

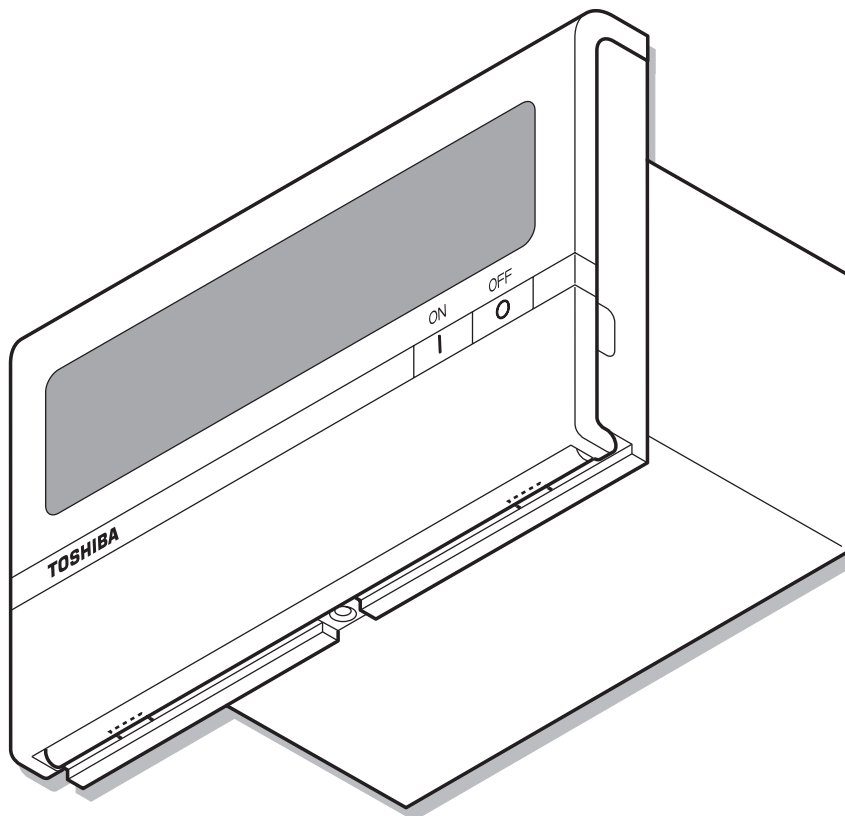
TOSHIBA

COMPLIANT MANAGER Installation Manual

Model name:

BMS-CM1280TLE

BMS-CM1280FTLE



-
- Save These Instructions!
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ENGLISH

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1 PRECAUTIONS FOR SAFETY

After the installation work, perform a trial operation to check for any problem. Explain how to use and maintain the unit to the customer. Ask the customer to keep this Installation Manual.

WARNING

- **Ask an authorized dealer or qualified installation professional to install or reinstall the Compliant Manager.**
Improper installation may result in electric shock or fire.
- **Turn off the main power supply switch or breaker before attempting any electrical work.**
Make sure all power switches are off. Failure to do so may cause electric shock.
- **Perform installation work properly according to this Installation Manual.**
Improper installation may result in electric shock or fire.
- **Do not modify the unit.**
Any modification may cause a malfunction, resulting in overheating or fire.

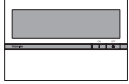




CAUTION

- **Do not install the unit at a place subject to leakage of flammable gas.**
If flammable gas leaks and remains around the unit, it may catch fire.
- **Perform wiring correctly in accordance with the specified current capacity.**
Failure to do so may result in short-circuiting, overheating, or fire.
- **Connect the specified cables for the terminals securely to prevent external forces from affecting them.**
Failure to do so may result in disconnection, overheating, or fire.
- **Make sure that the ground connection has been properly made.**
Improper grounding may result in electric shock. Ask your dealer or an installation professional about how to check the ground connection.
- **Do not install the unit at a humid place or a place subject to vibration.**
High humidity or vibration may cause a failure of the unit.
- **Do not expose the unit to direct sunlight or a heat source.**
This may cause a failure of the unit.
- **Do not install the unit at a place where noise is generated.**
This may cause a malfunction of the unit.

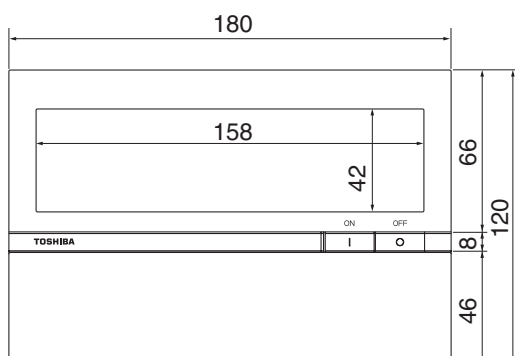
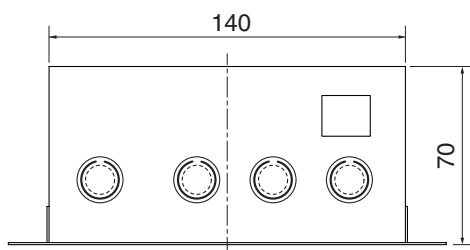
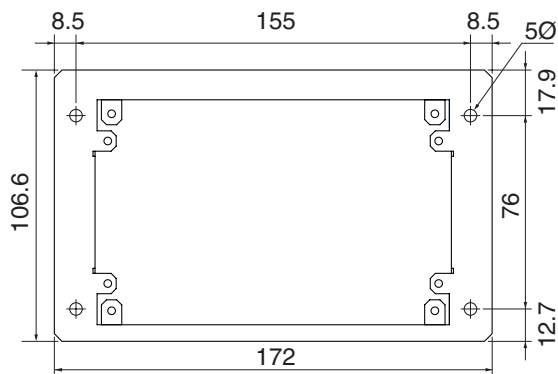
REQUIREMENT

- **Disconnect the appliance from the main power supply.**
This appliance must be connected to the main power supply by a circuit breaker or switch with a contact separation of at least 3mm.

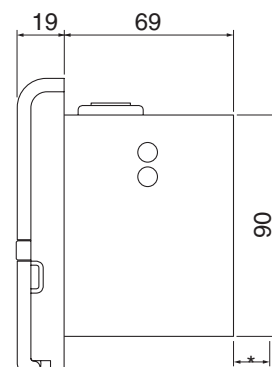
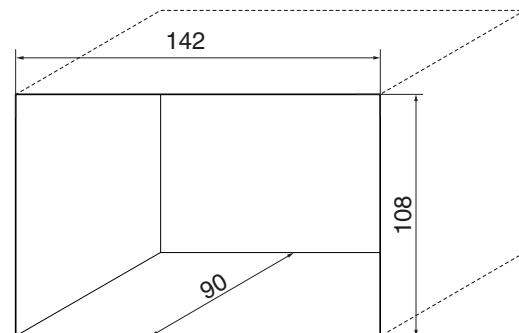
2 PACKAGED ITEMS OF COMPLIANT MANAGER

Part name	Image	Quantity	Remarks
Compliant Manager		1	
Manual		1	Owner's Manual
		1	Installation Manual
		1	Network Setting Manual * Packaged for BMS-CM1280FTLE only
CD-R		1	* Packaged for BMS-CM1280FTLE only
Clamp filter		2	BMS-CM1280TLE
		4	BMS-CM1280FTLE
Tie-wraps		2	BMS-CM1280TLE
		4	BMS-CM1280FTLE

External Dimensions



Dimensions of unit fixing holes in the wall, etc.

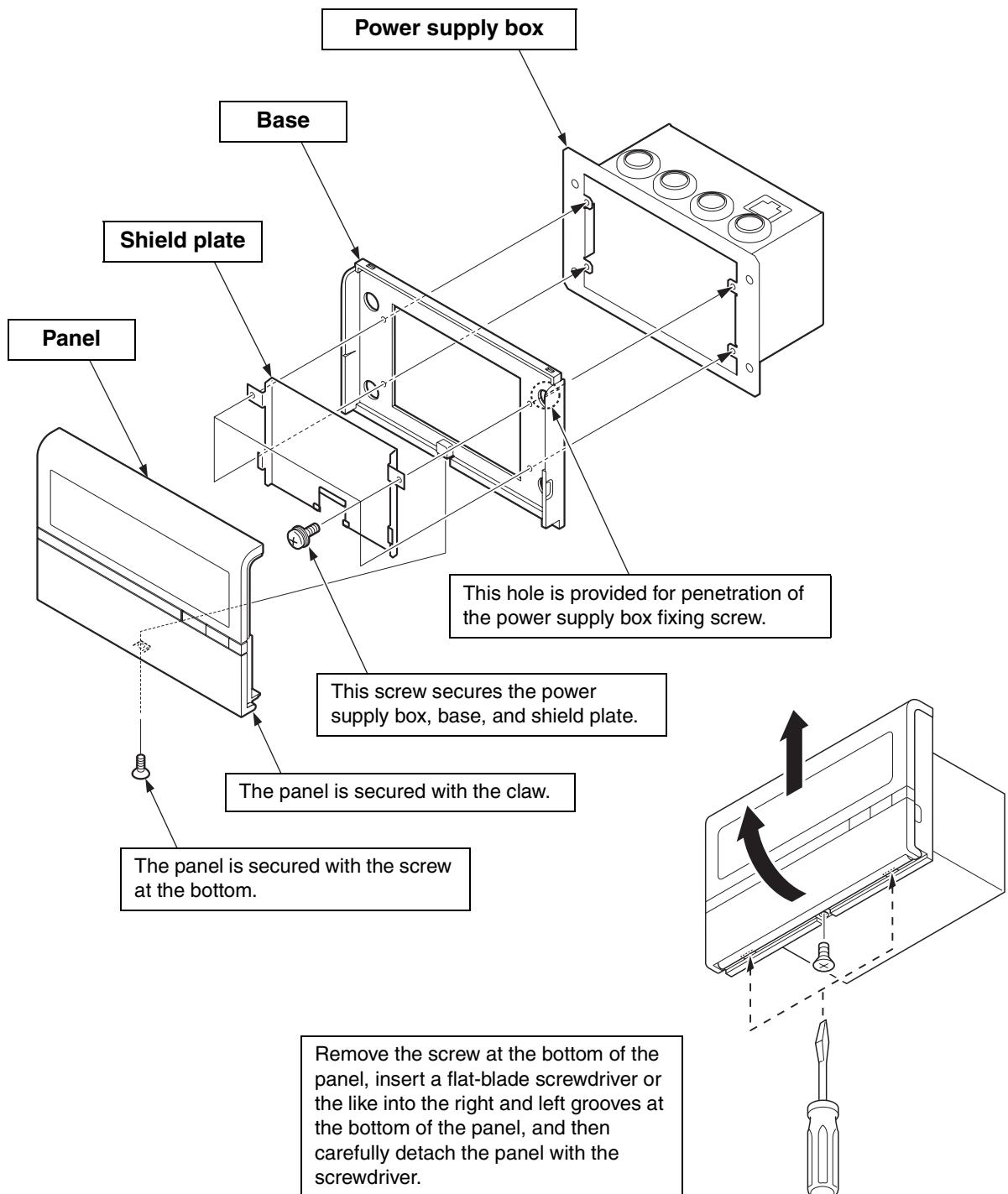


* Reserve space of 10mm or more when installing the unit.

3 INSTALLATION OF THE COMPLIANT MANAGER

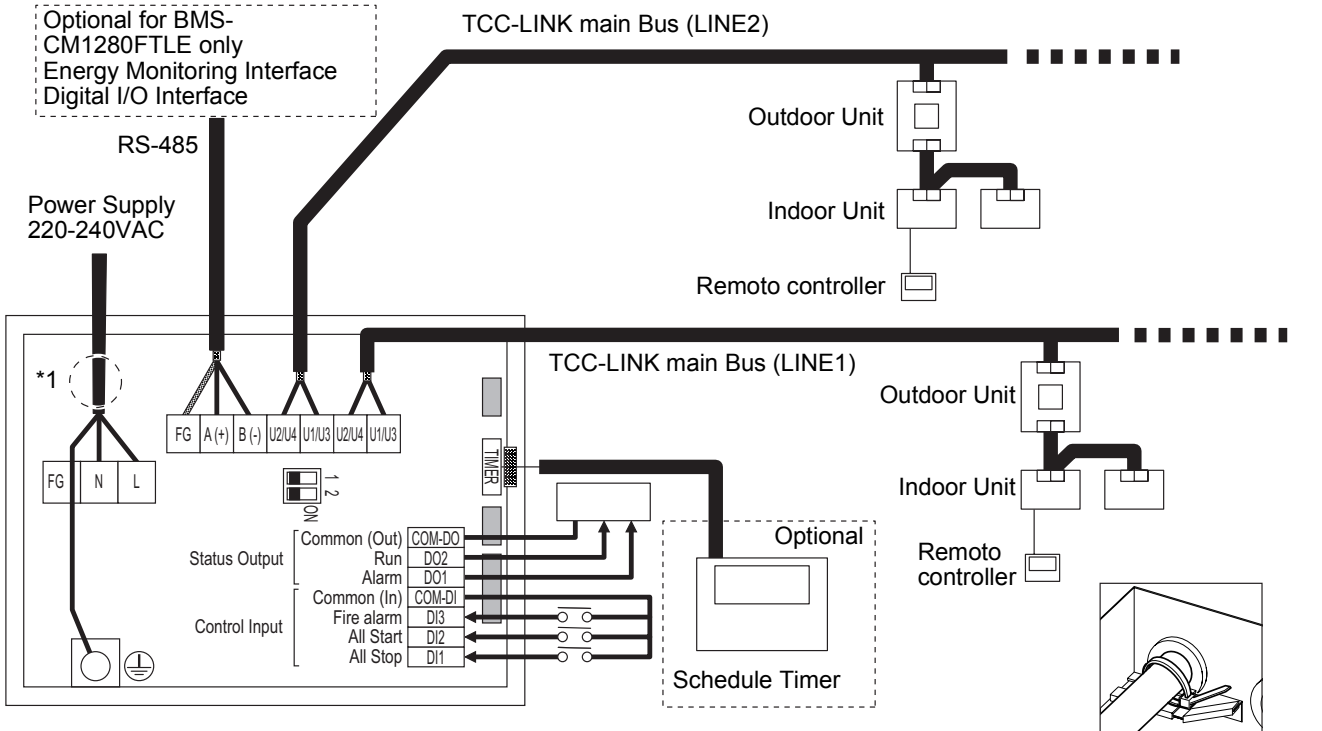
⚠ CAUTION

- Do not twist communication wires (used between indoor unit and outdoor unit and used for central control) and input/output wires with power wires or bundle them together with power wires in a metal tube. Doing so may cause malfunction.
- Install the Compliant Manager away from a noise source.
- When noise is induced into the power supply of the Compliant Manager, take proper measures such as attaching of a noise filter.



4 CONNECTION OF POWER CABLES/SIGNAL WIRES/EARTH WIRES

Connect power cables, signal wires, and earth wires to the specified terminals on the terminal block.

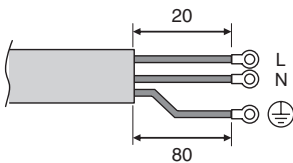


*1 Secure the power cable with the clamp in the case.

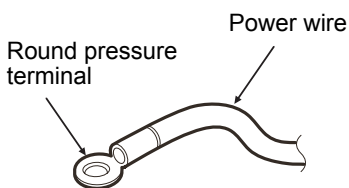
NOTE

- TCC-LINK does not have polarity.
- RS-485 has a polarity. Connect A(+) to A(+) and connect B(-) to B(-).
- For TCC-LINK, connect the shield wire to the ground on the air conditioner side (single-point grounding).
- For RS-485, connect the shield wire to the ground on the Compliant Manager side (single-point grounding).

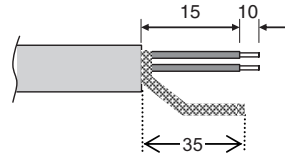
Length of stripped power cable



Attach a round pressure terminal to the end of each wire of the power cable.

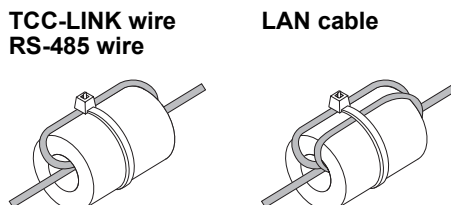


Length of stripped TCC-LINK and RS-485 communication wire

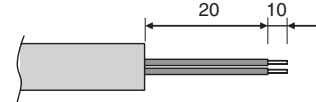


Be sure to attach the supplied clamp filter to the communication wire.

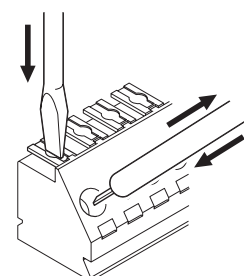
* When attaching the clamp filter, be sure to pass the communication wire twice through the clamp filter as shown below. Then fasten the communication wire with the supplied cable tie-wrap.



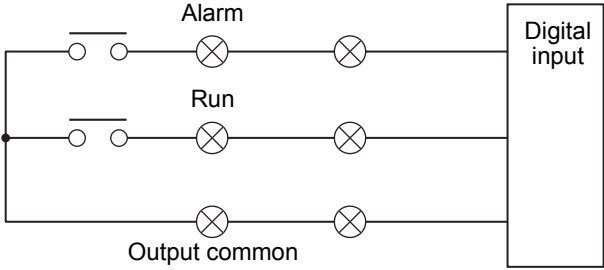
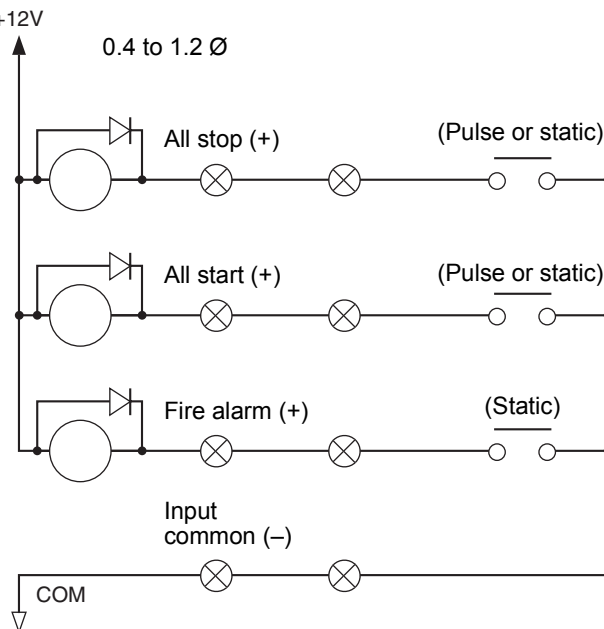
Length of stripped digital Input/Output communication wire



Remove and insert the wire while pressing the upper button with a screwdriver.



<Connections to External Equipment>

Designation	Input/Output item	Compliant Manager side		External equipment side		
		Input/output conditions	Terminal name	Demarcation terminal	Example of circuit	Input/output conditions
Digital input/output terminals	Status output	Alarm output Run output Non-voltage "A" contacts Static (Relay output) Allowable contact voltage/current 30 VDC, 0.3 A	0.4 to 1.2 Ø Alarm Run Output common			Wiring length: 100 m or less
	Control input	All stop input All start input Fire alarm input Voltage-applied "A" contacts All stop: Pulse or static All start: Pulse or static Fire alarm: Static (Photocoupler input) * Select non-voltage contacts that allow minute current (12V, 1mA)	+12V 0.4 to 1.2 Ø All stop (+) All start (+) Fire alarm (+) Input common (-) COM			Pulse width: 300 ms or more Wiring length: 100 m or less

*Wire the cable so that the user should not touch the electricity port directly.

<Specifications for Wiring>

Use the following materials to connect signal lines and power lines (procured on site)

No	Line	Description	
1	For TCC-LINK	Type	2-core shield wire
		Wire size	1.25mm ² , 1000m max. (total length including 2.00mm ² , 2000m max. air conditioner area)
		Length	
2	For RS-485	Type	2-core shield wire
		Wire size	1.25mm ² , 500m max. (total length)
		Length	
3	For Power	Type	H07 RN-F or 245IEC66 0.75mm ² , 50m max.
		Wire size	
		Length	
4	For Digital Input/Output connection	Type	227IEC75 (2-wire) 0.5mm ² , 100m max.
		Wire size	
		Length	

5 MODE SETTING FOR THE CONTROLLER

■ Operation mode

Use SW1-<6> for the operation mode setting.

OFF side: Central control mode

This Compliant Manager is used as a central control unit.

Settings with the remote controller are inhibited by the setting of the Compliant Manager.

ON side: Remote control mode

This Compliant Manager is used as a remote controller.

Settings with the Compliant Manager are inhibited by the setting of another central control unit.

■ Control group selection

Either simultaneous mode or an arbitrary range of a line and 16 groups (1 to 16, 17 to 32, 33 to 48, and 49 to 64) can be selectively set.

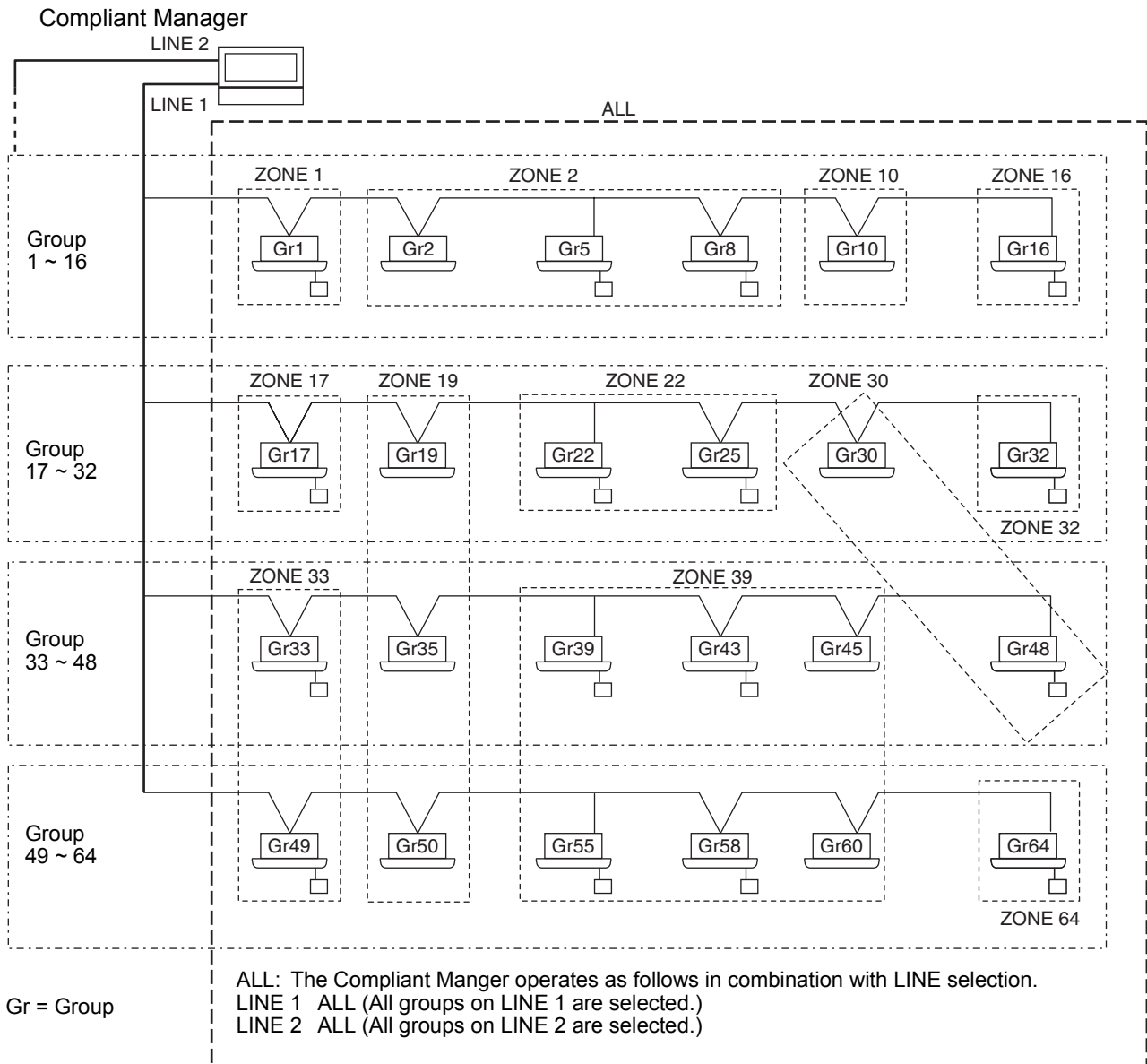
		DIP-SW1				DIP-SW2	
		<2>	<3>	<4>	<5>	<5>	<6>
All groups		OFF	OFF	OFF	OFF	OFF	OFF
LINE 1	Group 1 to 16	ON	OFF	OFF	OFF	OFF	ON
	Group 17 to 32	OFF	ON	OFF	OFF	OFF	ON
	Group 33 to 48	OFF	OFF	ON	OFF	OFF	ON
	Group 49 to 64	OFF	OFF	OFF	ON	OFF	ON
LINE 2	Group 1 to 16	ON	OFF	OFF	OFF	ON	ON
	Group 17 to 32	OFF	ON	OFF	OFF	ON	ON
	Group 33 to 48	OFF	OFF	ON	OFF	ON	ON
	Group 49 to 64	OFF	OFF	OFF	ON	ON	ON
Example: When setting LINE 1 (group 1 to 32) in the control group selection		ON	ON	OFF	OFF	OFF	ON

* When the control group selection is used, only the set group range is displayed.

* The control group selection is available only for one line.

<System Configuration of the Compliant Manger>

- Each line consists of up to 64 zones and 64 groups (up to 128 zones and 128 groups in total).
- Each group number is a central control address. (Effective values 1 to 64 and 99 are unset values.)
- Default setting when shipped: One group is assigned to one zone (zone number = group number)
- Groups that can be registered in each zone must meet the following conditions.
 1. Groups are connected to the same line.
 2. Groups are in the same group number range when the control group selection is used.

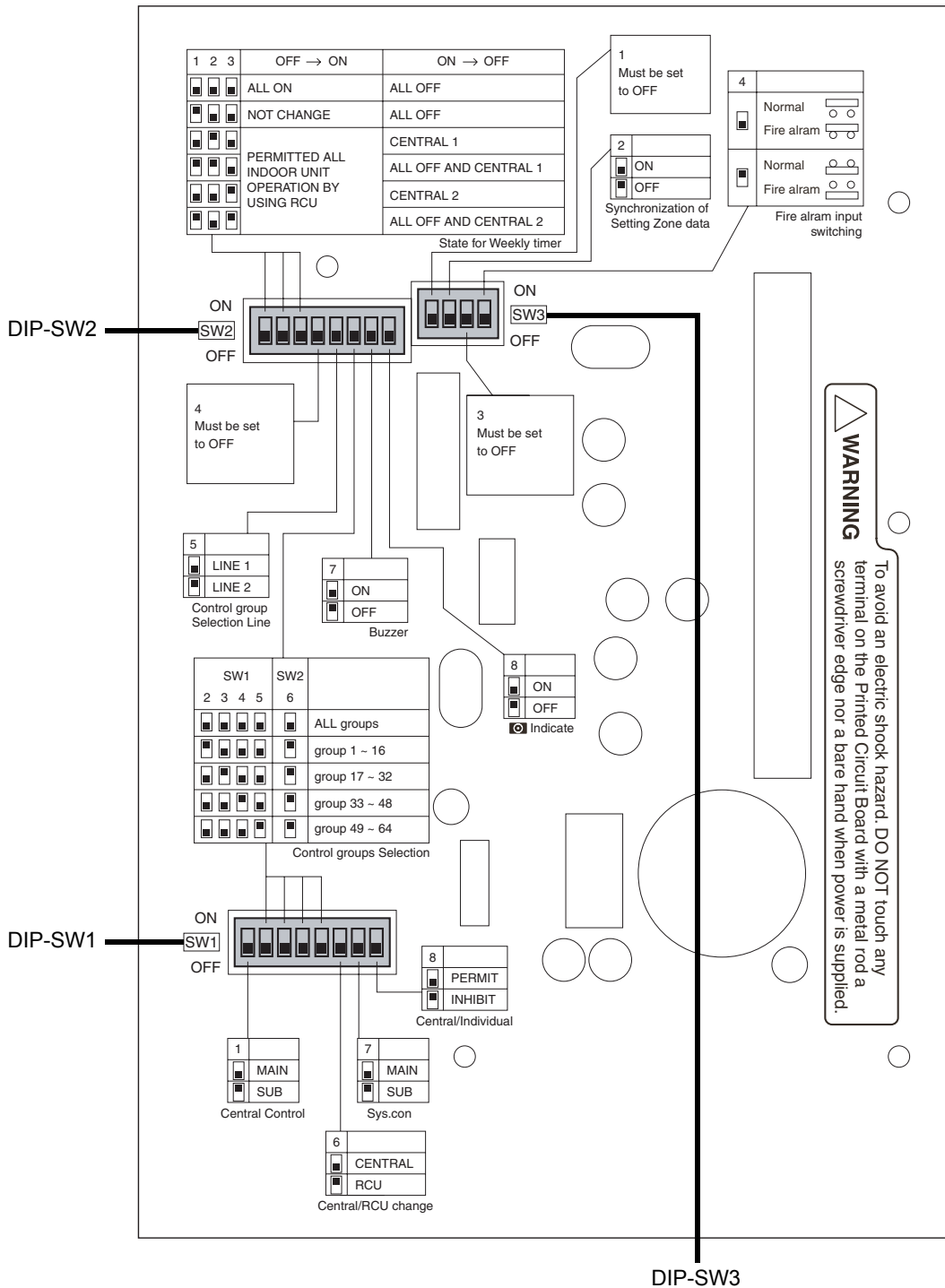


- * When the control group selection is not used ("ALL group"), all groups and zones on LINE 1 and LINE 2 can be controlled.
- * When the control group selection is used, only groups and zones in the set group range can be controlled.
 - When the control group selection is used, groups and zones outside this range are not displayed and cannot be operated.
 - **ALL** means the entire set group range.
 - Zones can be registered and operated only within the set group range. (No groups outside the range can be registered or operated.)
 - The group control mode is available only for one line.
- * Multiple group ranges can be specified by the control group setting.

(Example) When groups 33 to 48 and groups 49 to 64 are specified at the same time, a group range (groups 33 to 64) is set by the control group setting.

6 SWITCHES FOR SETTING

The settings switch is installed on the rear of the Compliant Manager.



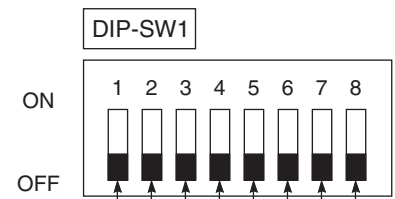
<DIP-SW1>

Factory setting: All OFF

<1> Compliant Manager main/sub selection
 OFF: Main
 ON: Sub

Normally, this bit is set to OFF.

When two Compliant Manager units are used as a main unit and a sub unit with the same mode setting, set this bit to OFF (Main) for one unit and to ON (Sub) for the other unit.



<2> to <5> Control group selection

Control group selection	SW2-<6>	SW1
All groups	OFF	-
Group 1 ~ 16	ON	<2> ON
Group 17 ~ 32	ON	<3> ON
Group 33 ~ 48	ON	<4> ON
Group 49 ~ 64	ON	<5> ON

These bits specify a group range used in the control group selection. The Compliant Manager for which control group selection is set controls only groups within the set group range.

* To use the control group selection, set SW1-<2> to <5> and SW2-<5> to <6>.

<6> Central control/remote controller mode selection
 OFF: Central control mode
 ON: Remote controller mode

Central control mode: Individual setting by remote controller can be inhibited by Compliant Manager.
 Remote controller mode: Setting by Compliant Manager is inhibited by other centra control equipments.

<7> Central control Main/Sub selection
 OFF: Main
 ON: Sub

This setting is required when multiple Compliant Manager units are used or another central control unit is used.

(1) Set this bit to OFF when one Compliant Manager unit is used.
 (2) When multiple central control units are used as a main unit and sub units, set to OFF (Main) for one unit and set to ON (Sub) for other units.

* It is recommended that the "All groups" (control group selection setting) be set for the central control main unit.

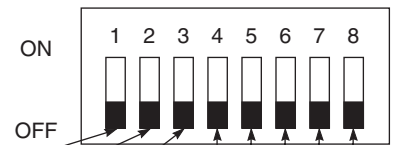
<8> Central button enable/disable
 OFF: button operation is permitted
 ON: button operation is inhibited

* The button is disabled in the remote controller mode regardless of this setting.

<DIP-SW2>

Factory setting: All OFF

DIP-SW2



<1> to <3> Timer input switching

These bits switch operation when the schedule timer has changed.

- Use (1) and (2) only in the remote control mode.
- When the control group selection is used, “All ON,” “All OFF” and “all indoor units” mean those within the set group range.

Central controller operation		Switch No.			
		<1>	<2>	<3>	
	Timer OFF → ON	Timer ON → OFF			
(1)	All ON	All OFF	OFF	OFF	OFF
(2)	No change	All OFF	ON	OFF	OFF
(3)	Individual control of all indoor units to be permitted	All indoor units CENTRAL 1	OFF	ON	OFF
(4)	Ditto	All OFF and all indoor units to be CENTRAL 1	ON	ON	OFF
(5)	Ditto	All indoor units CENTRAL 2	OFF	OFF	ON
(6)	Ditto	All OFF and all indoor units to be CENTRAL 2	ON	OFF	ON

<4> Always OFF
Always set this bit to OFF.


<5> Control group Selection line
OFF: LINE 1
ON: LINE 2

* Set a line number for which the control group selection is used.

<6> Control group selection enable
OFF: Normal mode
ON: Control group selection

Set this bit to ON when the control group selection is used.
* To use the control group selection, set SW1-<2> to <5> and SW2-<5> to <6>. For details, see the table on the previous page.

<7> Buzzer
OFF: With buzzer sound
ON: Without buzzer sound

<8>  indication
OFF: Displayed
ON: Not displayed

<DIP-SW3>

Factory setting: All OFF

DIP-SW3

<1> Always OFF
 • Always set this bit to OFF.

<2> Synchronization of Setting Zone data
 OFF: With transfer
 ON: Without transfer
 This bit specifies whether to perform synchronous communication of Setting Zone data between Compliant Managers.
 * When this bit is set to ON (without transfer), synchronous communication is not performed, and when zone setting is made, the data is not reflected in other Compliant Managers.

<3> Always OFF
 • Always set this bit to OFF.

<4> Fire alarm input switching

- OFF: CLOSE: Fire alarm (OPEN: Normal)

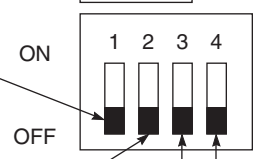
COM-DI ————○ ○———
 D13 ————
 (Normal)

COM-DI ————○ ○———
 D13 ————
 (Fire alarm)

- ON: OPEN: Fire alarm (CLOSE: Normal)

COM-DI ————○ ○———
 D13 ————
 (Normal)

COM-DI ————○ ○———
 D13 ————
 (Fire alarm)



7 CENTRAL CONTROL ADDRESS (GROUP NUMBER) SETTING

- Central control addresses must be assigned to all air conditioners to be controlled.
- Under the control of the Compliant Manager, central control address equals group number.

For address setting when connecting a TCC-LINK adapter to the central control system, refer to this manual and the TCC-LINK adapter installation manual.

<Preparations for central control address (group number) setting>

- Turn on the power of all air conditioners.
- This Compliant Manager or a standard wired remote controller is necessary for setting central control addresses.
- Terminate the operation of air conditioners, and then set central control addresses.
- * To set central control addresses with the Compliant Manager, initial communication with all connected indoor and outdoor units must have been completed. Therefore, wait at least 10 minutes after power-on, and then start central control address setting.

NOTE

If the address setting is made before the initial communication is completed, an address is not assigned to some units.

- Connect terminals U1 and U2 in the outdoor unit (Header unit) to the relay connector of terminals U3 and U4.
- Set SW30-2 on the interface P.C. board of the outdoor unit (Header unit) to ON only for one system, and to OFF for others.
- * The location of SW30 is shown in the wiring diagram supplied with the outdoor unit.








<Setting central control addresses (group numbers)>

Use “manual setting from wired remote controller,” “manual setting,” or “automatic setting” to set central control addresses.

A Manual setting from wired remote controller














Set central control addresses (group numbers) from a standard wired remote controller.

* The following setting procedure is described based on button operations of the wired remote controller RBC-AMT32E or RBC-AMT31E.

- (1) Press the  button and  button simultaneously for at least 4 seconds.
(Note: Do not press the  button during setting.)
- (2) Press the  button to change the CODE No. 03.
- (3) Set central control addresses (group numbers) with the  buttons.
 - Group numbers used for the Compliant Manager are central control addresses (DN item 03).
 - The effective address range is 1 to 64. However, there must be no duplicate address on the same line.
 - An address value of 99 is used as an unset address.
- (4) Press the  button to fix the setting.
- (5) Press the  button to exit the address setting mode.
 - * This setting procedure may vary depending on the wired remote controller model.
 - * Perform these steps while air conditioners are not working.

B Manual setting







Set central control addresses (group numbers) manually from the Compliant Manager.

- (1) Press the  button and ZONE  button simultaneously for at least 4 seconds. (CODE No. C1 flashes.)
- (2) Check CODE No. C1, and then press the  button.
- (3) Select the line on which the unit exists and the zone and group in which addresses are to be registered with the LINE button, ZONE  and  buttons, and GROUP  and  buttons.
 - When a zone is selected, group numbers registered in the zone are displayed.
 - Groups whose numbers are displayed are already registered.
 - Even when addresses have been registered, the registration can be cancelled with the  button.
- (4) Select the unit to be registered in the group selected in step (3).
 - Switch refrigeration system No.1 to 31 with the  button, and then switch indoor unit No.1 to 64 with the  button.
 - When no system exists, indoor unit number is displayed as “- -”.
 - System number 31 is for a local adapter and heat exchange ventilators. An indoor unit number is always displayed regardless of whether the unit exists or not.
- (5) Press the  button to register the setting or press the  button to cancel the setting.
- (6) To continue registration, repeat steps (3) to (5).
- (7) Press the  button to terminate the address setting.

C Automatic setting

Set central control addresses automatically from the Compliant Manager.

(Central control addresses are set automatically in ascending order of unit number.)






- (1) Press the  button and ZONE  button simultaneously for at least 4 seconds. (CODE No. C1 flashes.)
- (2) Press the SET TEMP.  or  button to change the CODE No. to C2.
- (3) Press the  button. (Central control addresses are automatically registered. This registration requires several minutes. **SETTING** lights during this address setting.)
- (4) **SETTING** goes out and the indication of C2 flashes, which shows completion of the automatic address registration.
- (5) Press the  button to exit the address setting mode.

<Checking duplicate central control address>

NOTE








This function is not available for light commercial air conditioners.

For details, refer to the manual of the TCC-LINK adapter.

- (1) Press the  button and ZONE  button simultaneously for at least 4 seconds. (CODE No. C1 flashes.)
- (2) Press the SET TEMP.  or  button to change the CODE No. C3.
- (3) Press the  button to start checking a duplicate central control address error. (**SETTING** lights during this check.)
- (4) When **SETTING** goes out, the check has been completed.
 - * When nothing appears in the group number display area at the end of checking, no duplicate address error has been detected.
 - * When a group number in the group number display area flashes at the end of checking, a duplicate address error has been detected. (Correct the duplicate address.)

<Correcting duplicate address>




Correct the duplicate address detected through the check using the following procedure.

- (1) When the duplicate address check has been completed, select CODE No. C1 with the SET TEMP.  or  button.
- (2) Press the  button.
- (3) The number of group in which the error has been detected flashes.
Select the flashing group number to be corrected with the GROUP  or  button.
- (4) Press the  button to clear the set incorrect central control address.
After that, set a correct central control address.
- (5) Press the  button to terminate the duplicate address correction.




8 ZONE SETTING

Register groups in a zone or cancel them.

(1) Change the mode to the zone setting mode.










- Press the  button,  button, and ZONE  button simultaneously for at least 4 seconds.
(The displayed zone number flashes and the Compliant Manager enters the zone setting mode. Indicates CODE No. "E1".)

(2) Select the zone to be set.



- Select the zone number to be set with the ZONE  or  button, and then press the  button to fix the selection.
(When the selection has been fixed, the selected zone number flashes.)
- When selection of zone has been fixed, the [] marks of the group numbers registered in the zone light up.

(3) Change registration of groups in a zone.

Register groups in a zone.

1. Select the group number to be set with the GROUP  or  button. Pressing the SET TEMP.  or  button skips the group number by +16 or by -16.
2. Press the  button.
The [] marks of the registered group numbers light up. ( []  → [])
3. Pressing the  button restores the state before the  button is pressed.
4. To continue registration of groups, repeat this procedure from the beginning.

NOTE

No zone data has been stored at this time. If the ZONE  or  button is pressed before the registration change is fixed, the set content for registration change is discarded.

(4) Fix the registration change.

Press the  button. The set content for registration change is stored in the memory.

- * After the memory write operation has been completed, the Compliant Manager exits the zone setting mode.

9 CHANGING RETURN-BACK TIME/ TEMPERATURE SETTINGS

Return-back time and return-back temperature (CODE No. settings) can be changed using the following procedure.

NOTE




Do not change the data of CODE No. 0A and the following item codes to prevent the remote controller from malfunctioning.

CODE No.	Item	Data	
		Factory setting	Setting range
01	Return-back Enable/Disable	001 (Enabled)	000 (Disabled), 001 (Enabled)
02	Return-back 1 Time, Heating	030 (30 minutes)	1 to 60 minutes (in units of 1 minute)
03	Return-back 1 Time, Cooling	030 (30 minutes)	1 to 60 minutes (in units of 1 minute)
04	Return-back 1 Temp., Heating	018 (18°C)	18 to 29°C (in units of 1°C)
05	Return-back 1 Temp., Cooling	028 (28°C)	18 to 29°C (in units of 1°C)
06	Return-back 2 Time, Heating	030 (30 minutes)	1 to 60 minutes (in units of 1 minute)
07	Return-back 2 Time, Cooling	030 (30 minutes)	1 to 60 minutes (in units of 1 minute)
08	Return-back 2 Temp., Heating	018 (18°C)	18 to 29°C (in units of 1°C)
09	Return-back 2 Temp., Cooling	028 (28°C)	18 to 29°C (in units of 1°C)

Changing settings



The following shows an example of changing the time (factory setting) in the case of return-back 1 heating from 30 minutes to 45 minutes.

(1) Change the mode to the CODE No. setting change mode.

Press the , , and ZONE  buttons simultaneously for at least 4 seconds.


(**SETTING** and CODE No. flash.)

(2) Set the data of the CODE No..

1. Change the CODE No. to "02" with the SET TEMP.  or  button.

2. Change the set data to "045" with the GROUP  or  button.

(**SETTING** and CODE No. are still flashing.)


3. Press the  button to determine the data. **SETTING** and CODE No. change to lighting.

4. To continuously change other settings, repeat steps 1 to 3 above.

NOTE

At this time, the entered data of the selected CODE No. has not been saved yet.

(3) Determine the change.

Press the  button to write the updated data in the memory of the remote controller.

* When the data has completely been written in the memory, the CODE No. setting change mode is exited.

LINE 1

ZONE	GROUP	Indoor unit No.	Installation place	ZONE	GROUP	Indoor unit No.	Installation place
	1				33		
	2				34		
	3				35		
	4				36		
	5				37		
	6				38		
	7				39		
	8				40		
	9				41		
	10				42		
	11				43		
	12				44		
	13				45		
	14				46		
	15				47		
	16				48		
	17				49		
	18				50		
	19				51		
	20				52		
	21				53		
	22				54		
	23				55		
	24				56		
	25				57		
	26				58		
	27				59		
	28				60		
	29				61		
	30				62		
	31				63		
	32				64		

LINE 2





ZONE	GROUP	Indoor unit No.	Installation place	ZONE	GROUP	Indoor unit No.	Installation place
	1				33		
	2				34		
	3				35		
	4				36		
	5				37		
	6				38		
	7				39		
	8				40		
	9				41		
	10				42		
	11				43		
	12				44		
	13				45		
	14				46		
	15				47		
	16				48		
	17				49		
	18				50		
	19				51		
	20				52		
	21				53		
	22				54		
	23				55		
	24				56		
	25				57		
	26				58		
	27				59		
	28				60		
	29				61		
	30				62		
	31				63		
	32				64		

10 TEST RUN

<Conducting a Test Run for the Compliant Manager>

- A test run is necessary to confirm that the Compliant Manager has recognized air conditioner units after the central control address setting.
 - (1) Turn on the power of all connected air conditioners.
 - (2) Turn on the power of the Compliant Manager.
 - (3) Make sure that the number of air conditioners connected to each line (only main units when group control is performed) equals the group number count displayed on the Compliant Manager.
 - (4) When these numbers are identical, there is no problem.
If they differ, set central control addresses again according to “Central Control Address (Group Number) Setting.” Also make sure that there is no incorrect wiring.

<Conducting a Test Run for Air Conditioners>

- (1) Press the  button for at least 4 seconds. (The “TEST” indication lights in the test run mode.)
- (2) Press the  button and  button. (Temperature cannot be set during a test run.)
- (3) When the test run is completed, press the  button to exit the test run mode.

11 SPECIFICATIONS

Model	BMS-CM1280TLE	BMS-CM1280FTLE
Power supply	220-240 VAC 50/60Hz	
Power consumption	3W	5W
Number of connectable indoor units (TCC-LINK)	128 Units (LINE1 64 Units, LINE2 64 Units)	
Energy Monitoring Relay Interface (RS-485)	4 Units (max.)	
Digital Input/Output Relay Interface (RS-485)	4 Units (max.)	
Operating temperature	0 to 40°C to 90%RH	
Dimensions	-20 to +60°C (no condensation)	
Mass	120 (H) × 180 (W) × 88 (D)	
Weight	1.1Kg	1.2Kg



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