USER'S MANUAL

VENTILATION AND HEAT EXCHANGE UNIT Remocon

(ENERGY RECOVERY VENTILATOR)

MANUEL DE L'UTILISATEUR

UNITÉ DE VENTILATION ET D'ÉCHANGE DE CHALEUR Remocon (VENTILATEUR D'ÉCHANGE DE CHALEUR)

ANWENDERHANDBUCH

VENTILATIONS- UND WÄRMETAUSCHGERÄT Remocon (ENERGIEGEWINNUNGS-VENTILATOR)

ISTRUZIONI PER L'USO

UNITÀ DI SCAMBIO TERMICO E VENTILAZIONE Remocon (VENTILATORE A RECUPERO ENERGETICO)

MANUAL DEL PROPIETARIO

UNIDAD DE INTERCAMBIO DE CALOR Y VENTILACIÓN Remocon (VENTILADOR CON RECUPERACIÓN DE ENERGÍA)



Accessories contained in the packing case Accessoires contenus dans le boîtier Zubehör in der Verpackungskiste Accessori contenuti nella valigetta per il trasporto Accesorios contenidos en la caja de empaque

Name Nom Name Nome Nombre	Figure Figure Abbildung Figura Figura	Specification Spécification Spezifikation Specificazione Especificación	Quantity Quantité Menge Quantità Cantidad	Usage Utilisation Verwendung Utilizzo Uso
Remote control Télécommande Fernsteuerung Telecomando Control remoto		-	1 piece 1 pièce 1 Stück 1 pezzo 1 pieza	Control the unit Contrôlez l'unité Steuerung der Einheit Controlla l'unità Controla la unidad
Screws Vis Schrauben Viti Tornillos	Onna	M4×20	2 pieces 2 pièces 2 Stück 2 pezzi 2 piezas	Fix the remote control to the junction box Fixez la télécommande à la boîte de dérivation Befestigen Sie die Fembedienung an der Anschlussdose Per fissare il telecomando alla scatola di giunzione Fijan el control remoto en la caja de empalmes

• Thank you for purchasing the product.

• Please read the safety precaution carefully before installing and using the remote control.

- Please read the instruction carefully to understand how to use safely. After you've read it, keep it well.
- Nous vous remercions d'avoir acheté ce produit.
- Veuillez lire attentivement les précautions de sécurité avant d'installer et d'utiliser la télécommande.
- Veuillez lire attentivement les instructions pour comprendre comment l'utiliser en toute sécurité. Après l'avoir lu, conservez cette notice en lieu sûr.
 Vielen Dank für den Kauf dieses Produkts.
- Bitte lesen Sie die Sicherheitshinweise sorgfältig durch, bevor Sie die Fernbedienung installieren und verwenden.
- Bitte lesen Sie die Anleitung sorgfältig, um zu verstehen, wie Sie das Gerät sicher einsetzen können. Nach dem Lesen gut verwahren.
- Grazie per aver acquistato guesto prodotto.
- Leggere attentamente gli avvisi di sicurezza prima di installare e utilizzare il telecomando.
- Si prega di leggere le istruzioni attentamente per comprendere le modalità di uso sicuro. Conservare con cura dopo la lettura.
- Gracias por comprar este producto.
- Lea cuidadosamente las precauciones de seguridad antes de instalar y usar el control remoto.
- Lea cuidadosamente las instrucciones para comprender cómo usarlo con seguridad. Después de leerlo, guárdelo bien.

CONTENTS:

SAFETY PRECATION	1~2
KEY AND DISPLAY DESCRIPTION	2
OPERATION	3
MAINTENANCE AND SPECIFICATION	4
SAFETY PRECATION	4
INSTALLATION	5
WIRING CONFIGURATION AND FAULT HANDLING	6
WIRING DIAGRAM	6

SOMMAIRE:

MESURES DE SÉCURITÉ1	~2
DESCRIPTION DES TOUCHES ET AFFICHAGES	2
FONCTIONNEMENT	3
MAINTENANCE ET SPÉCIFICATIONS	4
MESURES DE SÉCURITÉ	4
INSTALLATION	5
CONFIGURATION DU CÂBLAGE ET RÉSOLUTION DES DÉFAUTS	6
SCHÉMA DE CÂBLAGE	6

INHALTE:

SICHERHEITSMASSNAHMEN	.1~2
TASTEN- UND ANZEIGENBESCHREIBUNG	2
BETRIEB	3
WATUNG UND SPEZIFIKATIONEN	4
SICHERHEITSMASSNAHMEN	4
MONTAGE	5
VERKABELUNGSKONFIGURATION UND STÖRUNGSHANDHABUNG	6
SCHALTPLAN	6

INDICE:

NORME DI SICUREZZA	.1~2
DESCRIZIONE DEI TASTI E DEL DISPLAY	2
UTILIZZO	3
MANUTENZIONE E SPECIFICHE TECNICHE	4
NORME DI SICUREZZA	4
INSTALLAZIONE	5
CONFIGURAZIONE DEI CAVI E DIAGNOSTICA PROBLEMI	6
SCHEMA ELETTRICO	6

ÍNDICE:

PRECAUCIÓN DE SEGURIDAD	1~2
TECLA Y DESCRIPCIÓN DE LA VISUALIZACIÓN	2
OPERACIÓN	3
MANTENIMIENTO Y ESPECIFICACIONES	4
PRECAUCIÓN DE SEGURIDAD	4
INSTALACIÓN	5
CONFIGURACIÓN DEL CABLEADO Y MANEJO DE FALLAS	6
DIAGRAMA DE CABLEADO	6

PCH012A012

SAFETY PRECATION

WARNING

CAUTION



- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved.
- Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
- Make sure to disconnect the power supply before cleaning product.

The following instructions should be strictly observed in order to prevent injury to the users and other people, or damage to property.

The degrees of injury or damage that can be occured when the instructions are ignored and if the product is not used properly have been classified and described by the following indications.

Those things shown in this column indicate that there is possibility of causing death or severe injury.

Those things shown in this column indicate that there is possibility of causing injury to the users or damage.

Types of instructions that should be observed have been classified and described by the following pictorial symbols.



This symbol indicates the "COMPULSORY" item that must be followed without failure.



This symbol indicates the item "PROHIBITED" to do.

Entrust the agency or professional staff where you purchased to install it.



If you install it by yourself, it may cause the electric shock or fire.

Please stop it immediately if abnormal operation occurs (burnt smell). You must get the contact with agency or professional staff where you purchased.



In case the appliance is used in abnormal operation, it may cause the electric shock or fire.

Cut off the breaker before touching the terminal.



Otherwise, it may cause the electrical shock.

Re-install the remote control after moving, improper installation may cause the electric shock or fire.



Entrust the agency or professional staff where you purchased to install it.

■ It's prohibited to conduct selftransformation or repair, improper repair may cause the electric shock or fire.



Please get the contact with the agency or professional staff where you purchased.

SAFETY PRECATION

Don't expose the remote control directly to combustible spray.



Otherwise, it may cause the fire.

Don't operate by wet hands or wash by water. It's prohibited to use in high humidity location such as bathroom.



and screen breakage.

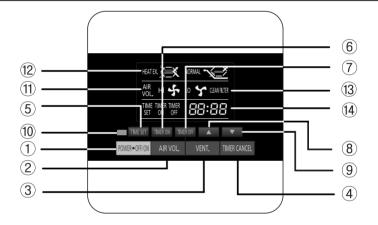
It may cause the fault, electric shock

In winter, when room is heated, don't operate the mode [normal ventilation].



Otherwise, condensation water may drop and dirty the ceiling.

KEY AND DISPLAY DESCRIPTION



1	POWER OFF/ON	Stop / start the unit.
2	AIR VOL.	Shift air volume between high notch and low notch.
3	VENT.	Switch between heat exchange and normal ventilation.
4	TIMER CANCEL	Quit the mode of timer on and timer off, and cancel the set.
5	TIME SET	Set the hour and minute.
6	TIMER ON	Set the hour and minute of timer on.
1	TIMER OFF	Set the hour and minute of timer off.
8		Increase the hour / minute in mode of time set, timer on / off.
9	•	Decline the hour / minute in mode of time set, timer on / off.

10	operate/stand -by display	Unit operates, stops or in standby mode.
1	Air volume display	Unit operates in the high / low air volume.
12	Ventilation display	Unit operates in the heat exchange mode or normal ventilation mode.
13	Clean filter display	It shows filter is required to clean. After cleaning, simultaneously press the "▲" and "▼" for 3 seconds, the signal light for "clean filter" is dark.
14	Display of Time set, timer and Filter usage	It displays the current time, operation mode of non-timer or timer on / off and accumulated time of filter usage.

OPERATION

1. POWER OFF/ON

Press the "Power OFF/ON", the unit stops/starts.

- Signal Light is red in the start mode.
- Signal Light is green in the stand-by mode.
 * In case of Remote controller, RC-E5, RC-EX series,
- Signal Light is green in the start mode.
- No display of signal light when stopping the unit.
- The unit operates in the last mode before stopping.
- In case any buttons are not pressed during 60 seconds, the display turns off.

2. Shift air volume



POWER OFF/ON

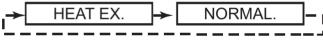
Press the "AIR VOL." to shift air volume between high notch and low notch.



3. Switch ventilation



Press the "VENT." to switch between heat exchange and normal ventilation.



4. Time set

- The initial value is 00:00, ":" doesn't spark.
- Press the "TIME SET" for over 3 seconds to enter into time set mode.

• When clock (hour) sparks, press the "▲" and "▼" to adjust the current time, then press "TIME SET" to confirm the hour.

• When clock (minute) sparks, press key "▲" and "▼" to adjust the current time, then press "TIME SET" to confirm the minute. When pressing "TIME SET" again, it starts the time and ":" sparks.

NOTE: The key " \blacktriangle " or " \blacktriangledown " is to adjust the number increasing or declining by 1, press the key " \blacktriangle " or " \blacktriangledown " for 3 seconds to quickly increase or decline.

5. Timer on/Timer off

• The "TIMER ON" and "TIMER OFF" are invalid before time set.

• When pressing the "TIMER ON" and "TIMER OFF", it displays the last time set. Initial value is 00:00.

• Press "TIMER ON" and "TIMER OFF" for 3 seconds, entering into the set mode of timer on and timer off.

• Clock (hour) sparks, press "▲" and "▼" to adjust the current time, then press the "TIMER ON" or "TIMER OFF" to confirm the hour.

• Clock (minute) sparks, press "▲" and "▼" to adjust the current time, then press the "TIMER ON" or "TIMER OFF" to confirm the minute. When pressing the "TIMER ON" or "TIMER OFF" again, it starts the timer mode and the signal light is bright continually.

5. Timer on/Timer off

Finishing the timer set, clock displays the current time. NOTE: The key " \blacktriangle " and " \blacktriangledown " is to adjust the number increasing or declining by 1, press the key " \blacktriangle " or " \blacktriangledown " for 3 seconds to quickly increase or decline.

6. Timer check

Press the "TIMER ON " and "TIMER OFF" to check.

7. Timer cancel

Press the "TIMER CANCEL" to cancel both of timer on/off.

8. Clean reminder and reset

When the filter is required to clean, the signal lights for clean filter and clock will have the following displays, meaning is as below.

Signal light for	Display of filter	Meaning	Signal light for "clean filter"
"clean filter"	usage condition		CLEAN FILTER
Sparkling	F-1	Filter is used for 1 month.	Circle (3) of Display
Sparkling	F-2	Filter is used for 2 months.	Description Signal light for "filter usage condition"
Sparkling	F-3	Filter is used for 3 months.	Circle ⁽⁾ of Display
Bright	Dark	Filter is used for 4 months.	Description

* 1 month = 24 hour x 30 days

In case the unit operates, the time is counted. Refer to this instruction for Energy Recovery Ventilator to clean or replace the filter according to the meaning written in the above sheet. After cleaning or replacing, simultaneously press the "▲" and "▼" for over 3 seconds, signal lights for "clean filter" and "filter usage condition" are dark. If not resetting, signal lights for "clean filter" and "filter usage condition" are bright.

9. Clear the filter using time to "0" (only for replacing the filter)

Signal light for "clean filter" doesn't spark, simultaneously press the "▲" and "▼" for over 3 second, clear the using time to "0" for new filter. It's suggested to clear "0" only for replacing the new filter. Don't conduct it in normal usage.

Routine maintenance

- Cut off the breaker if abnormal operation occurs.
- Mop the dirt in the out appearance by a cloth with a little dilute neutral detergent and then
- mop it by a dry and soft cloth.

• Never mop it by gasoline, benzene, dilute, alcohol, abrasive powder, chemical mop, spray insect killer and etc. Otherwise, it may cause the scratch or distortion.

• Junction box must be 100 ×100 mm, which requires customer to buy separately. Refer to the out appearance specification of remote control so that remote control is suitable to junction box.

Specification			
Power	220V-240V~ 50Hz	Appearance figure	UNIT: mm
Rated voltage	3.4W		
Out appearance size	116×120×40 (length×height×width) mm		
Weight	0.3kg		
Use condition	-10°C~40°C		47.8

SAFETY PRECATION

Installation caution

• Please read the "SAFETY PRECATION" carefully before installation.

• After installation, please conduct the trial operation to confirm no abnormal operation occurrence, and introduce the using and maintenance methods to customers according to instruction.

	UTION	
Don't install it in location where combustible gas may leak.	Wear the protective tools on construction such as gloves.	
Otherwise, it may cause the fire if fuel gas leaks.	Otherwise, it may cause the cuts or electric shock.	
 Don't install it in location with high humidity. Otherwise, it may cause the fire. 	■ The appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless	
 Conduct the wiring connection according to correct current capacity. Otherwise, it may cause the electric leakage, heat or fire. 	they have been given supervision or instruction concerning use of the appliance by a person who is responsible for their safety.	
 Fix the cable by dedicated parts. Otherwise, it may cause cable breakage, heat or fire. 	Children should be supervised to ensure that they do not play with the appliance. It may cause the electric shock or injury.	

INSTALLATION

Caution items for remote control installation location

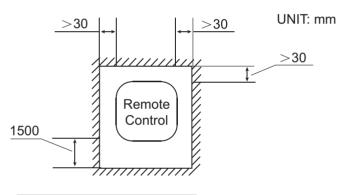
• Select the location where is easily installed. (With the customer permission).

• Select the location where is dry and not directly exposed to shine.

• Select the location where is flat to prevent from distortion. (Otherwise, it may damage the remote control or cause the fault if the wall is not flat.)

• If installation position is excessive high or low, it may hardly see the display screen, it's important to select the position where easily see it. The angle is out of 55 degrees from upper direction, 15 degrees from lower direction, 55 degrees from right and left direction. (Standard height is about 1.5m from the ground)

• As shown in the following figure, please leave the enough space around the installation position. Fix the base of remote control to the standard junction box (100×100mm) pre-reserved in the wall.

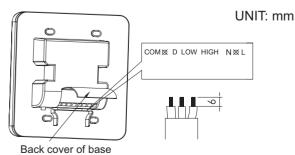


1. Wiring connection

Remove the cable from junction box and open the base cover. Connect the cable to specified position as indicated in the figure. Refer to the attached wiring diagram.

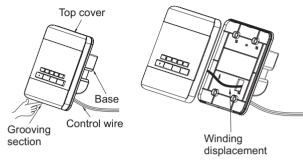


NOTE: Before inserting or connecting the controller, please be sure to cut off the breaker. When connecting the cable, peel off the skin of the cable by 6mm and insert into the terminal and fix it. Please ensure the skin of cable is not involved. Otherwise, it may occur the fire caused by short-circuit among the cables.



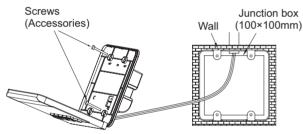
2. Disassemble the top cover

Open the grooving section by your fingernail as shown in the figure, please be careful to hurt your fingernail. Slightly remove the top cover, be careful to the connection between top cover and base, and don't break the winding displacement.



3. Fix the base into the junction box

Put the base into junction box (100×100mm) and note the direction of base during installation (as shown in the figure). Fix the base into the junction box (100×100mm) with the two attached screws by appropriate strength. Otherwise, it may damage the resin cover or cause distortion. Loosen the screws appropriately if found the cover distortion.



4. Fix the top cover

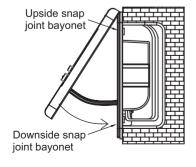
Fix the top cover to base, close the upside snap joint to the downside in order, indicated as right figure:



NOTE: Make sure internal cables are not caught by circuit-board or resin clip. Otherwise, it may cause electrical leakage.



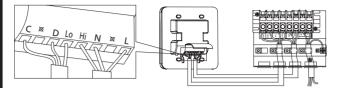
Don't press the screen. Otherwise it may break.



WIRING CONFIGURATION AND FAULT HANDLING

Connection with remote control

• Cut off the breaker before installing or connecting the remote control.

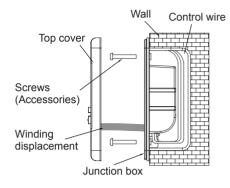


Handling on common fault

Condition	Solutions
It doesn't work with power on.	Is the power connected? Is the power failure?
After pressing the key, the unit doesn't work.	Is the power connection loose? Is the connection with ERV right? Is the wire connected with ERV loose?

Wiring configuration

• Connect the cables according to the wiring diagram, then fix the base into the junction box (100×100mm) by the two attached screws, keep the base parallel with wall and straight and no bending.



WIRING DIAGRAM

Caution items:

- The dashed line as shown in the figure must be conducted on spot by construction personnel.
- Please cut off the breaker before connection.

• It's recommended to use the cable for connecting power main unit and switch, its rated voltage is 300V/500V as stipulation of 60227 IEC 10 (hard wire). Cross-section area for each core wire is 1.5mm².

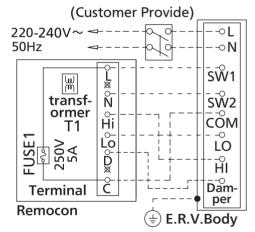
• When several units operate, quantity of unit is less than two. Otherwise, it may cause the fire by excessive current.

• Wear the protective tools on construction such as gloves.

• After wiring connection, please be sure to completely fix the base cover.

• Please read the instruction carefully before wiring connection.

%Please read the instruction in details carefully. Contact Point Separate Distance Over 3mm.



EC DECLARATION OF CONFORMITY

MITSUBISHI HEAVY INDUSTRIES THERMAL SYSTEMS, LTD. 16-5 Konan 2-chome, Minato-ku, Tokyo, 108-8215, Japan

declare under our sole responsibility that the apparatus referred to in this declaration conforms with the following directives.

Description of apparatus: Heat Exchanger Unit Model name: SAF Series

Relevant EU Directives : Machinery Directive 2006/42/EC Applied Standards : EN 60335-1

Authorized representative in EU :

MITSUBISHI HEAVY INDUSTRIES AIR-CONDITIONING EUROPE, LTD. 7 Roundwood Avenue, Stockley Park, Uxbridge, Middlesex, UB11 1AX, United Kingdom

Note : About the detail of Conformity model, see EC DECLARATION OF CONFORMITY sheet included in a package





MITSUBISHI HEAVY INDUSTRIES THERMAL SYSTEMS, LTD.

16-5 Konan 2-chome, Minato-ku, Tokyo, 108-8215, Japan http://www.mhi.co.jp/aircon/

MITSUBISHI HEAVY INDUSTRIES AIR-CONDITIONING EUROPE, LTD.

7 Roundwood Avenue, Stockley Park, Uxbridge, Middlesex, UB11 1AX, United Kingdom Tel: +44-20-7025-2750 Fax: +44-20-7025-2751 http://www.mhiae.com