



# **TOSHIBA**

Toshiba BMS-TP0640ACE Manual

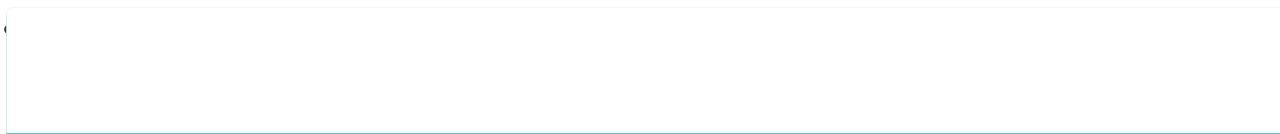
Touch screen controller, tcs-net air conditioning control system



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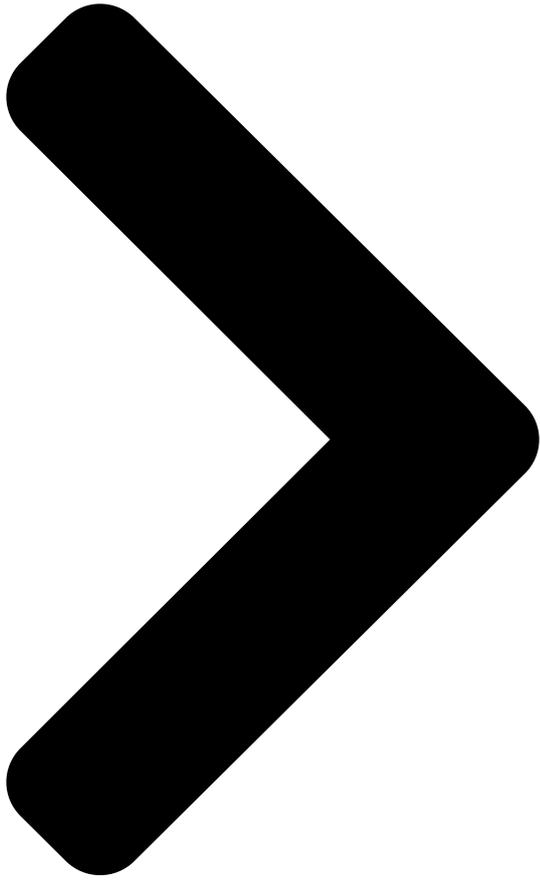
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FILE NO. A04-016

TENTATIVE

**TCS-NEOSHRIBA CONDITIONING  
CONTROL SYSTEM  
(TOUCH SCREEN CONTROLLER)**

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# Summary of Contents for Toshiba BMS-TP0640ACE

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[Page 3](#) OUTLINE 1-1 TCS-Net Air conditioning control system outline 1-2 Component 1-2-1 TCS-Net control system component 1-2-2 Application control component 1-3 Basic system component 1-3-1 Apparatus component 1-3-2 The control system devices 1-3-3 The control system devices (Procured on site) 1-3-4 Software 1-4 Touch screen controller function 1-5 Energy monitoring and billing function 1-6 Input/Output...

[Page 4](#) 1-1 TCS-Net Air conditioning control system outline The TCS-Net Air conditioning control system has achieved easy-to-operate central air conditioning control with the LCD Touch Screen Controller that integrates advanced functions. The system allows operation status monitoring, operation control, scheduled operation, and error code display of up to 512 indoor units with one controller.

[Page 6](#) PJ17 PJ17 OFF ON K100 HEAT COOL OPERATION/...

[Page 7](#) × × Indoor units connected Max. 64 units Max. 64 units Max. 512 units Max. 512 units Digital I/O × × × × Touch Screen Controller BMS-TP0640ACE BMS-TP0640PWE BMS-TP5120ACE BMS-TP5120PWE Intelligent Server BMS-LSV2E × × × × × ×...

[Page 8](#) 1-3-2 The control system devices Name Model Appearance Performance name Operation monitoring Operation control Operation schedule Error code display Fire alarm input Energy monitoring data saving in CF card Data collection Data collection software (This software is used for Intelligent server) Protocol transformation Main BUS to RS-485 Power meter interface...

[Page 9](#) 1-3-3 The control system devices (Procured on site) Name Performance Specification Measurement of power consumption Output Pulse output type data by pulse signal Pulse generator constants: 1kWh/pulse or 10kWh/pulse Pulse duration: 50 - 1000 ms Output terminal: ON/OFF contactor Network with HUB: Touch screen controller 10BASE-T compliant (\*)

[Page 10](#) 1-4 Touch screen controller function Monitoring All Indoor unit conditions can be monitored by the controller. Monitoring Items Mode FAN mode FLAP setting Set Temperature Inlet air temperature R/C control prohibition Control All Indoor unit operation can be controlled within user's selected division. Controllable division Whole building All tenant...

[Page 11](#) Management zone categories Indoor Unit Block Tenant Area Group/Unit (line address + indoor unit address) Building A Tenant A Shop A 1 0 1 1 - 1 (header unit) 1 - 2 (follower unit) 1 0 2 1 - 3 (header unit) 1 - 4 (follower unit) 1 0 3 1 - 5 (header unit)

## [Page 12: Error Code Display](#)

Monthly schedule setting Schedule patterns except for weekly schedule patterns can be set as special-day patterns. Up to four special-day patterns can be set. Non-operation dates can also be set. Error code display When an error occurs in a device, an error code is displayed.

## [Page 13: Specifications](#)

1-5 Energy monitoring and billing function Distributes total power consumption for each indoor unit according to the billing schedule set by the Touch Screen Controller. Reads the system setup file and the operation result file saved in the CF card of the Touch Screen Controller into the PC, and calculates power distribution result using the dedicated report creation software (Excel macro) to create spreadsheets and monthly reports.

## [Page 14: Monthly Report](#)

Monthly Report The report creation software creates monthly reports in Excel file format.  
Monthly report printout sample Report creation software functions Function Description  
Remarks Monthly report Creates operation result reports Operation result report type: creation  
for each indoor unit group •...

[Page 15](#) 1-6 Input/Output This system controls air conditioners by interlocking them with electric lock signals and fire alarm signals, and transmits air conditioner emergency signals to other devices. Fire alarm input Digital I/O Door-lock input Relay I/F Error output Intelligent Ethernet Server •...

## [Page 17: System Configuration](#)

SYSTEM CONFIGURATION 2-1 Touch screen controller system configuration...

[Page 18](#) 2-1 Touch screen controller system configuration RS-485 Ethernet Main Bus TCS-NET Relay I/F Intelligent Server (BMS-IFLSV1E) Max. 512 indoor (BMS-LSV2E) units (64 units x 8) Max. 64 air conditioners Touch Screen Controller per Intelligent per relay I/F (BMS-TP0640/5120) Compact Server Flash Main Bus Intelligent Server Software...

## [Page 19: System Configuration Table](#)

System Configuration Table (× ... available - ... not available) Touch Screen Controller BMS-TP0640ACE BMS-TP0640PWE BMS-TP5120ACE BMS-TP5120PWE Air conditioning monitoring/control × × Energy monitoring and billing - × - × Indoor units connected Max. 64 units Max. 512 units Intelligent Server 1 unit Max.

## [Page 20: System Configuration Examples](#)

The following lists required component devices in each category. 1. Without energy monitoring (A) Up to 64 indoor units Device Model Quantity Remarks Touch Screen Controller BMS-TP0640ACE Intelligent Server BMS-LSV2E Intelligent Server Software BMS-STCC01E TCS-NET Relay Interface BMS-IFLSV1E Max. 8...

[Page 21](#) (B) Up to 512 indoor units Device Model Quantity Remarks Touch Screen Controller BMS-TP5120PWE Intelligent Server BMS-LSV2E Max. 4 Intelligent Server Software BMS-STCC01E Max. 4 Same quantity as Intelligent Server required TCS-NET Relay Interface BMS-IFLSV1E Max. 32\* Up to 8 units per Intelligent Server Energy Monitoring Relay BMS-IFWH3E Max.

## [Page 23: Installation](#)

INSTALLATION 3-1 Installation work flow 3-2 Setup file data preparation 3-2-1 Control wiring diagram (Connection example) 3-2-2 Power meter wiring diagram (Connection example) 3-2-3 Air conditioner address table 3-2-4 Schedule table 3-3 Setup file creation 3-3-1 Setup file creation software (Excel macro) 3-3-2 Setup file contents 3-4 Control system Installation 3-4-1 External view...

## [Page 24: Installation Workflow](#)

3-1 Installation work flow Work flow Contents Reference No. Air conditioner equipments 0. System planning selection Chapter. 2 Control system device selection System wiring diagram Power meter wiring diagram 1. Setup file data preparation Address list Schedule list Create setup files by excel macro 2.

[Page 25](#) 3-2 Setup file data preparation Before implementation of installing, prepare the materials for creating the setting files. • Control wiring diagram • Power meter wiring diagram • Air conditioner address table • Schedule table 3-2-1 Control wiring diagram (Connection example)

[Page 27](#) 3-2-3 Air conditioner address table...

[Page 28](#) (Example)

## [Page 29: Schedule Table](#)

3-2-4 Schedule table...

[Page 30](#) 3-3 Setup file creation Create setup files according to the control wiring system diagram and the address table. 3-3-1 Setup file creation software (Excel macro) • The setup file creation software is used to create setup files installed in the Touch Screen Controller. •...

[Page 31](#) 3-3-2 Setup file contents (1) Display setup file • File name: DISP\_FORM.DEF • Enter entire building display mode, number of block display buttons, number of tenant display buttons, number of area display buttons, number of R.C. group/indoor display buttons, and schedule setting unit. •...

[Page 32](#) (11) Door-lock input definition file • File name: KEY\_CH.DEF • Enter door-lock input numbers (1-64), input device IDs, input channels, and signal logic (up to 64). • When no door-lock input is used, do not enter it. • An input device ID means the following: 0 to 7: I/O module device ID 10: general-purpose input in the touch panel 100 or more: digital I/O interface (Second digit: Intelligent Server No., first digit: Relay Interface No.)

[Page 33](#) (17) Power meter input definition file • File name: WHM\_CH.DEF • Power meter No. (1-64), interface address, channel No., pulse generator constants • Used for energy monitoring and billing. No data is provided when energy monitoring and billing is not performed.

## [Page 34: Control System Installation](#)

3-4 Control system installation 3-4-1 External view Touch Screen Controller Model: BMS-TP0640ACE BMS-TP5120ACE BMS-TP0604PWE BMS-TP5120PWE CF (Compact Flash) card slot (CF card for data files) Universal Input/ Output port USB mouse Ethernet port Intelligent Server PCI expansion unit Power input...

[Page 35](#) Intelligent Server Model: BMS-LSV2E Metal case type CF (Compact Flash) card slot Not used Touch Screen Controller Relay Interface Power switch (Ethernet) (RS-485) WARNING Do not decompose. unit: mm...

[Page 36](#) TCS-NET Relay Interface Model: BMS-IFLSV1E Parts name Specifications Case Galvanized sheet metal Case lid Galvanized sheet metal Grommet C30-SG20A Grommet C30-SG20A Grommet for power supply C30-SG20A 6- 5.5 mounting holes 63.6 unit: mm...

[Page 37](#) Energy monitoring R I/F • Digital I/O R I/F Model: BMS-IFWH3E BMS-IFDD01E Grommet for Grommet for power input power meter Grommet for RS-485 Grommet for DO unit: mm...

## [Page 38: Installation Method](#)

3-4-2 Installation method Touch Screen Controller Make space for installation and service. Install the Touch Screen Controller in a wall (standard) or on the dedicated stand (when available on site). In-wall installation ■ ■ ■ ■ ■ Conditions for installation ■...

[Page 39](#) Intelligent Server Installation Method and Orientation There are four ways to install the Intelligent Server as shown below: (1) rack mount (2) surface mount (3) wall mount A, and (4) wall mount B. The rack mount installation requires a support bracket for a 19-inch rack.

[Page 40](#) TCS-NET Relay Interface ■ ■ ■ ■ ■ Installation Method and Orientation There are five installation methods for this relay interface as shown below: surface mount and wall mounts. Use the attached screws. No good REQUIREMENT Do not install the unit in any of the following places. •...

## [Page 41: Device Specifications](#)

Touch Screen Power supply 100 - 240 V, AC 50/60 Hz Controller Power consumption 50 VA Outside dimensions 316 (W) x 256 (H) x 54 (D) mm BMS-TP0640ACE Weight 3.5 kg BMS-TP5120ACE BMS-TP0640PWE Ambient temperature 0 to 40 °C BMS-TP5120PWE...

## [Page 42: Wiring Specifications](#)

3-5 Wiring 3-5-1 Wiring specifications Power supply specifications Power cable Device Input voltage Power Remarks consumption wire size Touch Screen Controller 100 - 240 V, AC 50/60 Hz 50 VA 0.75 mm Procure on site Intelligent Server 85 - 132 V, AC 50/60 Hz 30 VA 180 - 264 V, AC 50/60 Hz TCS-NET Relay Interface...

## [Page 43: Wiring Diagram](#)

3-5-2 Wiring diagram TCC-LINK TERMINATOR RS-485 TERMINATOR U4 U3 U4 U3 U4 U3 U2 U1 U2 U1 U2 U1 U2 U1 TCS-NET RELAY INTERFACE TCC-LINK TERMINATOR RS-485 TERMINATOR U4 U3 U4 U3 U4 U3 U2 U1 U2 U1 U2 U1 U2 U1 U2 U1 U2 U1...

## [Page 47: Wiring Connection](#)

Wiring Connection The following describes wiring connections of the Energy Monitoring Relay Interface when it is used in the air conditioner control system. • Terminator resistor setting Set the RS-485 terminator resistor by the TCS-NET Relay Interface. Do not set it by the Energy Monitoring Relay Interface. •...

[Page 48](#) TCS-NET RELAY INTERFACE DI 1 Power meter 1 DI 2 Power meter 2 DI 3 Power meter 3 ADDRESS DI 4 Power meter 4 Power meter 5 DI 5 Power meter 6 DI 6 Power meter 7 DI 7 Power meter 8 DI 8 ENERGY MONITORING...

[Page 50](#) Wiring Connection CAUTION If an inductive load (relay coil) or a bulb is connected, a surge voltage or rush current will be generated. Take adequate measures against surge voltage or rush current. The following describes wiring connections of the Digital I/O Relay Interface when it is used in the air conditioner control system.

[Page 51](#) TCS-NET RELAY INTERFACE DI 1 Input contact 1 DI 2 Input contact 2 DI 3 Input contact 3 ADDRESS Input contact 4 DI 4 Input contact 5 DI 5 Input contact 6 DI 6 Input contact 7 DI 7 Input contact 8 DI 8 Load 1 Load 2...

## [Page 52: Network Connection](#)

3-6 Network connection Connecting the Network Wires Connect the Touch Screen Controller to Intelligent Servers and to an optional PC for creating monthly reports using network wires (category 5UTP straight wire), via a Switching HUB (procured on site). • Connect the Ethernet port of the controller to a port of the HUB with a network wire. •...

## [Page 53: Control System Configuration](#)

3-7 Control system configuration To connect the touch screen controller, intelligent server, and PC for energy monitoring and billing via switching HUB, All device IP address setting is necessary. Device IP address Touch screen controller: 192.168.2.69 (default address) 192.168.2.70 • •...

## [Page 55: Address Setting](#)

ADDRESS SETTING 4-1 Address setting flow 4-2 Definition of address 4-3 Address setting for air conditioner 4-3-1 Setting for VRF system (1) Check at main Power-ON (2) Manual setting from wired remote controller (3) Line (system) address setting (4) Power reset (5) Indoor unit address check (6) Trial operation (7) Setup of relay connector and terminator...

[Page 56](#) 4-1 Address setting flow Setting flow Contents Reference No. Indoor units/Outdoor units Power ON 4-3-1 (1) Setting from main wired remote controller Manual address setting 4-3-1 (2) (Line/Group/Indoor address setting) Dip Switch setting on outdoor interface Line address setting 4-3-1 (3) P.C.board Power reset Power reset to activate line address...

## [Page 57: Group Address](#)

4-2 Definition of address Indoor unit address • “Indoor unit address” is to make outdoor unit recognize an individual indoor unit. This indoor unit address is allocated to every indoor unit one by one for every refrigerant system. (At shipment=99, Address unset) Header Follower Header...

[Page 58](#) Line address (System address) • “Line address” is the address with which line (refrigerant system) indoor units are connected. This line address is set by switch setting on interface P.C. board of the header outdoor unit. Dip Switch Line 1 Line 2 setting (Refrigerant system 1)

[Page 59](#) Central control address • “Central control address” is to make central control devices recognize each indoor unit. This address can be set from central control devices automatically or manually. In case of group control on VRF system, one central control address

is allocated to each indoor unit in a group control.

[Page 60](#) Zone address (Zone No.) • “Zone address” is to be set when the central remote controller is used for each zone. Zone address is set by switch setting on central remote controller. Central remote controller can divide all indoor units into max. 4 zone. The zone to which the indoor unit belongs is decided by its central control address.

[Page 61](#) TCS-NET control system address CF card TCS-NET relay interface Compact Flash RS-485 (BMS-IFLSV1E) Outdoor units Indoor units CF card Ethernet Compact Flash Intelligent Server Line address No.1 ..(BMS-LSV2E) (Setup file) Intelligent server Touch Screen Controller No. = 1 (BMS-TP0640/5120) Line address ..

[Page 62](#) 4-3 Address setting for air conditioner 4-3-1 Setting for VRF system In this air conditioner, it is required to set up address to the indoor unit before starting operation. Set up the address according to the following setup procedure. CAUTION 1.

[Page 63](#) 4-3-1 (1) Check at main power-ON After turning on the main power of the indoor units and outdoor unit in the refrigerant system to be executed with a test operation, check the following items in each outdoor and indoor unit. (After turning on the main power, be sure to check in order of indoor unit →...

[Page 64](#) 4-3-1 (2) Manual setting from wired remote controller CAUTION Be sure to allocate Line (system) /Group/Indoor address one by one to match the address setting table and setup file that is prepared beforehand. If wrong value is set, a problem such as error of communication with air conditioner will occur. Dip Switch setting Header Line address...

## [Page 65: Operation Procedure](#)

(Step 2) Note) When setting the line address from the remote controller, do not use address 29 and 30. The address 29 and 30 cannot be set up in the outdoor unit. Therefore if they are incorrectly set up, a check code [E04] (Indoor/outdoor communication circuit error) is output.

[Page 66](#) 4-3-1 (3) Line (System) address setting Header unit interface P.C. board 1. Using SW13 and 14 on the interface P.C. board of the header unit in each system, set 2 3 4 2 3 4 2 3 4 2 3 4 up the system address for each system.

[Page 67](#) 4-3-1 (5) Indoor unit address check Step Item Operation and check contents Power - on Initial communication takes a couple of minutes. During initial communication, 7-segment display section is as follows as follows. Display [A] --- [U1], flashing Display [B] --- [ - - 0] --> [ - - i] flashing Display check After initial communications, [U1] are displayed in 7-segment display section.

[Page 68](#) 4-3-1 (7) Setup of relay connector and terminator • After trial operation for each refrigerant system, set the relay connector and terminator resistor for all refrigerant system which are connected from one TCS-NET relay interface. Header outdoor unit <Procedure> interface P.C. board How to set up terminator resistor (SW30) SW30 When all the address setups have finished in the same...

[Page 69](#) Check that relay connector are connected in all header outdoor units to which TCS-NET relay interface is connected. TCS-NET relay Header Header Header interface U3 U4 U3 U4 U3 U4 U3 U4 U3 U4 SW30 SW30 SW30 SW30 SW30 U1 U2 U5 U6 U1 U2 U5 U6...

[Page 70](#) TCS-NET relay Header interface Follower unit Header unit Follower unit Header unit unit U3 U4 U3 U4 U3 U4 U3 U4 U3 U4 U1 U2 U5 U6 Before address setup Relay...

[Page 71](#) 4-3-1 (8) Central control address setting (Note) 1) Perform after the setting of indoor and outdoor unit address (Indoor/group/line address). 2) Three setting address method can be selected. Manual setting from wired main remote controller (RBC-AMT21E) Manual setting from central control remote controller (TCB-SC642TLE) Automatic setting from central remote controller (TCB-SC642TLE) REQUIREMENT •...

[Page 72](#) Flow chart of setting central control address (digest) (In case of central remote controller TCB-SC642TLE) Completion of indoor unit addresses Automatic setting Automatic setting? Method Automatic setting from central remote controller (TCB-SC642TLE) Manual

setting (1) Press the buttons at the same time for more than 4 sec. Setting from central remote controller Set from wired (2) Select CODE No.

[Page 73](#) 4-3-1 (9) Trial operation for central controller (TCB-SC642TLE) Test run of the central controller (1) Power on for all indoor units. Next, power on for central controller. will flash, checking the indoor unit address automatically. (2) If group No. displayed on central controllers is not same as indoor unit No.\* \* In case of group control, main unit No.

[Page 74](#) 4-3-1 (10) Automatic address setting (for reference) CAUTION In case to decide address (Line / Group / Indoor address) by automatic address setup, be sure to change these address to match the address setting table for TCS-NET control system. → → → → “4-3-1 (2) Manual setting from wired remote controller”, →...

[Page 75](#) • Automatic address setup procedure Without central control : To the address setup procedure 1 With central control : To the address setup procedure 2 refrigerant system (However, go to the procedure 1 when the central control is performed in a single (Example) In case of central control in a single In case of central control over...

[Page 76](#) Header unit interface P.C. board Address setup procedure 2 1. Using SW13 and 14 on the interface P.C. board of the header 2 3 4 2 3 4 2 3 4 2 3 4 outdoor unit in each system, set up the line (system) address SW11 SW12 SW13...

[Page 77](#) 4-3-1 (11) Clearance of address Method 1 An address is individually cleared from a wired remote controller. “0099” is set up to line address, indoor address, and group address data from the remote controller. (For the setup procedure, refer to the abovementioned address setup from the remote controller.) Method 2 Clear the indoor addresses in the same refrigerant line from the outdoor unit.

[Page 78](#) 4-3-1 (12) Confirmation of indoor unit address and position by using the remote controller [Confirmation of indoor unit address and the position] 1. When you want to know the indoor address though position of the indoor unit itself can be recognized;...

[Page 79](#) • To confirm all the unit numbers from an arbitrary wired remote controller; <Procedure> (Operation while the air conditioner stops) The indoor unit No and position in the same refrigerant piping can be confirmed. An outdoor unit is selected, the indoor unit numbers in the same refrigerant piping are successively displayed, and then its indoor unit fan is turned on.

[Page 80](#) • To change all the indoor addresses from an arbitrary wired remote controller; (When the setup operation with automatic address has finished, this change is available.) Contents : Using an arbitrary wired remote controller, the indoor unit address can be changed for each same refrigerant system \*...

[Page 81](#) 4-3-1 (14) In case of increase the address-undefined indoor units (Extension, etc.) If set up the indoor address of which address is undefined accompanied with extension of indoor units, replacement of P.C. board, etc, follow to the methods below. Method 1 Set up an address individually from a wired remote controller.

[Page 82](#) 4-3-1 (15) Address setup example (VRF system) [Automatic address / Manual address setup example] Individual control Automatic address setting Available Available Outdoor Line address Outdoor Outdoor Indoor Indoor Indoor Indoor Configuration Master Master Master Side Master Side Line address \* RC: Remote controller Indoor Indoor unit address Group address...

### [Page 83: Group Control](#)

Group control Automatic address setting Available Available Available Outdoor Line address Outdoor Outdoor Outdoor Indoor Indoor Indoor Indoor Indoor Indoor Configuration Receiver unit Receiver unit (Side) Master Master Wireless RC. Wireless RC. Line address Indoor Indoor unit address Group address Central control (Multiple refrigerant systems) Automatic address setting Available...

[Page 84](#) Group control over other R.C. group/indoor names) Automatic address setting Available (\*1) Outdoor Line address Outdoor Outdoor Outdoor Configuration Indoor Indoor Indoor Indoor Indoor Indoor Master Line address Indoor Indoor unit address Group

address Group address It is necessary to change the group address as marked with \* when an In case of group control over refrigerant systems, automatic address setting is...

[Page 85](#) 4-3-2 Setting for 1 by 1 system 4-3-2 (1) Address re-setup POINT 1 When controlling the super-digital inverter and the digital inverter, the adaptor named "1:1 model" connection interface (TCB-PCNT30TLE) is necessary. 1. Cabling connection of control wiring Attach an adaptor per 1 group in group control operation (including individual control). Connect the adaptor to the header indoor unit in the group control.

[Page 86](#) POINT 2 After automatic address setup, it is necessary to change the line address from the wired remote controller for each system. (Manual re-setup) Reason : After automatic address setup, all the line addresses become "1" except a group control and then a duplicated address error "E08"...

[Page 87](#) POINT 3 When the central control is performed for indoor units of twin control in a group control, it may be required to change the group address. (Adapter is attached to the header indoor unit.) Reason : The central control device communicates with individual indoor unit, header indoor unit of the group control, and header indoor unit of twin control.

[Page 88](#) Case 1 (In case that the indoor unit in which the fan is turned on and the unit with the adapter are same) As the central control is available, push button. (Setup is determined.) When pushing the button, the display disappears and the status returns to the normal stop status. (The operation on the remote controller is not accepted for approx.

[Page 89](#) 4-3-2 (2) Indoor address change example 1 In case of central control up to 29 refrigerant systems (including No. of VRF systems) POINT 1) Change the line address for each refrigerant system. Central control device Refrigerant system Outdoor Outdoor Outdoor Outdoor Outdoor Outdoor...

[Page 90](#) 2 In case of central control over 30 refrigerant systems (including No. of VRF systems if any) \* Change operation is same to the above 1 up to 29th refrigerant system. POINT 1) Set all the line addresses to 30 for all indoor units attached with the adapter. POINT 2) Change the indoor address so that the indoor unit address numbers are not duplicated.

[Page 91](#) 4-4 Address setting for Control System devices 4-4-1 address setting flow CAUTION Before setting for TCS-NET air conditioning system, be sure to complete address setting and trial operation of each air conditioning system. (Address setting --- Line/Group/indoor unit address, central control address if central controller exists Trial operation --- Test operation should be performed in each refrigerant system one by one.) Setting flow Contents...

[Page 92](#) 4-4-2 Setting for Intelligent server Installing CF (Compact Flash) card Insert the attached CF (Compact Flash) card fully into the CF (Compact Flash) card slot on the side of the Intelligent Server. Intelligent Server Software Intelligent Server (BMS-STCC01E) (BMS-LSV2E) CF (Compact Flash) card CF (Compact Flash) card slot REQUIREMENT •...

[Page 93](#) 4-4-3 Setting for TCS-NET relay interface The following settings are necessary to use TCS-NET Relay Interfaces. • SW1 TCS-NET Relay Interface address set switch When two or more TCS-NET Relay Interfaces are used, set a different address for SW1 to avoid address duplication.

[Page 94](#) 4-4-4 Setting for Energy monitoring relay interface Address set switch 1 - 4 Address 1 2 3 4 0,5 - F Not used Operating mode set switch (0 usually) Test switch (all OFF usually) Test switch Reset switch LED1 Power indicator LED2 RS-485 communication status indicator LED3...

[Page 95](#) 4-4-5 Setting for Digital I/O relay interface Address set switch 1 - 4 Address 0,5 - F Not used 1 2 3 4 Operating mode set switch (0 usually) Test switch (all OFF usually) Test switch Reset switch LED1 Power indicator LED2 RS-485 communication status indicator LED3...

## [Page 97: Trial Operation](#)

TRIAL OPERATION 5-1 Trial operation 5-2 Air conditioning control system troubleshooting 5-2-1 Faults of air conditioner 5-2-2 Faults of air conditioning control system...

[Page 98](#) 5-1 Trial operation Item Description Check point ● Meeting with the customer on setting information Preparation Preparation of necessary documents Creation of control wiring system diagram Creation of air conditioner address table Creation of schedule table for each

R.C. group/indoor ●...

[Page 99](#) Trial Operation Check list...

[Page 100](#) Trial Operation Check list (Example)

[Page 101](#) 5-2 Air conditioning control system troubleshooting <Regarding faults that may occur after installation, trial operation, and adjustments of Air conditioning control system and their remedies> 5-2-1 Faults of air conditioner • The Touch Screen Controller displays an error code and description that are the same as those displayed on the remote controller.

### [Page 102: Other Faults](#)

Other faults Description Possible causes Remedy Nothing is displayed on Touch Screen Controller is not powered on. Power on the Touch Screen Controller. the Touch Screen Backlight turns off automatically due to no Touch the Touch Screen Controller screen. touch-screen operation for 10 minutes. Controller screen.

This manual is also suitable for:

[Bms-tp0640pweBms-tp5120aceBms-tp5120pwe](#)