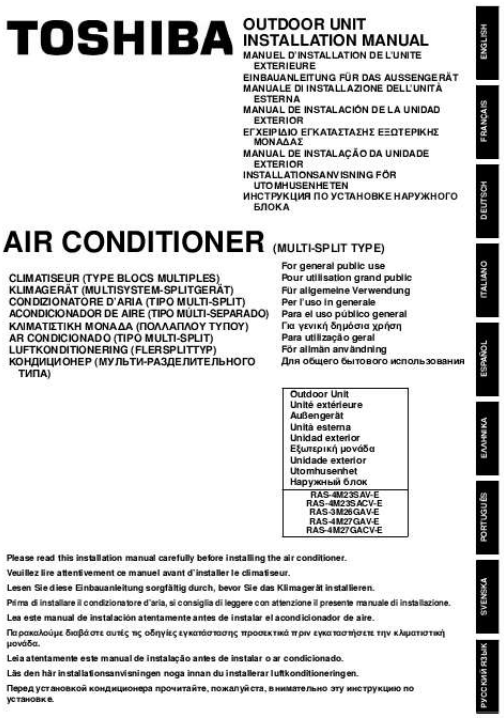

TOSHIBA

OUTDOOR UNIT
INSTALLATION MANUAL
MANUEL D'INSTALLATION DE L'UNITE EXTERIEURE
EINBAUANLEITUNG FÜR DAS AUSSENGERÄT
MANUALE DI INSTALLAZIONE DELL'UNITÀ ESTERNA
MANUAL DE INSTALACIÓN DE LA UNIDAD EXTERIOR
ΕΓΧΕΙΡΙΔΙΟ ΕΓΚΑΤΑΣΤΑΣΗΣ ΕΞΩΤΕΡΙΚΗΣ ΜΟΝΑΔΑΣ
MANUAL DE INSTALAÇÃO DA UNIDADE EXTERIOR
INSTALLATIONSANVISNING FÖR UTOMHUSENHETEN
ИНСТРУКЦИЯ ПО УСТАНОВКЕ НАРУЖНОГО БЛОКА

ENGLISH
FRANÇAIS
DEUTSCH
ITALIANO
ESPAÑOL
ΕΛΛΗΝΙΚΑ
PORTUGUÊS
SVENSKA
РУССКИЙ ЯЗЫК

AIR CONDITIONER (MULTI-SPLIT TYPE)

CLIMATISEUR (TYPE BLOCS MULTIPLES)
KLIMAGERÄT (MULTISYSTEM-SPLITGERÄT)
CONDIZIONATORE D'ARIA (TIPO MULTI-SPLIT)
ACONDICIONADOR DE AIRE (TIPO MÚLTI-SEPARADO)
ΚΛΙΜΑΤΙΣΤΙΚΗ ΜΟΝΑΔΑ (ΠΟΛΛΑΠΛΟΥ ΤΥΠΟΥ)
AR CONDICIONADO (TIPO MULTI-SPLIT)
LUFTKONDITIONERING (FLERSPLITTYP)
КОНДИЦИОНЕР (МУЛЬТИ-РАЗДЕЛИТЕЛЬНОГО ТИПА)

For general public use
Pour utilisation grand public
Für allgemeine Verwendung
Per l'uso in generale
Para el uso público general
Για γενική δημόσια χρήση
Para utilização geral
För allmän användning
Для общего бытового использования

Outdoor Unit
Unité extérieure
Außengerät
Unità esterna
Unidad exterior
Εξωτερική μονάδα
Unidade exterior
Utomhusenhet
Наружный блок

RAS-4M23SAV-E
RAS-4M23SACV-E
RAS-3M26GAV-E
RAS-4M27GAV-E
RAS-4M27GACV-E

Please read this installation manual carefully before installing the air conditioner.
Veuillez lire attentivement ce manuel avant d'installer le climatiseur.
Lesen Sie diese Einbauanleitung sorgfältig durch, bevor Sie das Klimagerät installieren.
Prima di installare il condizionatore d'aria, si consiglia di leggere con attenzione il presente manuale di installazione.
Lea este manual de instalación atentamente antes de instalar el acondicionador de aire.
Παρακαλούμε διαβάστε αυτές τις οδηγίες εγκατάστασης προσεκτικά πριν εγκαταστήσετε την κλιματιστική μονάδα.
Leia atentamente este manual de instalação antes de instalar o ar condicionado.
Läs den här installationsanvisningen noga innan du installerar luftkonditioneringen.
Перед установкой кондиционера прочитайте, пожалуйста, внимательно эту инструкцию по установке.

Manual abstract:

Leia atentamente este manual de instalao antes de instalar o ar condicionado. Ls den hr installationsanvisningen noga innan du installerar luftkonditioneringen. , , . DEUTSCH MANUAL DE INSTALAO DA UNIDADE EXTERIOR INSTALLATIONSANVISNING FR UTOMHUSENHETEN E FRANAIS MANUEL D'INSTALLATION DE L'UNITE EXTERIEURE EINBAUANLEITUNG FR DAS AUSSENGERT MANUALE DI INSTALLAZIONE DELL'UNIT ESTERNA MANUAL DE INSTALACIN DE LA UNIDAD EXTERIOR ENGLISH OUTDOOR UNIT INSTALLATION MANUAL CONTENTS/SOMMAIRE/INHALT/INDICE/NDICE/ NDICE/INNEHLL/ ENGLISH 1 2 3 4 5 6 7 SAFETY PRECAUTIONS .....

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14 L IMPORTANT NOTICE For details on how to install the indoor units, refer to the installation manual accompanying the indoor units. 1 SAFETY PRECAUTIONS For general public use RAS-4M23SAV-E, RAS-4M23SACV-E Power supply cord of outdoor unit shall be 1.5 mm2 (H07RNF or 60245IEC66) polychloroprene sheathed flexible cord. RAS-3M26GAV-E, RAS-4M27GAV-E, RAS-4M27GACV-E Power supply cord of outdoor unit shall be 2.5 mm2 (H07RNF or 60245IEC66) polychloroprene sheathed flexible cord. CAUTION New Refrigerant Air Conditioner Installation THIS AIR CONDITIONER ADOPTS THE NEW HFC REFRIGERANT (R410A) WHICH DOES NOT DESTROY OZONE LAYER. R410A refrigerant is apt to be affected by impurities such as water, oxidizing membrane, and oils because the working pressure of R410A refrigerant is approx. 1.6 times as that of refrigerant R22. Accompanied with the adoption of the new refrigerant, the refrigeration machine oil has also been changed.

Therefore, during installation work, be sure that water, dust, former refrigerant, or refrigeration machine oil does not enter the new type refrigerant R410A air conditioner circuit. To prevent mixing of refrigerant or refrigerating machine oil, the sizes of connecting sections of charging port on main unit and installation tools are different from those of the conventional refrigerant units. Accordingly, special tools are required for the new refrigerant (R410A) units as shown on page 4. For connecting pipes, use new and clean piping materials with high pressure fittings made for R410A only, so that water and/or dust does not enter. Moreover, do not use the existing piping because there are some problems with pressure fittings and possible impurities in existing piping. CAUTION TO DISCONNECT THE APPLIANCE FROM THE MAIN POWER SUPPLY Disconnection from the supply mains: The means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules. DANGER FOR USE BY QUALIFIED PERSONS ONLY. TURN OFF MAIN POWER SUPPLY BEFORE ATTEMPTING ANY ELECTRICAL WORK. MAKE SURE ALL POWER SWITCHES ARE OFF. FAILURE TO DO SO MAY CAUSE ELECTRIC SHOCK.
CORRECTLY CONNECT THE CONNECTING CABLE. IF THE CONNECTING CABLE IS INCORRECTLY CONNECTED, ELECTRIC PARTS MAY BE

DAMAGED. CHECK THAT THE EARTH WIRE IS NOT BROKEN OR DISCONNECTED BEFORE INSTALLATION. FAILURE TO DO SO MAY CAUSE ELECTRIC SHOCK. DO NOT INSTALL THE UNIT IN A PLACE WHERE INFLAMMABLE GAS CAN LEAK.
A FIRE CAN RESULT IF INFLAMMABLE GAS ACCUMULATES AROUND THE UNIT. TO PREVENT THE INDOOR UNIT FROM OVERHEATING AND CAUSING A FIRE HAZARD, PLACE THE UNIT WELL AWAY (MORE THAN 2 M) FROM HEAT SOURCES SUCH AS RADIATORS, HEAT REGISTORS, FURNACE, STOVES, ETC. WHEN MOVING THE AIR-CONDITIONER FOR INSTALLATION TO ANOTHER PLACE, BE VERY CAREFUL NOT TO ALLOW THE SPECIFIED REFRIGERANT (R410A) TO BECOME MIXED WITH ANY OTHER GASEOUS BODY INTO THE REFRIGERATION CIRCUIT. IF AIR OR ANY OTHER GAS MIXES WITH THE REFRIGERANT, THE GAS PRESSURE IN THE REFRIGERATION CIRCUIT WILL BECOME ABNORMALLY HIGH AND IT MAY RESULT IN THE PIPE BURSTING OR PERSONNEL INJURIES. IN THE EVENT THAT THE REFRIGERANT GAS LEAKS OUT OF THE PIPE DURING THE INSTALLATION WORK, IMMEDIATELY LET FRESH AIR INTO THE ROOM.
IF THE REFRIGERANT GAS IS HEATED, POISONOUS GAS MAY RESULT. CHECK THE FOLLOWING POINTS BEFORE STARTING OPERATION IN THE INSTALLATION WORK. - THE PIPES ARE SECURELY CONNECTED AND DO NOT LEAK. - THE SERVICE VALVE IS OPENED. OPERATING THE COMPRESSOR WHILE THE SERVICE VALVE IS CLOSED WILL RESULT IN AN ABNORMALLY HIGH PRESSURE, AND CAN POSSIBLY DAMAGE THE COMPRESSOR AND OTHER PARTS. ALSO, ANY LEAKS IN THE CONNECTIONS CAN CAUSE AIR TO BE SUCKED IN, RESULTING IN AN EVEN HIGHER ABNORMALLY PRESSURE, AND CAN CAUSE A PIPE RUPTURE OR INJURY. WHEN CARRYING OUT THE PUMP-DOWN WORK, SHUT DOWN THE COMPRESSOR BEFORE DISCONNECTING THE REFRIGERANT PIPE. DISCONNECTING THE REFRIGERANT PIPE WITH THE SERVICE VALVE LEFT OPEN AND WITH THE COMPRESSOR STILL OPERATING WILL CAUSE AIR, ETC. TO BE SUCKED IN, RAISING THE PRESSURE INSIDE THE REFRIGERATION CYCLE TO AN ABNORMALLY HIGH LEVEL, AND POSSIBLY RESULTING IN RUPTURING, INJURY, ETC.
1 EN ENGLISH WARNING Never modify this unit by removing any of the safety guards.

The installation of the air conditioner must be positioned in a location that can sufficiently support its weight. Failure to do so may result in unit damage and human injury. Appliance shall be installed in accordance with national wiring regulations. If you detect any damage, do not install the unit. Contact your Toshiba dealer immediately. Please request the dealer or a specialized installer to perform the installation. If you perform the installation yourself and the work is carried out improperly, water leaks, electric shock, or fire can result.

The electrical work should be performed by a qualified electrician in accordance with the technical standards for electrical equipment, internal wiring regulations, and installation manual for the electrical equipment. A dedicated circuit should be used, and the voltage should match the rated voltage of the product. If the power supply circuit does not have enough capacity or the work is performed improperly, an electric shock or fire can result.

Be sure to connect the indoor and outdoor unit wires at their tips. Do not connect the wires below the tips. If the connections and fixtures are not made properly, overheating or a fire can result. Connect the wiring between the indoor and outdoor units so that the cord clamp does not stick out, and attach the covers properly. If the clamp is not attached properly, the terminal sections can overheat, and a fire or electric shock can result.

Always use the supplied parts or specified parts for the installation work parts. Usage of different parts can cause the unit to fall, a water leak, fire, or electric shock. After the installation work is completed, check that the refrigerant gas is not leaking. If the refrigerant gas is leaking indoors, toxic gas can be generated if it comes into contact with a flame such as from a fan heater, oven, or stove burner. Connect the ground wire.

Do not connect the ground wire to a gas pipe, water pipe, lightning rod, or telephone ground wire. Failure to connect the ground properly can result in an electric shock. Do not install in locations where the unit will get splashed by water or with high humidity such as bathrooms. This can cause deterioration of the insulation, resulting in an electric shock or fire. CAUTION Exposure of unit to water or other moisture before installation may result in an electrical short. Do not store in a wet basement or expose to rain or water. After unpacking the unit, examine it carefully for any damage. Do not install in a place that can increase the vibration of the unit. Do not install in a place that can amplify the noise level of the unit or where noise or discharged air might disturb neighbors. To avoid personal injury, be careful when handling parts with sharp edges.

Please read this installation manual carefully before installing the unit. It contains further important instructions necessary for proper installation. Wear work gloves when carrying out the installation work or repairs. Contact with parts, etr's receiving hole size, strength of spring in the tool has been improved. Charge hose Electronic balance for refrigerant charging Torque wrench (nominal dia. 1/2, 5/8) Flare tool (clutch type) Gauge for projection adjustment Vacuum pump adapter -- Gas leakage detector Used when flare is made by using conventional flare tool. Connected to conventional vacuum pump. It is necessary to use an adapter to prevent vacuum pump oil from flowing back into the charge hose. The charge hose connecting part has two ports -- one is for conventional refrigerant (7/ 16 UNF 20 threads per inch) and the other is for R410A. If the vacuum pump oil (mineral) mixes with R410A a sludge may occur and damage the equipment.

@@@@@@@@@@@@ A place which is not exposed to a strong wind. A place free of combustible gases. A place which does not block a passageway. @@@@@@@@@@@@@@@@@@@@@@@@@@@@@ A place where the drain water does not cause any problems. @@Do not use a bathroom scale or similar instrument.

*Use liquid refrigerant when refilling the refrigerant. Since the refrigerant is in liquid form, it can fill quickly. @@Drain the water from all the drain holes directly. To protect the outdoor unit from snow accumulation, install a holding frame, and attach a snow protection hood and plate. * Do not use a double-stacked design.*

Snow protection plate Front Snow protection hood Install at least 50 cm above the snow accumulation line. At least 50 cm Anchor bolts Snow accumulation line Holding frame CAUTION 1. 2. 3. 4. Install the outdoor unit in a location where there are no obstructions near its air intake or air outlet. When the outdoor unit is installed in a place that is always exposed to strong winds like on the coast or on a high story of a building, secure the normal fan operation using a duct or a wind shield. Especially in windy areas, install the unit to prevent the admission of wind. Installation in the following places may result in trouble. Do not install the unit in such places.

A place full of machine oil. A saline-place such as the coast. A place full of sulfide gas. Strong A place where high-frequency waves are likely to be generated, such wind as from audio equipment, welders, and medical equipment. Draining the water (heat pump models only) A hole is provided on the base plate of the outdoor unit to ensure that the defrost water produced during heating operations is drained off efficiently. When the outdoor unit is to be installed in an area with a moderate climate Allow the water in the outdoor unit to drip onto the ground. If a centralized drain is required, which is the case when the unit is installed on a balcony or against a wall, follow the steps below. When a drain pipe is to be used to drain the water Use a drain pan to catch the defrost water, and drain the pan. Use a pipe made of hard PVC with a nominal diameter of 25 mm inside diameter for the drain pipe. Tips when using a drain pan and elbow When using a drain pan, check its dimensions before deciding where the outdoor unit is to be installed.

When the elbow supplied is to be used, be advised that its dimensions are as shown in the figure. Ensure that the foundation does not protrude beyond where the elbow and the part of the hose connected to it are to be installed. Direction of air blown out Drain port Outline of drain pan Outline of outdoor unit Outdoor unit Drain pan Elbow (with a 40 mm outside diameter) Foundation 58 When draining off the water using a drain nipple When a drain hose is to be used to drain the water, install the drain nipple and water-proofing rubber cap shown in the figure, and use a commercially available drain hose (16 mm inside diameter). Tightly seal the knock-out holes and screw/ thread areas using a silicon adhesive, etc. to ensure that there is no water drippage.

Under some conditions, condensation may form on the base plate and drip down. When all the defrost water is to be drained off using a centralized drain, use the drain pan. d Water-proofing rubber cap c Drain nipple 7 80 30 EN ENGLISH Precautions about Installation in Regions with Snowfall and Cold Temperatures When the outdoor unit is to be installed in an area with a snowy or cold climate Allow the water in the outdoor unit to drip onto the ground. (Do not use a hose to drain off the water.) The drain water may freeze inside the base plate at below freezing outside air temperatures so use a screwdriver or other tool to open the knock-out holes in the base plate.

The water will drain more efficiently when the knock-out holes are opened.

(Use a screwdriver or other tool to pull out the knock-out pieces.) Knock-out holes Refrigerant Piping Connection Flaring 1. Cut the pipe with a pipe cutter. Obliquity Roughness Warp 2. Insert a flare nut into the pipe, and flare the pipe. Projection margin in flaring: A (Unit: mm) Rigid (Clutch type) Outer diameter of copper pipe 6.35 9.52 12.7 R410A tool used 0 to 0.

5 0 to 0.5 0 to 0.5 Imperial (Wing nut type) Outer diameter of copper pipe 6.35 9.52 12.7 Conventional tool used 1.0 to 1.5 1.0 to 1.5 1. 0 to 1.5 Die Pipe R410A 1.5 to 2.0 1.5 to 2. 0 2.0 to 2.5 3. Flaring size: B (Unit: mm) Outer diameter of copper pipe 6.35 9. 52 12.7 R410A 9.1 13.2 16.6 B +0 0.4 R22 9.0 13.0 16.2 In case of flaring for R410A with the conventional flare tool, pull it out approx. 0.

5 mm more than that of R22 to adjust the specified flare size. The copper pipe gauge is useful for adjusting projection margin size. Tighten the connection Align the centers of the connecting pipes and tighten the flare nut as much as possible with your fingers. Then tighten the nut with a wrench and torque wrench as shown in the figure. Half union Flare nut Externally threaded side Internally threaded side Use a wrench to secure. Use a torque wrench to tighten. CAUTION Do not apply excessive force. Otherwise, the nut may break. EN 8 Outer diameter of copper pipe 6.35 mm 9. 52 mm 12.7 mm (Unit: Nm) Tightening torque 14 to 18 (1.4 to 1.8 kgfm) 33 to 42 (3.3 to 4. 2 kgfm) 50 to 62 (5.0 to 6.2 kgfm) Flare at outdoor unit side Tightening torque for connection of flare pipe The pressure of R410A is higher than R22. (Approx. 1. 6 times.) Therefore securely tighten the flare pipes which connect the outdoor unit and the indoor unit with the specified tightening torque using a torque wrench. If any flare pipe is incorrectly connected, it may cause not only a gas leakage but also trouble in the refrigeration cycle. 4M23, 4M27 6.35 9.52 6.35 9.52 6.35 9.52 6.

*35 9.52 or 12.7 Unit A Unit B Unit C Unit D Outdoor unit RAS-4M23SAV-E, RAS-4M23SACV-E A B C D Total * * * * 1 unit: 16 or 13 or 10 1 unit: 13 or 10 1 unit: 13 or 10 10 46 45 Indoor unit RAS-4M27GAV-E, RAS-4M27GACV-E 1 unit: 16 or 13 or 10 1 unit: 16 or 13 or 10 1 unit: 13 or 10 1 unit: 13 or 10 52 RAS-3M26GAV-E 1 unit: 16 or 13 or 10 1 unit: 16 or 13 or 10 1 unit: 13 or 10 The unit A connection port diameter is 6.35 / 9.52 for the 4M23 and 6.35 / 12.7 for the 3M26 and 4M27. Use a different-diameter joint if the diameters of the connection port and connection piping are different. Mount the different-diameter joint on the connection port of the outdoor unit. Only one 16-class indoor unit can be connected to the 4M23. A 1-room connection is not an option for the indoor units (you cannot connect only one indoor unit). A 2-room or more connection must always be used for the indoor units (you must connect at least two indoor units). All combinations that do not exceed the "Total" number can be installed. Note that expanders and reducers may be required depending on the combination method. 9 EN ENGLISH Flare at indoor unit side Evacuating After the piping has been connected to the indoor unit, perform the air purge. AIR PURGE Evacuate the air in the connecting pipes and in the indoor unit using a vacuum pump. Do not use the refrigerant in the outdoor unit. For details, see the vacuum pump manual. Use a vacuum pump Be sure to use a vacuum pump with counter-flow prevention function so that oil inside the pump does not flow back into the air conditioner pipes when the pump stops. (If oil inside the vacuum pump enters the air conditioner circuit which uses R410A, trouble with the refrigeration system may develop.) 1. Connect the charge hose from the manifold valve to the service port of the gas side packed valve. 2. Connect the charge hose to the port of the vacuum pump. 3. Open fully the low pressure side handle of the gauge manifold valve. 4. Operate the vacuum pump to begin evacuating. Perform evacuating for about 35 minutes if the piping length is 70 meters (25 minutes for 50 total meters) (assuming a pump capacity of 27 liters per minute). Confirm that the compound pressure gauge reading is 101 kPa (76 cmHg).*

5. Close the low pressure valve handle of gauge manifold. 6. Open fully the valve stem of the packed valves (both sides of Gas and Liquid). 7. Remove the charging hose from the service port. 8. Securely tighten the caps on the packed valves. Compound pressure gauge 101 kPa (76 cmHg) Handle Lo Charge hose (For R410A only) Pressure gauge Manifold valve Handle Hi (Keep full closed) Charge hose (For R410A only) Vacuum pump adapter for counter-flow prevention (For R410A only) Packed valve at liquid side Vacuum pump Service port (Valve core (Setting pin)) Packed valve at gas side CAUTION IMPORTANT POINTS FOR PIPING WORK (1) Prevent dust and moisture from entering the pipes. (2) Tighten connections carefully (between pipes and unit). (3) Evacuate the air in the connecting pipes using a VACUUM PUMP. (4) Check for gas leaks at all connections. Packed valve handling precautions Open the valve stem until it touches the stopper. @@@@2. 3. 4. 5. 6. Remove the side panel and cord clamp from the outdoor unit. @@@@Use vinyl tape, etc. to insulate the cords which are not going to be used. Locate them so that they do not touch any electrical or metal parts. Secure the power cord and the connecting cable with the cord clamp. Attach the side panel on the outdoor unit. Stripping length of connecting cable 123 10 10 40 10 30 30 LN 10 40 Earth line Connecting cable Power cord Earth line 4 unit (A + B + C + D) Multi Terminal block (Connecting cable) 3 unit (A + B + C) Multi Terminal block (Connecting cable) Screw Screw Connecting cable (B unit) Connecting cable (A unit) Connecting cable (D unit) Power cord Connecting cable (B unit) Connecting cable (A unit) Connecting cable (C unit) Connecting cable (C unit) Power cord Model Power source Maximum running current Installation fuse rating Power cord Connecting cable 4 unit Multi RASRAS4M23SAV-E 4M23SACV-E 3 unit Multi 4 unit Multi RASRASRAS3M26GAV-E 4M27GAV-E 4M27GACV-E 220240V ~50Hz 220V ~60Hz 16.4 A 17.0 A 20 A breaker or fuse (all types can be used) H07RNF or 60245IEC66 (2.5 mm2) H07RNF or 60245IEC66 (1.0 mm2) 16.6 A 13.

8 A 13.8 A 16 A breaker or fuse (all types can be used) H07RNF or 60245IEC66 (1.5 mm2) H07RNF or 60245IEC66 (1.0 mm2) CAUTION Incorrect wiring connection may cause electrical parts to burn out. Be sure to comply with local regulations/codes when running the wire from outdoor unit to indoor unit. (Size of wire and wiring method etc.) Every wire must be securely connected. If incorrect or incomplete wiring is carried out, fire or smoke may result. Prepare the power supply for the exclusive use of the air conditioner. 11 EN ENGLISH Wiring Connection 5 GROUNDING This air conditioner must be grounded without fail.

*Grounding is necessary not only to safeguard against the possibility of receiving an electric shock but also to absorb both the static, which is generated by high frequencies and held in the surface of the outdoor unit, and noise since the air conditioner incorporates a frequency conversion device (called an inverter) in the outdoor unit. If the air conditioner is not grounded, users may receive an electric shock if they touch the surface of the outdoor unit and that unit is charged with static. 6 CHECK AND TEST OPERATION For R410A, use the leak detector exclusively manufactured for HFC refrigerant (R410A, R134a, etc.) * The conventional leak detector for HCFC refrigerant (R22, etc.) cannot be used because its sensitivity for HFC refrigerant lowers to approx. 1/40 of that manufactured exclusively for HFC refrigerant. Pressure of R410A becomes approx. 1.6 times that of R22. If installation work has not completely finished, gas leaks may occur in cases such as when pressure rises during operation.*

Check the flare nut connections, valve stem cap connections and service port cap connections for gas leaks with a leak detector or soap water. Flare nut connections (Indoor unit) Service port cap connection Valve stem cap connection Flare nut connections (Outdoor unit) CAUTION Use a circuit breaker of a type that is not tripped by shock waves. Incorrect/incomplete wiring will cause electrical fires or smoke. Prepare the power source for exclusive use with the air conditioner. Miswiring (Mis-piping) Check Make sure that the wiring and piping for each room have the same alphabetical code (A, B, C, D). Connect and secure the power cord. Use the power cord/cables with thickness, type, and protective devices specified in this manual. Insulate the unused cords (conductors) with PVC tape. 1. 2.

3. Turn on the power breaker. Open the side panel of the outdoor unit. Set the indoor unit to COOL mode. It is unnecessary to set the temperature. Miswiring checks cannot be executed when the outdoor air temperature is 5C or less. Start the check. Disconnect the miswiring check connector (color: Red) from the inverter P.C. board.

4. EN 12 5. 6. 7. During checks (Check time 3 to 20 minutes).

*When an error described in the table below occurrs, check that operation stops and an error code is displayed on LED. After checks, the check results are displayed on LED. The compressor stops when a miswiring (mis-pipng) error occurrs. Confirm the contents of the table below. Turn off the power breaker. Correct miswiring/mis-piping. Connect the miswiring check connector. Execute the check operation again. Automatically return to normal operation when conditions are normal. Return to normal operation. To return to normal operation during check operation or after a miswiring (mis-piping) error has been determined, connect the miswiring check connector. Miswiring (mis-piping) check by LED Indication For this outdoor unit, self-miswiring (mis-piping) checks are possible using the five LEDs (1 Yellow + 4 Red). * LEDs (D800 to D804) are provided on the inverter P.C. board.*

*LED D800 D801 D802 D803 D804 Normal operation (no error) Checking A unit During check *1 Checking B unit Checking C unit Checking D unit Crush/Clog of Pipe A Crush/Clog of Pipe B Crush/Clog of Pipe C *1 Crush/Clog of Pipe D Miswiring/Mis-piping or Crush/Clog of Pipe A, B Miswiring/Mis-piping or Crush/Clog of Pipe A, C *1 Check results *1 *1 Miswiring/Mis-piping or Crush/Clog of Pipe A, D Miswiring/Mis-piping or Crush/Clog of Pipe B, C Miswiring/Mis-piping or Crush/Clog of Pipe B, D Miswiring/Mis-piping or Crush/Clog of Pipe C, D A, B, C Miswiring/Mis-piping A, B, D Miswiring/Mis-piping A, C, D Miswiring/Mis-piping B, C, D Miswiring/Mis-piping A, B, C, D Miswiring/Mis-piping Packed valve stays closed LED : Light Emitting Diode, *1 4 unit Multi model only Check mode Normal operation Short Open Short Description : LED ON, : LED OFF, : LED Flash Red Yellow Miswiring (mis-piping) check connector (color: Red) 13 EN ENGLISH 7 USEFUL FUNCTIONS Self-Diagnosis by LED Indication For this outdoor unit, by referring to the 5 LED (1 Yellow + 4 Red) indicator lights, self-diagnosis is possible. LEDs (D800 to D804) are located on the sub-control board underneath the inverter. Contents Normal running IGBT short circuit, Compressor motor rear short Trouble on position detecting circuit Trouble on current detecting circuit OUTDOOR CONDENSOR PIPE TEMPERATURE SENSOR (TE) fault SUCTION PIPE TEMPERATURE SENSOR (TS) fault DISCHARGE PIPE TEMPERATURE SENSOR (TD) fault Trouble on outdoor fan OUTDOOR TEMPERATURE SENSOR (TO) fault Trouble on compressor system GAS SIDE PIPE TEMPERATURE SENSOR a (TGa) fault GAS SIDE PIPE TEMPERATURE SENSOR b (TGb) fault GAS SIDE PIPE TEMPERATURE SENSOR c (TGc) fault GAS SIDE PIPE TEMPERATURE SENSOR d (TGd) fault Gas leakage, TS sensor out of place, PMV fault, Sensor fault TE sensor out of place, INDOOR EVAPORATOR PIPE SENSOR (TC) out of place, PMV fault, Sensor fault Indoor or outdoor miswiring, Gas leakage, TS/TC sensor out of place, PMV fault, Sensor fault Communication trouble between MCU Compressor lock Trouble on discharge temperature, Gas leakage Compressor break down *1 *2 *2 Indoor alarm code None 14 16 17 18 18 19 1A 1B 1C 1C 1C 1C 1C 1C 1C 1C 1D 1E 1F : LED ON, *1 4 unit Multi model only *2 Heat pump model only These LEDs do not normally light. 1. If trouble occurs, LED goes on according to the contents of trouble as shown in the table above. 2. When two or more troubles occur, LEDs go on cyclically (alternately). 3. When the trouble is eliminated, LEDs go off. Red Yellow LED indication D800 D801 D802 D803 D804 : LED OFF EN 14 EG21808801-b .*