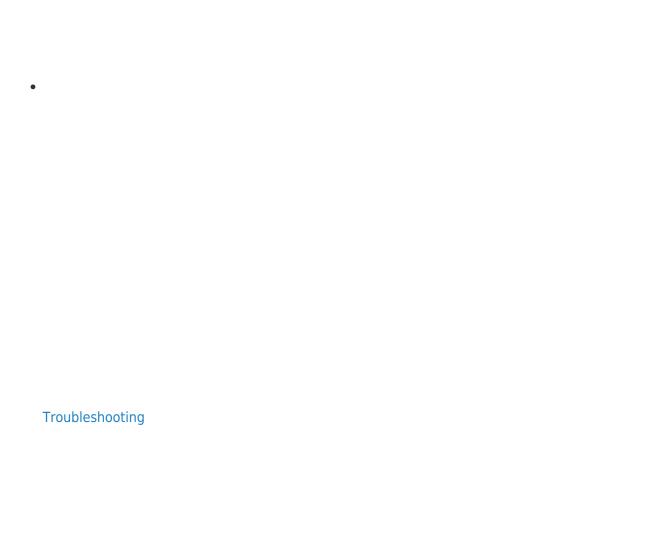
# Operation Description - Toshiba RAS-13SKV-E Service Manual

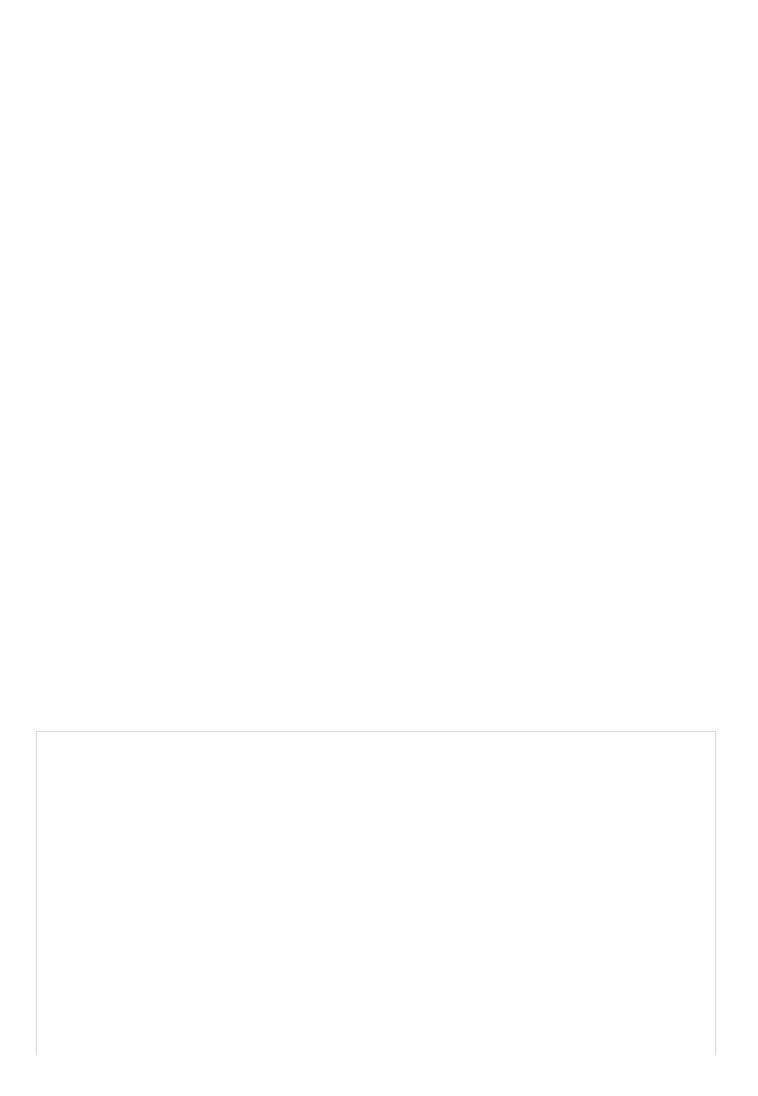
Indoor/outdoor unit, split type air conditioner

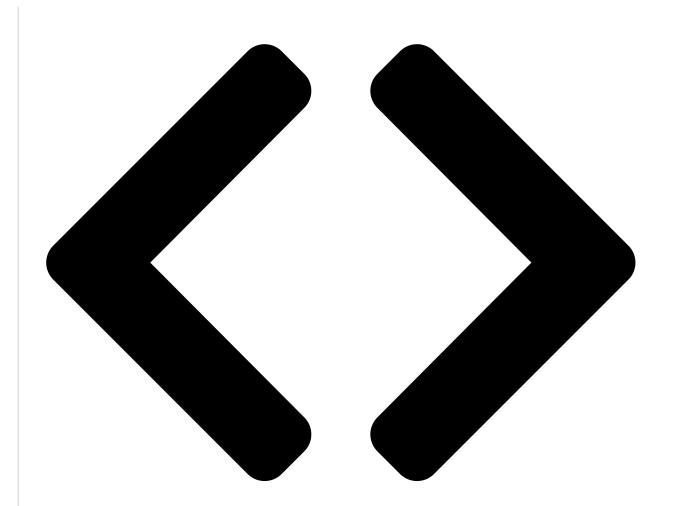
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#### 9-1. Outline of Air Conditioner Control

This air conditioner is a capacity-variable type air conditioner, which uses AC or DC motor for the indoor for motor and the outdoor fan motor. And the apace PERATION DESCRIPTION

proportional control compressor which can change the motor speed in Quating of Air to and tioner Control mounterhishail control with the control of the control of the control of the control of the capacity of the control of the

- Detection of inverter in release operation
- Over-current detection to IGBT module (Comp
- Compressor and outdo serial signal is off (whe reach the board assem trouble of the signal sy
- Transferring of operation signal) from outdoor ur controller

The outdoor unit controller receives operation command from the indoor unit side, and controls the outdoor fan and the pulse Modulating valve. (P.M.V)

Besides, detecting revolution position of the confidence RATION DESCRIPTION

sor motor, the outdoor unit controller controls speed of

#### the congruesso untitioned to foating the congruesso untition the congruesso untition of the congruesso and the congruesso untition of the congruesso and the congruesso untition of the congruesso and the

the inverter and switching timing of the supply power air (current dinamateritiming) is a step to the time indoor to the foremotion appointmendutdoor fan motor. And the capacity-And the repressionable outral complesses nation reagned ange the the operators stated in the range of the buttoop ups is control the indoor with controller and the inverter to control the indoor unit. The compressor and the inverter to control as the compressor adopts four pole brushless unit. DC motor the frequency of the supply power ontrolled by the from inwerter three presser is two-times cycles

of the สุรุษากลยอง เคราะ fc เอาหายได้คา drives the indoor fan motor 1 Rolebaseddoporu odmonandleent from the remote controller, The incoor transfers the operation conversing to the outdoor commands Politcher remote controller and assumes the following utdoor unit controller receives operation com-

- Judgment of Suction air temperature of the Indoor land the outdoor fan and the pulse Modulating valve. (P.M.V) heat exchanger by using the indoor temperature of the compressions, detecting revolution position of the compressions. (TA seggrimotor, the outdoor unit controller controls speed of
- Judgithen contribues subrombeait by countrielling mountait voltage of ture bythe inverter exchange hier siming sets er supply power (Preveneuritransferotiming) so that motors drive according
- to the operation command.

   Louver motor control

  And then, the outdoor unit controller transfers reversely
- Indoon each pertain gratalish file in the outdoor unit to
- · LED (Lightof mitting Dioda) idisalawaentrol
- Transferring of operation command signal (Serial signal)
   As the compressor adopts four-pole brushless DC motor, the frequency of the supply power
   Reception of information of operation of the supply power in minimum inverter to compressor is two-times cycles (Serial|signahie dedical nutsible from pedatal tonthe outdook unit and judgment/display of error
- Air purifilia of eaftind a ar unit controller
- 2. Role of Tahutadiodocomiunitocommonly letter judges the operation Receiving **เกยาชาลาสร**งห์เวเซาปกลาสารเกราะ and assumes signal) from the lowing functions of the outdoor unit perform ludgment of suction air temperature of the indoor
- Compressor operation control
   (TA sensor)
   Operation control of outdoor fan motor
   DRAY control of the indoor heat exchanger tempera-
- P.M.V. control ture by using heat exchanger sensor (TC sensor)
- 4-way valverevern freezing control, etc.)
  - Louver motor control
- 9. OPERATION DESGRIBETION CONTROL
  - LED (Light Emitting Diode) display control
  - Transferring of apprecian command cianal (Carial

- Detection of inverter in release operation
- Over-current detection to IGBT module (Comp
- Compressor and outdo serial signal is off (whe reach the board assem trouble of the signal sy
- Transferring of operatio signal) from outdoor ur controller
- Detection of outdoor te revolution control
- Defrost control in heatil measurement by outdo control for 4-way valve

#### 3. Contents of operation (Serial signal) from ir outdoor unit controll

The following three types the indoor unit controller.

- Operation mode set on
- Compressor revolution by indoor temperature (Correction along with ture and correction of it temperature are added
- Temperature of indoor
- For these signals ([Ope pressor revolution] indo perature), the outdoor ( input current to the inve followed operation with does not exceed the al

#### 4. Contents of operation (Serial signal) from o to indoor unit control

The following signals are controller.

- The current operation r
- The current compresso
- Outdoor temperature
- Existence of protective For transferring of thes

### Operations followed to judgment 9. OPERATION DESCRIPTION of serial signal from indoor side. 9-1. Outline of Air Conditioner Control This air conditioner is a capacity-variable type air - 30 - conditioner, which uses AC or DC motor for the indoor · Detertion of an variation with a political property of the capacityreleas@poperational control compressor which can change the · Overmoter recede that a range Jeans is to IGB mounted The DC motor drive circuit is mounted to the indoor unit. The compressor and the inverter to control compressor and outdoor fan stop function when an motor are mounted to the outdoor unit. serial signal is off (when the serial signal does not line entire air conditioner is mainly controlled by the reach the board assembly of outdoor control by trouble ที่ยากับอัติกาลเกรียกเกา stempoller drives the indoor fan motor Transfeseigunforpentimaindosentinon(Serialemote controller, signal) another austices the topetation coincided botthe outdoor controller. Detection outdoor white antioligrace engine enterior comrevolution control the indoor unit side, and controls the Outdoor fan and the pulse Modulating valve. (P.M.V) Defrost control in heating operation (Tempo Besides, detecting revolution position of the compresmeasurement by outdoor heat exchange random controls speed of control the compressive and outside of the billing output voltage of 3. Contrem to vertex each convitohing atirolisig roal the supply power (Serial (SHITTEN) FRANS FROTON IN 1895 THE METERS drive according to the operation command. outdoor unit controller transfers reversely The following that had status in the following the south of the southo the indoontrollthentroder unit controller. Operation mode set on the remote controller As the compressor adopts four-pole brushless Compressor revolution command signal defined power DC motor, the frequency of the supply power by indoor temperature and sampressor use two-times cycles (Correction the nactuial variables of new littimerature and correction of indoor heat exchanger temperetu**Roje of jadoor unit controller** TemperaTheeindionolouniteatnerallemiguelges the operation • For these signals of the remeter and assumes pressor rether following functions changer temperature), the detail of a light of the indoor input current to the inverter, and performs the (TA sensor) followed operation within the range that current Judgment of the indoor heat exchanger temperadoes not exceed the allowable texchanger sensor (TC sensor) 4. Contents (proparation zing monto) (Serial signal diremporto controller to indoor unitdoomtfashlenotor operation control

The following Engralish testiting no idde out id playuciantrol

Transferring of approximation command cianal (Carial

- Detection of inverter in
- release operation Over-current detection to IGBT module (Comp
- Compressor and outdo serial signal is off (whe reach the board assem trouble of the signal sy
- Transferring of operatio signal) from outdoor ur controller
- Detection of outdoor te revolution control
- Defrost control in heatil measurement by outdo control for 4-way valve

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- Operation mode set on
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#### 4. Contents of operation (Serial signal) from o to indoor unit control

The following signals are controller.

- The current operation r
- The current compresso
- Outdoor temperature
- Existence of protective For transferring of thes

#### controller.

- The current operation mode
- The current compressor revolution
- Outdoor temperature

# 9. OPERATION DESCRIPTION

• Existence of protective circuit operation

#### For tragsferri@utlineeofgAir, Conditioner Control controllerismanitors the hertents absighted variable type air judges constitution epf which less successed motor for the indoor Contenfor of ptdq ranged the ecoles active darbenoutor. And the capacity-

- status meets speed in the range from 11 to 96 rps is mounted. The DC motor drive circuit is mounted to the Mhether protective circuit operates indoor unit. The compressor and the inverter to control When has incorrected to the outlier of the outlier unit. unit controller tile ar sometoner is mainly controlled by the

**Table of Contents** 

- Detection of inverter in release operation
- Over-current detection to IGBT module (Comp
- Compressor and outdo serial signal is off (whe reach the board assem trouble of the signal sy
- Transferring of operatio signal) from outdoor ur

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Related Manuals for Toshiba RAS-13SKV-E

<u>Air Conditioner Toshiba RAS-13SKV-E Service Manual</u>

Air Conditioner Toshiba RAS-B10SKVP-E Service Manual

Split type air conditioner (119 pages)

Air Conditioner Toshiba RAS-B10SKVP-E Owner's Manual

Split type air conditioner (91 pages)

Air Conditioner Toshiba RAS-B10SKVP-E Installation Manual

(19 pages)

Air Conditioner Toshiba RAS-B10SKVP-E Installation Manual

(148 pages)

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Split wall type (68 pages)

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(108 pages)

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(8 pages)

Air Conditioner Toshiba RAS-10SKP Series Owner's Manual

(8 pages)

#### Related Content for Toshiba RAS-13SKV-E

RAS-25S4KVDG-ND Operation Description 1. Basic Operation

Toshiba RAS-25S4KVDG-ND

RAS-B22PKVSG-TR Operation Description

Toshiba RAS-B22PKVSG-TR

RAS-25S4KVPG-ND Operation Description 1. Basic Operation

Toshiba RAS-25S4KVPG-ND

**RAS-10S3AV-E Operation Description** 

Toshiba RAS-10S3AV-E

RAS-M05G3KVSG-E Operation Description

Toshiba RAS-M05G3KVSG-E

RAS-18S3KV-E Operation Description

Toshiba RAS-18S3KV-E

RAS-M07G3DV-E Operation Description

# Toshiba RAS-M07G3DV-E RAS-M07N4KVRG-E Operation Description Toshiba RAS-M07N4KVRG-E

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