CL-920 Curtain Motor ----- RJ 11 Port (RS-485)

RS485
(Must supported by custom programming)

123456

6 —————— RS485-A

5 —————— RS485-B

Bottom View of the Motor

(Optional) RJ 11 Port
for Connecting to Home Theater
or Home Automation System
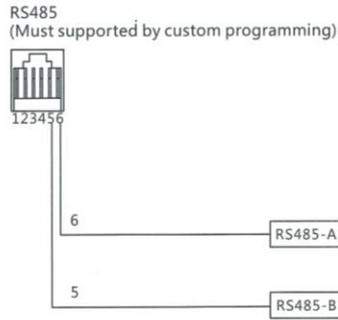
Attention:
1. The control logic signal is pulse dry contact signal and lasts 100-200ms.
2. Provided RS485 control is required, instruction should be done prior to production.

Light   Pin Hole
(Programming Button)

After the software in the controlling client is completed, please do the programming the same way as programming with the remote control, as follow:

1. <u>Press and Hold</u> the "Programming button" at the bottom of the motor about 5 seconds until the LED light is on.

2. Send the "OPEN" command from the controlling device to the motor.("OPEN" command 129,1,2,3,1,2,166)

3. If the setting is done correctly, the LED light will flash then goes off.
4. Now the motor and controlling device are paired and communicating.

Programming button		LED light

Send (Open command 129,1,2,3,1,2,166)
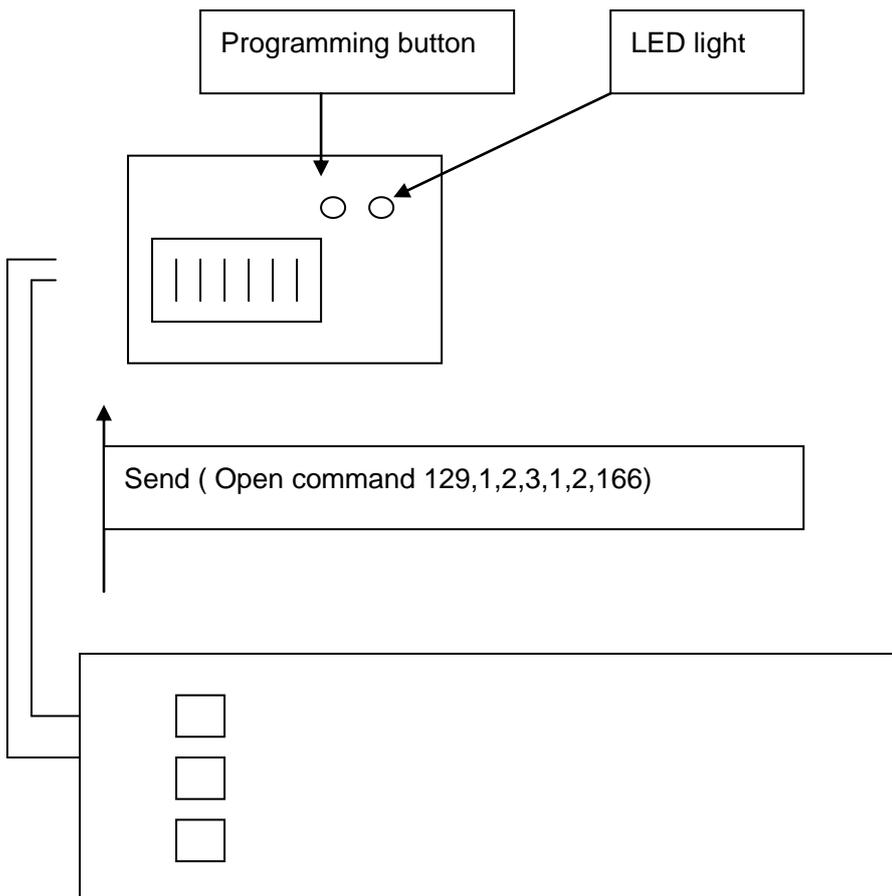
BYTE 1

Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0

Bit7=1 (That's to say the controlling device controls the motor)

Bit7=0 ((That's to say the motor feedback information to the controlling device)

Bit0=1 (That's to say it is curtain motor)

=0X81=129

BYTE 2

BYTE 3

BYTE 4

BYTE 5

Are all address for the device=

BYTE 6

Controlling Byte

2=OPEN(or Programming)

3=STOP

4=CLOSE

6=ENQUIRING

BYTE 7

Verification Byte

RS-485 Communication Protocal

The master controlling device sends one package of data to the curtain motor, the curtain motor will respond with data back.

The curtain motor does not send data to the master controlling device on its own initiative.

Baud rate：9600

The format of RS485 is as follow: 1 bit starting position-"8-bit data" -1 bit stop position.

The definition of Half-dual-way Rs485 communication protocal.

1. The package of data which the master controlling device sends to the curtain motor.

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 6	Byte 7
Device Type	Address I	Address II	Address III	Device Channel	Controlling Byte	Verification Byte

Device Type:

    Bit7：   Send and Receive symbol:

        "1"=master device sends to curtain motor,

        "0"= curtain motor responds to master device.

    Bit6-Bit5：Reserved as blank

    Bit4-Bit0：Device type, definition of 1-32 device type as below

        curtain motor：   "1"

Address I, II, III:

    Master Fixed ID set by factory.

Device Channel:

    "1"=Channel 1, total 1-255.

Controlling Byte:

    Bit 2=OPEN(ALSO PROGRAMMING),

    Bit 3=STOP

    Bit 4=CLOSE,

    Bit 6=ENQUIRING CURRENT STATUS OF CURTAIN MOTOR

Verification Byte:

Verification Byte=DEVICE TYPE * 1+ ADDRESS I * 2 + ADDRESS II * 3+ ADDRESS III * 4 +

        DEVICE CHANNEL * 5 + CONTROLLING BIT * 6

2. When curtain motor receives the data from master controlling device, and confirms it is used to control the current curtain motor, within 50ms, the curtain motor will clear the bit 7 as 0, and responds it to master controlling device to tell the data is well received.

The responding data format is as below:

Byte1	Byte2	Byte3	Byte4	Byte5	Byte6	Byte7
Device type	Address I	Address II	Address III	Device Channel	Current Status of Curtain	Verification Bit

Device Type:

    Bit7：   Send and Receive symbol:

            "1"=master device sends to curtain motor,

            "0"= curtain motor responds to master device.

    Bit6-Bit5：Reserved as blank

    Bit4-Bit0：Device type, definition of 1-32 device type as below

            curtain motor： "1"

Device Channel:

    "1"=Channel 1, total 1-255

Current Status of Curtain

    1= curtain fully open

   100= curtain fully closed

 2-99= the current position = length percentage of the total length

  170= curtain motor does not enter the model of electronic counting stop

  187= the motor stopped due to hindrance and bounce back

   50= the curtain is in the center of the total length

Verification Byte:

Verification Byte=DEVICE TYPE * 1+ ADDRESS I * 2 + ADDRESS II * 3+ ADDRESS III * 4 +

               CHANNEL NUMBER * 5 + CONTROLLING BIT * 6

3. When there is not only one curtain motor connecting to one master controlling device,
   connect All "A" together and all "B" together.

   The master controlling device must program each curtain motor one by one, and do not control 2 or more curtain motors in one channel. Otherwise there will be a conflict in RS485 address-finding.

For example, there are 3 curtain motors in one RS485, and the address is 1,2,3, and the channel is 1,2,3 correspondingly. The motor is capable to control the motor 1 by select channel 1, and the data format is[129, 1,2,3,1,2,166] decimal system number. Curtain Motor 1 received the data and responds the data format [1, 1,2,3,1,2,38] decimal system number by RS485 wire to confirm and the curtain will open.

It is possible to find out the position of curtain 1 as follow:
The master controlling device sends [129, 1,2,3,1,6,190] to enquire the status of the curtain, and in case the curtain is in the center, then the curtain motor responds data [1, 1,2,3,1,50,46] decimal system number by RS485 wire.