

Central Control Adaptor Installation Instructions

1 Important notice

Please read the Important Notice in these Installation Instructions supplied with the product, and perform installation in accordance with these instructions properly.

The central control adaptor is a dedicated device that can be directly connected with the indoor unit for converting communication protocols and connects the indoor unit to central control network.

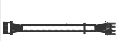
Precautions for arrangement:

1. The design and installation of the central control adaptor should be performed under the unified planning for central control system. The installation location of the central adaptor, electrical distribution and wiring, address assignment, connection with Modbus monitor and indoor unit should be planned in advance.
2. Cables for central control and distribution lines shall not be too close to each other or routed in the same conduit. RS-485 bus should be arranged as far away from interference sources as possible, especially high voltage interference sources, such as transformer and frequency converter. For other relevant precautions, see the requirements for wiring of building automation system.
3. The equipment on either end of the group control bus must be provided with terminal-matched resistor.
4. The central control line must be configured as a daisy-chain bus topology. If a star-type or tree topology is required, it is recommended to use RS-485 hub and RS-485 repeater.
5. The central control adaptor should be installed close to the electronic control adaptor of the indoor unit.
6. The baud rate of the adaptor must be set the same with Modbus/ BACnet monitor.

7. The addresses for the central control adaptor should not be repeated.
8. The maximum allowable length of the connecting cable between the indoor unit and the central control adaptor is 40m, and the maximum allowable length of RS485 control cable is 1000m.

2 Checking accessories

Check and confirm that in addition to the central control adaptor product the following accessories are included in the packaging box.

Installation instructions	Connecting cable to IDU	Connecting cable to wired controller for Group Control Function	Clamp	Double-sided tape
				
Qty.: 1	Qty.: 1	Qty.: 1	Qty.: 2	Qty.: 1

3 How to install

1. Selecting the location where the appliance is to be installed.

Please install it in the ceiling and close to the electrical control adaptor of indoor unit.

2. Wiring connection

- ① Connection with indoor unit by connecting cable. As shown in Fig.1.

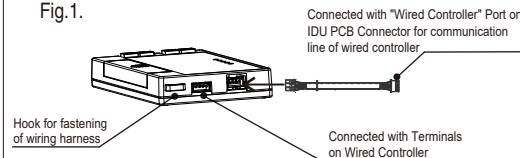


Fig. 1 Connection with indoor unit by connecting cable

- ② Connection of central control communication line, as shown in Fig. 2.

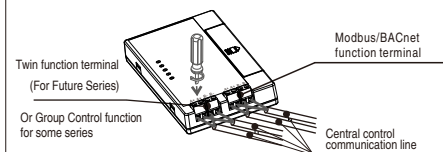


Fig. 2 Connection of central control communication line

	Type	Minimum specifications
Central control communication line	Shielded twisted pairs	Cross-sectional area: $2 \times 0.75\text{mm}^2$

Notes:

1. The above requirement for wiring is the minimum;
2. The central control communication line should be provided by users;
3. Correct polarity of the cable should be ensured during connection;
4. The cable should be reliably secured after connection is completed.

3. Setting of DIP switches

Please set DIP switches according to the actual conditions. Settings after power on will not take effect.

Methods for setting DIP switches:

Before setting, slide down the cover on the central control adaptor. After setting, reinstall the cover to adaptor. As shown in Fig.3.

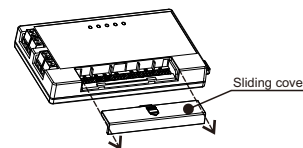
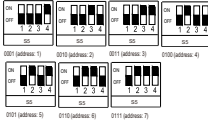


Fig. 3 Methods for setting DIP switches

System	DSW	Description	Setting method
Group Control	S1-1 S1-2	Indoor unit setting (For hardware)	00: Slave unit (connected to central control adapter): S1-1OFF+S1-2OFF 11: Master unit (connected to wired controller): S1-1ON+S1-2ON
	S1-3	Setting for terminal resistor	Central control adapter with the longest wiring length: S1-3 ON
	S1-4	Setting when fuse is fail to work	Set S1-4 ON if the fuse of the electronic board of the adapter has blown, to restore the communication with the device
	S4-1	Setting for specific products	Set the switch to "ON" when using the Group Control Function
	S4-2	Indoor unit setting (For software)	Slave unit (connected to central control adapter): S1-1 OFF + S1-2 OFF => S4-2 OFF (0) Master unit (connected to wired controller): S1-1 ON + S1-2 ON => S4-2 ON (1)
Group Control	S5	Setting for indoor units addresses	Address setting for secondary (slave) indoor units, range of addresses: 1-7. 



System	DSW	Description	Setting method																																																																																																																																																																																																																																									
Centralized Control System	S2-1	Setting for terminal resistor	Be sure to set the position of the switch on either end of the central control system to "ON".																																																																																																																																																																																																																																									
	S2-2	Setting when fuse is fail to work	Set S2-2 ON if the fuse of the electronic board of the adapter has blown, to restore the communication with the device.																																																																																																																																																																																																																																									
	S3	Setting of baud rate	S3-1 OFF + S3-2 OFF : 9600 bps S3-1 OFF + S3-2 ON: 19200 bps S3-1 ON + S3-2 ON: 38400 bps																																																																																																																																																																																																																																									
	S4-3	Protocol selection	S4-3 OFF + S4-4 OFF: no BMS protocol activated (default setting)																																																																																																																																																																																																																																									
	S4-4		S4-3 OFF + S4-4 ON: BACnet protocol activated S4-3 ON + S4-4 OFF: Modbus protocol activated																																																																																																																																																																																																																																									
	S6 S7	Setting of BACnet/ModBus addresses	S6: for setting high addresses (reserve); S7: for setting low addresses. Range of addresses: 1~64. <table><tr><th>Address</th><th colspan="4">S6</th><th colspan="4">S7</th></tr><tr><th></th><th>1</th><th>2</th><th>3</th><th>4</th><th>1</th><th>2</th><th>3</th><th>4</th></tr><tr><td>1</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>2</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>3</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td></tr><tr><td>4</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>5</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td></tr><tr><td>6</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>7</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td></tr><tr><td>8</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>9</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>10</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>11</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>1</td></tr><tr><td>12</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>13</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>14</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td></tr><tr><td>15</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td></tr><tr><td>16</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>0</td><td>0</td></tr><tr><td>17</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>18</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>19</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>20</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>21</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>22</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>23</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr><tr><td>24</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td></tr></table>	Address	S6				S7					1	2	3	4	1	2	3	4	1	0	0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	1	4	0	0	0	0	0	0	1	0	5	0	0	0	0	0	0	1	0	6	0	0	0	0	0	1	0	0	7	0	0	0	0	0	0	1	1	8	0	0	0	0	0	1	0	0	9	0	0	0	0	0	1	0	0	10	0	0	0	0	0	1	0	1	11	0	0	0	0	0	1	0	1	12	0	0	0	0	0	1	1	0	13	0	0	0	0	0	1	1	0	14	0	0	0	0	0	1	1	0	15	0	0	0	0	0	1	1	1	16	0	0	0	0	0	1	0	0	17	0	0	0	0	0	0	0	0	18	0	0	0	0	0	0	0	0	19	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0
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1) 0 = OFF; 1 = ON

2) S7 Setting for Addr. 17-31 are same with 1-15

3) S7 Setting for Addr. 33-63 are same with 1-15

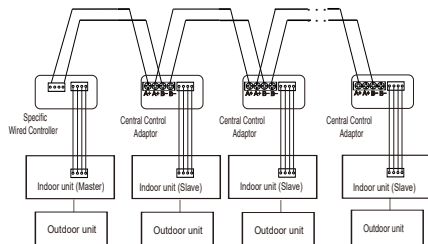
Note: When the centralized control system is not used, set S4-3, S4-4, S6 and S7 off..

3. Securing the adaptor

If necessary, use double-sided tape to secure the central control adaptor onto the indoor unit after installation.

Wiring diagram for Group Control (Available for some Series)

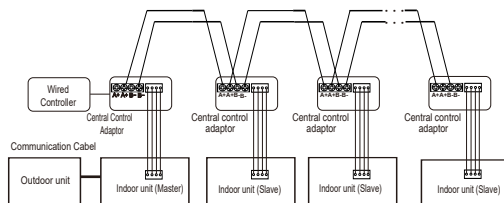
RS485 shielded twisted pairs (with polarity, A+ B-) Max. 8 Indoor Units totally



NOTE: Group Control is not available with BACnet or Modbus at the same time.

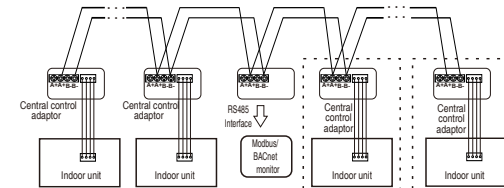
Wiring diagram for Twin System (For future Series)

RS485 shielded twisted pairs (with polarity, A+ B-) Max. 6 Indoor Units totally



Wiring diagram for centralized control system (BACnet/ModBus)

RS485 shielded twisted pairs (with polarity, A+ B-) Max. 64 Indoor Units totally



NOTE:

Be sure to insert the connecting cable into the wired controller port of indoor unit PCB board. If you still have any trouble, please contact local service center of our company for further information.

NOTE:

- 1) The slave indoor address must be incremented form 1.
- 2) When the Twin System is not used, set S4-2 and S5 off.