tr><td>9</td><td>3.0 < ΔTj ≤ 3.0</td><td>3.5 < ΔTj</td></tr></table> <table><tr><td>SW setting (1-4, 5, 6)</td><td>Target unit</td></tr><tr><td>000</td><td>Indoor unit 1</td></tr><tr><td>100</td><td>Indoor unit 2</td></tr><tr><td>010</td><td>Indoor unit 3</td></tr><tr><td>110</td><td>Indoor unit 4</td></tr><tr><td>001</td><td>Indoor unit 5</td></tr><tr><td>101</td><td>Indoor unit 6</td></tr><tr><td>011</td><td>Indoor unit 7</td></tr><tr><td>111</td><td>Indoor unit 8</td></tr></table>	ΔTj	Cooling	Heating	ΔTj = room temp. - Set temp.	ΔTj = Set temp. - room temp.	0	ΔTj ≤ -0.5	ΔTj ≤ -0.5	1	-1.0 < ΔTj ≤ -0.5	-0.5 < ΔTj ≤ 0.0	2	-0.5 < ΔTj ≤ -0.5	0.0 < ΔTj ≤ 0.5	3	0.0 < ΔTj ≤ 0.0	0.5 < ΔTj ≤ 1.0	4	0.5 < ΔTj ≤ 0.5	1.0 < ΔTj ≤ 1.5	5	1.0 < ΔTj ≤ 1.0	1.5 < ΔTj ≤ 2.0	6	1.5 < ΔTj ≤ 0.5	2.0 < ΔTj ≤ 2.5	7	2.0 < ΔTj ≤ 2.0	2.5 < ΔTj ≤ 3.0	8	2.5 < ΔTj ≤ 2.5	3.0 < ΔTj ≤ 3.5	9	3.0 < ΔTj ≤ 3.0	3.5 < ΔTj	SW setting (1-4, 5, 6)	Target unit	000	Indoor unit 1	100	Indoor unit 2	010	Indoor unit 3	110	Indoor unit 4	001	Indoor unit 5	101	Indoor unit 6	011	Indoor unit 7	111	Indoor unit 8	Code display
ΔTj	Cooling	Heating																																																						
	ΔTj = room temp. - Set temp.	ΔTj = Set temp. - room temp.																																																						
0	ΔTj ≤ -0.5	ΔTj ≤ -0.5																																																						
1	-1.0 < ΔTj ≤ -0.5	-0.5 < ΔTj ≤ 0.0																																																						
2	-0.5 < ΔTj ≤ -0.5	0.0 < ΔTj ≤ 0.5																																																						
3	0.0 < ΔTj ≤ 0.0	0.5 < ΔTj ≤ 1.0																																																						
4	0.5 < ΔTj ≤ 0.5	1.0 < ΔTj ≤ 1.5																																																						
5	1.0 < ΔTj ≤ 1.0	1.5 < ΔTj ≤ 2.0																																																						
6	1.5 < ΔTj ≤ 0.5	2.0 < ΔTj ≤ 2.5																																																						
7	2.0 < ΔTj ≤ 2.0	2.5 < ΔTj ≤ 3.0																																																						
8	2.5 < ΔTj ≤ 2.5	3.0 < ΔTj ≤ 3.5																																																						
9	3.0 < ΔTj ≤ 3.0	3.5 < ΔTj																																																						
SW setting (1-4, 5, 6)	Target unit																																																							
000	Indoor unit 1																																																							
100	Indoor unit 2																																																							
010	Indoor unit 3																																																							
110	Indoor unit 4																																																							
001	Indoor unit 5																																																							
101	Indoor unit 6																																																							
011	Indoor unit 7																																																							
111	Indoor unit 8																																																							
ON 123456	U9 Error status during the Error postponement period	<table><tr><td>Description</td><td>Detection point</td><td>Display</td></tr><tr><td>Normal</td><td>—</td><td>00</td></tr><tr><td>Overvoltage error</td><td>Power circuit board</td><td>01</td></tr><tr><td>Undervoltage error</td><td>Controller circuit board</td><td>02</td></tr><tr><td>L1 or L2 phase interruption error</td><td>Power circuit board</td><td>04</td></tr><tr><td>Abnormal power synchronous signal</td><td>Power circuit board</td><td>08</td></tr></table> * Display examples for multiple errors: Overvoltage (01) + Undervoltage (02) = 03 Undervoltage (02) + Power-sync signal error (08) = 0A	Description	Detection point	Display	Normal	—	00	Overvoltage error	Power circuit board	01	Undervoltage error	Controller circuit board	02	L1 or L2 phase interruption error	Power circuit board	04	Abnormal power synchronous signal	Power circuit board	08	Code display																																			
Description	Detection point	Display																																																						
Normal	—	00																																																						
Overvoltage error	Power circuit board	01																																																						
Undervoltage error	Controller circuit board	02																																																						
L1 or L2 phase interruption error	Power circuit board	04																																																						
Abnormal power synchronous signal	Power circuit board	08																																																						

<Branch box unit operation monitor function>

[When option part 'A-Control Service Tool (PAC-SK52ST)' is connected to branch box controller board (CNM)]

Digital indicator LED1 displays 2 digit number or code to inform operation condition and the meaning of error code by controlling DIP SW2 on 'A-Control Service Tool'.

Operation indicator SW2 : Indicator change of self diagnosis

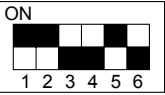
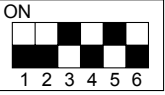
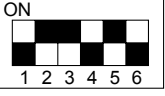
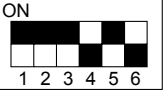
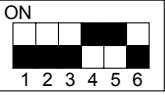
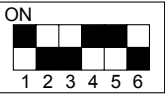
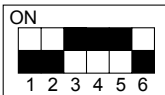
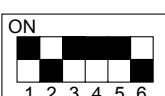
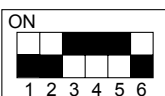
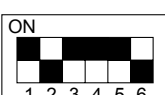
SW2 setting	Display detail	Explanation for display	Unit
			
<Digital indicator LED1 working details> (Be sure that 1 to 6 in the SW2 are set to OFF.) (1) Display when the power supply is ON. When the power supply is ON, blinking displays by turns. Wait for 2 minutes at the longest. (2) When the display lights (Normal operation) ① The number of connected indoor units to this branch box (0 - 5)			
LED1 	(Lighting)		
		SW2 (Initial setting)	
	Pipe temperature / Liquid (TH3) – 40~90 (°C) – 40~194 (°F)*	– 40~90 (°C), – 40~194 (°F) (When the coil thermistor detects 0°C or below, “–” and temperature are displayed by turns.) (Example) When –10°C; 0.5 secs. 0.5secs. 2 secs. –□ → 10 → □□	°C °F(*)
	Discharge/Compressor temperature (TH4) 3~217 (°C) 37~327 (°F)*	3~217 (°C), 37~327 (°F)* (When the discharge/compressor thermistor detects 100°C or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 105°C; 0.5 secs. 0.5secs. 2 secs. □1 → 05 → □□	°C °F(*)
	Output step of outdoor FAN 0~15	0~15	Step
	Unit number of this branch box 1~2	1 or 2 * Omit the figures after the decimal fractions.	Code display
	Compressor operating frequency 0~225	0~255 (When it is 100Hz or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 125Hz; 0.5 secs. 0.5secs. 2 secs. □1 → 25 → □□	Hz
	LEV-A opening pulse 0~500	0~500 (When it is 100 pulse or more, hundreds digit, tens digit and ones digit are displayed by turns.) (Example) When 150 pulse; 0.5 secs. 0.5secs. 2 secs. □1 → 50 → □□	Pulse

* SW1-8 : OFF (Unit: °C), SW1-8 : ON (Unit: °F)

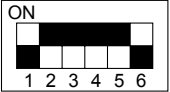
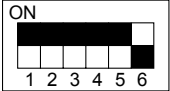
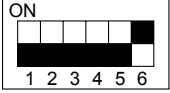
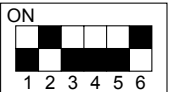
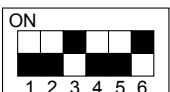
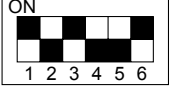
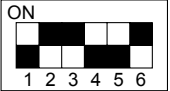
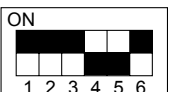
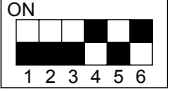
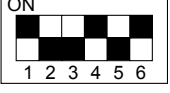


SW2 setting	Display detail	Explanation for display	Unit														
ON 1 2 3 4 5 6	LEV-B opening pulse 0~500	0~500 (When it is 100 pulse or more, hundreds digit, tens digit and ones digit are displayed by turns. (Example) When 150 pulse; 0.5 secs. 0.5secs. 2 secs. 1 → 50 →	Pulse														
ON 1 2 3 4 5 6	LEV-C opening pulse 0~500	0~500 (When it is 100 pulse or more, hundreds digit, tens digit and ones digit are displayed by turns. (Example) When 150 pulse; 0.5 secs. 0.5secs. 2 secs. 1 → 50 →	Pulse														
ON 1 2 3 4 5 6	LEV-D opening pulse 0~500	0~500 (When it is 100 pulse or more, hundreds digit, tens digit and ones digit are displayed by turns. (Example) When 150 pulse; 0.5 secs. 0.5secs. 2 secs. 1 → 50 →	Pulse														
ON 1 2 3 4 5 6	LEV-E opening pulse 0~500	0~500 (When it is 100 pulse or more, hundreds digit, tens digit and ones digit are displayed by turns. (Example) When 150 pulse; 0.5 secs. 0.5secs. 2 secs. 1 → 50 →	Pulse														
ON 1 2 3 4 5 6	Capacity setting indoor-A	<table><tr><th>Code display (Not Qj)</th><th>Rated capacity</th></tr><tr><td>2</td><td>06</td></tr><tr><td>3</td><td>09</td></tr><tr><td>6</td><td>12</td></tr><tr><td>8</td><td>15</td></tr><tr><td>9</td><td>17, 18</td></tr><tr><td>11</td><td>24</td></tr></table>	Code display (Not Qj)	Rated capacity	2	06	3	09	6	12	8	15	9	17, 18	11	24	Code display
Code display (Not Qj)	Rated capacity																
2	06																
3	09																
6	12																
8	15																
9	17, 18																
11	24																
ON 1 2 3 4 5 6	Capacity setting indoor-B	Code display															
ON 1 2 3 4 5 6	Capacity setting indoor-C	Code display															
ON 1 2 3 4 5 6	Capacity setting indoor-D	Code display															
ON 1 2 3 4 5 6	Capacity setting indoor-E	Code display															
ON 1 2 3 4 5 6	Indoor pipe temperature / Liquid TH2 Indoor-A – 39~88 (°C) – 38~190 (°F)*	– 39~88 (°C), – 38~190 (°F) (When the temperature is 0°C or less, “–” and temperature are displayed by turns.)	°C °F(*)														

* SW1-8 : OFF (Unit: °C), SW1-8 : ON (Unit: °F)

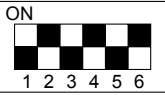
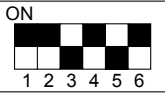
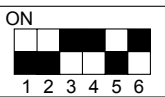
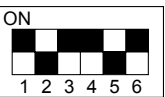
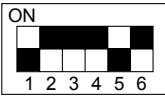
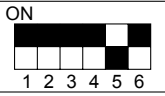
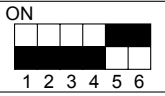
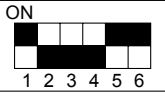
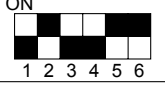
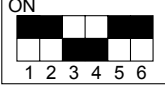
SW2 setting	Display detail	Explanation for display	Unit
	Indoor pipe temperature / Liquid TH2 Indoor-B – 35~88 (°C) – 31~190 (°F)*	– 35~88 (°C), – 31~190 (°F) (When the temperature is 0°C or less, “–” and temperature are displayed by turns.)	°C °F(*)
	Indoor pipe temperature / Liquid TH2 Indoor-C – 39~88 (°C) – 38~190 (°F)*	– 39~88 (°C), – 38~190 (°F) (When the temperature is 0°C or less, “–” and temperature are displayed by turns.)	°C °F(*)
	Indoor pipe temperature / Liquid TH2 Indoor-D – 39~88 (°C) – 38~190 (°F)*	– 39~88 (°C), – 38~190 (°F) (When the temperature is 0°C or less, “–” and temperature are displayed by turns.)	°C °F(*)
	Indoor pipe temperature / Liquid TH2 Indoor-E – 39~88 (°C) – 38~190 (°F)*	– 39~88 (°C), – 38~190 (°F) (When the temperature is 0°C or less, “–” and temperature are displayed by turns.)	°C °F(*)
	LEV-1 opening pulse 0~500	0~500	Pulse
	LEV-2 opening pulse 0~500	0~500	Pulse
	LEV-3 opening pulse 0~500	0~500	Pulse
	LEV-4 opening pulse 0~500	0~500	Pulse
	LEV-5 opening pulse 0~500	0~500	Pulse
	Outdoor pipe temperature / 2-phase (TH6) – 39~88 (°C) – 38~190 (°F)*	– 39~88 (°C), – 38~190 (°F) (When the temperature is 0°C or less, “–” and temperature are displayed by turns.)	°C °F(*)
	Outdoor outside temperature (TH7) – 39~88 (°C) – 38~190 (°F)*	– 39~88 (°C), – 38~190 (°F) (When the temperature is 0°C or less, “–” and temperature are displayed by turns.)	°C °F(*)

* SW1-8 : OFF (Unit: °C), SW1-8 : ON (Unit: °F)

SW2 setting	Display detail	Explanation for display	Unit
	Outdoor heatsink temperature (TH8) – 40~200 (°C) – 40~327 (°F)*	– 40~200 (°C), – 40~327 (°F) (When the temperature is 0°C or less, “–” and temperature are displayed by turns.) (When the thermistor detects 100°C or more, hundreds digit, tens digit and ones digit are displayed by turns.)	°C °F
	LEV-6 opening pulse 0~500	0~500	Pulse
	LEV-7 opening pulse 0~500	0~500	Pulse
	LEV-8 opening pulse 0~500	0~500	Pulse
	High pressure (63HS) 0~500 (0.1 kgf/cm²) 0~711 (PSIG)*	0~500 (0.1 kgf/cm²), 0~711 (PSIG) (When it is 100 or more, hundreds digit, tens digit and ones digit are displayed by turns.)	0.1 kgf/cm² PSIG(*)
	Input current 0~50	0~50	A
	Indoor pipe temperature / Cond. / Eva. TH5 Indoor-A	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)
	Indoor pipe temperature / Cond. / Eva. TH5 Indoor-B	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)
	Indoor pipe temperature / Cond. / Eva. TH5 Indoor-C	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)
	Indoor pipe temperature / Cond. / Eva. TH5 Indoor-D	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)
	Indoor pipe temperature / Cond. / Eva. TH5 Indoor-E	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)

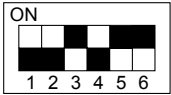
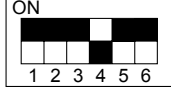
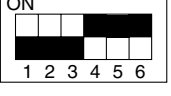
* SW1-8 : OFF (Unit: °C, 0.1 kgf/cm²), SW1-8 : ON (Unit: °F, PSIG)



SW2 setting	Display detail	Explanation for display	Unit
	Branch pipe temperature TH-A	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)
	Branch pipe temperature TH-B	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)
	Branch pipe temperature TH-C	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)
	Branch pipe temperature TH-D	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)
	Branch pipe temperature TH-E	– 39~88 (°C) – 38~190 (°F)*	°C °F(*)
	TH1 Indoor-A	8~39 (°C) 46~102 (°F)*	°C °F(*)
	TH1 Indoor-B	8~39 (°C) 46~102 (°F)*	°C °F(*)
	TH1 Indoor-C	8~39 (°C) 46~102 (°F)*	°C °F(*)
	TH1 Indoor-D	8~39 (°C) 46~102 (°F)*	°C °F(*)
	TH1 Indoor-E	8~39 (°C) 46~102 (°F)*	°C °F(*)

* SW1-8 : OFF (Unit: °C), SW1-8 : ON (Unit: °F)



SW2 setting	Display detail	Explanation for display	Unit
	Indoor - setting temperature Indoor-A	16~31 (°C) 60~87 (°F)*	°C °F(*)
	Indoor - setting temperature Indoor-B	16~31 (°C) 60~87 (°F)*	°C °F(*)
	Indoor - setting temperature Indoor-C	16~31 (°C) 60~87 (°F)*	°C °F(*)
	Indoor - setting temperature Indoor-D	16~31 (°C) 60~87 (°F)*	°C °F(*)
	Indoor - setting temperature Indoor-E	16~31 (°C) 60~87 (°F)*	°C °F(*)

* SW1-8 : OFF (Unit: °C), SW1-8 : ON (Unit: °F)

9-9. SELECTING FUNCTIONS USING THE REMOTE CONTROLLER

Each function can be set according to necessity using the remote controller. The setting of function for each unit can only be done by the remote controller. Select function available from the table 1.

(1) Functions available when setting the unit number to 00

※1 The functions table below are available only when P-series indoor unit and the wired remote controller is used.

※2 After the power supply returns, the indoor unit does not operate for 3 minutes (Some kind of indoor units operate for 30 seconds, after that, it stops for 3 minutes).

Above operation is normal.

<Table 1> Function selections

Function	Settings	Mode No.	Setting No.	● : Initial setting (when sent from the factory)	Remarks
Power failure automatic recovery	OFF	01	1		The setting is applied to all the units in the same refrigerant system.
	ON ※2		2	●	
Indoor temperature detecting	Average data from each indoor unit	02	1	●	
	Data from the indoor unit with remote controller		2		
	Data from main remote controller		3		
LOSSNAY connectivity	Not supported	03	1	●	
	Supported (Indoor unit does not intake outdoor air through LOSSNAY)		2		
	Supported (Indoor unit intakes outdoor air through LOSSNAY)		3		
Power supply voltage	230V	04	1	●	
	208V		2		
Frost prevention temperature	2°C [36°F](Normal)	15	1	●	
	3°C [37°F]		2		
Humidifier control	When the compressor operates, the humidifier also operates.	16	1	●	
	When the fan operates, the humidifier also operates.		2		

Meaning of "Function setting"

Mode02:indoor temperature detecting

No	Indoor temperature(ta)=		Diagram 1: Two indoor units (A, B) connected to a single remote controller (C, D)	Diagram 2: Two indoor units (A, B) connected to two separate remote controllers (C, D)	Diagram 3: One indoor unit (A) connected to two separate remote controllers (C, D)	Diagram 4: One indoor unit (A) connected to a single remote controller (C)
No.1	Average data of the sensor on all the indoor units	Initial setting	ta=(A+B)/2	ta=(A+B)/2	ta=A	ta=A
No.2	The data of the sensor on the indoor unit that is connected with remote controller		ta=A	ta=B	ta=A	ta=A
No.3	The data of the sensor on main remote controller		ta=C	ta=C	ta=C	ta=C

The installer and system specialist shall secure safety against leakage according to local regulations or standards. The following standards may be applicable if local regulations are not available.

10-1. INTRODUCTION

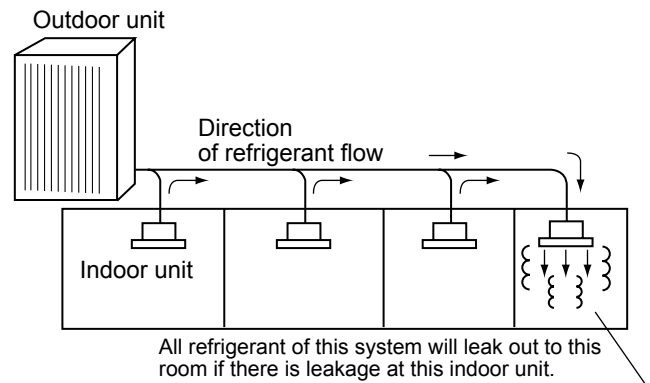
R410A refrigerant of this air conditioner is non-toxic and non-flammable but leaking of large amount from an indoor unit into the room where the unit is installed may be deleterious.

To prevent possible injury, the rooms should be large enough to keep the R410A concentration specified by KHK : (a high pressure gas safety association) installation guidelines S0010 as follows.

* Maximum concentration
Maximum refrigerant concentration of R410A of a room is 0.30 kg/m³ accordance with the installation guidelines. To facilitate calculation, the maximum concentration is expressed in units of kg/m³ (kg of R410A per m³)

Maximum concentration of R410A: 0.3kg/m³[0.019lbs/ft³]

(KHK installation guidelines S0010)



10-2. CONFIRMING PROCEDURE OF R410A CONCENTRATION

Follow (1) to (3) to confirm the R410A concentration and take appropriate treatment, if necessary.

(1) Calculate total refrigerant amount by each refrigerant system.

Total refrigerant amount is precharged refrigerant amount at ex-factory plus additional charged amount at field installation.

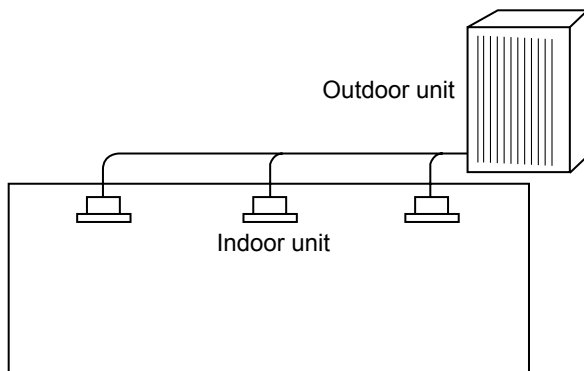
Note:

When single refrigeration system is consists of several independent refrigeration circuit, figure out the total refrigerant amount by each independent refrigerant circuit.

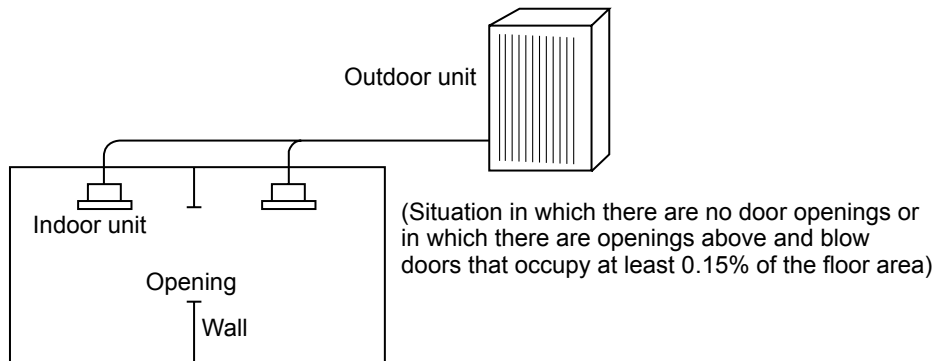
(2) Calculate room volumes (m³[ft³]) and find the room with the smallest volume

The part with represents the room with the smallest volume.

(a) Situation in which there are no partitions

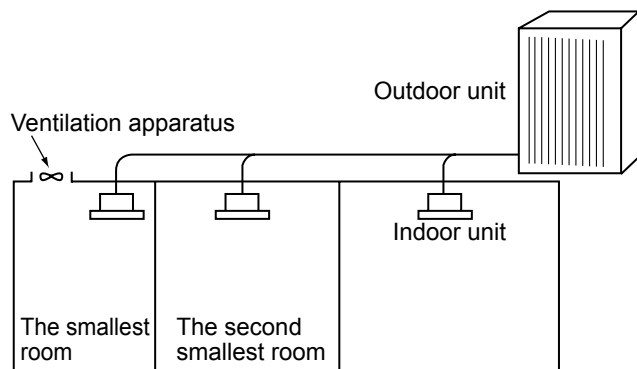


(b) There are partitions, but there are openings that allow the effective mixing of air.



(c) If the smallest room has mechanical ventilation

Apparatus that is linked to a household gas detection and alarm device, the calculations should be performed for the second smallest room.



(3) Use the results of calculations (1) and (2) to calculate the refrigerant concentration:

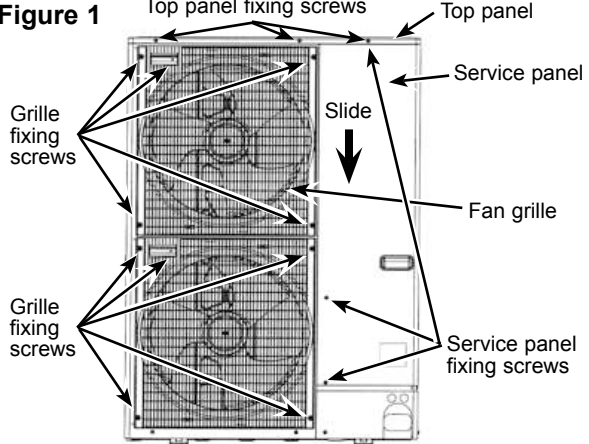
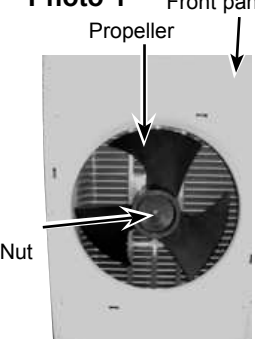
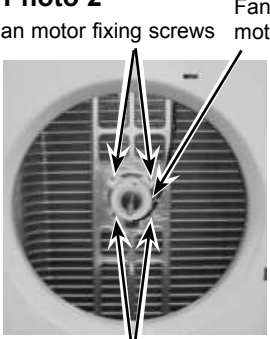
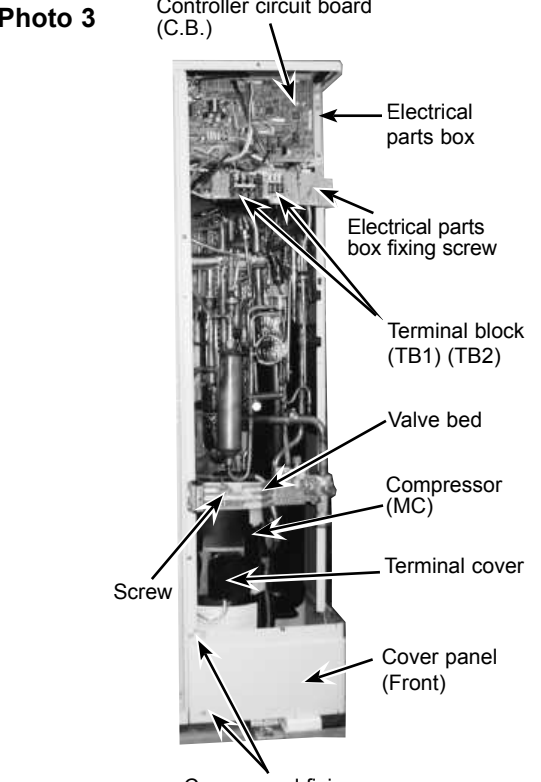
$$\frac{\text{Total refrigerant in the refrigerating unit (kg[lbs])}}{\text{The smallest room in which an indoor unit has been installed (m}^3\text{[ft}^3\text{])}} \leq \text{maximum concentration (kg/m}^3\text{[lbs/ft}^3\text{])}$$

Maximum concentration of
R410A: 0.3kg/m³[0.019 lbs/ft³]

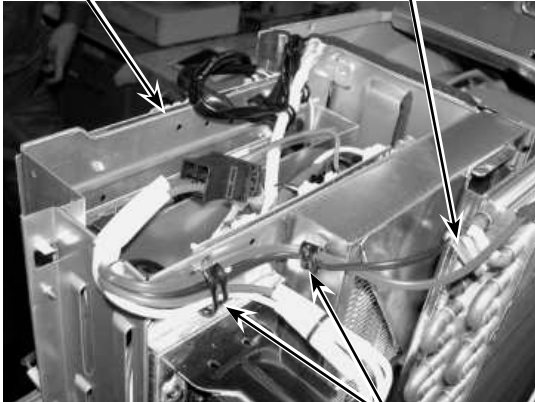
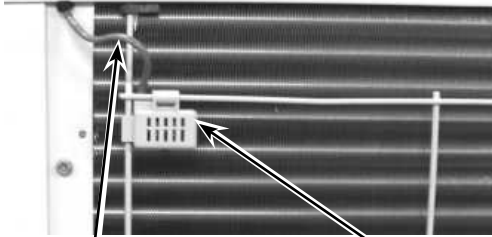
If the calculation results do not exceed the maximum concentration, perform the same calculations for the larger second and third room, etc., until it has been determined that nowhere will the maximum concentration be exceeded.

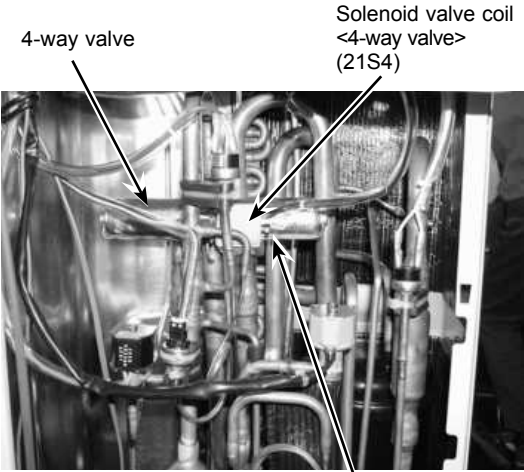
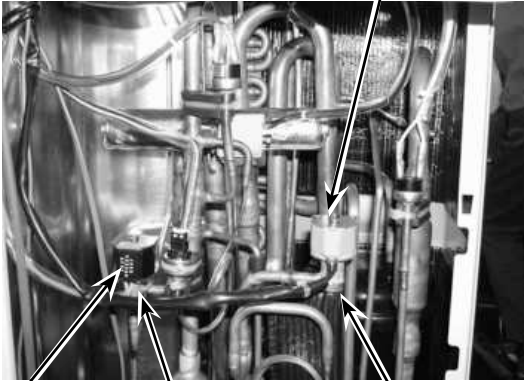
OUTDOOR UNIT : MXZ-8B48NA

MXZ-8B48NAR1

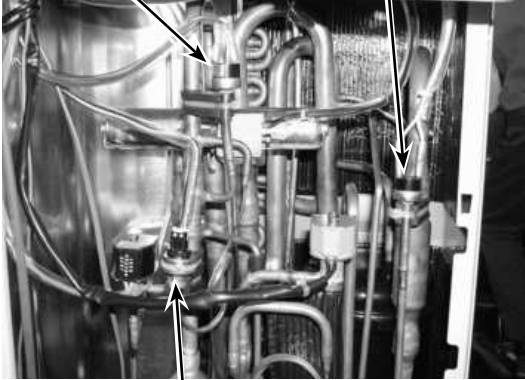
OPERATING PROCEDURE	PHOTOS & ILLUSTRATION
1. Removing the service panel and top panel (1) Remove 3 service panel fixing screws (5 × 12) and slide the hook on the right downward to remove the service panel. (2) Remove screws (3 for front, 3 for rear/5 × 12) of the top panel and remove it.	Figure 1 
2. Removing the fan motor (MF1, MF2) (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) (3) Remove 5 fan grille fixing screws (5 × 12) to detach the fan grille. (See Figure 1) (4) Remove a nut (for right handed screw of M6) to detach the propeller. (See Photo 1) (5) Disconnect the connectors, CNF1 and CNF2 on controller circuit board in electrical parts box. (6) Remove 4 fan motor fixing screws (5 × 25) to detach the fan motor. (See Photo 2)	Photo 1  Photo 2 
3. Removing the electrical parts box (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) (3) Disconnect the indoor/outdoor connecting wire and power supply wire from each terminal block. (4) Remove all the following connectors from controller circuit board; fan motor, thermistor <Outdoor pipe>, thermistor <Discharge/Compressor>, thermistor <Outdoor 2-phase pipe>, thermistor <Outdoor>, high pressure switch, high pressure sensor, low pressure switch, solenoid valve coil <4-way valve> and solenoid valve coil <Hot gas bypass>, solenoid valve coil <Returning oil bypass>. Then remove a screw (4 × 8) from the valve bed to remove the lead wire. Pull out the disconnected wire from the electrical parts box. <Diagram symbol in the connector housing> • Fan motor (CNF1, CNF2) • Thermistor <Outdoor pipe> (TH3) • Thermistor <Discharge/Compressor> (TH4) • Thermistor <Outdoor 2-phase pipe, Outdoor> (TH7/6) • High pressure switch (63H) • High pressure sensor (63HS) • Low pressure switch (63L) • Solenoid valve coil <4-way valve> (21S4) • Solenoid valve coil <Bypass valve> (SV1) • Solenoid valve coil (Returning oil bypass) <Bypass valve> (SV2) (5) Remove the terminal cover and disconnect the compressor lead wire. (6) Remove an electrical parts box fixing screw (4 × 10) and detach the electrical parts box by pulling it upward. The electrical parts box is fixed with 2 hooks on the left and 1 hook on the right.	Photo 3 



OPERATING PROCEDURE	PHOTOS
4. Removing the thermistor <Outdoor 2-phase pipe> (TH6) (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) (3) Disconnect the connectors, TH6 and TH7 (red), on the controller circuit board in the electrical parts box. (4) Loosen the clamp for the lead wire in the rear of the electrical parts box. (5) Pull out the thermistor <Outdoor 2-phase pipe> (TH6) from the sensor holder. Note: In case of replacing thermistor <Outdoor 2-phase pipe> (TH6), replace it together with thermistor <Outdoor> (TH7) since they are combined together. Refer to No.5 below to remove thermistor <Outdoor>.	Photo 4 Thermistor <Outdoor 2-phase pipe> (TH6) Controller circuit board (C.B.) Clamp 
5. Removing the thermistor <Outdoor> (TH7) (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) (3) Disconnect the connector TH7 (red) on the controller circuit board in the electrical parts box. (4) Loosen the clamp for the lead wire in the rear of the electrical parts box. (See Photo 4) (5) Pull out the thermistor <Outdoor> (TH7) from the sensor holder. Note: In case of replacing thermistor <Outdoor> (TH7), replace it together with thermistor <Outdoor 2-phase pipe> (TH6), since they are combined together. Refer to No.4 above to remove thermistor <Outdoor 2-phase pipe>.	Photo 5 Lead wire of thermistor <Outdoor> (TH7) Sensor holder 
6. Removing the thermistor <Outdoor pipe> (TH3) and thermistor <Discharge/Compressor> (TH4) (1) Remove the service panel. (See Figure 1) (2) Disconnect the connectors, TH3 (white) and TH4 (white), on the controller circuit board in the electrical parts box. (3) Loosen the clamp for the lead wire in the rear of the electrical parts box. (See Photo 4) (4) Pull out the thermistor <Outdoor pipe> (TH3) and thermistor <Discharge/Compressor> (TH4) from the sensor holder.	Photo 6 Thermistor <Outdoor pipe> (TH3) Compressor (MC) Thermistor <Discharge> (TH4) 

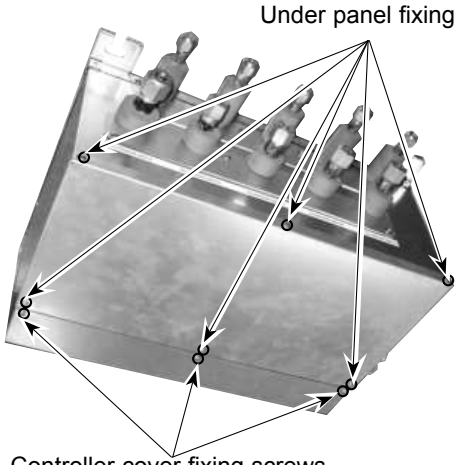
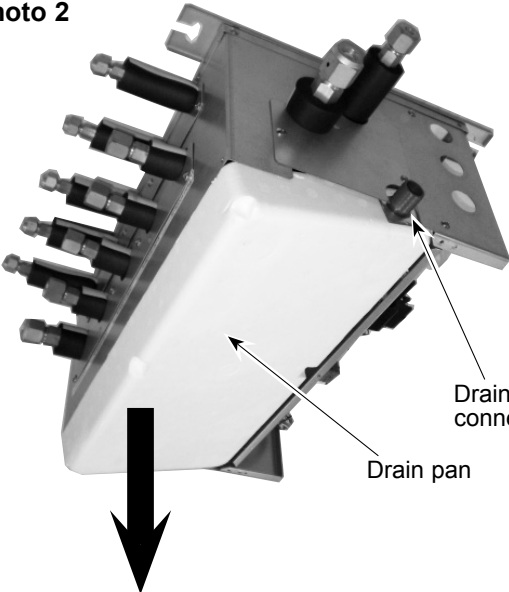
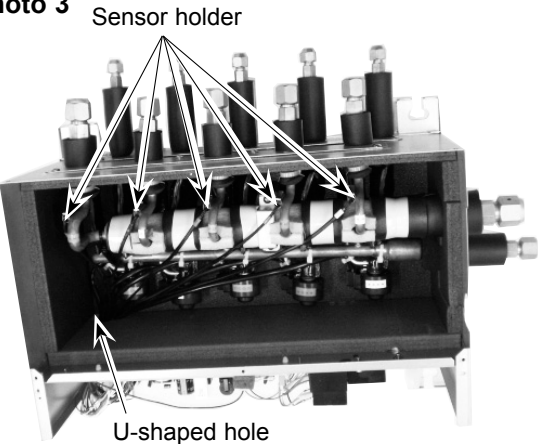
OPERATING PROCEDURE	PHOTOS
7. Removing the solenoid valve coil <4-way valve> (21S4) (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) [Removing the solenoid valve coil <4-way valve>] (3) Remove 4-way valve solenoid coil fixing screw (M4 × 6). (4) Remove the solenoid valve coil <4-way valve> by sliding the coil toward you. (5) Disconnect the connector 21S4 (green) on the controller circuit board in the electrical parts box. 8. Removing the 4-way valve (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) (3) Remove 3 valve bed fixing screws (4 × 10) and 4 ball valve and stop valve fixing screws (5 × 16) and then remove the valve bed. (4) Remove 4 right side panel fixing screws (5 × 12) in the rear of the unit and then remove the right side panel. (5) Remove the solenoid valve coil <4-way valve>. (See Photo 7) (6) Recover refrigerant. (7) Remove the welded part of 4-way valve. Note 1: Recover refrigerant without spreading it in the air. Note 2: The welded part can be removed easily by removing the right side panel. Note 3: When installing the 4-way valve, cover it with a wet cloth to prevent it from heating (120°C [250°F] or more), then braze the pipes so that the inside of pipes are not oxidized.	Photo 7  4-way valve Solenoid valve coil <4-way valve> (21S4) Solenoid valve coil <4-way valve> fixing screw
9. Removing solenoid valve coil <Bypass valve> (SV1) and bypass valve (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) (3) Remove the electrical parts box. (See Photo 3) (4) Remove 3 right side panel fixing screws (5 × 12) in the rear of the unit and remove the right side panel. (5) Remove the bypass valve coil fixing screw (M4 × 6). (6) Remove the solenoid valve coil <Bypass valve> (SV1) by sliding the coil upward. (7) Recover refrigerant. (8) Remove the welded part of bypass valve. Note 1: Recover refrigerant without spreading it in the air. Note 2: The welded part can be removed easily by removing the right side panel.	Photo 8  Solenoid valve coil <Bypass valve> (Returning oil bypass) (SV2) Solenoid valve coil <Bypass valve> (SV1) Bypass valve (SV1) Bypass valve (SV2)
10. Removing solenoid valve coil (Returning oil bypass) <Bypass valve> (SV2) and bypass valve (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) (3) Remove the electrical parts box. (See Photo 3) (4) Remove 3 right side panel fixing screws (5 × 12) in the rear of the unit and remove the right side panel. (5) Remove the bypass valve coil fixing screw (M5 × 6). (6) Remove the solenoid valve coil (Returning oil bypass) <Bypass valve> (SV2) by sliding the coil upward. (7) Recover refrigerant. (8) Remove the welded part of bypass valve. Note 1: Recover refrigerant without spreading it in the air. Note 2: The welded part can be removed easily by removing the right side panel.	



OPERATING PROCEDURE	PHOTOS
11. Removing the high pressure switch (63H) and low pressure switch (63L) (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) (3) Remove the electrical parts box. (See Photo 3) (4) Remove 3 right side panel fixing screws (5 × 12) in the rear of the unit and remove the right side panel. (5) Pull out the lead wire of high pressure switch and low pressure switch. (6) Recover refrigerant. (7) Remove the welded part of high pressure switch and low pressure switch. Note 1: Recover refrigerant without spreading it in the air. Note 2: The welded part can be removed easily by removing the right side panel. Note 3: When installing the high pressure switch and low pressure switch, cover them with a wet cloth to prevent them from heating (100°C [210°F] or more), then braze the pipes so that the inside of pipes are not oxidized.	Photo 9 High pressure switch (63H) Low pressure switch (63L)  High pressure sensor (63HS)
12. Removing the high pressure sensor (63HS) (1) Remove the service panel. (See Figure 1) (2) Remove the top panel. (See Figure 1) (3) Remove the electrical parts box. (See Photo 3) (4) Remove 3 right side panel fixing screws (5 × 12) in the rear of the unit and remove the right side panel. (5) Pull out the lead wire of high pressure sensor. (6) Recover refrigerant. (7) Remove the welded part of high pressure sensor. Note 1: Recover refrigerant without spreading it in the air. Note 2: The welded part can be removed easily by removing the right side panel. Note 3: When installing the high pressure sensor, cover it with a wet cloth to prevent it from heating (100°C [210°F] or more), then braze the pipes so that the inside of pipes are not oxidized.	

BRANCH BOX : PAC-AKA51BC PAC-AKA31BC

PHOTO : PAC-AKA51BC

OPERATING PROCEDURE	PHOTOS
1. Removing the controller cover and under panel (1) Remove 3 controller cover fixing screws (4×10) to detach the cover. (See Photo 1) (2) Remove 6 under panel fixing screws (4×10) to remove the panel. (See Photo 1)	Photo 1  Under panel fixing screws Controller cover fixing screws
2. Removing the drain pan (1) Remove the under panel. (See Photo 1) (2) Remove the drain hose. (3) Incline the side of the drain pan that faces the piping to remove the pan. ※ When removing the drain pan, be careful with remaining water on the pan. Also, be careful not to make cracks on the pan.	Photo 2  Drain hose connection Drain pan
3. Removing the thermistors (TH-A-E) (1) Remove the controller cover. (See Photo 1) (2) Remove the under panel. (See Photo 1) (3) Pull out the thermistors, TH-A-E, from the sensor holders mounted on the gas pipe. (See Photo 3) (4) Pull out those thermistors through the U-shaped hole to the board side. (5) Loosen the side clamps of the board and disconnect the connectors on the board.	Photo 3  Sensor holder U-shaped hole

OPERATING PROCEDURE

4. Removing the LEV coil (LEV-A-E)

- (1) Remove the controller cover. (See Photo 1)
- (2) Remove the under cover. (See Photo 1)
- (3) Remove 4 separator fixing screws (4×10) in the side of the branch box. (See Photo 4)
- (4) Tilt the separator to the board side. (See Photo 4)
- (5) Loosen the side clamps of the board and disconnect the connectors on the board.
- (6) Pull out the lead wire through the U-shaped hole. (See Photo 3)
- (7) Cut the band that fixes the lead wire to pull out the LEV coil (LEV-A-E). (See Photo 5)

PHOTOS

Photo 4

Separator fixing screws

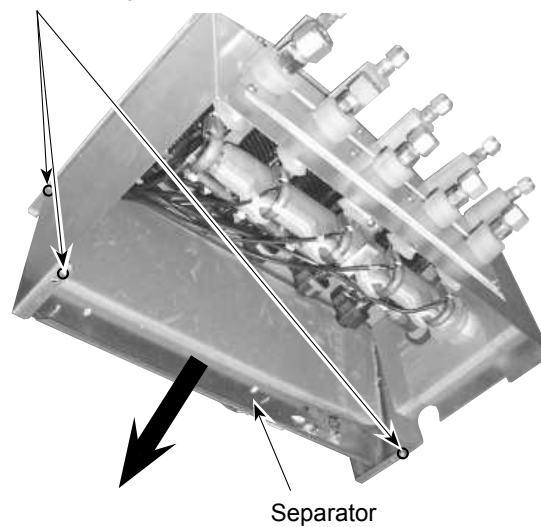


Photo 5

Separator

LEV coil





