

ELO Central control system

For all industrial COLDPRO air coolers

Central control system

- Group control is called central control system too. It connected all installed cooler units to the central controller. In our new central system, the units in the system is independent, they are able to work in the different mode
- Compared with the single controller, it's easier to control the big project with multiple units of cooler.

The single control unit



cooler

One unit with one controller. The default wire length is 8m, the recommended is 30m as maximum. The longer, the more problems happen.

+



Controller
B

+



Controller
C

+



Controller
D

+



Controller
E

Controller

The central control system



Central controller



12VDC power adapter



Unit 1



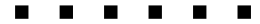
Unit 2



Linker 1



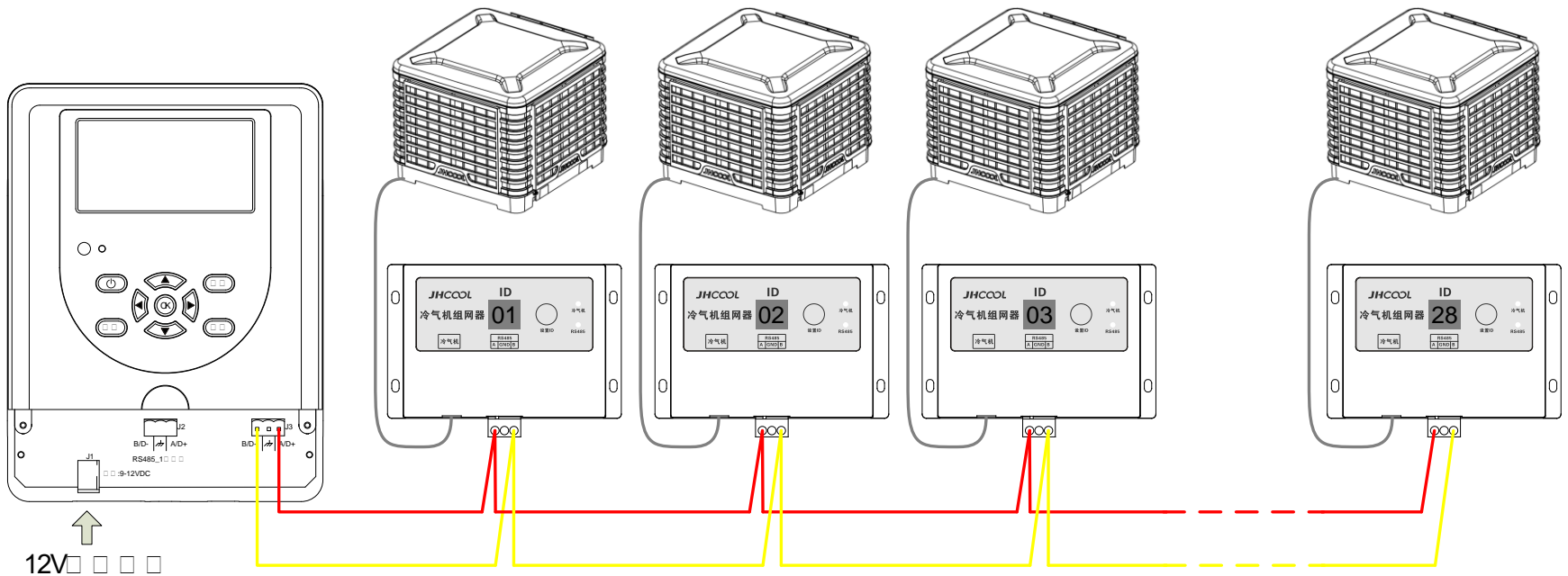
Linker 2



One central control system consist:

1 central controller+112DC adapter+Nlinkers+N units coolers

The central controller installation diagram



Through RS485 bus, the central controller monitor the linkers, and control the cooler units the linkers

RS-485, also known as TIA/EIA-485 or EIA-485, is a standard defining the electrical characteristics of drivers and receivers for use in balanced digital multipoint systems.

The data is transmitted over a Shielded Twisted-Pair **bus**

Central control system

The system controls a maximum of 28pcs cooler units

The maximum of the shielded twisted-pair is 1200m

The wire used as bus: shielded twisted-pair, RVSP2X0.3

The system is compatible all ColdPRO ELO coolers with the controller



Central controller



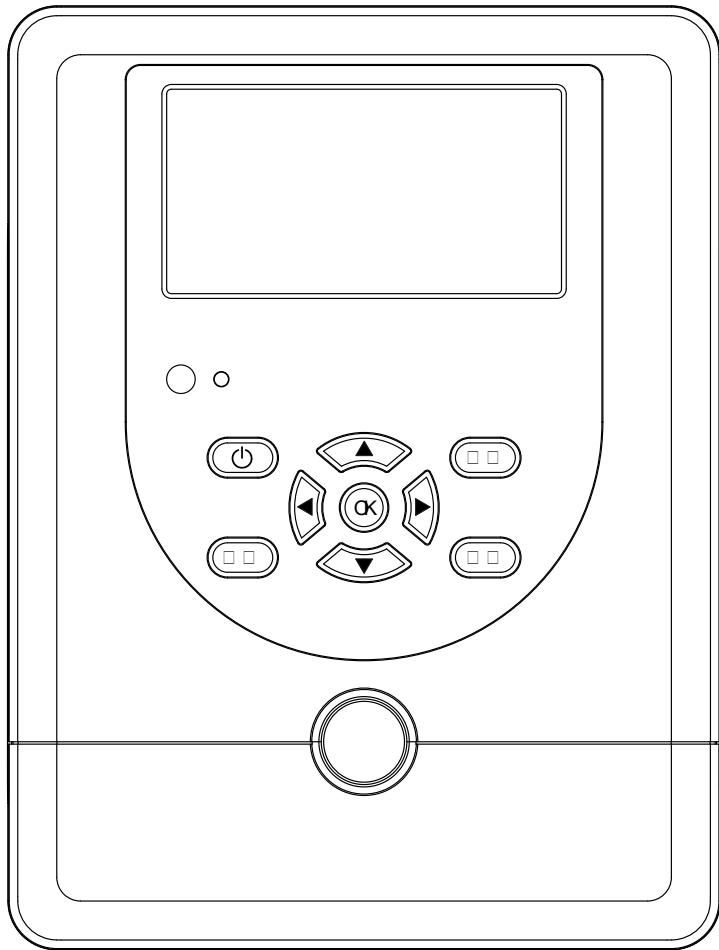
12V Adaptor

Central controller 12VDC power adapter. 128×64 dot matrix LCDscreen. It is able to detect problems and controller all units in the system

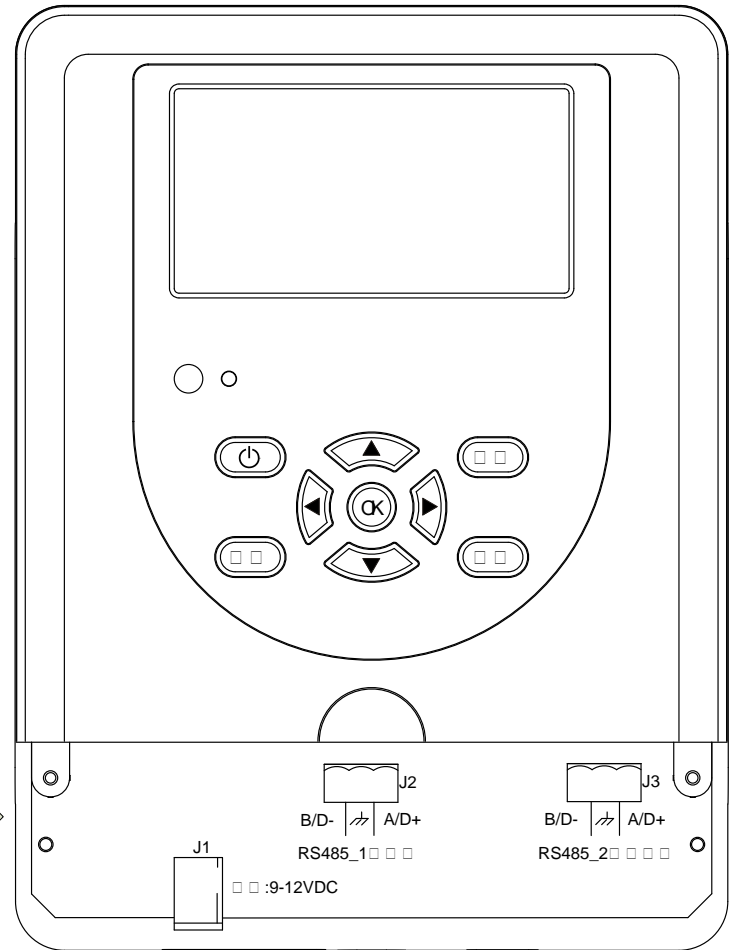
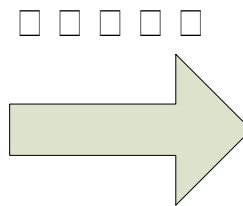
Central controller and linker and connected with RS485 bus.

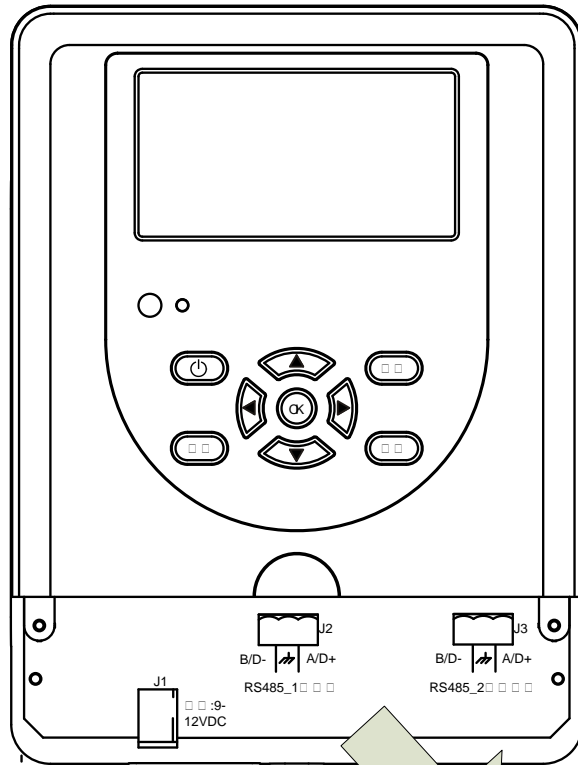
Functions:

- (1)Auto re-start. After power outage, the system will automatically restart;
- (2)Control a separate unit or control few units combine;
- (3)After setting, use power button to start whole system;
- (4)Temperature or humidity mode ;
- (5)Intelligent timer. It's able to set to use only in working days;
- (6)Shut –down cleaning and pre-cooling ;
- (7)Auto cleaning 0-999hours cycle;
- (8) Control up to 28 units;
- (9)Record 24 hours temperature and humidity data;
- (10)Record the fault message to detect when fault occur.



Open the cover



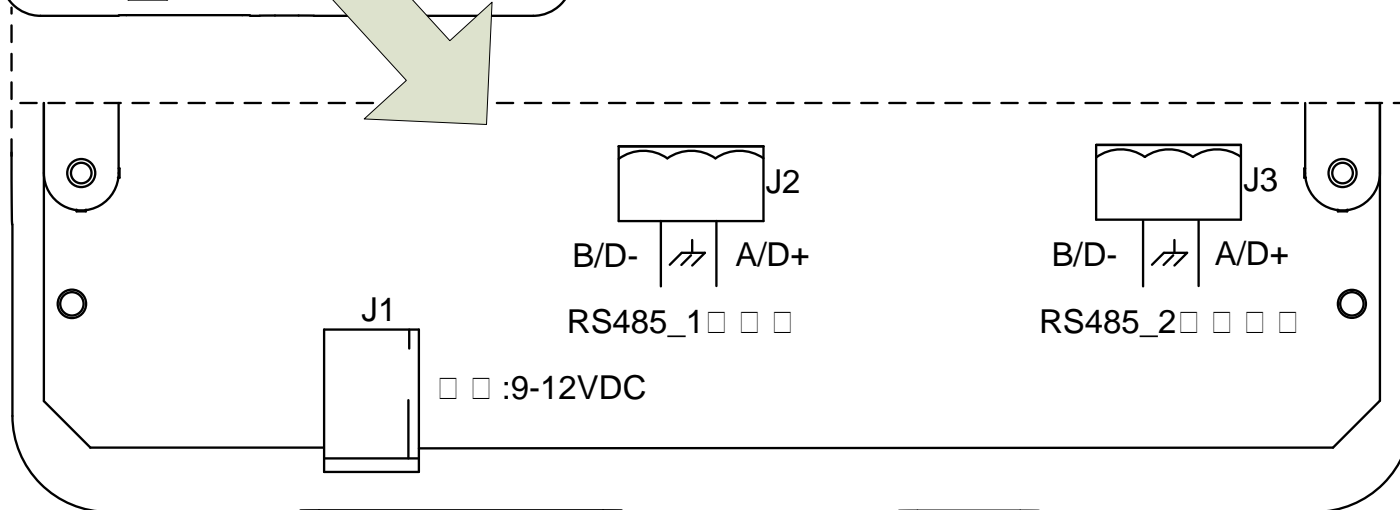


Central controller:

J1: DC power interface.

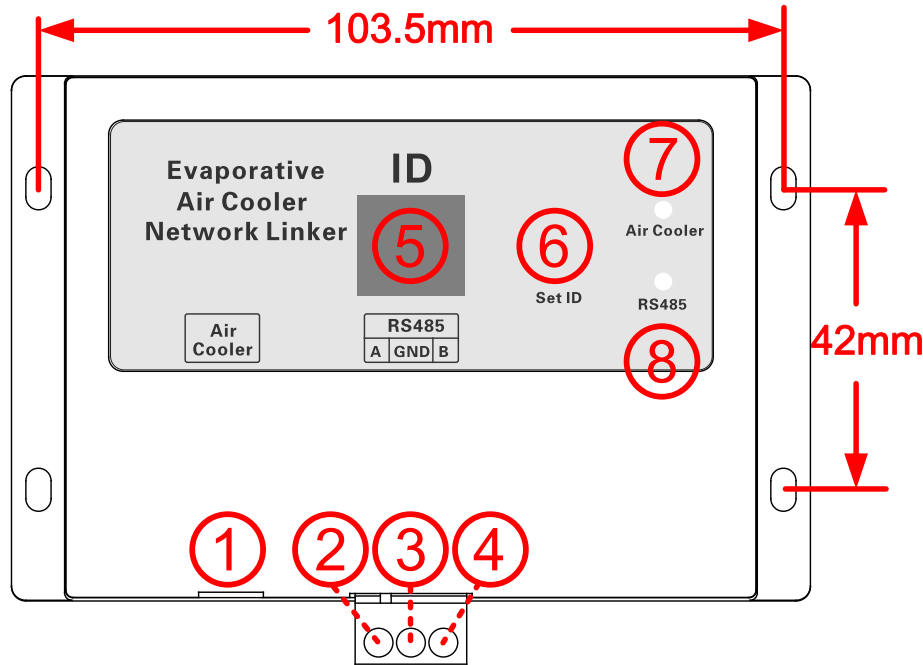
J2: Upper RS485 interface. Left for updating version system. Such as PC control

J3: RS485 interface connected to the linker





Linker powered by communication cable. And communicate with cooler unit over communication cable. Receive the data from central controller over RS485 bus. In the system, every linker has a **unique ID**. **Press the setting button on the linker to the ID**. **If the linker's ID is 01, the cooler units connected to the linker is NO. 1.**



- ① Telephone line interface
- ② RS485 A
- ③ Ground
- ④ RS485 B
- ⑤ ID display
- ⑥ ID setting
- ⑦ air cooler Signal indicator
- ⑧ 485signal indicator

ID setting:

Long press ⑥ ID setting button, till ⑤ ID flash, the short press to select 01~28, the setting will be saved when flash disappear. When ⑤ displaying“- -” means the linker doesn't has a ID. The unit connected to the linker is not in the system.

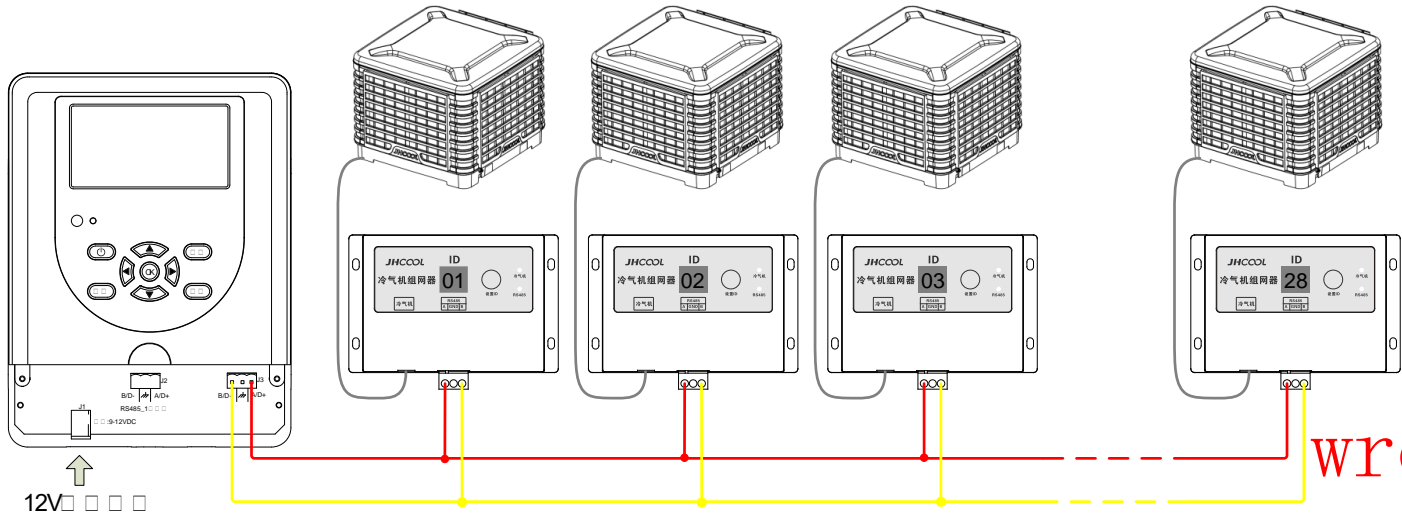
Air cooler indicator : Flashing means connecting is OK. ① and air cooler communicate well

485 signal indicator: flashing means ②④ and central controller connected well.

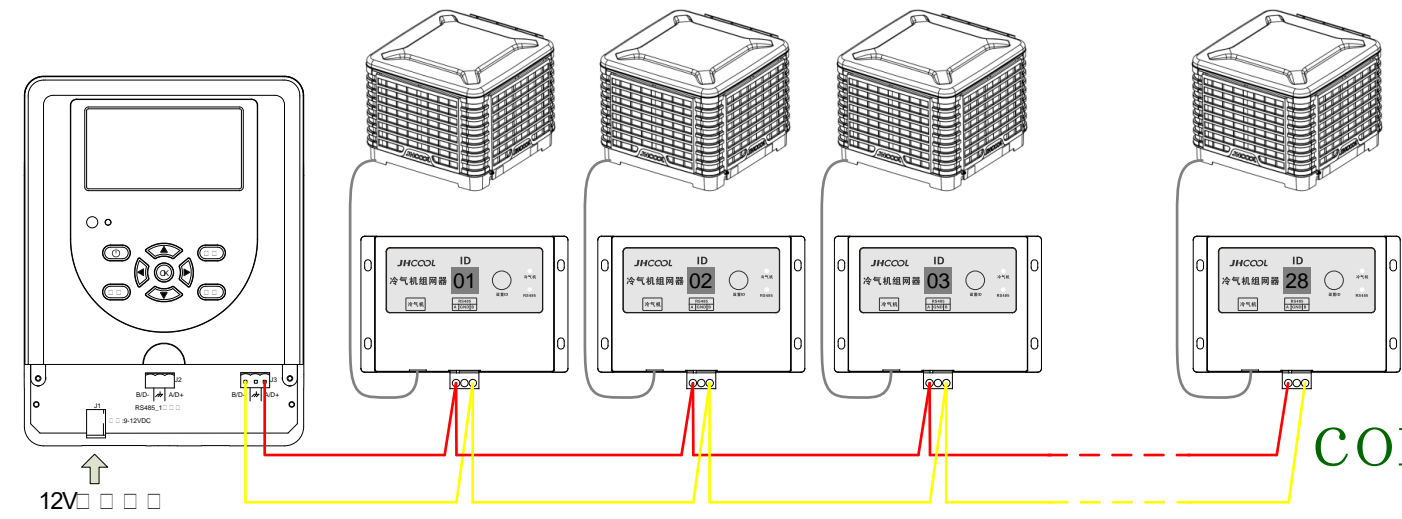
The components list

Description	Model	Qty
Central controller	JH-D-CTRL-V2.0	1
12V DC power adapter	SPA-1210	1
linker	JH-ZWQ-V3.0	28
485 bus wire	Shielded twist-pair RVSP2×0.3	5
User manual		1
packing		1

Note: The maximum of the system is 28 units



wrong

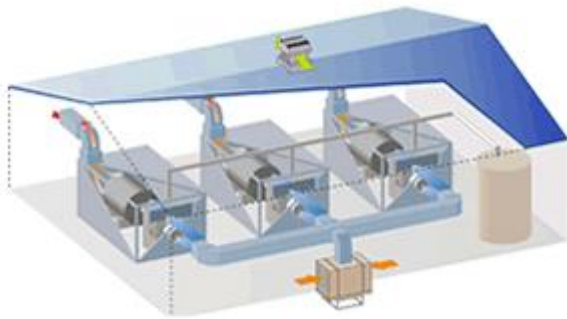


correct

485 bus must be hand by hand connection. Not star connection and not branch connection .

Places for central control system

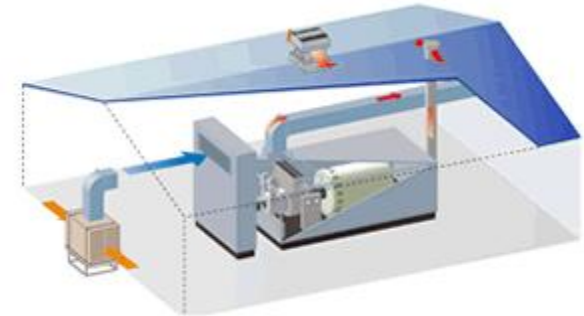
The central control system is powerful in the multiple units project



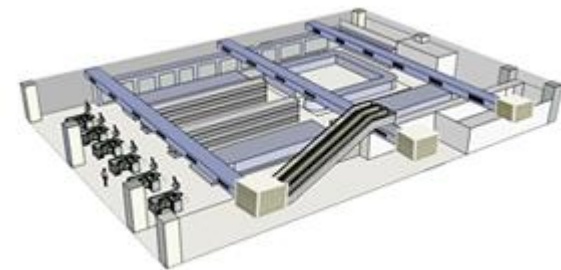
workshop



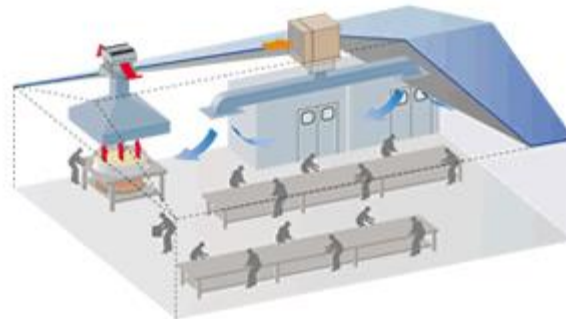
Sport facilities



Heat generated equipment



Market and mall



manufacture plant

