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INSTALLATION MANUAL

V-NET

- Please read this installation manual completely before installing the product.
- Installation work must be performed in accordance with the national wiring standards by authorized personnel only.
- Please retain this installation manual for future reference after reading it thoroughly.

TYPE : Dry contact for communication
Model : PQDSBCGCD0

P/NO : MFL42540218

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TABLE OF CONTENTS

Safety Precautions

To prevent injury to the user or other people and property damage, the following instructions must be followed.

■ Incorrect operation due to ignoring instruction will cause harm or damage. The seriousness is classified by the following indications.

⚠WARNING	This symbol indicates the possibility of death or serious injury.
⚠CAUTION	This symbol indicates the possibility of injury or damage.

■ Meanings of symbols used in this manual are as shown below.

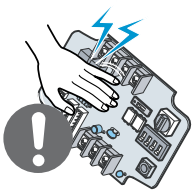
⃠	**Be sure not to do.**
❗	**Be sure to follow the instruction.**

⚠WARNING

■ During installation

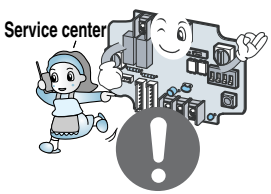
Do not touch the board when the power is connected.

• It can cause a fire, electric shock, explosion, injury and problem to the product.



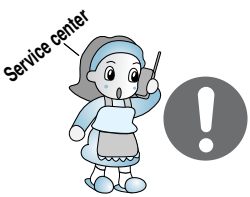
Always request for installation of the product to the service center or the installation service provider.

• It can cause a fire, electric shock, explosion and injury.



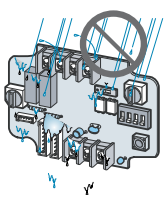
When reinstalling the previously installed product, request for service to the service center or the installation service provider.

• It can cause a fire, electric shock, explosion and injury.



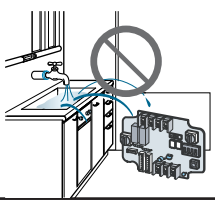
Do not install the product where it can be exposed to rain.

• It can cause problems to the product.



Do not install the product in a humid location.

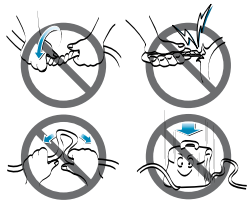
• It can cause problems to the product.



■ During use

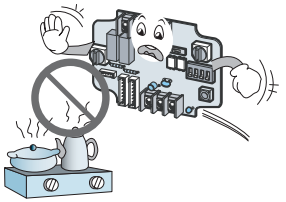
Do not modify or extend the power cord.

• It can cause a fire and electric shock.



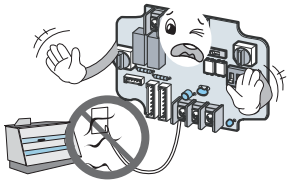
Do not use any flaming devices near the product.

• It can cause a fire.



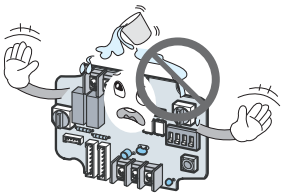
Do not use any heating devices near the power cord.

• It can cause a fire and electric shock.



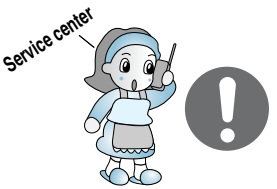
Do not pour water inside the product.

• It can cause an electric shock and problem to the product.



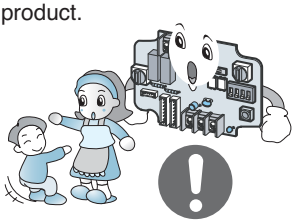
When the product is submersed in water, always request for service to the service center or the installation service provider.

• It can cause a fire and electric shock.



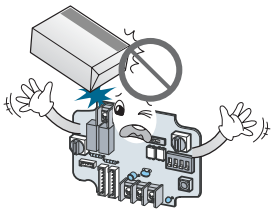
Make the children and the elderly use the product with the help of a guardian.

• It can cause a safety accident and problems to the product.

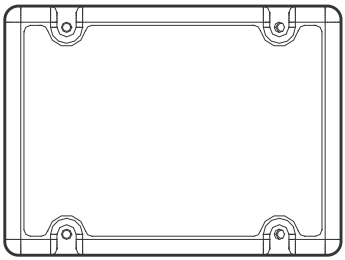


Do not give impact to the product.

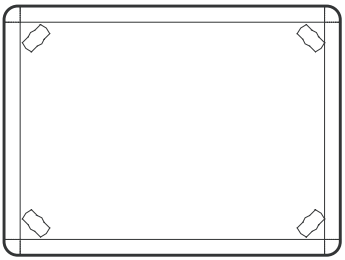
• It can cause problems to the product.



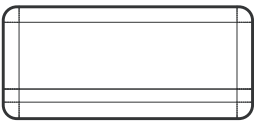
Name of each part



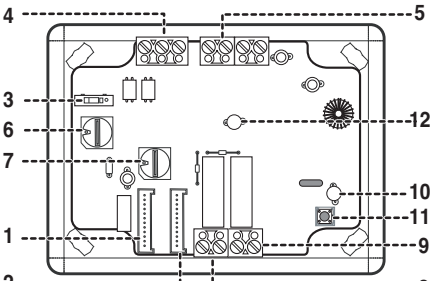
(Front case)



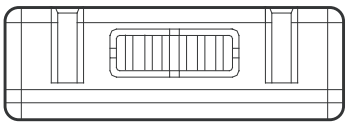
(Rear case)



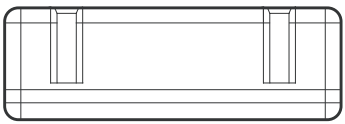
(Top)



(Internal PCB board)



(Side)



(Side)

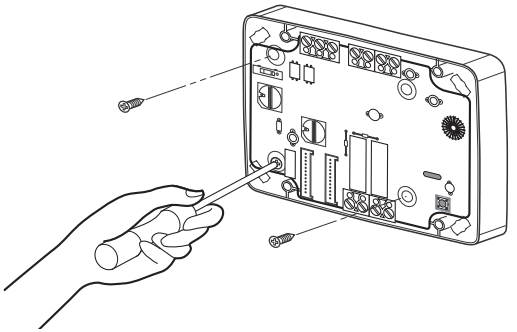
DRY CONTACT FOR COMMUNICATION

1. CN_INDOOR	: Connector for indoor unit
2. CN_PI485	: PI485 connector
3. CHANGEOVER_SW	: Switch to select External Voltage or Non Voltage for input contact signal
4. CN_CONTROL	: Contact point signal input
5. CN_COM	: Signal input for communication
6. CONTROLMODE_SW	: Switch to select the control mode
7. TEMP_SW	: Switch to set the desired temperature or indoor unit address
8. CN_OUT(O1,O2)	: Output terminal to show whether the indoor unit is operating (Relay contact)
9. CN_OUT(E1,E2)	: Output terminal to show whether there is an error with the indoor unit (Relay contact)
10. LED_DISPLAY	: LED to display the status of Dry contact
11. RESET_SW	: Reset switch
12. LED_485	: LED to display the status of communication

Installation Method

Installation inside of the indoor unit

① Loose 3 screws anchoring PCB and then separate PCB from the rear case



② Connect the connection wires according to the instructions. (Please refer to Setting and Using Method)

③ Perform the switch setting according to switch setting method. (Please refer to Setting and Using Method)

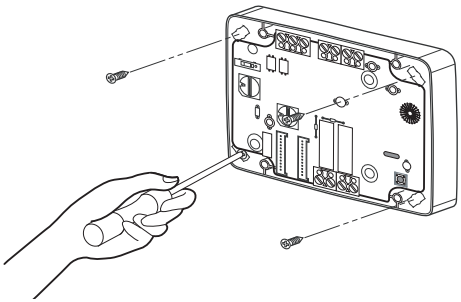
④ Fix PCB on suitable space inside of the indoor unit.

⚠ CAUTION

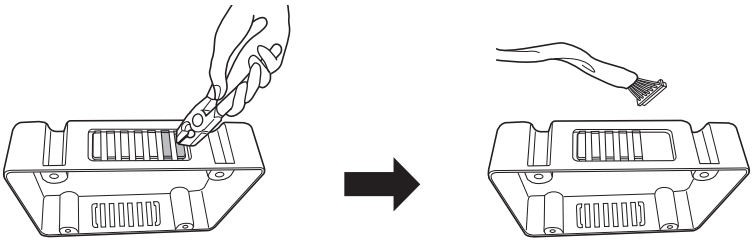
1. Install the product on flat surface and screw at least 2 places. Otherwise the Dry contact may not be anchored properly.
2. Do not screw too tightly. It may cause deformation of the case.
3. Do not deform the case at random. It may cause malfunction of the Dry contact.

Installation outside of the indoor unit

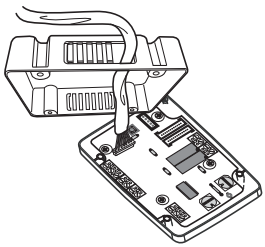
① Screw the rear case on the installation surface using screws.



② Please cut the pole which is located in side of the front case properly.

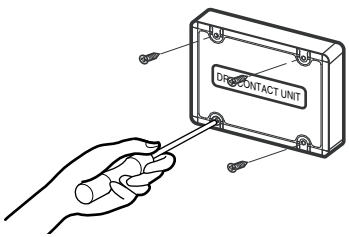


③ Connect connection wires according to the instructions.
(Reference to Setting and Using Method)
Then, connect wire to PCB after going through hole of ②.



④ Perform the switch setting according to switch setting method. (Reference to Setting and Using Method)

⑤ Join the front case and the rear case, anchor the front case at holes using anchor screws.



⚠ CAUTION

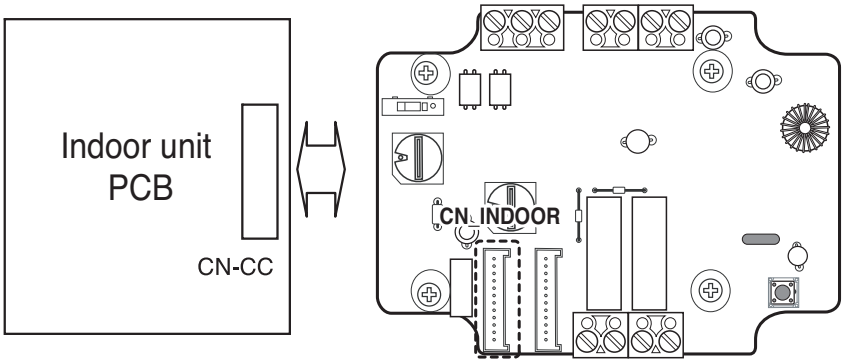
1. Install the product on flat surface and screw at least 2 places. Otherwise the Dry contact may not be anchored properly.
2. Do not screw too tightly. It may cause deformation of the case.
3. Do not deform the case at random. It may cause malfunction of the Dry contact.

Setting and using method

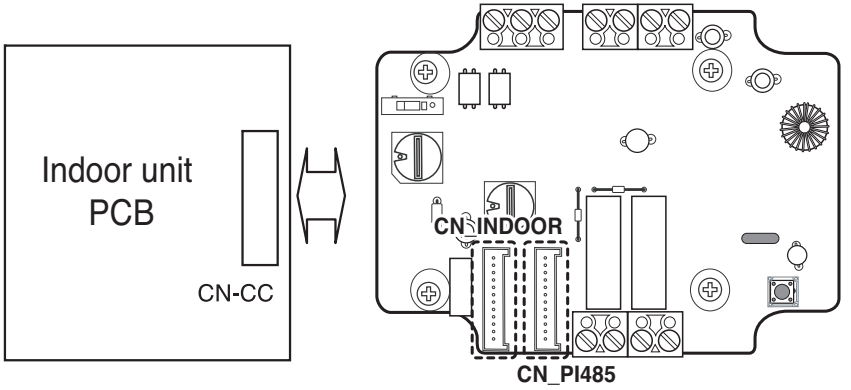
After change any Dry contact setting, then you must press RESET switch to reflect the setting.

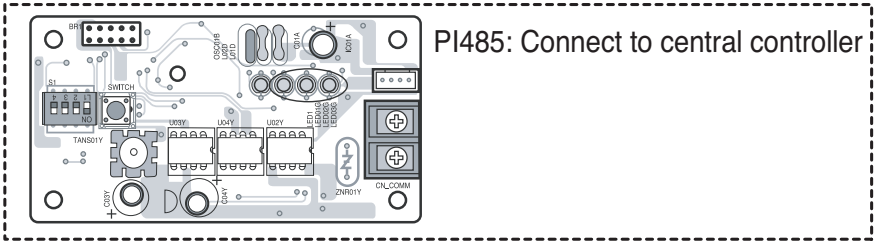
1. Power supply and indoor unit connection

■ When using the Dry contact for communication independently



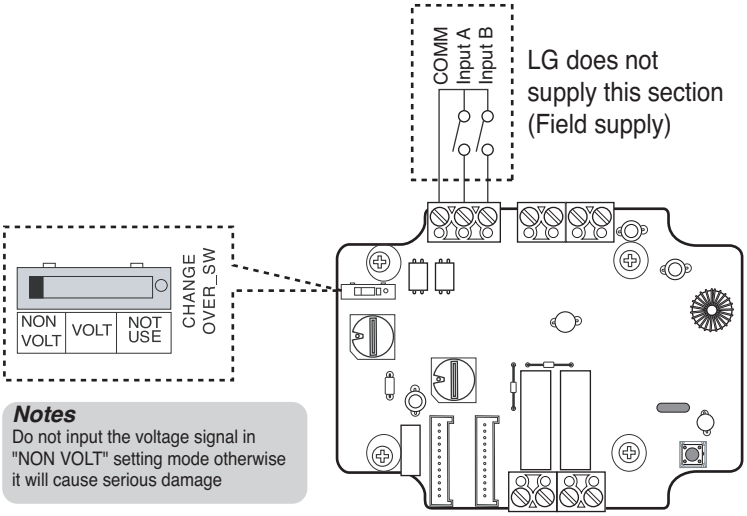
■ When using with the central controller (Only when the indoor unit PCB is a non-communication model)





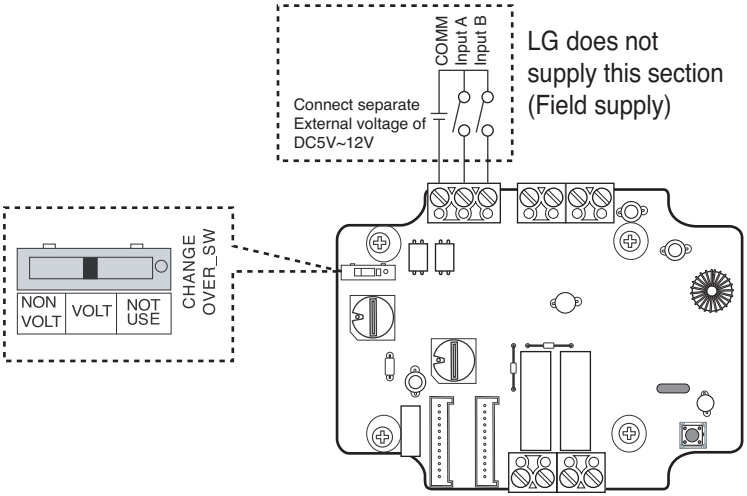
2. Setting of input signal

■ When using contact signal input without external power

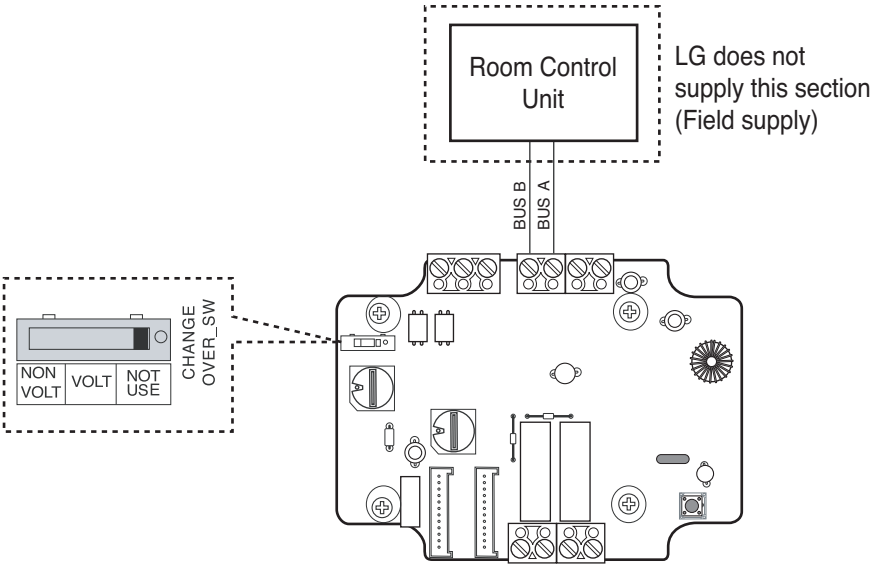


Notes
Do not input the voltage signal in "NON VOLT" setting mode otherwise it will cause serious damage

■ When using contact signal input with external power



■ When using communication signal input



3. Setting of 'TEMP_SW'

■ When setting the desired temperature of the Dry contact

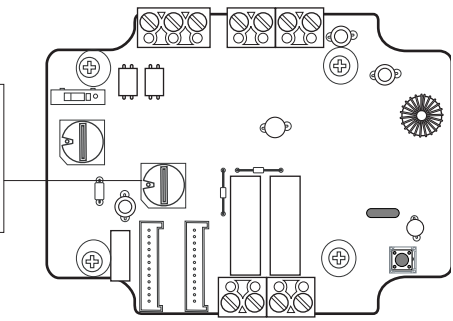
: When operating the indoor unit, set the desired temperature according to the TEMP_SW setting.
When the indoor unit is unlocked, the desired temperature can be reset by other controller

- Use the TEMP_SW to set the temperature as shown below

TEMP (°C)	Not use Dry Contact module's Desired temp function	18	19	20	21	22
'TEMP SW' setting	0	1	2	3	4	5

TEMP (°C)	23	24	25	26	27	28	29	30
'TEMP SW' setting	6	7	8	9	A	B	C	D

*. E, F : Reserved



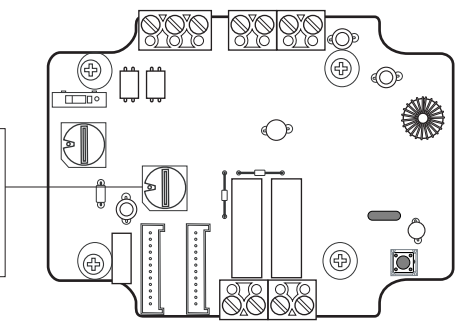
■ When setting Dry contact address for using with RCU

- When operating with Room Control Unit, Temp_SW is used for setting Dry contact address

- Use the TEMP_SW to set the address as shown below

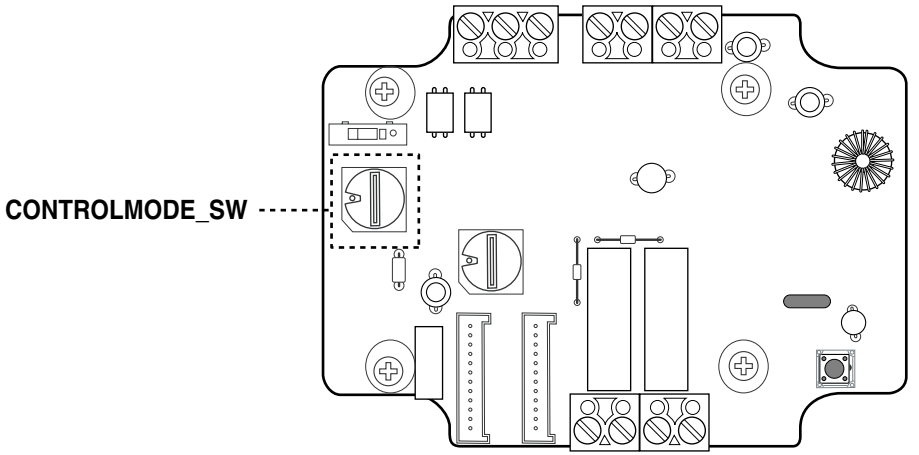
Address	00	01	02	03	04	05	06	07
TEMP SW setting	0	1	2	3	4	5	6	7

Address	08	09	0A	0B	0C	0D	0E	0F
TEMP SW setting	8	9	A	B	C	D	E	F



4. Setting of 'CONTROLMODE_SW'

■ Use the CONTROLMODE_SW to set a control mode for contact signal input



Notes

- Indoor unit control priority
  Central control > Dry contact > Wired/Wireless remote controller, indoor unit button
- Dry contact controls the indoor unit according to the applicable mode when there is a change in input of A and B.

1) Cancel mode for use of dry contact

CONTROL_ MODE S/W	Input A	Input B	Operating mode
0	OFF	OFF	The indoor unit cannot be controlled through the Dry contact No change in indoor unit condition
	ON	OFF	
	OFF	ON	
	ON	ON	

Notes

- Set this when the Dry contact is connected but not used.

2) General mode

CONTROL_ MODE S/W	Input A	Input B	Operating mode
1	OFF	OFF	Indoor unit stopped, locked
	ON	OFF	Indoor unit prior operating condition maintained, unlocked
	OFF	ON	Indoor unit stopped, locked
	ON	ON	Indoor unit stopped, locked
2	OFF	OFF	Indoor unit stopped, locked
	ON	OFF	Indoor unit operating, unlocked
	OFF	ON	Indoor unit stopped, locked
	ON	ON	Indoor unit stopped, locked
3	OFF	OFF	Indoor unit stopped, locked
	ON	OFF	Indoor unit stopped, locked
	OFF	ON	Indoor unit prior operating condition maintained, unlocked
	ON	ON	Indoor unit operating, unlocked
4	OFF	OFF	Indoor unit stopped, locked
	ON	OFF	Indoor unit stopped, locked
	OFF	ON	Indoor unit prior operating condition maintained, unlocked
	ON	ON	Indoor unit prior operating condition maintained, unlocked
5	OFF	OFF	Indoor unit prior operating condition maintained, locked
	ON	OFF	Indoor unit prior operating condition maintained, locked
	OFF	ON	Indoor unit prior operating condition maintained, locked
	ON	ON	Indoor unit prior operating condition maintained, unlocked
6	OFF	OFF	Indoor unit prior operating condition maintained, locked
	ON	OFF	Indoor unit prior operating condition maintained, locked
	OFF	ON	Indoor unit prior operating condition maintained, locked
	ON	ON	Indoor unit operating, unlocked

3) Fan level setting mode

CONTROL_ MODE S/W	Input A	Input B	Operating mode
7	OFF	OFF	Indoor unit operating at low level, locked
	ON	OFF	Indoor unit operating at low level, unlocked
	OFF	ON	Indoor unit stopped, locked
	ON	ON	Indoor unit stopped, locked
8	OFF	OFF	Indoor unit operating at low level, locked
	ON	OFF	Indoor unit operating at low level, unlocked
	OFF	ON	Indoor unit stopped, locked
	ON	ON	Indoor unit prior operating condition maintained, unlocked

Notes

• When the indoor unit is operating in Dry contact, the fan level can be changed by other controller when the fan level is set to low level and the indoor unit is in unlocked condition.

4) Power save mode

CONTROL_ MODE S/W	Input A	Input B	Operating mode
9	OFF	OFF	Indoor unit operating in power save mode, locked
	ON	OFF	Indoor unit operating in power save mode, unlocked
	OFF	ON	Indoor unit stopped, locked
	ON	ON	Indoor unit operating not in power save mode, unlocked
A	OFF	OFF	Indoor unit operating in power save mode, locked
	ON	OFF	Indoor unit operating in power save mode, unlocked
	OFF	ON	Indoor unit stopped, locked
	ON	ON	Indoor unit stopped, locked

Notes

• When setting 9, A mode, the TEMP_SW must be set as 1 ~D.

• Power save mode: Adjust the set temperature to +3°C for cooling and -3°C for heating.

5) Compressor stop mode

CONTROL_ MODE S/W	Input A	Input B	Operating mode
B	OFF	OFF	Indoor unit operating (Compressor in stop mode), locked
	ON	OFF	Indoor unit prior operating condition maintained (Compressor not in stop mode), unlocked
	OFF	ON	Indoor unit stopped, locked
	ON	ON	Indoor unit stopped, locked

Notes

• Compressor stop mode: The compressor is stopped during cool/heat operation.

6) Operating mode selection mode

CONTROL_ MODE S/W	Input A	Input B	Operating mode
C	OFF	OFF	Indoor unit stopped, unlocked
	ON	OFF	Indoor unit in cool/high operation, unlocked
	OFF	ON	Indoor unit in heat/high operation, unlocked
	ON	ON	Indoor unit in fan/high operation, unlocked
D	OFF	OFF	Indoor unit stopped, locked
	ON	OFF	Indoor unit in cool/high operation, locked
	OFF	ON	Indoor unit in heat/high operation, locked
	ON	ON	Indoor unit in fan/high operation, locked

Notes

Under C,D mode

• Basically, the setting temperature is 18°C at cooling mode, 30°C at heating mode.

• When using TEMP_SW (1~D), the Dry contact makes reference to a value of the TEMP_SW.

■ Use the CONTROLMODE_SW to set a control mode for communication signal input

CONTROL_ MODE S/W	Input A	Input B	Operating mode
E	OFF	OFF	The Dry contact ignores a contact signal Only operates by communication signal input from RCU
	ON	OFF	
	OFF	ON	
	ON	ON	

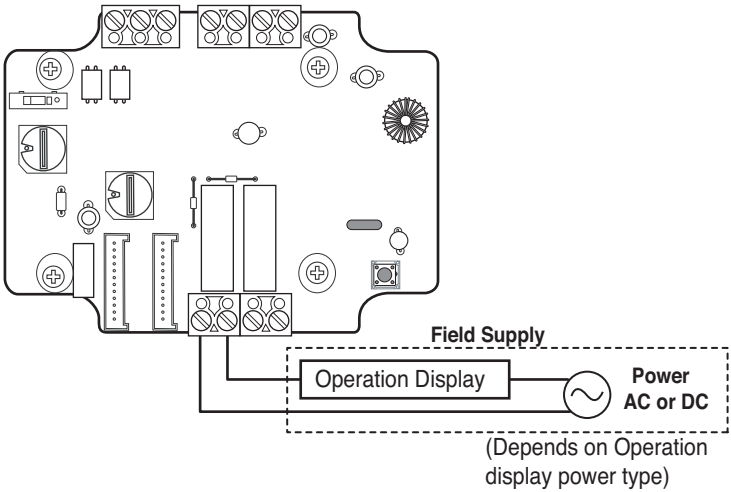
Notes

Once the Dry contact has been set E mode,

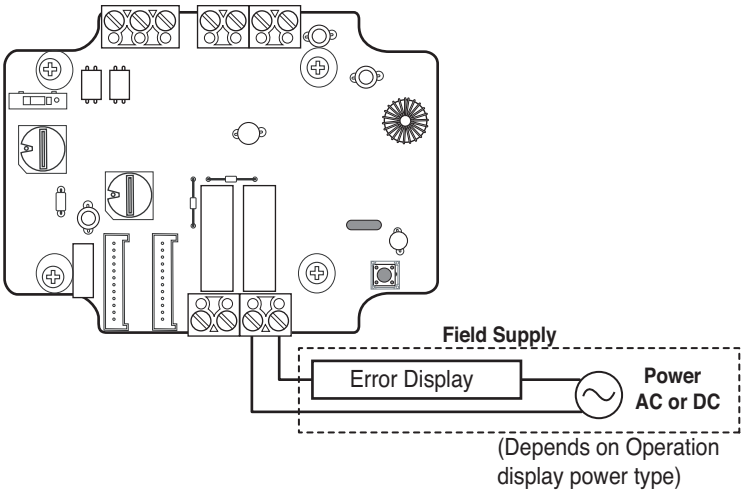
- TEMP_SW is used to set the address of Dry contact (00~0F).
- The Operation & Error output Display is disabled

5. Indoor unit monitoring

■ Monitoring whether the indoor unit is operating: Refer to below and connect to the control device that you want to control.



■ Monitoring indoor unit error: Refer to below and connect to the control device that you want to control.



Notes

When using the Dry contact for communication with Room Control Unit
Operation & Error Display will be disabled.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