



MP series HMI

User manual

WUXI XINJE ELECTRIC CO., LTD.

Data No. HMC 01 20110520 3.0

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January, 2010

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Preface

Thank you for buying MP series HMI, this manual should be read and understood before doing relative operation.

Purpose

- This manual will guide readers in the correct operating and maintaining MP series HMI. Also, this manual refers to the application situations, operations, transportation, storage, set up, installation, maintaining and so on.
- This manual contains three parts: product introduction, wiring, HMI programming.

Users

This manual is fit for following personnel:

- End Users
- Engineers
- Technicians

Please read the safety notes carefully before using the products.

Get the manual

Please download all the manuals, catalogs from Xinje website:
www.xinje.com.

Contact us

If you have any questions, please contact us as the following methods:

Tel: 86 510 85134139

Fax: 86 510 85111290

Address: 4th Floor, Building 7, No.100 Dicui Road, Wuxi, Jiangsu province, China

Safety caution

Please read the manual carefully before using. Make sure your operation is correct and safety. The following contents are only aimed at MP series products.

Please keep the manual properly, put in the location easy to get and read, hand the manual to the end users.



NOTICE

- Please do not bundle power line with communication cable or let them too close, keep at least 10cm.
- Please do not install module or change the wire. Otherwise it may cause malfunction, error action, damage or fire.
- Please shut off the power when there is abnormal smell or voice in MP products. (The short sound made by buzzer after power on is normal)
- Do not strike the HMI with a hard or sharp object, or press on the touch panel with too much force or with pen, screw, since it may damage the HMI and cause damage.
- Please tighten the screws when install the products to prevent from falling off.
- Please transport, store, set up, install and maintain the products correctly, otherwise the HMI may be damaged.



DANGERS

- Confirm the rated voltage of MP and connect correct before power on.
- Please do not touch the terminals after power on to avoid electric shock.
- Please do not open the cover board.
- Please cut off all the power when installing or disassembling the products, or it may cause error action and malfunction.
- Please use MP series HMI in suitable environment conditions according to instructions, otherwise it may cause accident.
- Please do not use the products where there is high frequency radiate, high magnetic field or other interferences.

1.MP introduction

1-1. Features

MP series integrate the features of OP and TP series HMI. It has more choices and solutions for your machine.

1-1-1. Features

◆ Display:

Size 3.7" and 7", blue LCD, 256 true color TFT LCD;

Display area is touch screen;

◆ Screen:

Support Multi-language, any font and size, word art;

Support BMP pictures, user can add picture library;

◆ Control:

Dynamic data display, bar map, trend map;

Real-time alarm, history alarm information;

9 levels password protection;

◆ Buttons:

Up to 26 function buttons, the function can be set freely;

Sensitive and accurate buttons;

◆ Communication:

Support various brands of PLC, inverter, meter;

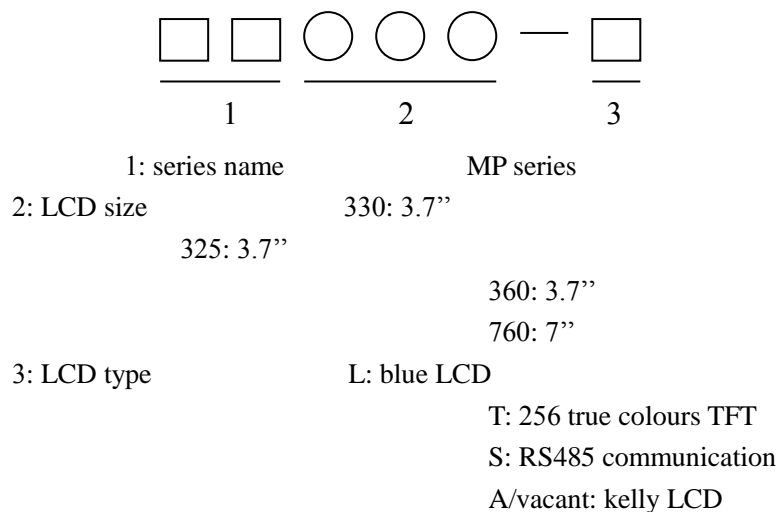
Support free format communication, self-defined protocol;

Support micro-printer

◆ Debug:

Simulate online/offline, SCADA

1-1-2. Name rule



1-1-3. Types

| Model | Description |
|-----------|--|
| MP330 | 3.7", Kelly LCD, 192*64, 26 function buttons, touch screen, RS422 |
| MP330-S | 3.7", Kelly LCD, 192*64, 26 function buttons, touch screen, RS485 |
| MP325-A | 3.7", Kelly LCD, 192*64, 20 function buttons, touch screen, RS422 |
| MP325-A-S | 3.7", Kelly LCD, 192*64, 20 function buttons, touch screen, RS485 |
| MP360-L | 3.7", blue LCD, 192*64, 26 function buttons, touch screen |
| MP760-T | 7", 256 true colours TFT, 480*234, 26 function buttons, touch screen |

1-2. General specifications

Electric specifications:

| Item | | Specification | | | |
|-----------|--------------------------|--|------------------------------|---------------|--------------|
| | | MP330(-S) | MP325-A(-S) | MP360-L | MP760-T |
| Electric | Input voltage | DC24V | | | |
| | Consumption current | <140mA | | <240mA | |
| | Allowable power-off | <10s (less than 1s in fact) | | | |
| | Withstand voltage impact | AC1000V, 20mA, less than 1 minute | | | |
| | Insulated resistor | 10MΩ, DC500V (signal and ground) | | | |
| Ambient | Operate temperature | 0℃～50℃ | | | |
| | Storage temperature | -20℃～60℃ | | | |
| | Ambient temperature | 10~90% (no condensation) | | | |
| | Noise immunity | 1000Vp-p, pulse period 1ms, last time 1 minute | | | |
| | Ambient air | No corrosive gas | | | |
| | Protection | IP20 | | | |
| Structure | Cooling mode | Natural cooling | | | |
| | External dimension | 172*121*56.5 | 172*94*40 | 172*121*56.5 | 214*200*60.3 |
| | Mounting dimension | 164*113 | 164.2*86.8 | 164*113 | 201*187 |
| Port | Download port | RS232 | | | |
| | Com port | RS232/422 (-S: RS232/485) | RS232/422 (-S: RS232/485) | RS232/422/485 | |

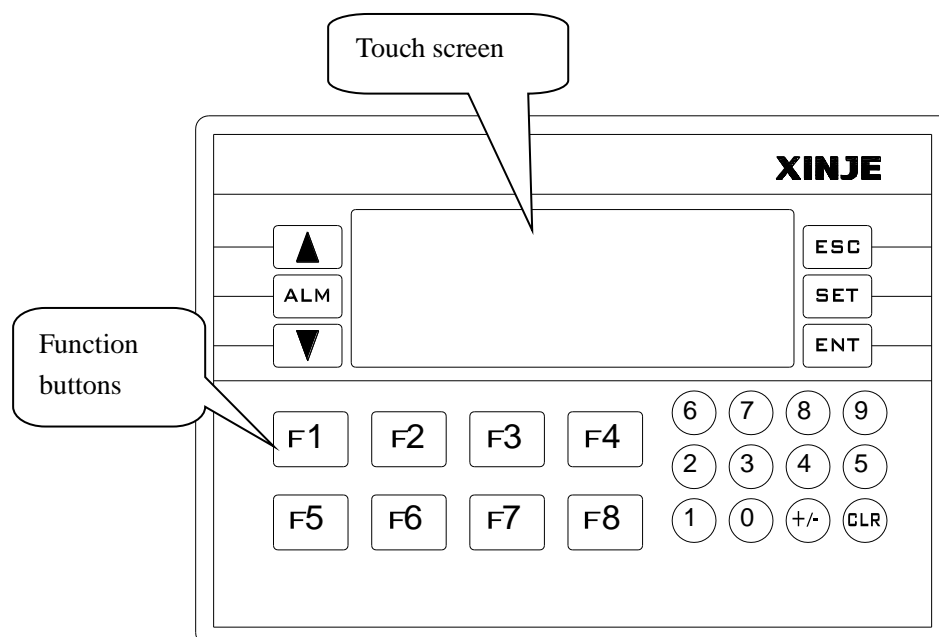
HMI specifications:

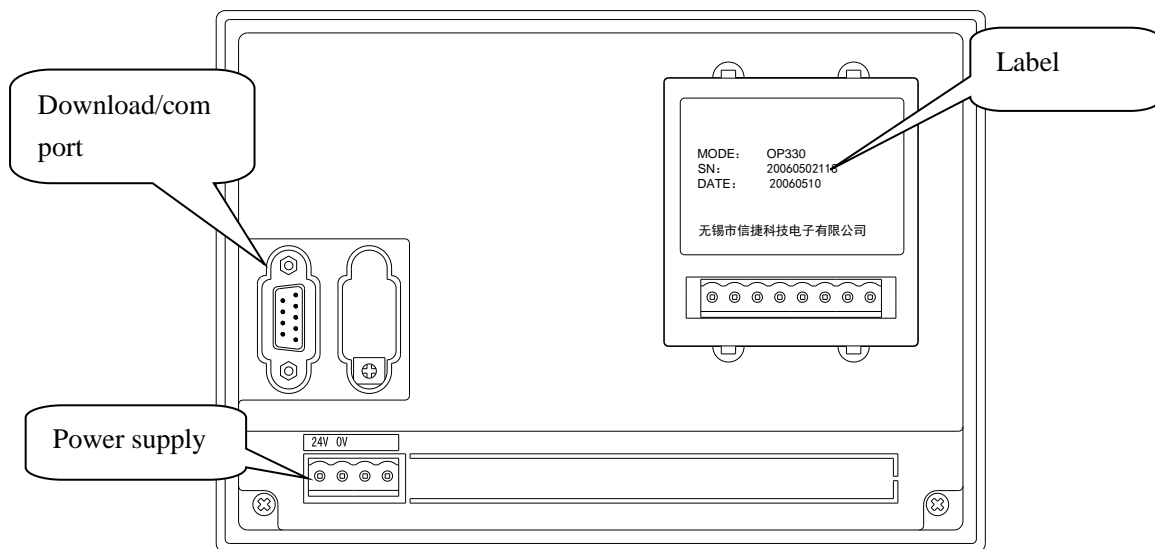
| Item | | Specification | | | |
|--------|------------|--|-------------|--------------------|----------------|
| | | MP330(-S) | MP325-A(-S) | MP360-L | MP760-T |
| Screen | LCD type | Kelly LCD | | Blue LCD | 256 colors TFT |
| | LCD size | 3.7 inch | | | 7 inch |
| | Using life | 20000 hours, ambient temperature 25℃, 24 hours running | | | |
| | Resolution | 192*64 | | | 480*234 |
| | Contrast | Adjustable through potentiometer | | | Unadjustable |
| | Language | Chinese, English | | Chinese, English | |
| | Character | Lattice font, vector font | | Any size, any font | |
| | Touch mode | Matrix, resistor mode | | | |
| memory | Screen | 64KB FlashROM | | 2MB FlashROM | 4MB FlashROM |
| | Data | 1KB SRAM | | 1KB SRAM | 4KB SRAM |

1-3. Structure

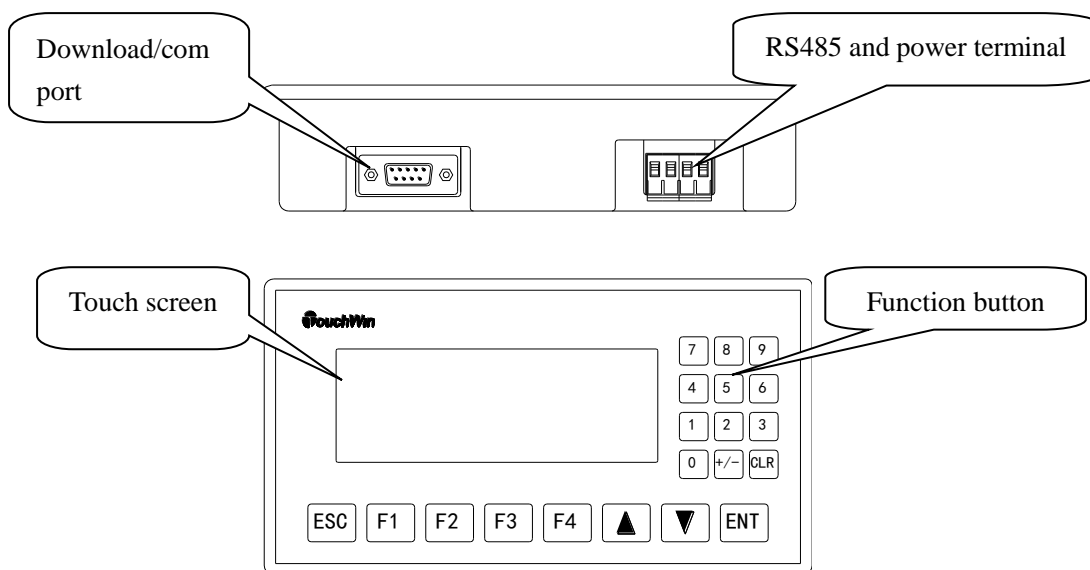
1-3-1. Structure

MP330 (-S)

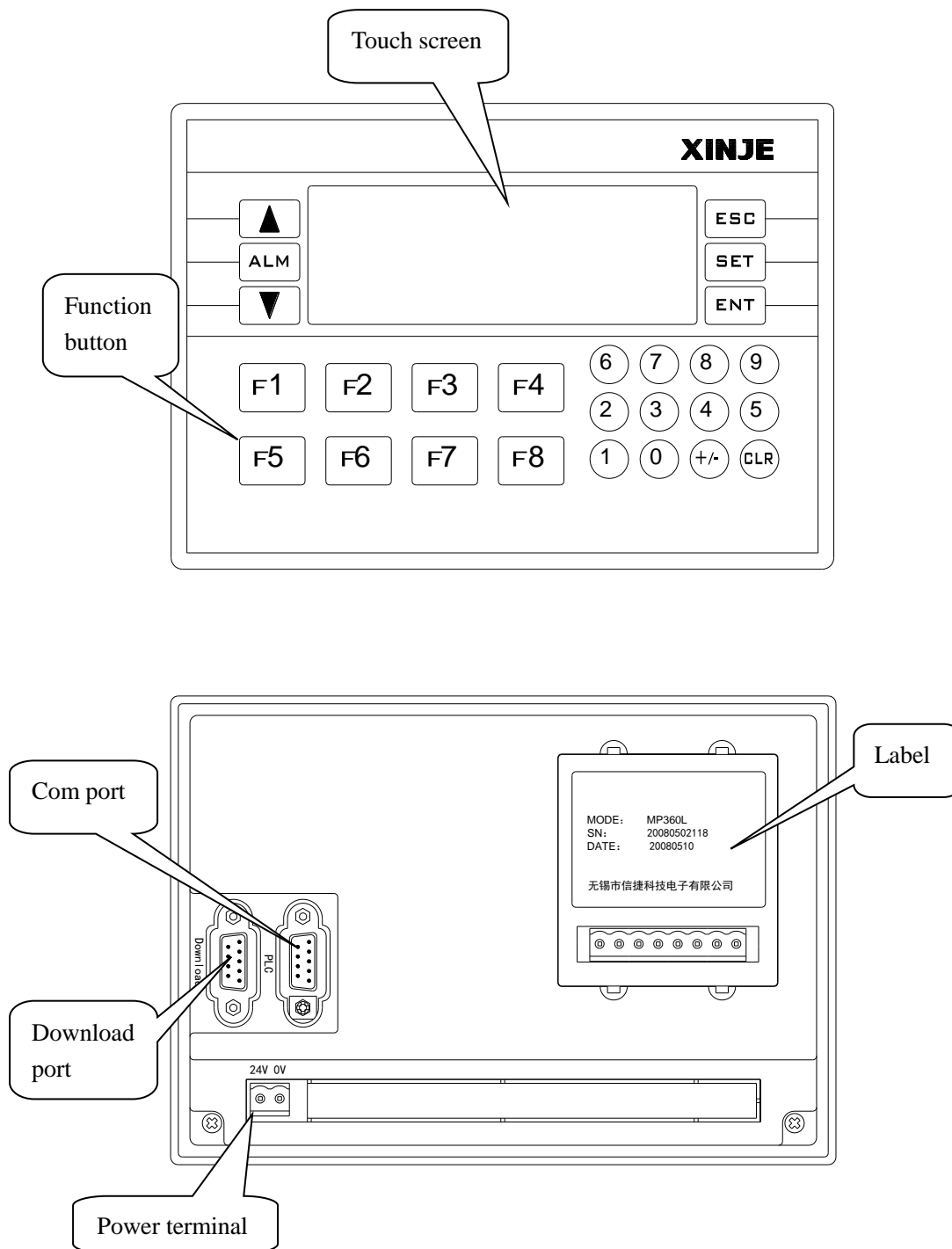




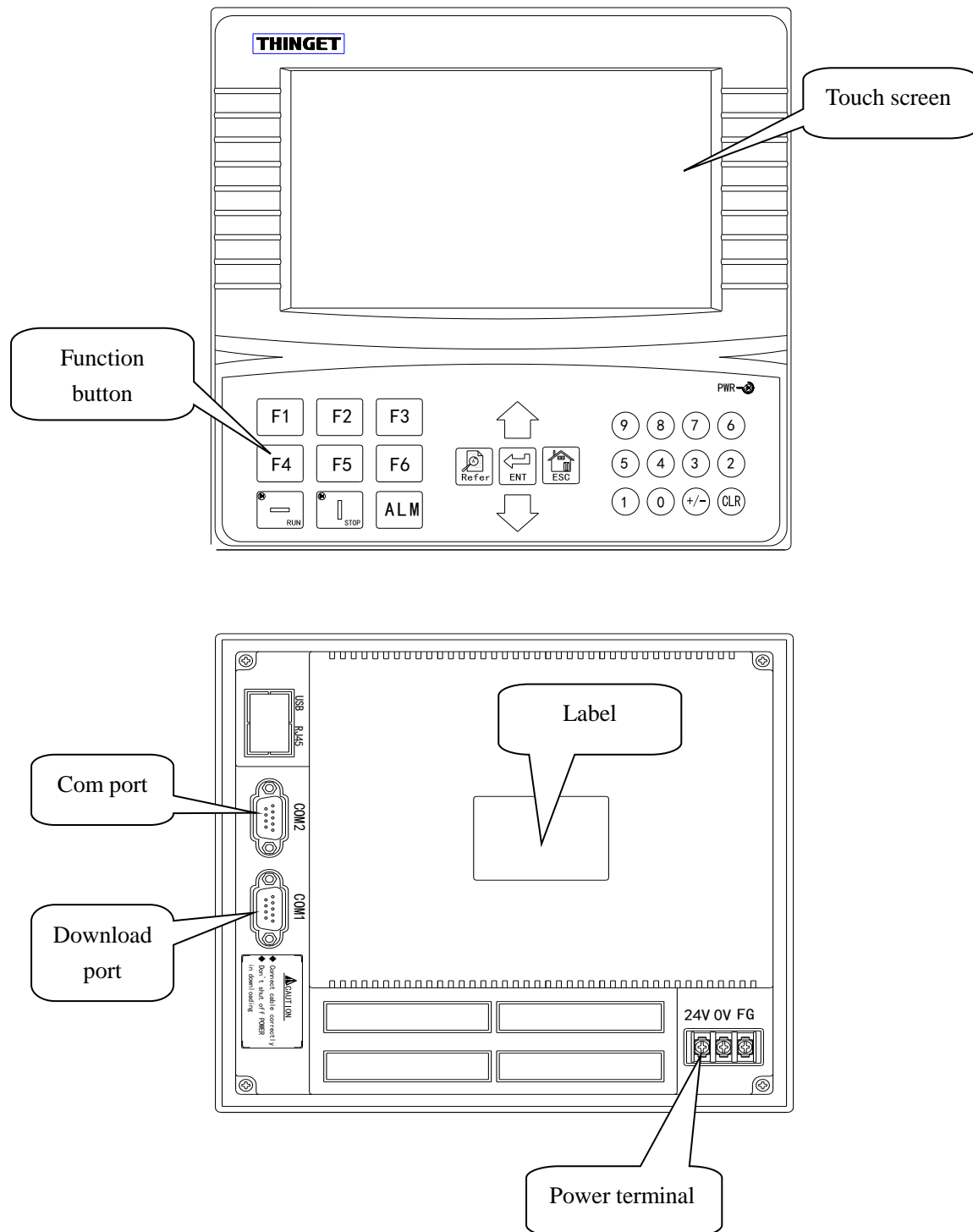
MP325-A (-S)



MP360-L













MP760-T



1-3-2. Buttons













MP330 (-S)/MP325-A (-S)/MP360-L

| Key-press | Function |
|---|---|
|  | Whatever the mode of the display is in, it will return to original system screen once you press the key (the defaulted screen is No.1). Generally, set the original system screen to be main menu or most used screen. |
|  | Turn the screen to the last page |
|  | Turn the screen to the next page |
|  | Press the key to modify the register value. The register which is being modified will display in reverse color and the bit will twinkle. If there is no register component in the screen it will do vacancy operation once. Before pressing [ENT] key, press [SET] key again to cancel the setting and continue modifying the next data register. |
|  | To write the modified value in the register and continue modifying next register. After the last register in the screen has been modified, it will quit the setting. |
|  | Alarming list key. After setting the function of alarming list, press this key to jump to the alarming list screen. |
|  | Clear the selected area when modifying the register data. |
|  | Set the positive or negative of the data when modifying the register data. |
|  | Number key 0-9, press the key to set the number you want |
|  | Function key F1-F8 |

Note:

All the buttons can be defined to many functions, including set ON, set OFF, reverse, instant ON.

MP760-T

| Key | Function |
|---|--|
|  | Running the program, LED indication light |
|  | Stop running the program, LED indication light |
|  | Whatever the mode of the display is in, it will return to original system screen once you press the key (the defaulted screen is No.1). Generally, set the original system screen to be main menu or most used screen. |
|  | Turn the screen to the last page |
|  | Turn the screen to the next page |
|  | Inquiry, jump to the user appointed screen |
|  | To write the modified value in the register and continue modifying next register. After the last register in the screen has been modified, it will quit the setting. |
|  | Alarming list key. After setting the function of alarming list, press this key to jump to the alarming list screen. |
|  | Clear the selected area when modifying the register data. |
|  | Set the positive or negative of the data when modifying the register data. |
|  | Number key 0-9, press the key to set the number you want |
|  | Function key F1-F6 |

Note:

All the buttons can be defined to many functions, including set ON, set OFF, reverse, instant ON.

1-3-3. Download and com port

MP330 (-S)/MP325-A (-S)

MP330 and MP325-A has one port. It can download and communicate with other devices.

MP330/MP325-A

| Pin | Function |
|------|----------|
| Pin1 | TD+ |
| Pin2 | RXD |
| Pin3 | TXD |
| Pin4 | |
| Pin5 | GND |
| Pin6 | TD- |
| Pin7 | RTS |
| Pin8 | RDD- |
| Pin9 | RDD+ |

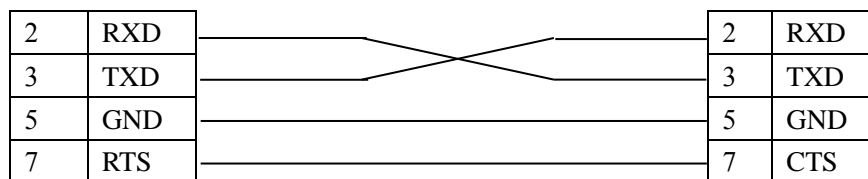
MP330-S/MP325-A-S

| Pin | Function |
|------|----------|
| Pin1 | TD+ |
| Pin2 | RXD |
| Pin3 | TXD |
| Pin4 | |
| Pin5 | GND |
| Pin6 | TD- |
| Pin7 | RTS |
| Pin8 | B |
| Pin9 | A |

The diagram of connecting with PC

MP330(-S)/MP325-A(-S)

PC



MP360-L/MP760-T

MP360-L and MP760-T has two ports: download port and communication port.

Download port can download program. Communication port can connect to other devices such as PLC, inverter and so on.

Download port

| Pin | Function |
|------|----------|
| Pin1 | NC |
| Pin2 | RXD2 |
| Pin3 | TXD2 |
| Pin4 | A2 |
| Pin5 | GND |
| Pin6 | TD- |
| Pin7 | B2 |
| Pin8 | NC |
| Pin9 | NC |

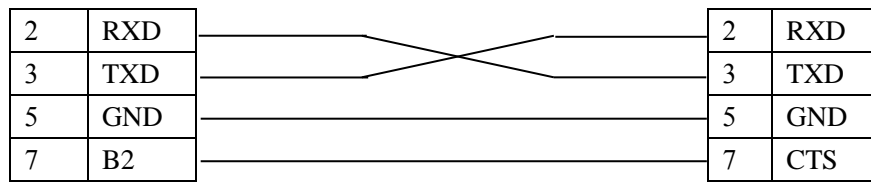
Communication port

| Pin | Function |
|------|----------|
| Pin1 | TD+ |
| Pin2 | RXD1 |
| Pin3 | TXD1 |
| Pin4 | A1 |
| Pin5 | GND |
| Pin6 | TD- |
| Pin7 | B1 |
| Pin8 | RDD- |
| Pin9 | RDD+ |

The diagram of connecting with PC

MP360-L/MP760-T

PC



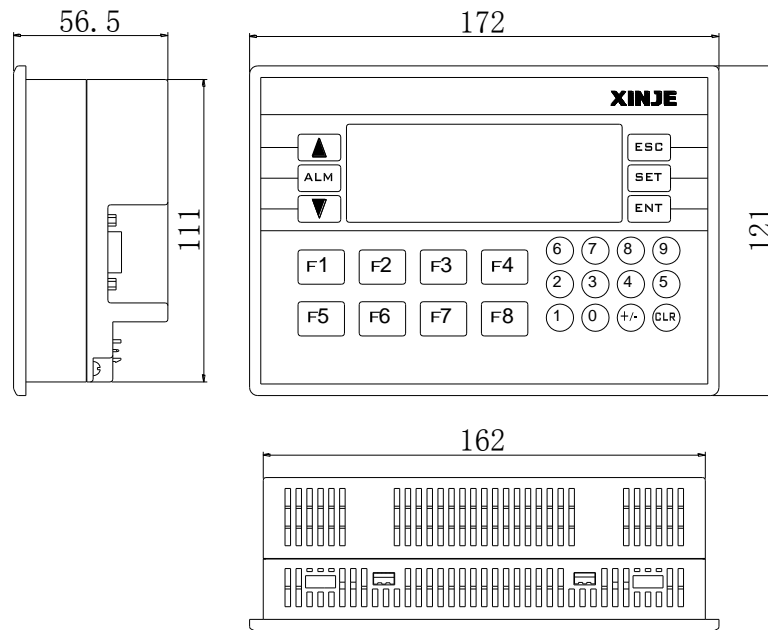
Note: Connect pin 5 and 8 is forced download mode.

1-4. Dimension

1-4-1. Product Dimensions

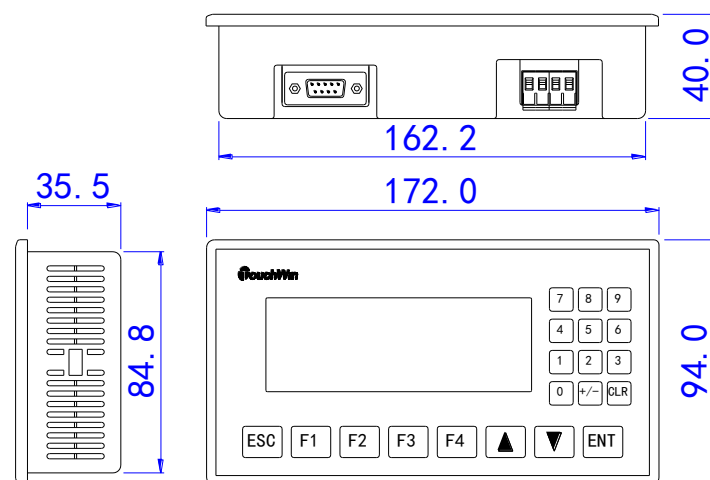
MP330(-S)/MP360-L

Unit: mm



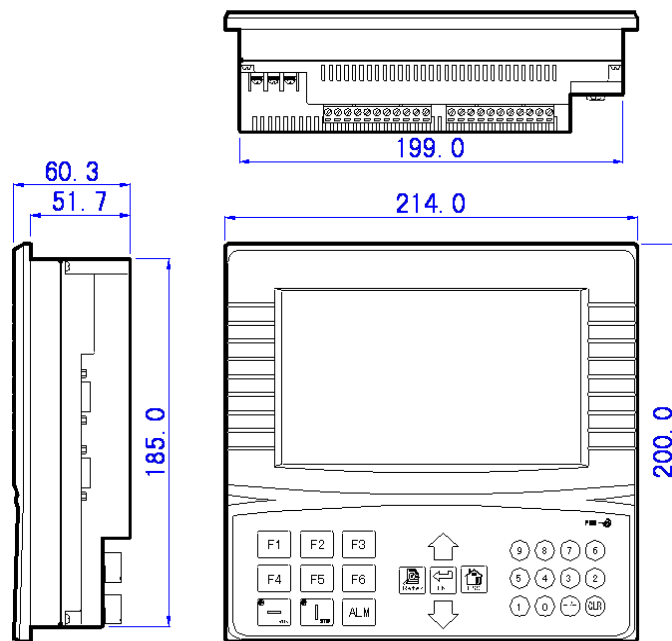
MP325-A(-S)

Unit: mm



MP760-T

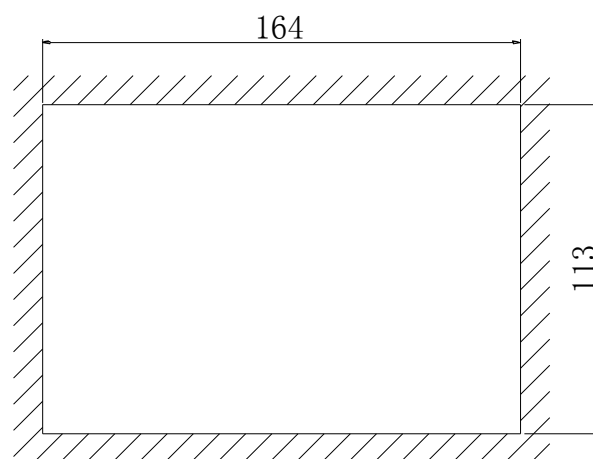
Unit: mm



1-4-2. Mounting dimensions

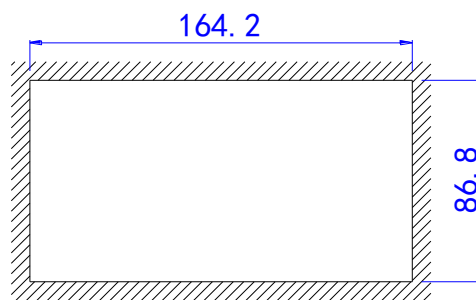
MP330(-S)/MP360-L

Unit: mm



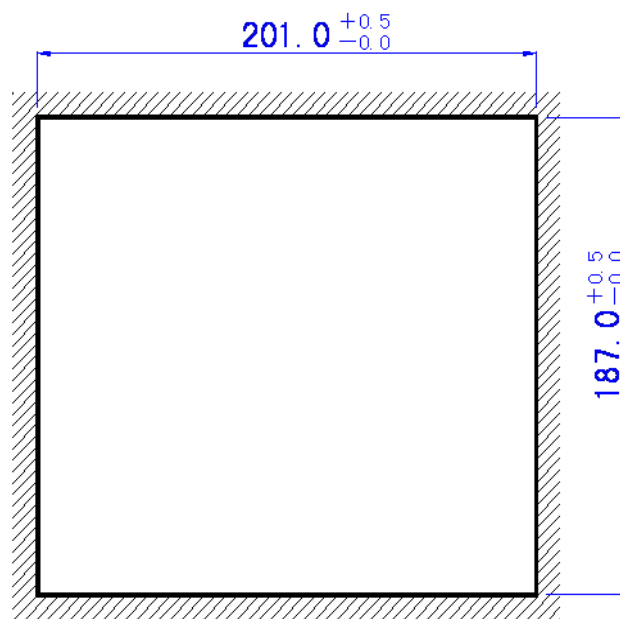
MP325-A(-S)

Unit: mm



MP760-T

Unit: mm



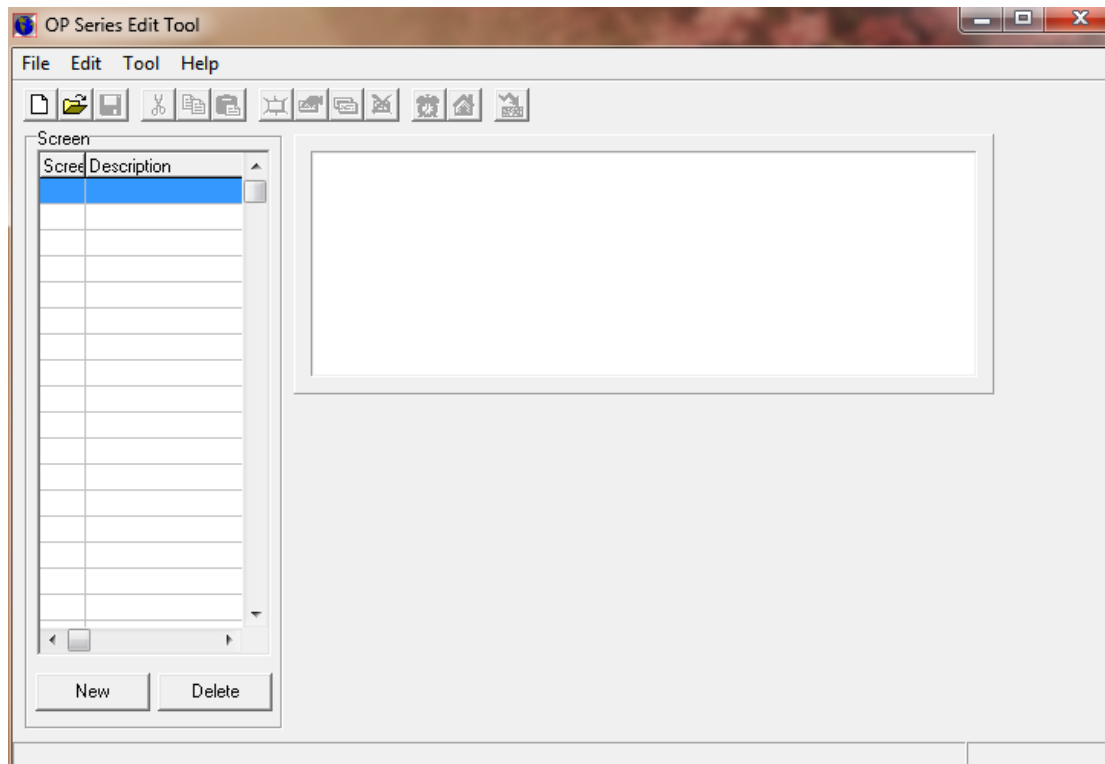
2. Software and programming

2-1. OP20 software

2-1-1. About the software

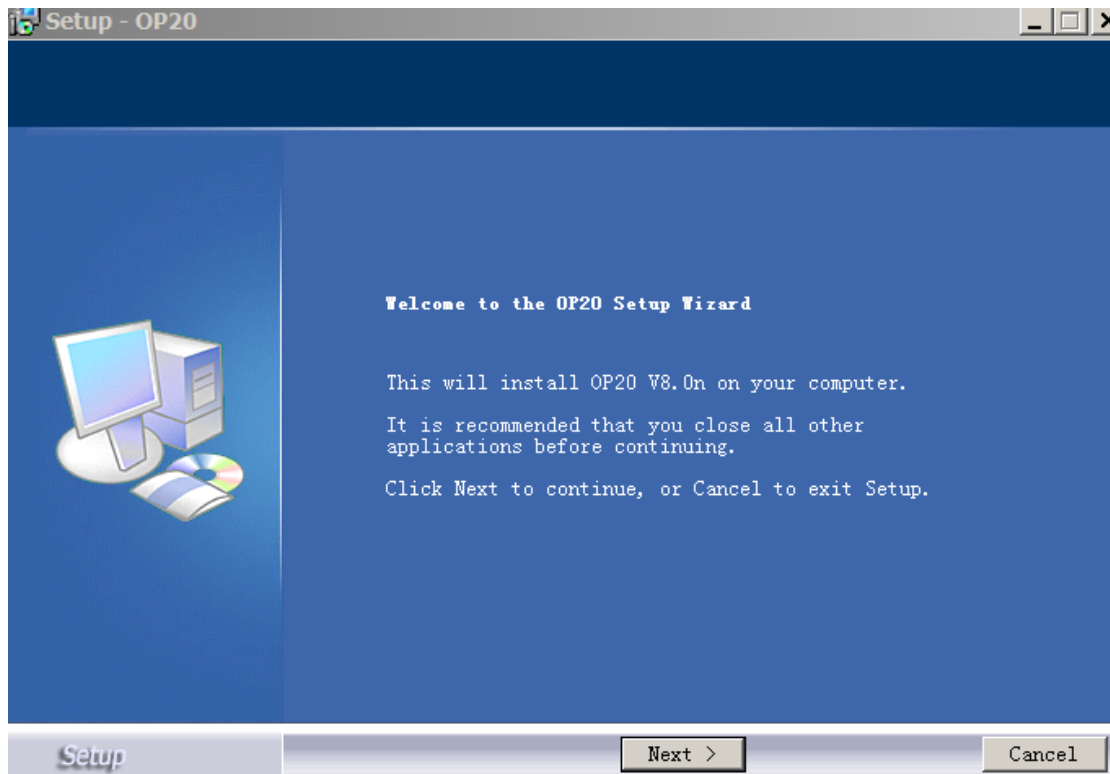
The program of MP330, MP330-S, MP325-A, MP325-A-S is made through OP20 software.

OP20 software:

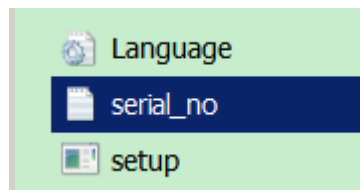


2-1-2. Install and uninstall

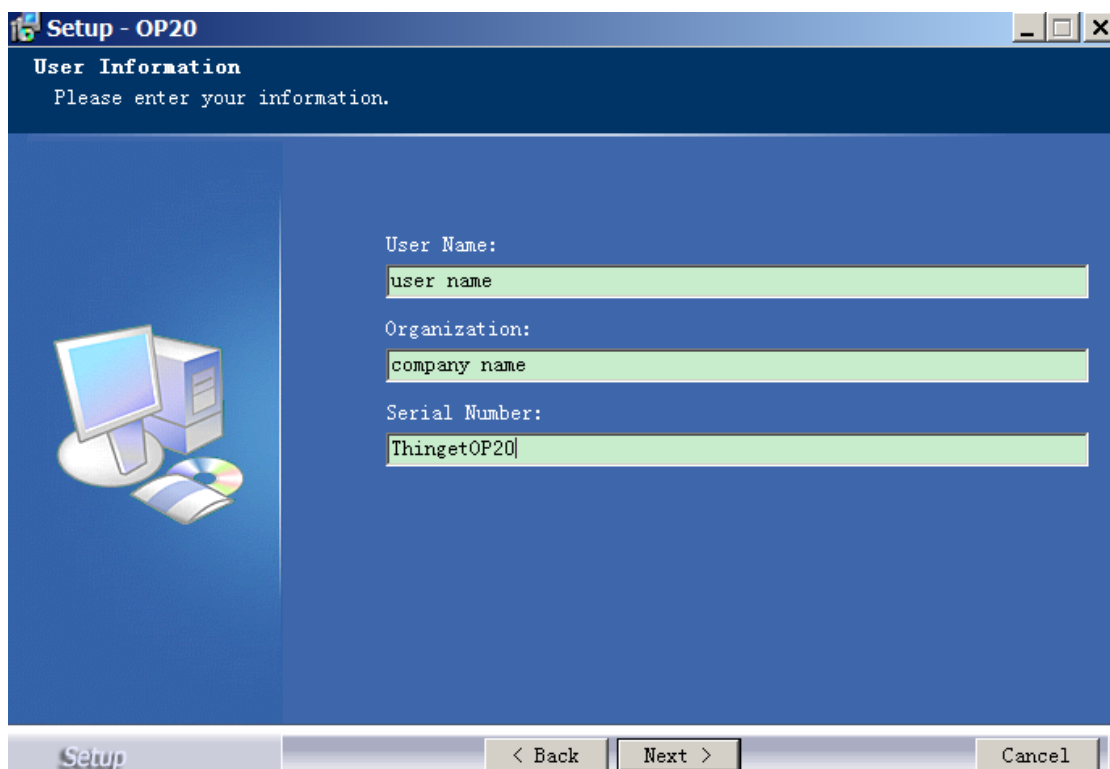
1. Get the OP20 software from www.xinje.com
2. OS requirements: Windows98/2000/XP/Win7.
3. Installation steps
 - (1) Double click “setup.exe” to enter the installation guide.



(2) click next and “accept the agreement”. Click next to enter the serial number. Open



“serial_no.txt” to know the serial number.



(3) Click next until finish the installation.

Note: 1. If there is other version of OP20 in the PC, please choose different installation location. If the two versions are installed at the same location, the software cannot run normally.

2. Higher version of OP20 is compatible with lower version. But lower version isn't compatible with higher version.

4. Uninstall

Double click "Thinget/OP20/unins000.exe" in the installation folder and continue as the uninstall guide.















2-1-3. Using steps

The following is the basic steps to use the software:






Open OP20 software → build a new project → choose panel type → choose PLC type → make the screen → save the project → download project → run the OP product








2-1-4. Buttons and parts

1. Buttons

| Button | Function |
|---|---|
|  | Build a new project |
|  | Open a project |
|  | Save the project |
|  | Cut the contents in the text |
|  | Copy the contents in the text |
|  | Paste the contents in the text |
|  | Build a new screen |
|  | The attribute of current screen |
|  | Copy screen |
|  | Delete screen |
|  | Alarm list, each alarm message is related to an auxiliary relay |
|  | The original screen. Press ESC on the panel to return to original screen. It can set the password and interactive register. |
|  | Set the general function key. (for MP325/OP330/MP330) |
|  | Download the program into the OP panel |

2. Parts

| Button | Function |
|---|---------------------------------------|
|  | For text input |
|  | Dynamic text |
|  | Text, support different fonts |
|  | Dynamic text, support different fonts |
|  | Set the register data |

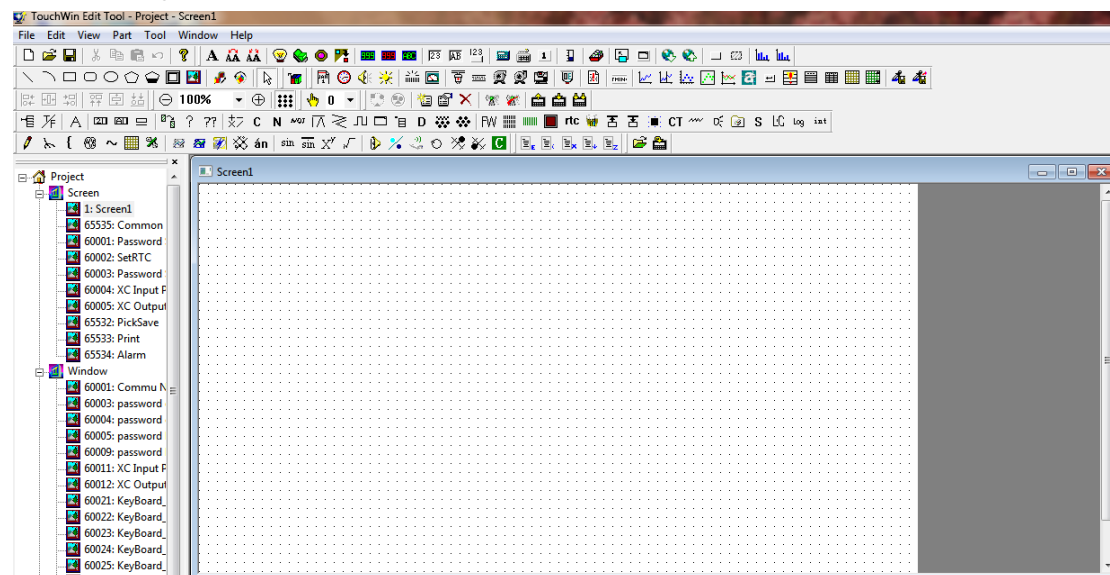
| | |
|---|--|
|  | Lamp, to display the status of PLC auxiliary relay |
|  | Function button. The function includes coil setting, screen jump, data setting |
|  | Trend map. To show the trend of parameters |
|  | Bar map. To show the flow, pressure, level and so on. |
|  | Insert bmp file. |
|  | String. To show the contents in PLC register. |
|  | Function button for touch operation (only for MP series panel) |

2-2. TouchWin software

2-2-1. About the software

The program of MP360-L, MP760-T should be edited in Touchwin software.

The following is the Touchwin software:



2-2-2. Install and uninstall

Installation steps:

1. Double click setup.exe file.
2. Click next until finish the installation. Open serial_no.txt to get the serial no.

Note:

1. please do not install two versions of Touchwin in the same location. Only one version of Touchwin software is recommended to install in the PC.
2. Higher version can open the program made in lower version. But lower version cannot open the higher version program.

Uninstallation steps:

Double click Thinget/TouchWin/unins000.exe to uninstall the software.




















2-2-3. Using steps























The basic using steps of TouchWin software:
























Run the software → build a new project → choose the panel type → choose the PLC port device → choose the download port device → edit the project → save the project → download the program into MP series products → communicate MP with other device






















2-2-4. Tools and parts










The tools and parts in the software:

| Icon | Name | Function |
|---|------------------|---|
|  | New | Build a new project |
|  | Open | Open the file |
|  | Save | Save the file |
|  | Cut | Cut the element |
|  | Copy | Copy the element |
|  | Paste | Paste the element |
|  | Undo | Undo the operation |
|  | Help | Check the software version information |
|  | Text | Input static text |
|  | Dynamic text | Display the text according to the value of register, support 16 texts, set register value as 0~15 |
|  | Variational text | Display the text according to the value of register, set register value as user need |
|  | Lamp | Display the ON/OFF state of switch |
|  | Button | ON/OFF the bit element |
|  | Lamp button | Combine the function of lamp and button |
|  | Screen jump | Jump to object screen |
|  | Digital display | Display the register value |
|  | Alarm display | Set the upper/lower limit of register value, when exceeding the range, twinkle display |
|  | Text display | Display characters in multi-registers |
|  | Digital input | Input the data in the register |

| | | |
|---|---------------------|--|
|  | Text input | Input characters in the register |
|  | Set data | Set data and used in arithmetic |
|  | Digital keyboard | Digital input keyboard |
|  | ASCII keyboard | Character input keyboard |
|  | User input | One input button of keyboard |
|  | Bar | Display the register value in bar picture |
|  | Dynamic map | Display the map according to the register value, support 16 maps, the register value is 0~15 |
|  | Call window | Call window according to the value in the coil or register |
|  | Window button | Control the open, close of the window |
|  | Download recipe | Download the recipe into object device |
|  | Upload recipe | Upload the recipe into TH register |
|  | Function button | Realize multi-functions with this button |
|  | Function field | Similar to function button, but the trigger condition is different. |
|  | Discrete column map | Display the data in discrete column map |
|  | Continue column map | Display the data in continue column map |
|  | Line | Draw lines |
|  | Arc | Draw arc |
|  | Rectangle | Draw rectangle |
|  | Ellipse | Draw ellipse |
|  | Fold/polygon | Draw fold and polygon |
|  | Polygon block | Similar to container |
|  | Frame | Draw 3D rectangle |

| | | |
|---|----------------------------|--|
|  | Map | Add jpg or bmp format pictures |
|  | Move animation | make the movement animation of object |
|  | Rotate animation | Switch the picture |
|  | Material library | The picture library |
|  | Date | Display the date |
|  | Clock | Display the time |
|  | Buzzer | Control the buzzer by the coil |
|  | LCD light control | Control the background light by the coil |
|  | Scale | Display the value in scale |
|  | Instrument | Display the value in the meter |
|  | Valve | Simulate the state of valve |
|  | Pipe | Simulate the liquid state in the pipe |
|  | Pump | Simulate the pump running |
|  | Auto wind | Simulate the auto wind |
|  | Motor | Simulate the motor running |
|  | Retort | Simulate the retort running |
|  | Inverter alarm information | Display the inverter alarm information |
|  | Scroll text | Display the text in scroll mode |
|  | Real time map | Display the current value in curve |
|  | History data map | Display the current and history value in curve |
|  | XY curve | Display two curve in X, Y direction |
|  | XY curve Ex | Display the value in line, point and line-point. |
|  | Time trend control | Display value in certain time space |

| | | |
|---|---------------------------------|--|
|  | Data moving button | Use with event, curve, alarm event, realize flip, confirm and clear operation |
|  | Alarm list | Show the inverter alarm information in the list |
|  | Display real time event | Display real time alarm information, when the alarm is free, the event will be deleted automatically |
|  | Display history event | Display many alarm information and event happen time |
|  | Common grid control | Display a group of register in the table |
|  | Data grid control | Display a group of register in the table, support time information table |
|  | Sample save | To collect the object data, no limit for the sample quantity and time, save the data in TH registers |
|  | Sample export | Save the data in TH register and export to object device as CSV format file |
|  | Align left | Align left the objects |
|  | Align center | Align center the objects |
|  | Align right | Align right the objects |
|  | Align top | Align top the objects |
|  | Align middle | Align middle the objects |
|  | Align bottom | Align bottom the objects |
|  | Zoom out | Zoom out the screen |
|  | Zoom percent | Zoom percent |
|  | Zoom in | Zoom in the screen |
|  | Grid | Display grid in the screen |
|  | State change | Switch button state display |
|  | Dynamic picture state selection | Switch dynamic picture state display |
|  | Public unit | Use the unit in all the screens |


| | | |
|---|------------------|---|
|  | Private unit | Use the unit in appointed screen |
|  | New | Build a new screen |
|  | Property | Screen name, author, remark... |
|  | delete | Delete the current screen |
|  | Simulate offline | Simulate the project in the TH |
|  | Simulate online | Connect PLC and TH, simulate the project in TH online |
|  | Download | Download the project in the TH |
|  | Upload | Upload the project from TH to PC |
|  | Debug download | Debug download |

2-3. Make the program

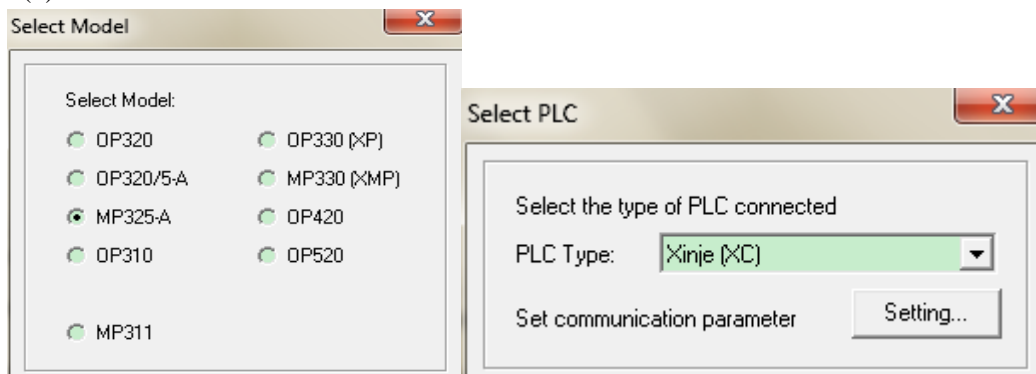
2-3-1. MP330(-S)/MP325-A(-S)

The program of MP330(-S) and MP325-A(-S) are edited in OP20 software.

1. Build a new program

(1) Click  to build a new project.

(2) Choose the MP model and PLC model:



(3) Click OK to confirm the settings.

2. Please refer to **OP software manual** for making and downloading the program.

The OP software manual download link:

<http://www.xinje.com/en/DownloadShow.asp?ID=232>

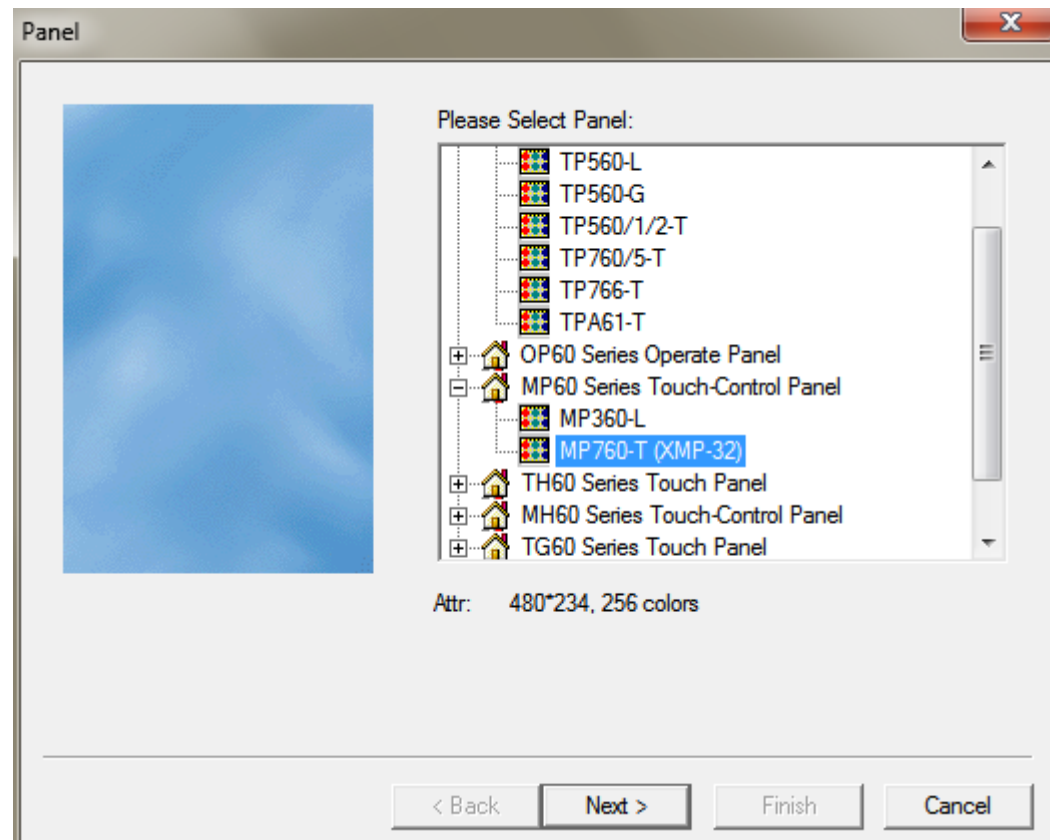
2-3-2. MP360-L/MP760-T

The program of MP360-L and MP760-T are edited in TouchWin software.

1. Build a new project

(1) Open the Touchwin software.

(2) Click File/New or  to build a new project.



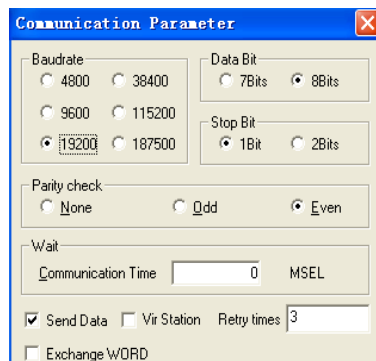
(3)

Select the correct MP type and com port device type



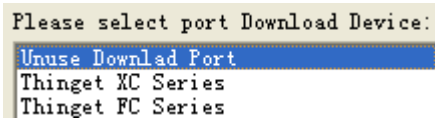
com port device type

(4) Set the com port device communication parameters according to PLC port device

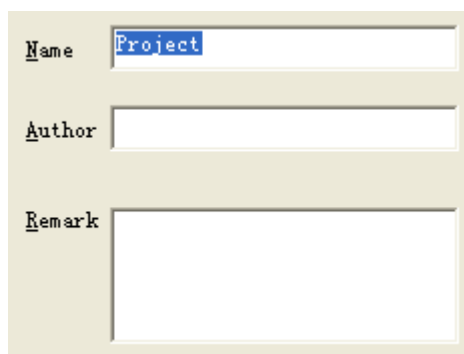



(5) When download port (COM1) is not used as communication port, please select unuse download port.

When use COM1 as com port, please select communication device.



(6) Finish the building process.




(7) Click  to save the project in the PC.

2. Edit the screen

Please refer to Touchwin software manual.

3. Download the project

Connect the MP series download port with PC, click  to download the program.
Please don't cut the power when downloading. Please download again if the power is off.

2-3-3. Communication

Connect MP with Xinje PLC through communication cable. Make sure the MP power supply is DC24V. Give the power for all the devices.

If the MP screen show communicating, please check the station no., baud rate of both devices.

The connection diagram of MP and other devices please refer to chapter 3.

3.Connection diagram of MP and other devices

3-1. Xinje FC/XC series PLC

1. Software settings

| Parameters | Recommended Settings |
|------------------------|--------------------------|
| Download Port | 9-Pin communication port |
| PLC Port | Communication port |
| Communication Type | RS232 |
| Communication Distance | 15m |
| Data Bit | 8 |
| Stop Bit | 1 |
| Verification Mode | Odd |
| Baud Rate | 9600 |
| Modbus Number | 1 |

2. Operational Address

(1) FC Series

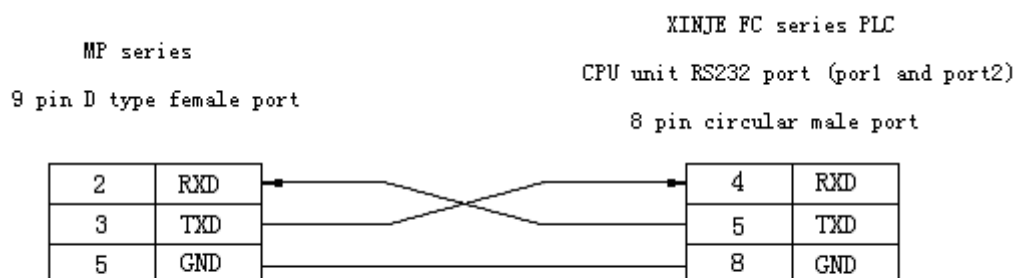
| FC Address | Operational Range | Data Type | Description |
|------------|-------------------|-------------|------------------------------|
| X | 0~337 | Bit | External input coil |
| Y | 0~337 | Bit | External output coil |
| M | 0~383 | Bit | Internal coil |
| SM | 0~96 | Bit | Internal special register |
| T | 0~128 | Bit | Timer |
| C | 0~128 | Bit | Counter |
| W | 0~2047 | Word/DWord | Data register |
| FW | 0~191 | Word/DWord | FlashROM register |
| TW | 0~127 | Word/ | Value of Timer |
| CW | 0~127 | Word/ | Value of Counter |
| SW | 0~111 | Word//DWord | Special register |
| WX | 0~13 | Word//DWord | Input coil as a register |
| WY | 0~13 | Word//DWord | Output relay as a register |
| WM | 0~23 | Word//DWord | Internal relay as a register |

(2) XC Series

| XC Address | Operational Range | Data Type | Description |
|------------|-------------------|------------|----------------------------|
| X | 0~543 | Bit | External input coil |
| Y | 0~543 | Bit | External output coil |
| M | 0~7999 | Bit | Internal coil |
| S | 0~1023 | Bit | Internal coil |
| M8XXX | 0~511 | Bit | Internal special coil |
| T | 0~639 | Bit | Timer |
| C | 0~639 | Bit | Counter |
| D | 0~7999 | Word/DWord | Data register |
| TD | 0~639 | Word/DWord | Value of Timer |
| CD | 0~639 | Word/DWord | Value of Counter |
| D8XXX | 0~511 | Word/DWord | Special register |
| FD | 0~1535 | Word/DWord | FlashROM register |
| FD8XXX | 0~511 | Word/DWord | Output relay as a register |
| ED | 0~36863 | Word/DWord | Extend data register |
| DM | 7984 | Word | Data register |
| DX | 0~52 | Word | Data register |
| DY | 0~52 | Word | Data register |
| DS | 0~1008 | Word | Data register |
| DM8XXX | 0~496 | Word | Data register |
| DT | 0~603 | Word | Data register |
| DC | 0~619 | Word | Data register |
| ID | 0~9999 | Word/DWord | Analog input |
| QD | 0~9999 | Word/DWord | Analog output |

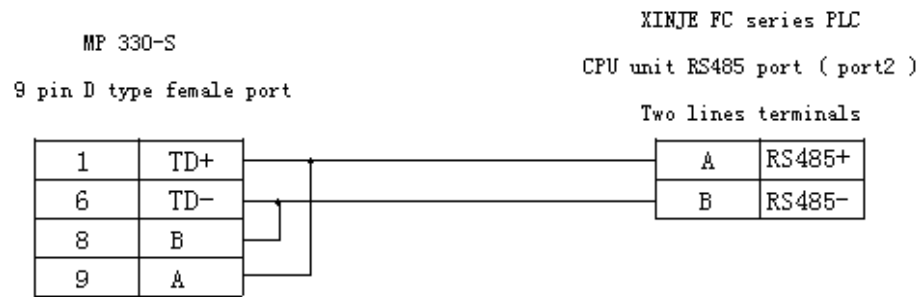
3. Connection Type

(1) Connect to FC series CPU (RS232 port)

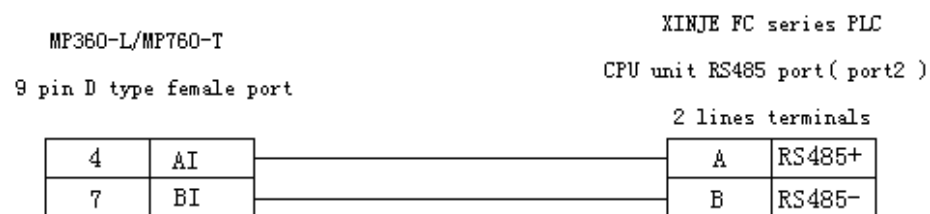


Suitable Model: MP330、MP330-S、MP360-L、MP760-T

(2) Connect to FC series CPU (RS485 port)

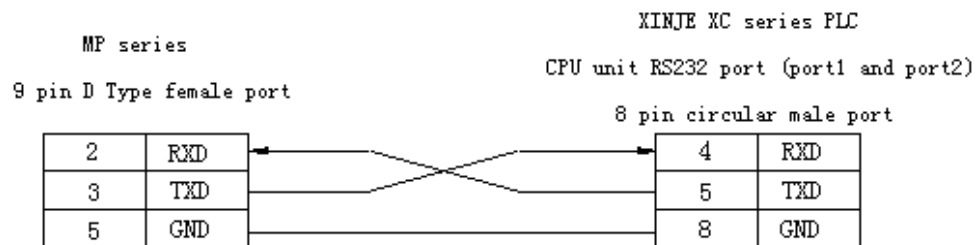


Suitable Model: MP330-S



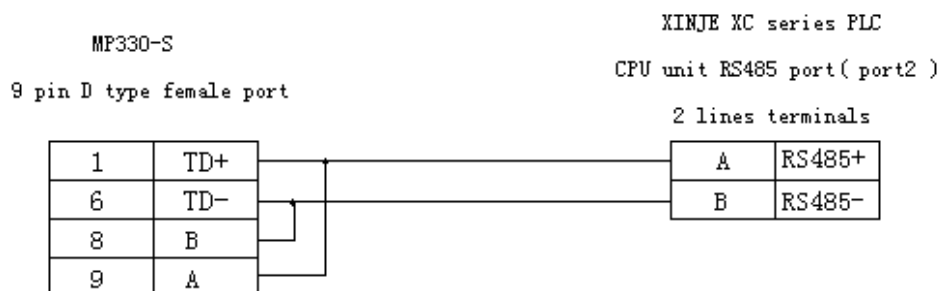
Suitable Model: MP360-L、MP760-T

(3) Connect to XC series CPU (RS232 port)

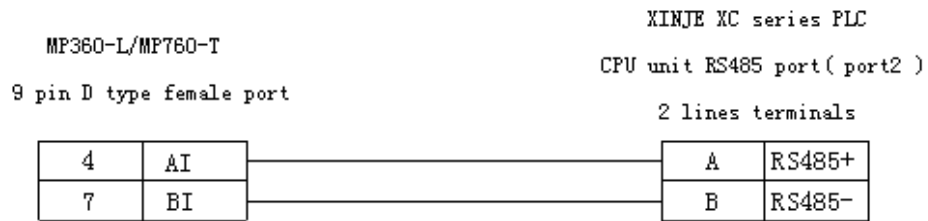


Suitable Model: MP330、MP330-S、MP360-L、MP760-T

(4) Connect to XC series CPU (RS485 port)

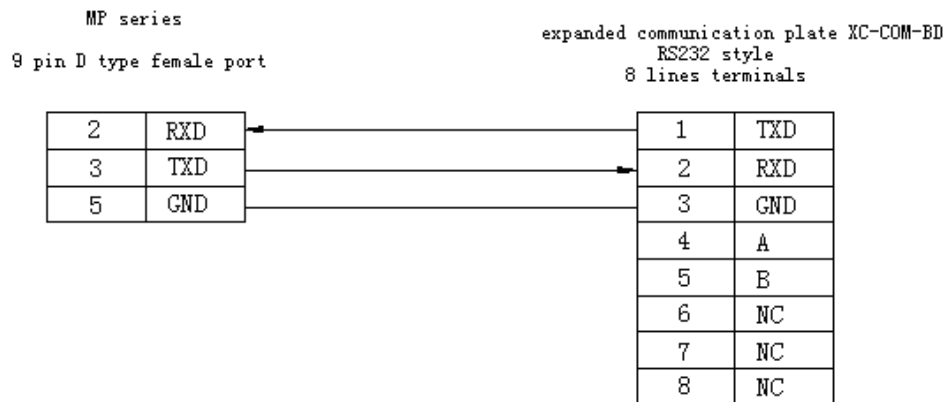


Suitable Model: MP330-S



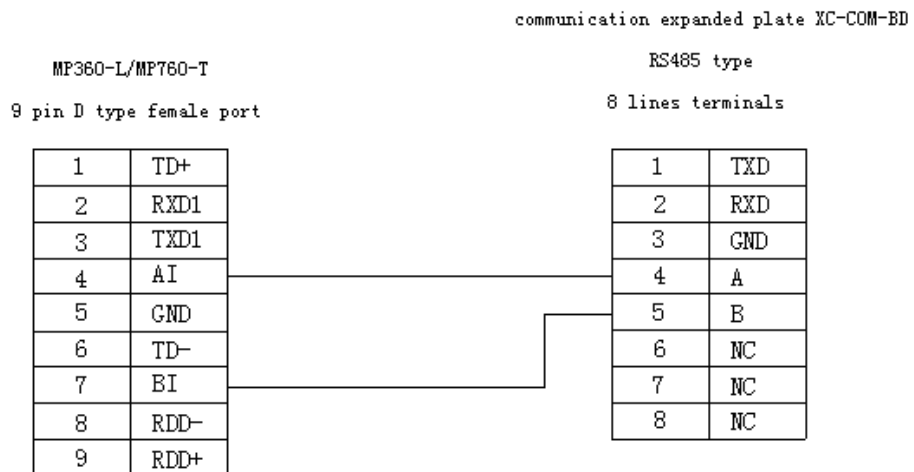
Suitable Model: MP360-L、MP760-T

(5) Connect to extend communication board XC-COM-BD(RS232 port)



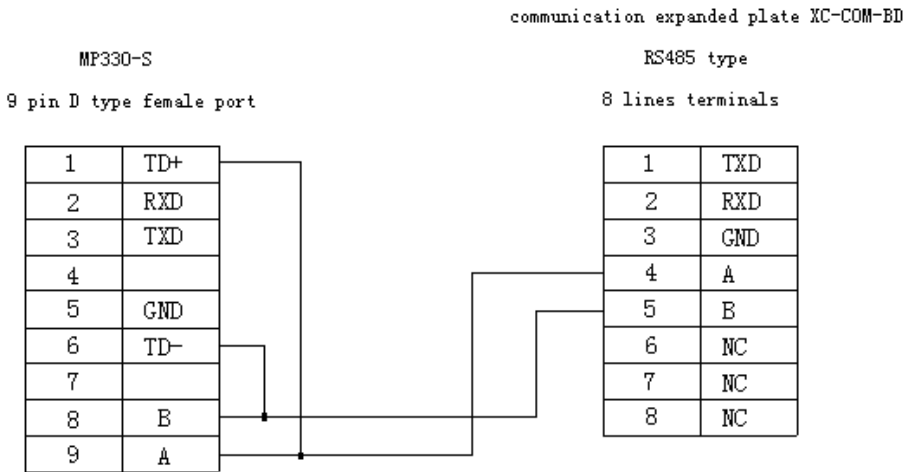
Suitable Model: MP330、MP330-S、MP360-L、MP760-T

(6) Connect to extend communication board XC-COM-BD(RS485 port)



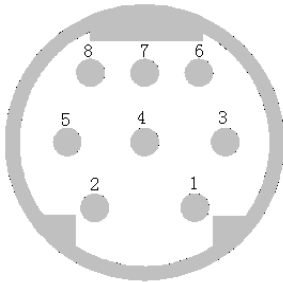
-

Suitable Model: MP360-L、MP760-T



Suitable Model: MP330-S.

4. 8-pin round male port of FC/XC series PLC (Port1、Port2)



3-2. FX/Q series of Mitsubishi

1. Software settings

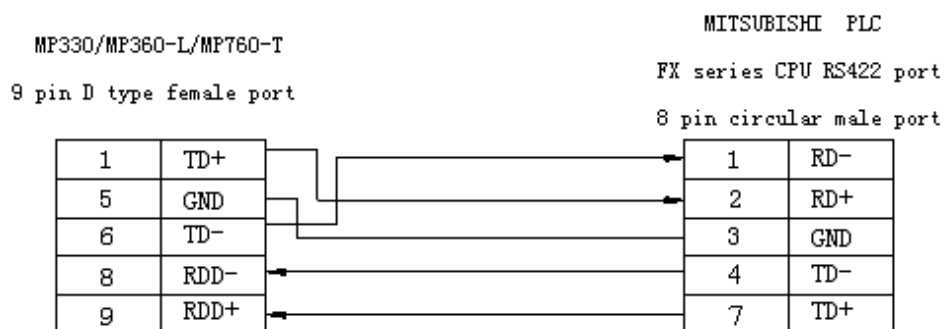
| Parameters | Recommended Settings |
|------------------------|---------------------------|
| Download Port | 9-Pin communication port |
| PLC Port | Programming Port/FX-422BD |
| Communication Type | RS422 |
| Communication Distance | 70m |
| Data Bit | 7 |
| Stop Bit | 1 |
| Verification Mode | Even |
| Baud Rate | 9600 |
| Modbus Number | 0 |

2. Address

| XC Address | Operational Range | Data Type | Description |
|------------|-------------------|------------|----------------------|
| X | 0~177 | Bit | External input coil |
| Y | 0~177 | Bit | External output coil |
| M | 0~8255 | Bit | Internal coil |
| S | 0~999 | Bit | Stepping coil |
| T | 0~255 | Bit | Timer status |
| C | 0~255 | Bit | Counter |
| C16 | 0~199 | Word/DWord | 16-Bit Counter |
| C32 | 200~255 | DWord | 32-Bit Counter |
| D | 0~8255 | Word/DWord | Data register |
| T | 0~255 | Word/DWord | Current value |
| X | 0~177 | Word/DWord | Data register |
| Y | 0~177 | Word/DWord | Data register |
| M | 0~8255 | Word/DWord | Data register |
| S | 0~999 | Word/DWord | Data register |

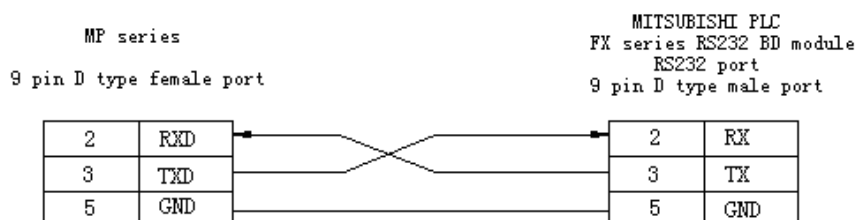
3. Connection Type

(1) connect to FX series CPU (RS422 port)



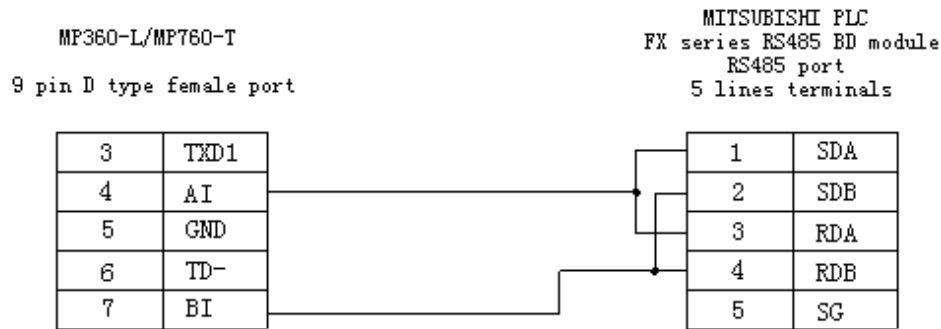
Suitable model: MP330、MP360-L、MP760-T

(2) connect to FX series communication module RS232BD

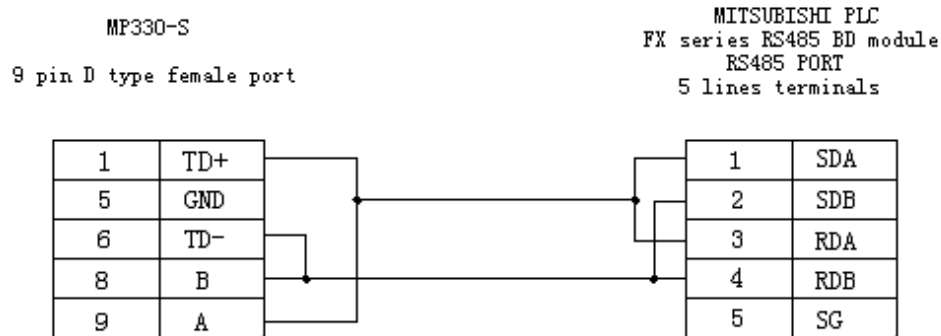


Suitable model: MP330、MP330-S、MP360-L、MP760-T

(3) connect to FX series communication module RS485BD

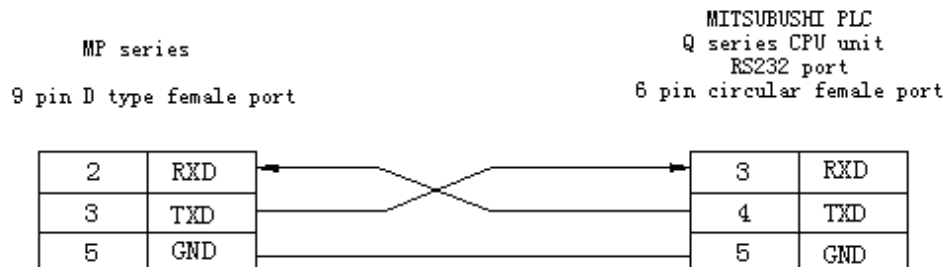


Suitable model: MP360-L、MP760-T



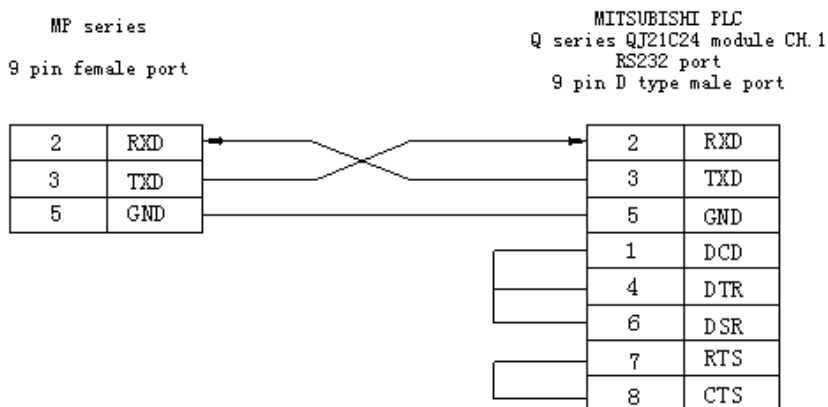
Suitable model: MP330-S

(4) connect to Q series CPU (RS232 port)



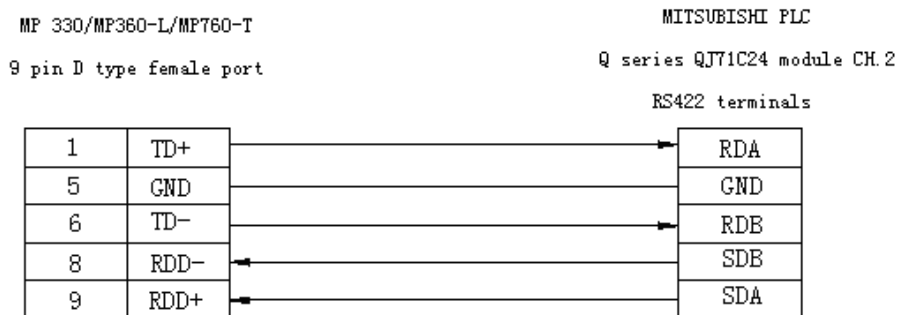
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(5) connect to Q series module QJ71C24 (RS232 port)



Suitable model: MP330、MP330-S、MP360-L、MP760-T

(6) connect to Q series module QJ71C24 (RS422 port)



Suitable model: MP330、MP360-L、MP760-T

3-3. Siemens S7-200/300/400 series

1. Software settings

| Parameters | Recommended settings |
|------------------------|--|
| MP communication port | RS485 port |
| PLC communication port | Terminal port or expanded communication port |
| Communication type | RS485 |
| Communication distance | 100m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | Even |
| Baud rate | 9600 |
| Modbus number | 2 |

2. Address

(1) S7-200 series

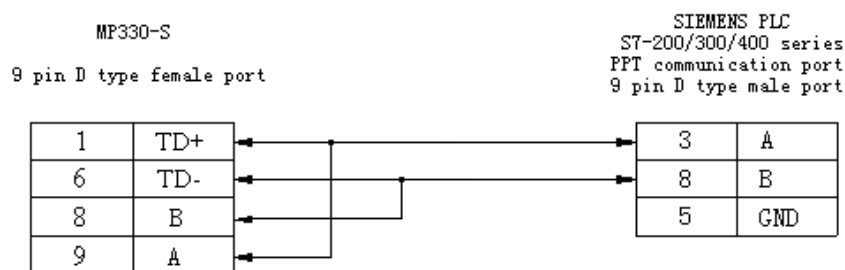
| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-----------|---|
| VB | 0~4095 | Byte | Variable data bytes registers |
| VW | 0~4095 | Word | Variable data word registers |
| VD | 0~4095 | DWord | Variable double word data registers |
| IB | 0~15 | Byte | External input bytes image registers |
| IW | 0~15 | Word | External input word image registers |
| ID | 0~15 | DWord | External input double word image registers |
| QB | 0~15 | Byte | External output byte image registers |
| QW | 0~15 | Word | External output word image registers |
| QD | 0~15 | DWord | External output double word image registers |

| | | | |
|-----|--------|-------|--|
| MB | 0~31 | Byte | Internal auxiliary bytes registers |
| MW | 0~31 | Word | Internal auxiliary word registers |
| MD | 0~31 | DWord | Internal auxiliary double word registers |
| SMB | 0~299 | Byte | Internal special auxiliary bytes registers |
| SMW | 0~299 | Word | Internal special auxiliary word registers |
| SMD | 0~299 | DWord | Internal special auxiliary double word registers |
| SB | 0~31 | Byte | Special auxiliary bytes registers |
| SW | 0~31 | Word | Special auxiliary word registers |
| SD | 0~31 | DWord | Special auxiliary double word registers |
| T | 0~255 | Word | Registers |
| C | 0~255 | Word | Registers |
| M | 0~31 | Bit | Bit storage |
| V | 0~4095 | Bit | Variable storage |
| I | 0~15 | Bit | External input coil |
| Q | 0~15 | Bit | External output coil |
| SM | 0~299 | Bit | Special relay |
| S | 0~31 | Bit | Sequential control relay |
| T | 0~255 | Bit | Timer status |
| C | 0~255 | Bit | Counter |

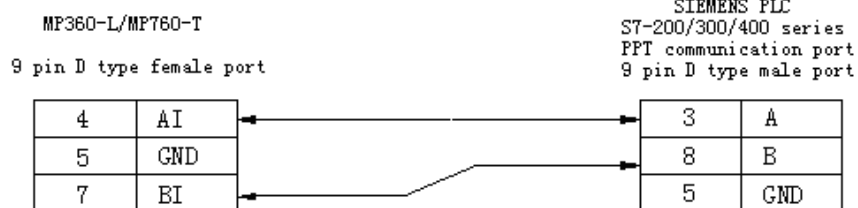
(2) S7-300/400 series

| PLC address | Operational range | Data type | description |
|-------------|-------------------|-----------------|------------------------------|
| I | 0~9999 | Byte/Word/DWord | External input registers |
| Q | 0~9999 | Byte/Word/DWord | External output registers |
| M | 0~9999 | Byte/Word/DWord | Internal auxiliary registers |
| DB0~DB20 | 0~9999 | Byte/Word/DWord | Data registers |
| I | 0~9999 | Bit | External input coil |
| Q | 0~9999 | Bit | External output coil |
| M | 0~9999 | Bit | Internal auxiliary relay |
| DB0~DB20 | 0~9999 | Bit | Internal auxiliary relay |

3. Connection Type



Suitable model: MP330-S



Suitable model: MP360-L、MP760-T

3-4. Omron C series

1. Software settings

| Parameters | Recommended settings |
|------------------------|--|
| MP communication port | Communication port |
| PLC communication port | Terminal port or expanded communication port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 7 |
| Stop bit | 2 |
| Verification mode | Even |
| Baud rate | 9600 |
| Modbus number | MP330/MP330-S: 0 MP360-L/MP760-T: 2 |

Notices: When MP series is in communication with Omron PLC, you need to set Omron PLC to 'Monitor Run' mode. Below is the operation method: Give power after setting the data in DM 6600 to H0201, then it will be ok.

2. Address

(1) SYSMAC CPM/CQM series

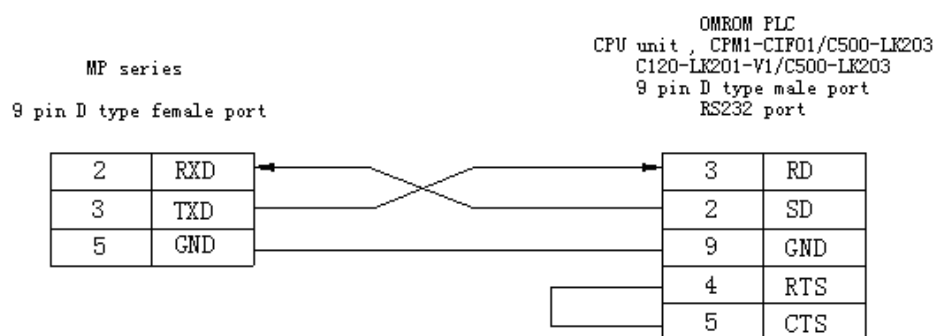
| PLC address | Operational range | Data type | Description |
|-------------|-------------------|------------|-------------------------------|
| IR | 0~65535 | Bit | I/O and internal relay |
| SR | 244~65535 | Bit | Relay |
| HR | 0~65535 | Bit | Keep type relay |
| AR | 0~65535 | Bit | Auxiliary relay |
| LR | 0~65535 | Bit | Connection relay |
| PV | 0~65535 | Bit | Timer / Counter current value |
| TC | 0~65535 | Bit | Timer / Counter |
| IR | 0~65535 | Word/DWord | Registers |
| SR | 244~65535 | Word/DWord | Registers |

| | | | |
|----|---------|------------|------------------------------------|
| HR | 0~65535 | Word/DWord | Registers |
| AR | 0~65535 | Word/DWord | Registers |
| LR | 0~65535 | Word/DWord | Registers |
| PV | 0~65535 | Word/DWord | Registers |
| TC | 0~65535 | Word/DWord | Registers |
| DM | 0~65535 | Word/DWord | Words / double word data registers |

(2) SYSMAC CP/CJ/CS series

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|------------|-------------|
| CIO | 0~9999 | Bit | |
| D | 0~99999 | Bit | |
| H | 0~9999 | Bit | |
| W | 0~9999 | Bit | |
| A | 0~9999 | Bit | |
| T | 0~9999 | Bit | Timer |
| C | 0~9999 | Bit | Counter |
| CIO | 0~9999 | Word/DWord | Registers |
| D | 0~99999 | Word/DWord | Registers |
| H | 0~9999 | Word/DWord | Registers |
| W | 0~9999 | Word/DWord | Registers |
| A | 0~9999 | Word/DWord | Registers |
| T | 0~9999 | Word/DWord | Registers |
| C | 0~9999 | Word/DWord | Registers |

3. Connection Type



Suitable model: MP330、MP330-S、MP360-L、MP760-T

3-5. KOYO S series

1. Software settings

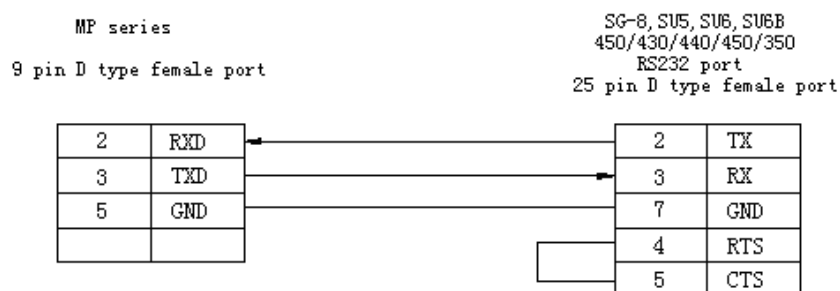
| parameters | Recommended settings |
|------------------------|--|
| MP communication port | Communication port |
| PLC communication port | Terminal port or expanded communication port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | Odd |
| Baud rate | 9600 |
| Modbus number | MP360-L/MP760-T: 1 |

2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-------------|-------------------------|
| M | 0~777 | Bit | Internal auxiliary coil |
| I | 0~777 | Bit | External input coil |
| Q | 0~777 | Bit | External output coil |
| SP | 0~777 | Bit | Internal auxiliary coil |
| T | 0~777 | Bit | Timer coil |
| C | 0~777 | Bit | Counter coil |
| S | 0~777 | Bit | Stepping coil |
| R | 0~41200 | Word/D Word | Data registers |

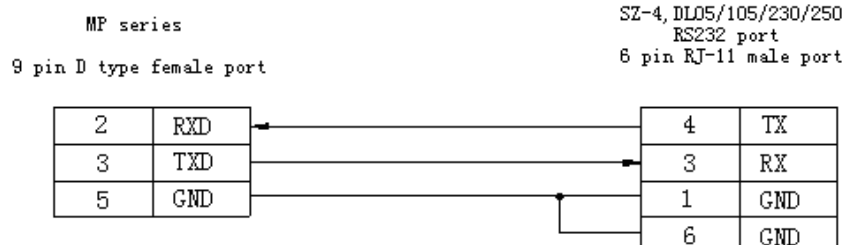
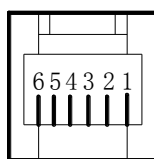
3. Connection Type

(1) connect to CPU or communication unit 25 pin (RS232 communication serial port)



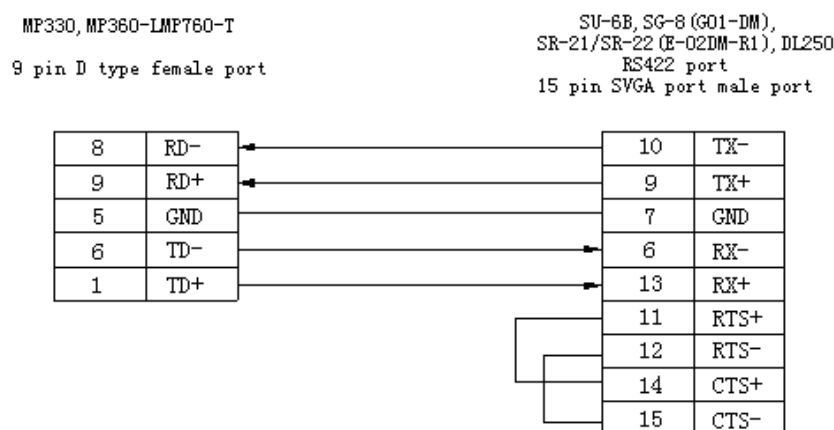
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(2) connect to CPU unit 6 pins RJ-11 jack (RS232 communication serial port)



Suitable model: MP330、MP330-S、MP360-L、MP760-T

(3) RS422 communication type



Suitable model: MP330、MP360-L、MP760-T

3-6. Delta DVP series

1. Software settings

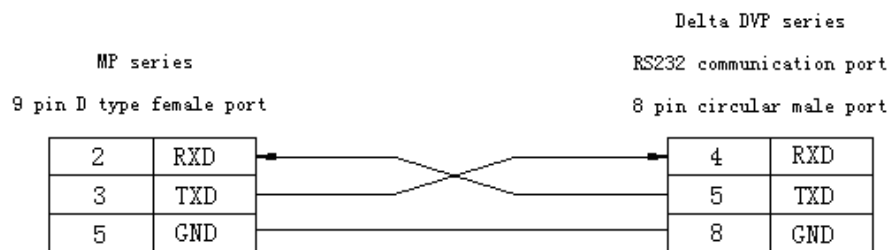
| parameters | Recommended settings |
|------------------------|----------------------|
| MP communication port | Communication port |
| PLC communication port | terminal port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 7 |
| Stop bit | 1 |
| Verification mode | Even |
| Baud rate | 9600 |
| Modbus number | 1 |

2. Address

| PLC address | Operational range | Data type | description |
|-------------|-------------------|-------------|--------------------------|
| X | 0~377 | Bit | External input coil |
| Y | 0~377 | Bit | External output coil |
| M | 0~1279 | Bit | Internal auxiliary relay |
| S | 0~1023 | Bit | Stepping coil |
| T | 0~255 | Bit | Timer coil |
| C | 0~255 | Bit | Counter coil |
| D | 0~1279 | Word/D Word | Data registers |
| TD | 0~255 | Word/D Word | Timer current value |
| CD | 0~255 | Word/D Word | Counter current value |
| S | 0~1023 | Word/D Word | Registers |
| X | 0~377 | Word/D Word | Registers |
| Y | 0~377 | Word/D Word | Registers |
| M | 0~127 | Word/D Word | Registers |

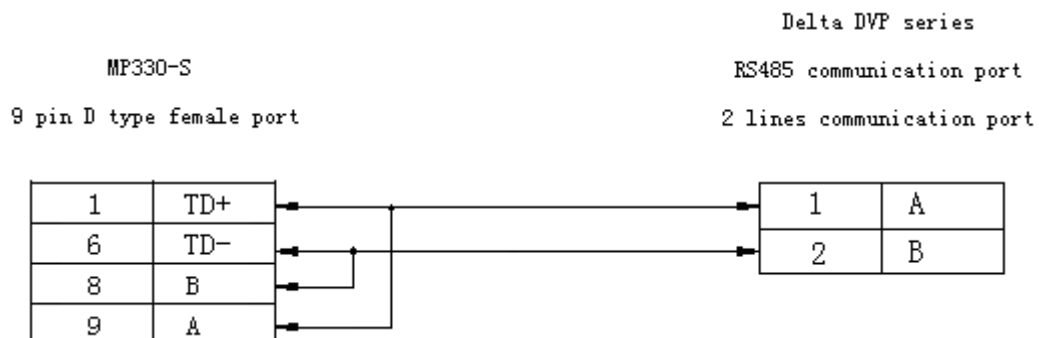
3. Connection type

(1) connect to CPU unit RS232 communication serial port

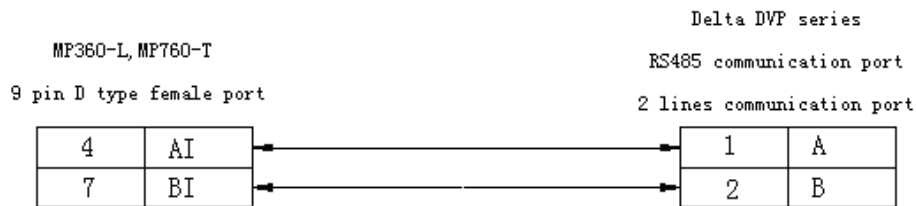


Suitable model: MP330、MP330-S、MP360-L、MP760-T

(2) connect to CPU unit RS485 communication serial port



Suitable model: MP330-S



Suitable model: MP360-L、MP760-T

3-7. LG Master-K series

1. Software settings

| Parameters | Recommended settings | |
|------------------------|----------------------|----------------------|
| | Master-K80/120S | K80/120S (Cnet) |
| MP communication port | Communication port | |
| PLC communication port | Terminal port | Multifunctional port |
| Communication type | RS232 | |
| Communication distance | 15m | |
| Data bit | 8 | |
| Stop bit | 1 | |
| Verification mode | None | |
| Baud rate | 38400 | 9600 |
| Modbus number | 1 | |

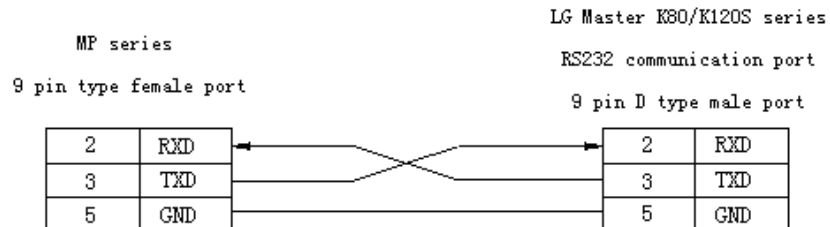
2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-------------|--------------------------|
| M | 0~9999F | Bit | Internal auxiliary coil |
| L | 0~9999F | Bit | Connection relay coil |
| K | 0~9999F | Bit | Hold relay coil |
| F | 0~9999F | Bit | Read only data registers |
| T | 0~9999 | Bit | Timer coil |
| C | 0~9999 | Bit | Counter coil |
| D | 0~9999 | Bit | Data registers |
| P | 0~9999F | Bit | Input / output coil |
| D | 0~9999 | Word/D Word | Data registers |
| TD | 0~9999 | Word/D Word | Timer current value |
| CD | 0~9999 | Word/D Word | Counter current value |
| S | 0~9999 | Word/D Word | Registers |
| K | 0~9999 | Word/D Word | Registers |
| M | 0~9999 | Word/D Word | Registers |

| | | | |
|---|--------|-------------|-----------|
| L | 0~9999 | Word/D Word | Registers |
| F | 0~9999 | Word/D Word | Registers |
| P | 0~9999 | Word/D Word | Registers |

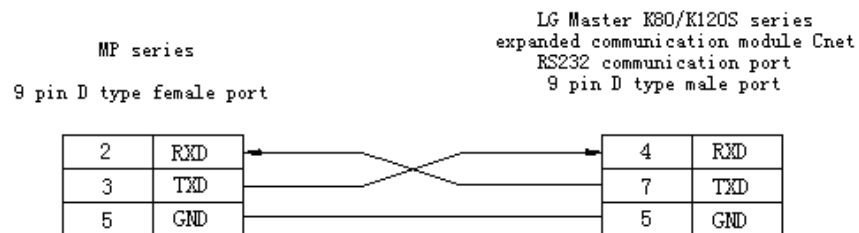
3. Connection type

(1) connect to CPU unit (RS232 communication serial port)



Suitable model: MP330, MP330-S, MP360-L, MP760-T.

(2) connect to CPU unit (use expanded communication module)



Suitable model: MP330, MP330-S、MP360-L、MP760-T.

3-8. Panasonic FP series

1. Software settings

| Parameters | Recommended settings |
|------------------------|------------------------------------|
| MP communication port | Communication port |
| PLC communication port | Terminal port / communication port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | Odd |
| Baud rate | 9600 |
| Modbus number | 1 |

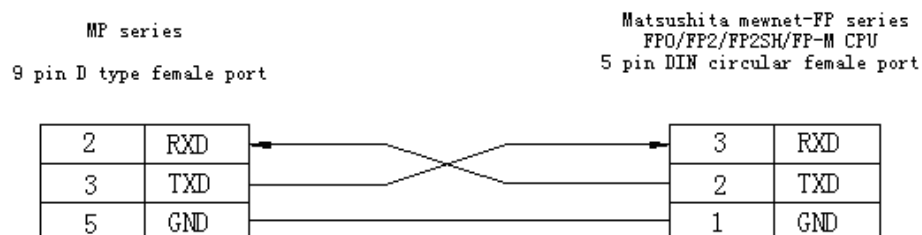
Notice: The modbus number of FP PLC series is generally considered to '1', but the modbus number of FP3 should be '0' because of its special control. Be careful of the communication settings of the PLC in the process of connection.

2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-------------|--|
| X | 0~12 (0~F) | Bit | External input coil (bit manipulation) |
| WX | 0~12 | Word/D Word | Word/D Word registers |
| Y | 0~12 (0~F) | Bit | External output coil (bit manipulation) |
| WY | 0~12 | Word/D Word | Word/D Word registers |
| R | 0~62, 90~903 | Bit | Internal auxiliary coil (bit manipulation) |
| WR | 0~65535 | Word/D Word | Word/D Word registers |
| T | 0~99 | Bit | Timer coil |
| L | 0~65535 (0~F) | Bit | Connection control coil |
| C | 100~143 | Bit | Counter coil |
| SV | 0~143 | Word/D Word | Setting value of Timer or counter |
| EV | 0~143 | Word/D Word | Current value of timer or counter |
| DT | 0~65535 | Word/D Word | Word/D Word data registers |

3. connection type

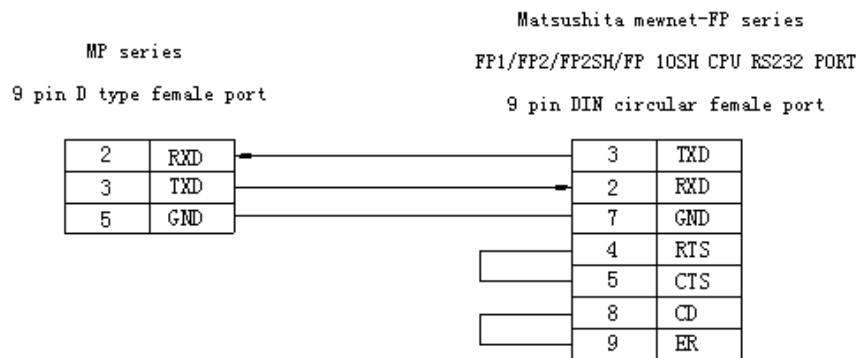
(1) connect to CPU unit 5 pin circular female



Suitable model: MP330、MP330-S、MP360-L、MP760-T

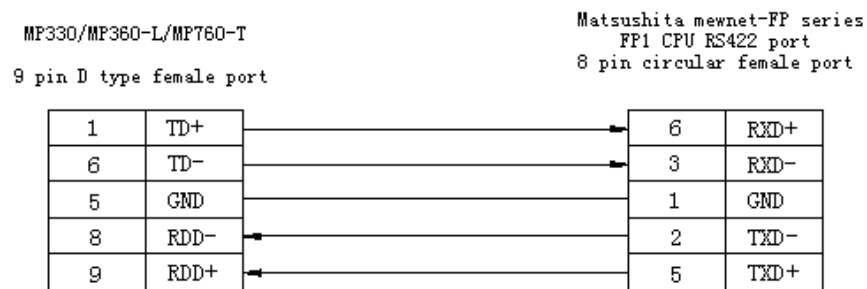
Notice: In the FP0 series, only the FP0-CXXCXX has the communication port 'RS232'.

(2) connect to CPU unit 9 pin D type male



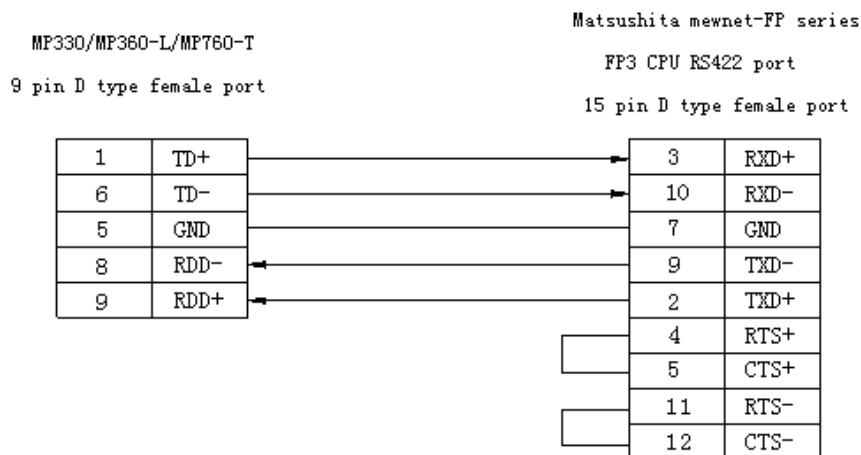
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(3) connect to CPU unit 8 pin D type male



Suitable model: MP330、MP360-L、MP760-T

(4) connect to CPU unit 8 pin D type male



Suitable model: MP330、MP360-L、MP760-T

3-9. Schneider Micro/Neza/Twido series

1. Software settings

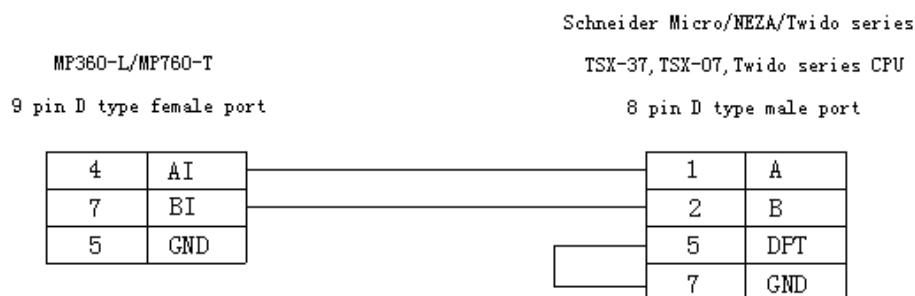
| Parameters | Recommended settings |
|------------------------|----------------------|
| MP communication port | Communication port |
| PLC communication port | Communication port |
| Communication type | RS485 |
| Communication distance | 100m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | Even |
| Baud rate | 9600 |
| Modbus number | 1 |

2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-------------|---------------|
| M | 0~2047 | Bit | Internal coil |
| MW | 0~2047 | Word/D Word | Register coil |

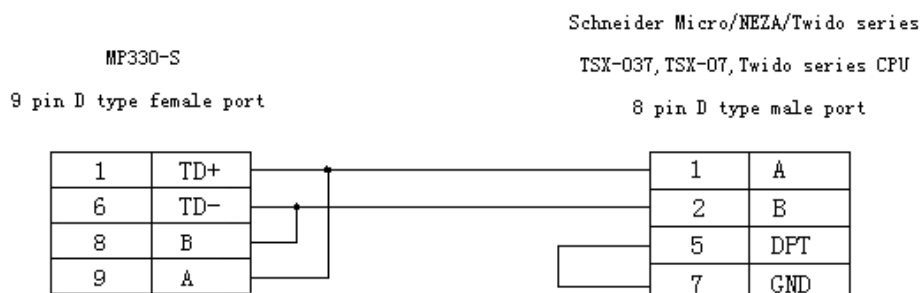
3. connection type

(1) connect to CPU unit (RS485 type)



Suitable model: MP360-L、MP760-T

(2) connect to CPU unit (RS485 type)



Suitable model: MP330-S

3-10. Facon FB series

1. Software settings

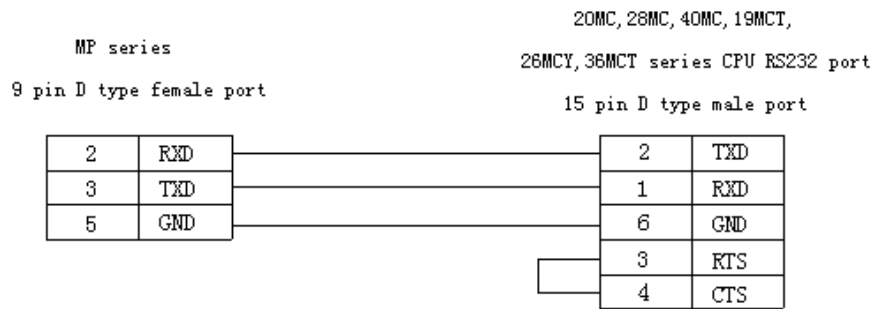
| parameters | Recommended settings |
|------------------------|--|
| MP communication port | Communication port |
| PLC communication port | Communication port/expanded communication port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 7 |
| Stop bit | 1 |
| Verification mode | Even |
| Baud rate | 9600 |
| Modbus number | 1 |

2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-------------|-------------------------|
| M | 0~2001 | Bit | Internal auxiliary coil |
| X | 0~255 | Bit | External input coil |
| Y | 0~255 | Bit | External output coil |
| S | 0~999 | Bit | Sequential control coil |
| T | 0~255 | Bit | Timer |
| C | 0~255 | Bit | Counter |
| R | 0~9000 | Word/D word | Data registers |
| X | 0~255 | Word/D word | Registers |
| Y | 0~255 | Word/D word | Registers |
| M | 0~2001 | Word/D word | Registers |
| S | 0~999 | Word/D word | Registers |
| D | 0~3071 | Word/D word | Registers |
| TD | 0~255 | Word/D word | Registers |
| C16 | 0~199 | Word/D word | 16 counter |
| C32 | 200~255 | Word/D word | 32 counter |
| T | 0~255 | Word/D word | Designated timer status |

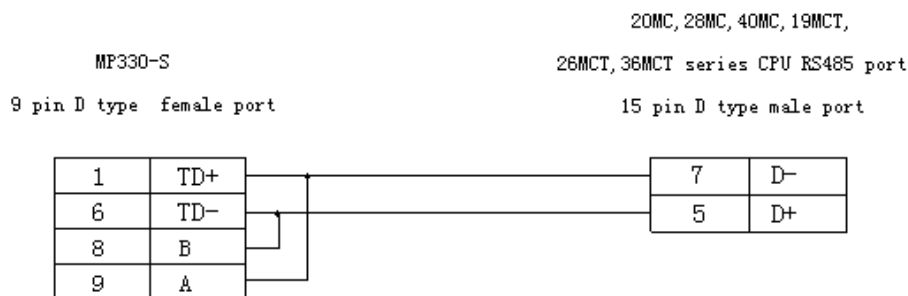
3. connection type

(1) connect to CPU unit (RS232 type)

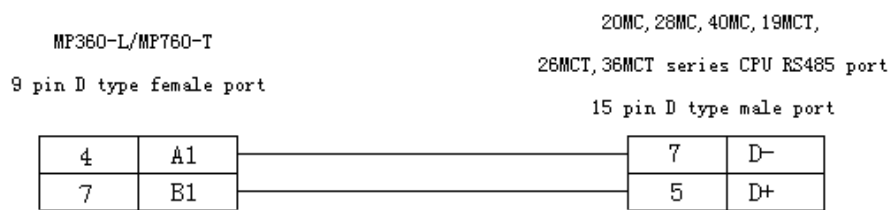


Suitable model: MP330、MP330-S、MP360-L、MP760-T

(2) connect to CPU unit (RS485 type)

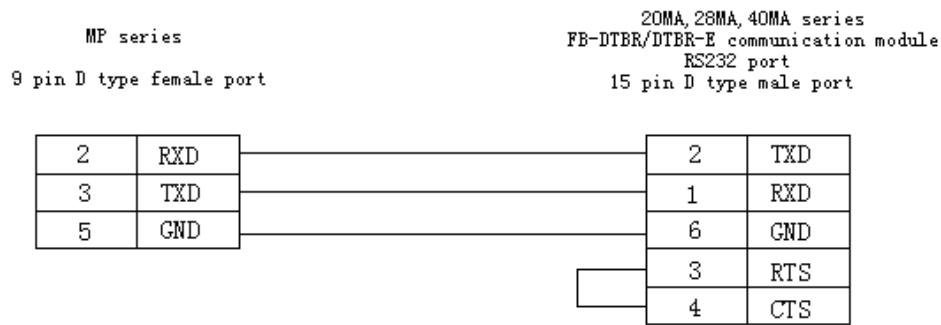


Suitable model: MP330-S



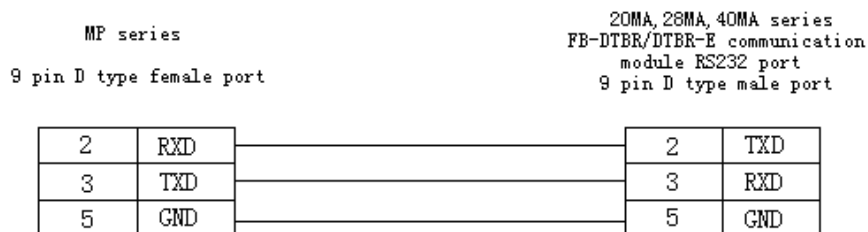
Suitable model: MP360-L、MP760-T

(3) connect to FB-DTBR/DTBR-E communication module (RS232) (15 pin D type male)



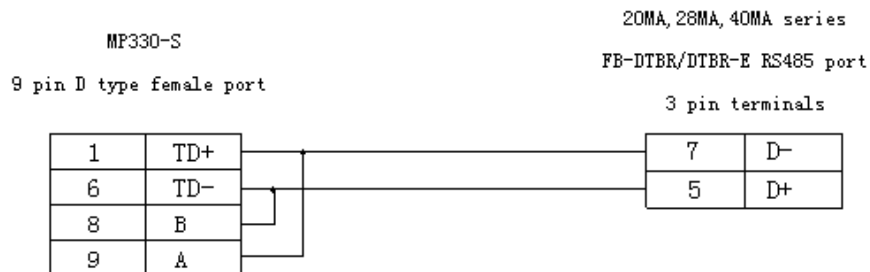
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(4) connect to FB-DTBR/DTBR-E communication module (RS232) (9 pin D type male)

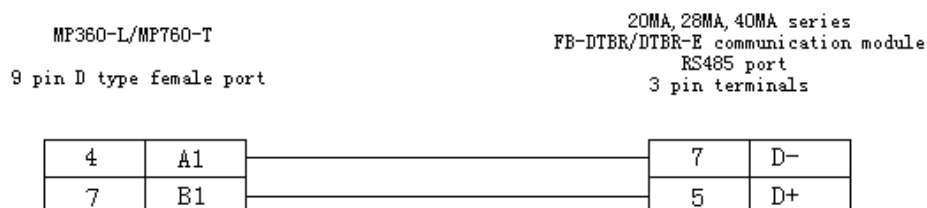


Suitable model: MP330、MP330-S、MP360-L、MP760-T

(5) connect to FB-DTBR/DTBR-E communication module (RS485)



Suitable model: MP330-S



Suitable model: MP360-L、MP760-T

3-11. Vigor VB series

1. software settings

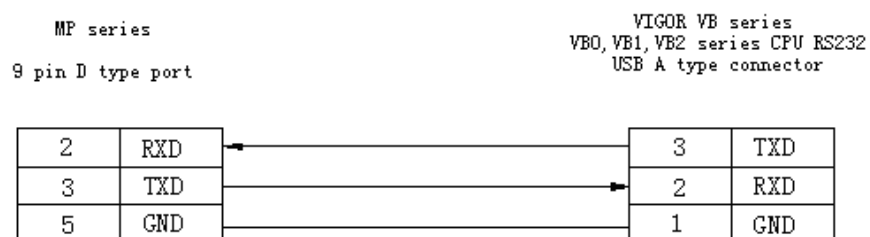
| Parameters | Recommended settings |
|------------------------|--|
| MP communication port | Communication port |
| PLC communication port | Communication port/expanded communication port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 7 |
| Stop bit | 1 |
| Verification mode | Even |
| Baud rate | 19200 |
| Modbus number | 1 |

2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|--------------|-------------------------|
| X | 0~777 | Bit | External input coil |
| Y | 0~777 | Bit | External output coil |
| M | 0~9255 | Bit | Internal auxiliary coil |
| S | 0~999 | Bit | Special auxiliary coil |
| TSTATUS | 0~255 | Bit | Timer status |
| CSTATUS | 0~255 | Bit | Counter status |
| TCOIL | 0~255 | Bit | Timer |
| CCOIL | 0~255 | Bit | Counter |
| C16 | 0~199 | Word | 16 counter |
| C32 | 200~255 | D Word | 32 counter |
| D | 0~9255 | Word/ D Word | Data registers |
| TW | 0~255 | Word/ D Word | Current value |
| X | 0~777 | Word/ D Word | Registers |
| Y | 0~777 | Word/ D Word | Registers |
| M | 0~9255 | Word/ D Word | Registers |
| S | 0~999 | Word/ D Word | Registers |

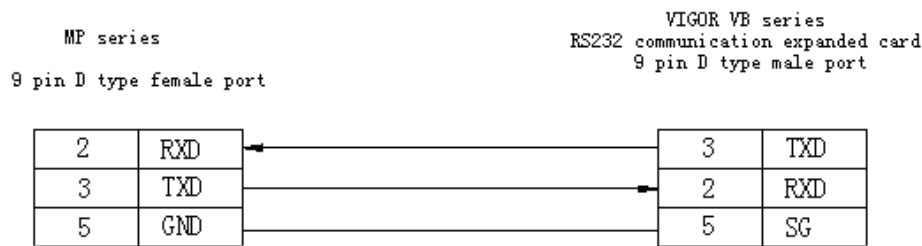
3. connection type

(1) connect to CPU unit A type of USB connector communication (RS232)



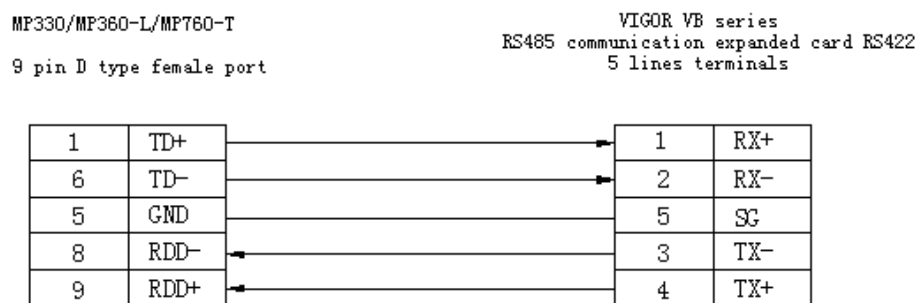
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(2) connect to CPU unit through RS232 communicational expanded card



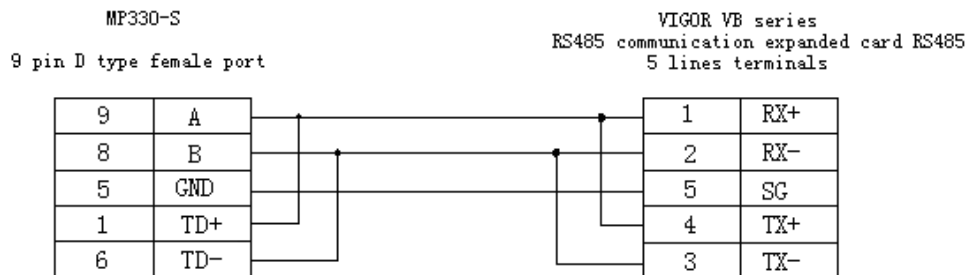
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(3) connect to CPU unit through RS485 communicational expanded card by RS422

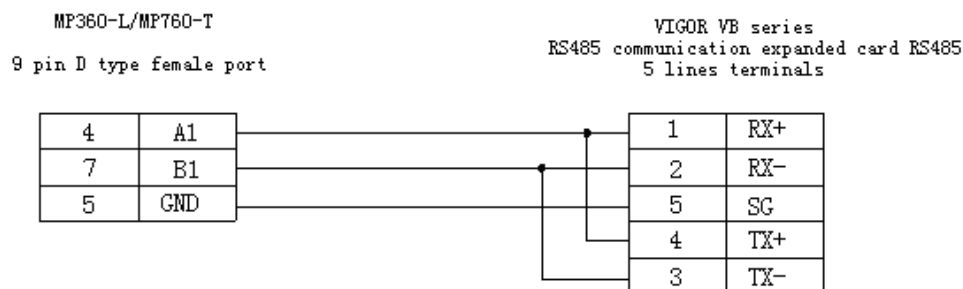


Suitable model: MP330、MP360-L、MP760-T

(4) connect to CPU unit through the RS485 communicational expanded card (RS485)



Suitable model: MP330-S



Suitable model: MP360-L、MP760-T

3-12. Keyence KV series

1. Software settings

| parameters | Recommended settings |
|------------------------|----------------------|
| MP communication port | Communication port |
| PLC communication port | Terminal port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | Even |
| Baud rate | 9600 |
| Modbus number | 1 |

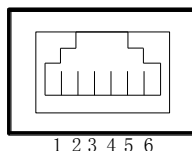
2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-----------|----------------|
| R | 0~999 | Bit | Coil |
| DM | 0~8000 | word | Data registers |

3. connection type

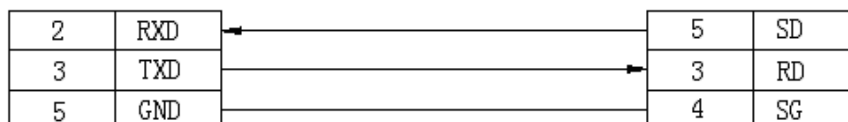
(1) connect to CPU unit (RS232)

RJ-11 interface



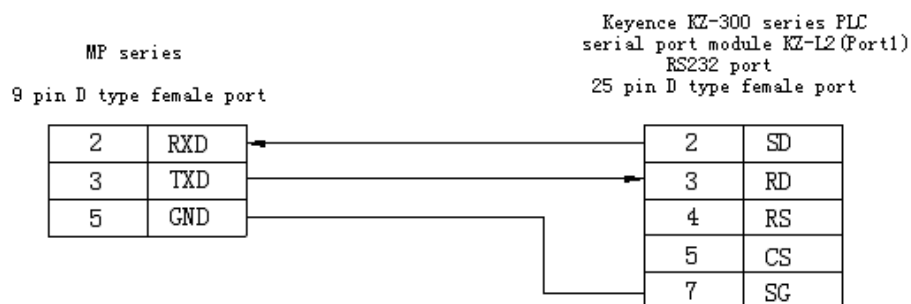
MP series
9 pin D type female port

Keyence KV-10/16/24/40 series PLC
CPU unit RS232 port
6 pin RJ11 receptacle



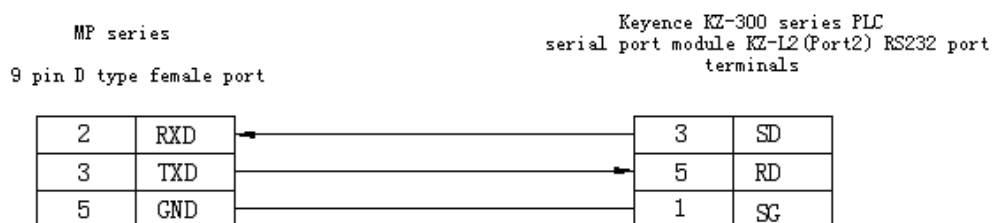
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(2) connect to Keyence KZ-300 series through serial port module KZ-L2 (Port1, RS232)



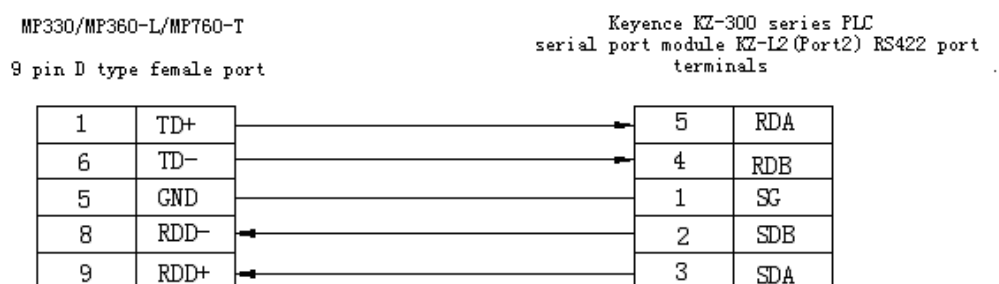
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(3) connect to Keyence KZ-300 series through the serial port module KZ-L2 (Port2, RS232)



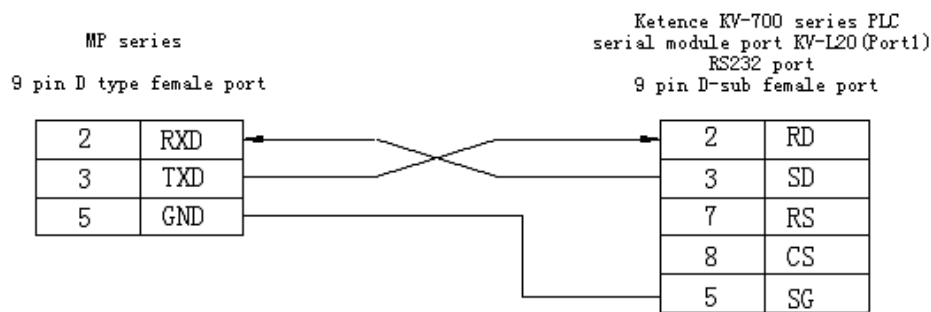
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(4) Keyence KZ-300 series through the serial module KZ-L2 (Port2, RS422)



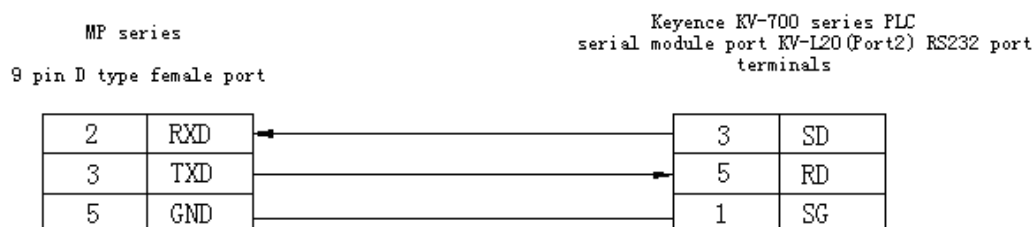
Suitable model: MP330、MP360-L、MP760-T

(5) Keyence KZ-70 series through the serial port module KV-L20 (Port1, RS232)



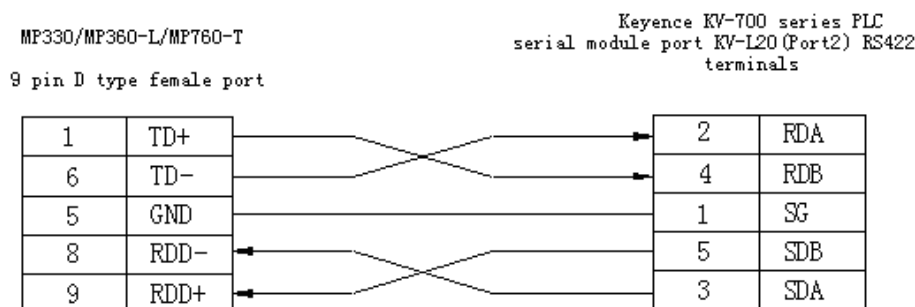
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(6) connect to Keyence KZ-700 series through the serial port module KV-L20 (Port2, RS232)



Suitable model: MP330、MP330-S、MP360-L、MP760-T

(7) connect to the serial port module KV-L20 (Port2, RS422)



Suitable model: MP330、MP360-L、MP760-T

3-13. Emerson EC20 series

1. software settings

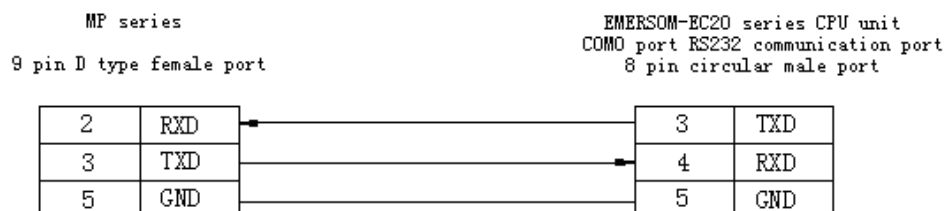
| parameters | Recommended settings |
|------------------------|----------------------|
| MP communication port | Communication port |
| PLC communication port | Terminal port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | Even |
| Baud rate | 19200 |
| Modbus number | 1 |

2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-------------|---------------------------------|
| X | 0~377 | Bit | External input coil |
| Y | 0~377 | Bit | External output coil |
| M | 0~2047 | Bit | Internal auxiliary coil |
| S | 0~1023 | Bit | Special auxiliary coil |
| T | 0~255 | Bit | Timer status |
| C | 0~255 | Bit | Counter coil |
| SM | 0~9999 | Bit | Special internal auxiliary coil |
| D | 0~7999 | Word/D Word | Data registers |
| SD | 0~255 | Word/D Word | registers |
| Z | 0~15 | Word/D Word | registers |
| T | 0~255 | Word/D Word | registers |
| C16 | 0~199 | Word/D Word | 16 counter |
| C32 | 200~255 | Word/D Word | 32 counter |

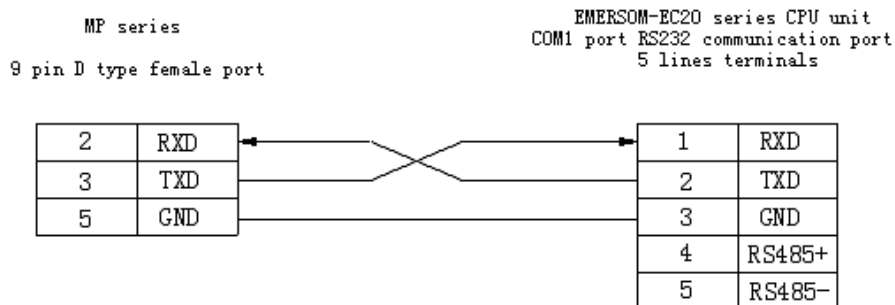
3. Connection type

(1) connect to COM0 communication port (RS232)



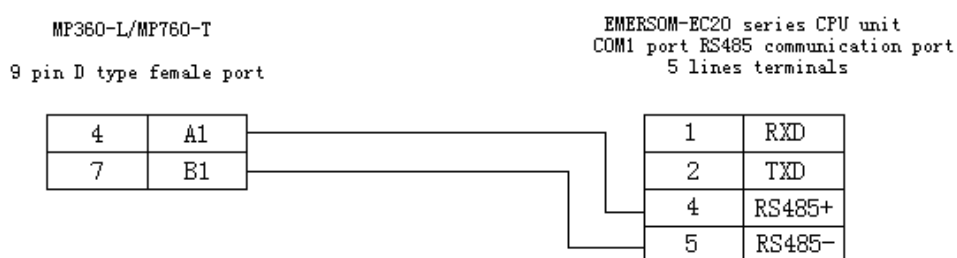
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(2) connect to COM1 communication port (RS232)

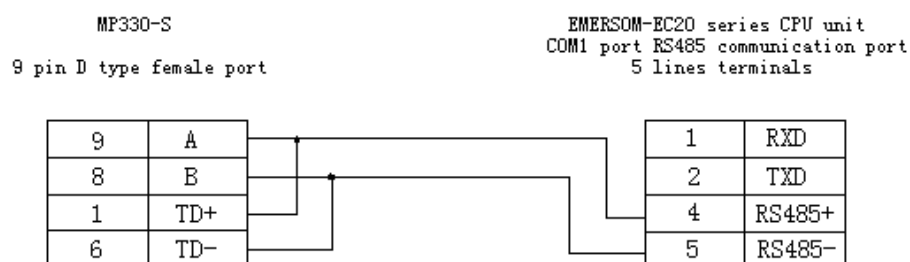


Suitable model: MP330、MP330-S、MP360-L、MP760-T

(3) connect to COM1 communication port (RS485)



Suitable model: MP360-L、MP760-T



Suitable model: MP330-S

Notice: The communication port ‘COM1’ of the Emerson EC20 series PLC contains a R232 and a RS485 communication port, and only one of the ports can be chosen. At the same time, the unused port can not be connected with other cables to avoid the communicational interference.

3-14. OPTO22 series

1. software settings

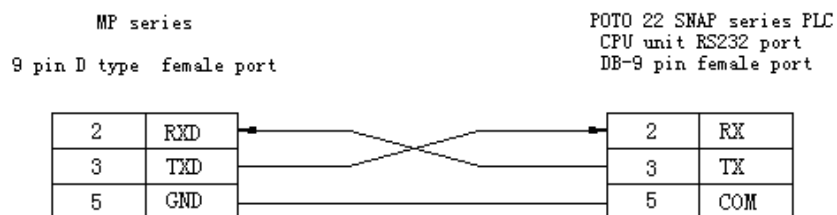
| parameters | Recommended settings |
|------------------------|----------------------|
| MP communication port | Communication port |
| PLC communication port | Terminal port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | None |
| Baud rate | 115200 |
| Modbus number | 1 |

2. Address

| PLC address | Operational range | Data type | Description |
|---------------|-------------------|-----------|----------------------|
| DI | 0~9999 | Bit | External input coil |
| DO | 0~9999 | Bit | External output coil |
| PID000~PID031 | 0~6 | Bit | |
| I | 0~9999 | D Word | registers |
| F | 0~9999 | D Word | registers |
| AI | 0~9999 | D Word | registers |
| AO | 0~9999 | D Word | registers |

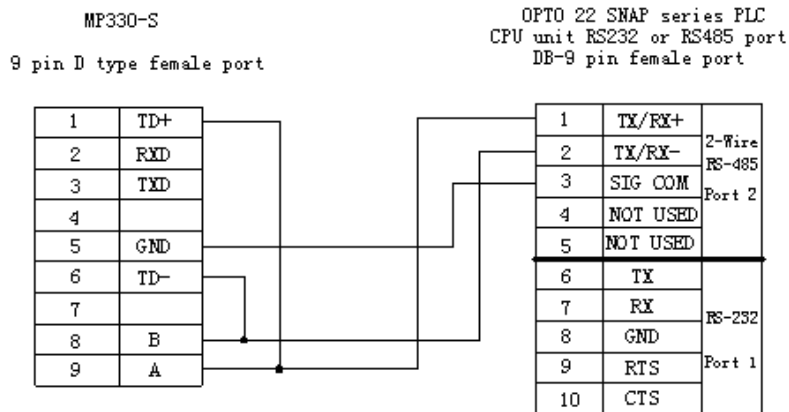
3. Connection type

(1) connect to CPU unit(RS232)

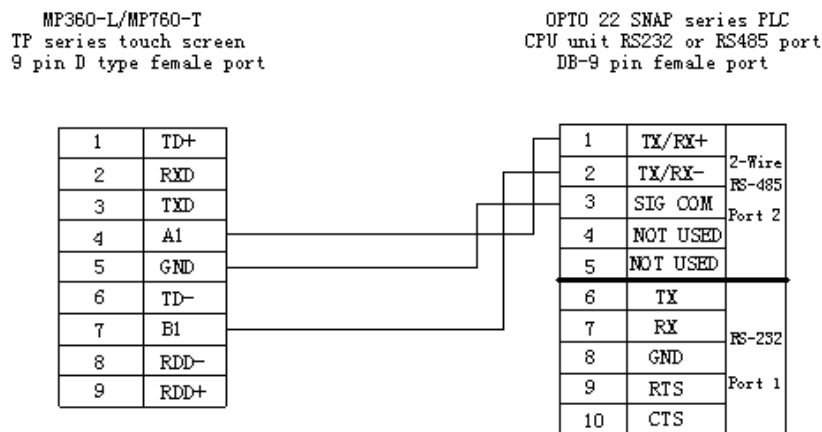


Suitable model: MP330、MP330-S、MP360-L、MP760-T

(2) connect to CPU unit RS232 or RS485 port (RS485)

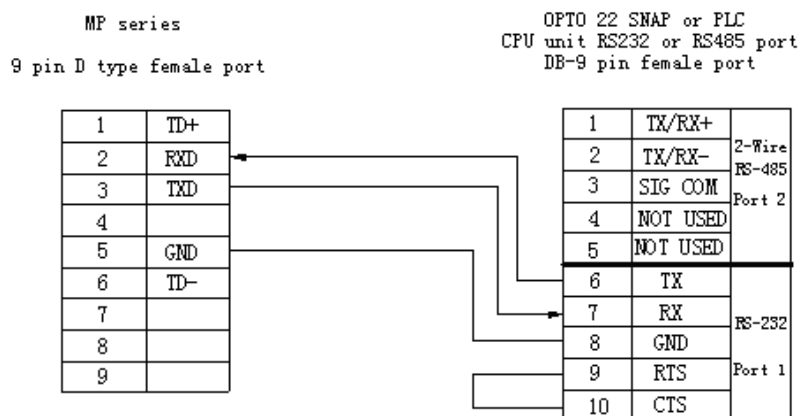


Suitable model: MP330-S



Suitable model: MP360-L, MP760-T

(3) connect to CPU unit RS232 or RS485 port (RS232)



Suitable model: MP330, MP330-S, MP360-L, MP760-T

3-15. SAIA-Burgess PCD series

1. software settings

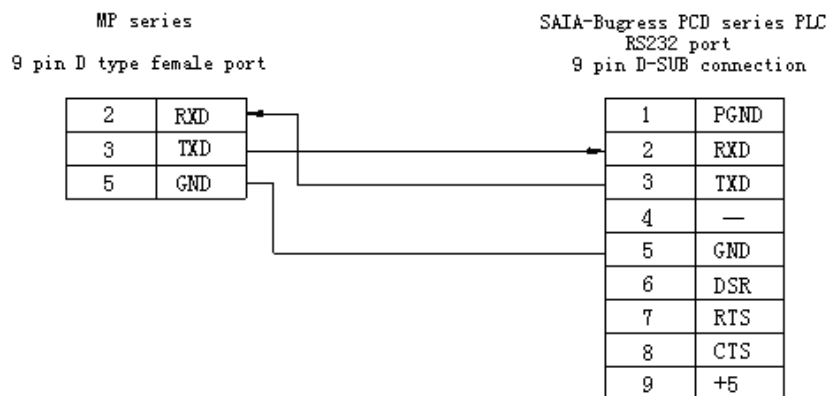
| parameters | Recommended settings |
|------------------------|----------------------|
| MP communication port | Communication port |
| PLC communication port | Terminal port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | None |
| Baud rate | 19200 |
| Modbus number | 1 |

2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-----------|----------------------|
| R | 0~4095 | D Word | Registers |
| T | 0~1599 | D Word | Registers |
| C | 0~1599 | D Word | Registers |
| F | 0~8000 | Bit | Auxiliary coil |
| I | 0~1023 | Bit | External input coil |
| O | 0~1023 | Bit | External output coil |

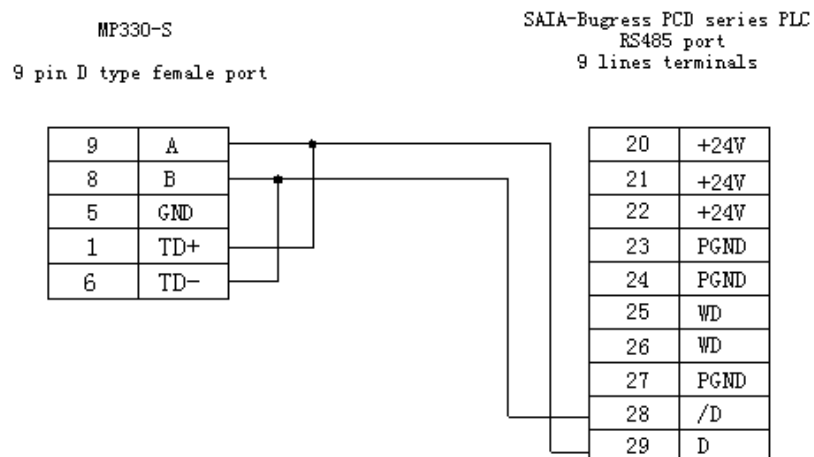
3. Connection type

(1) connect to PGU (RS232)

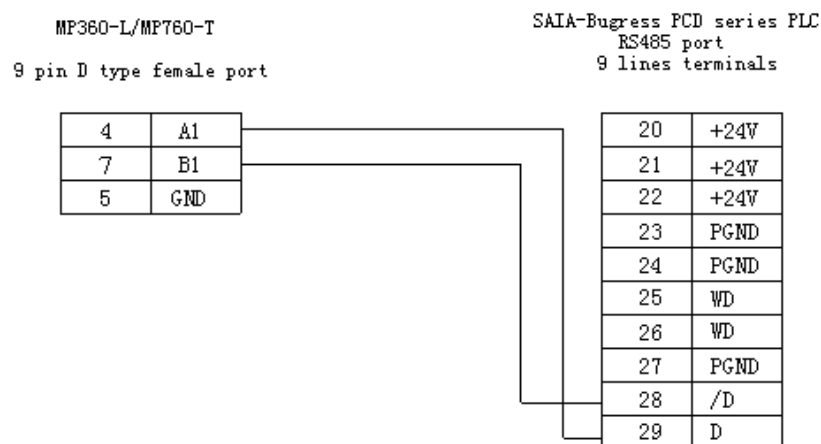


Suitable model: MP330、MP330-S、MP360-L、MP760-T

(2) connect to PGU (RS485)

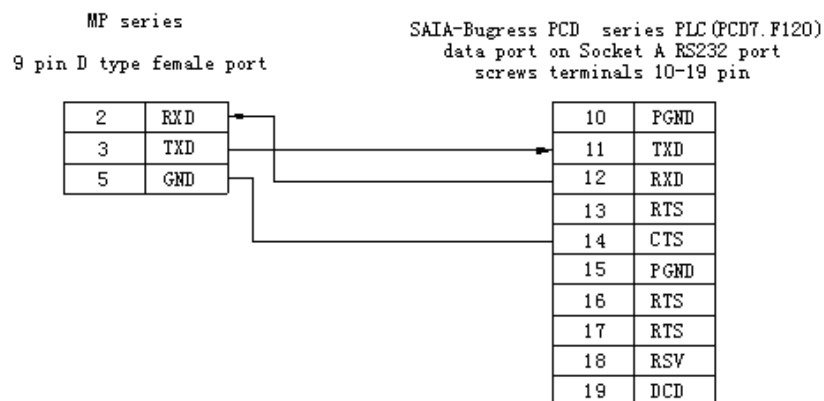


Suitable model: MP330-S



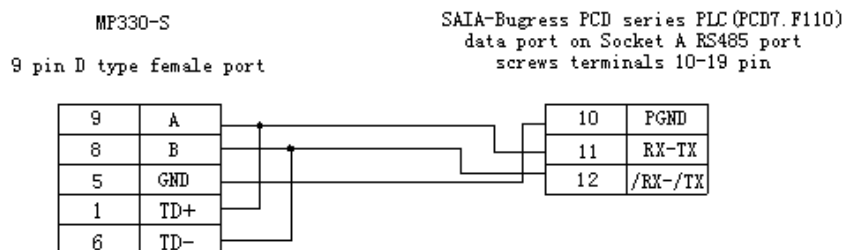
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(3) connect to Socket A data port (PCD7.F120)

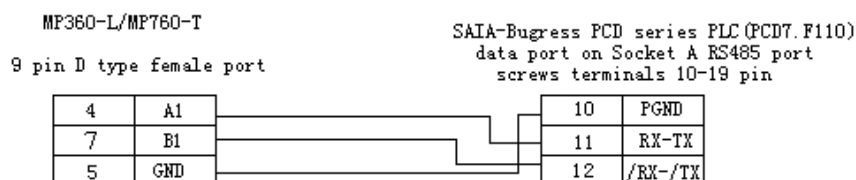


Suitable model: MP330、MP330-S、MP360-L、MP760-T

(4) connect to the serial data port of Socket A (PCD7.F110)

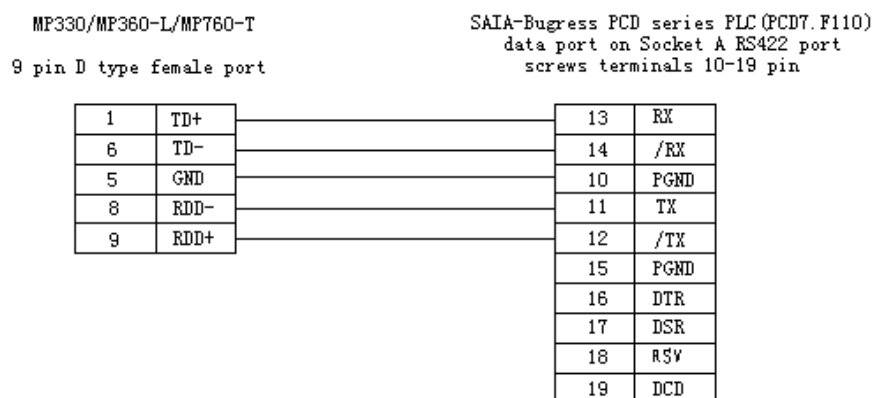


Suitable model: MP330-S



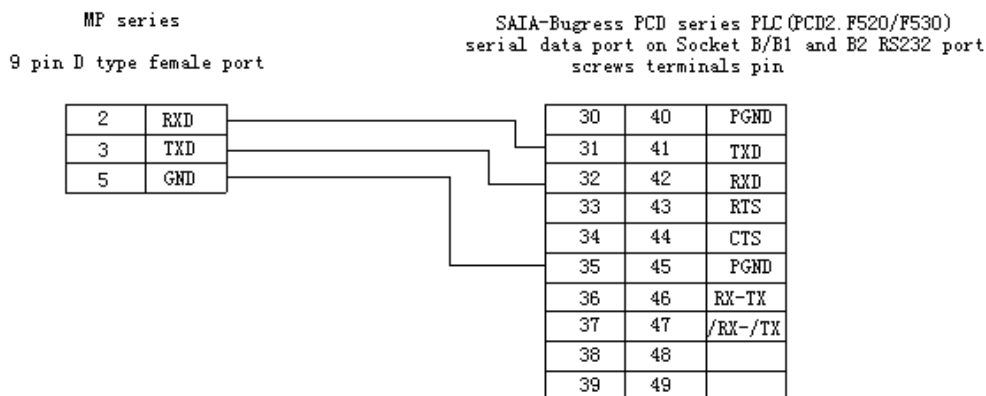
Suitable model: MP360-L、MP760-T

(5) connect to the serial data port of Socket A (PCD7.F110)



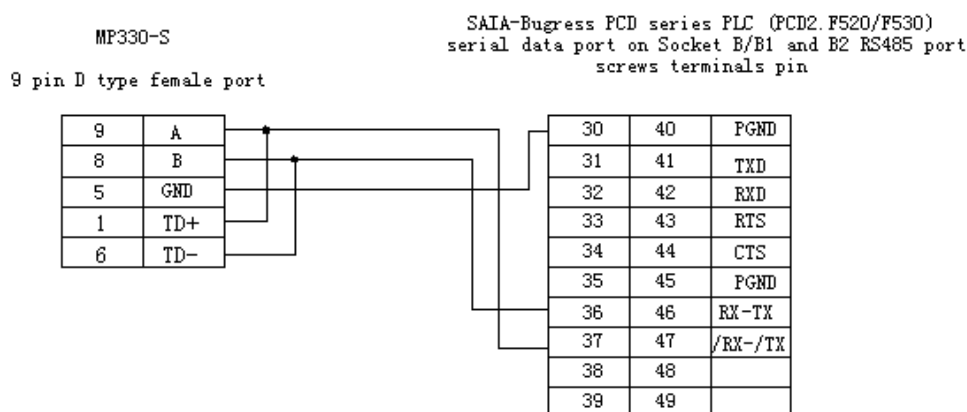
Suitable model: MP330、MP360-L、MP760-T

(6) connect to the serial data port of Socket B/B1 and B2 (PCD2.F520/F530)

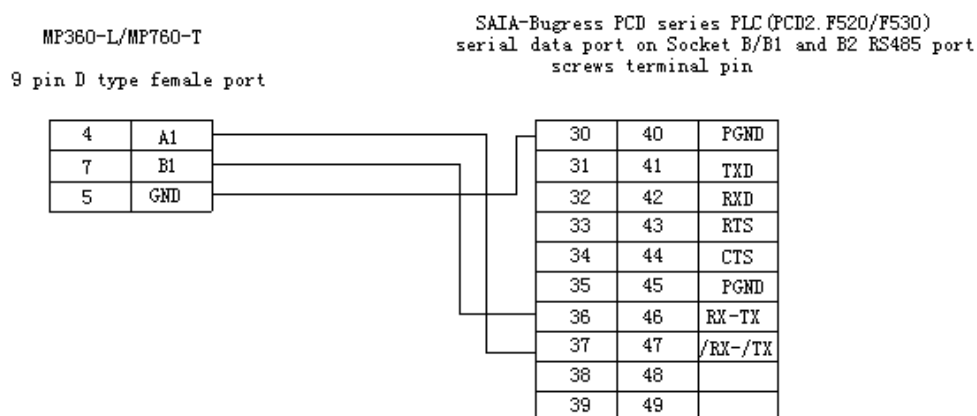


Suitable model: MP330、MP330-S、MP360-L、MP760-T

(7) connect to the serial data port of Socket B/B1 and B2 (PCD2.F520/F530)

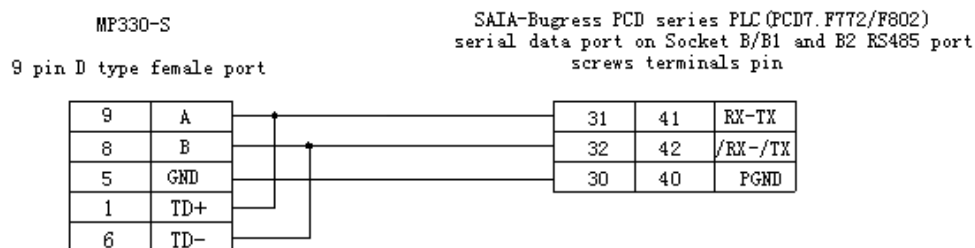


Suitable model: MP330-S

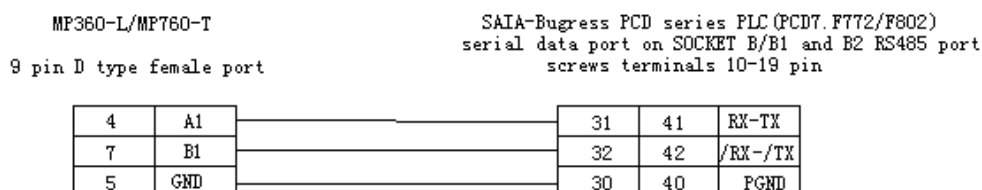


Suitable model: MP360-L、MP760-T

(8) connect to the serial data port of Socket B/B1 and B2 (PCD7.F772/F802)

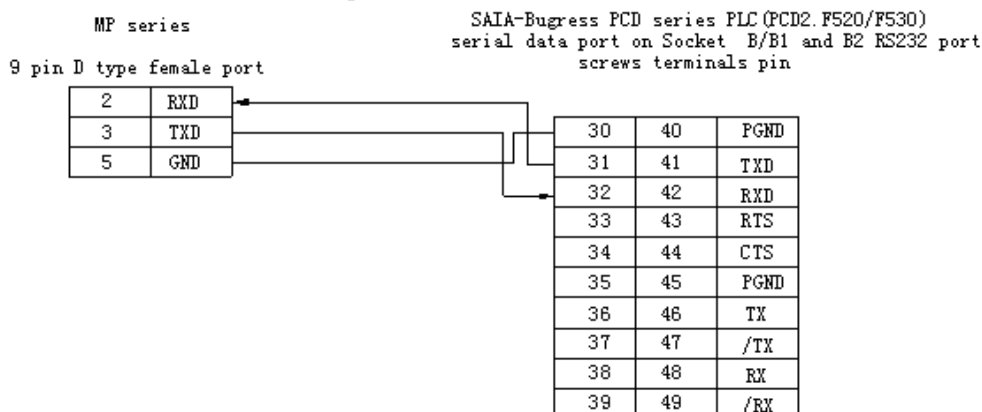


Suitable model: MP330-S



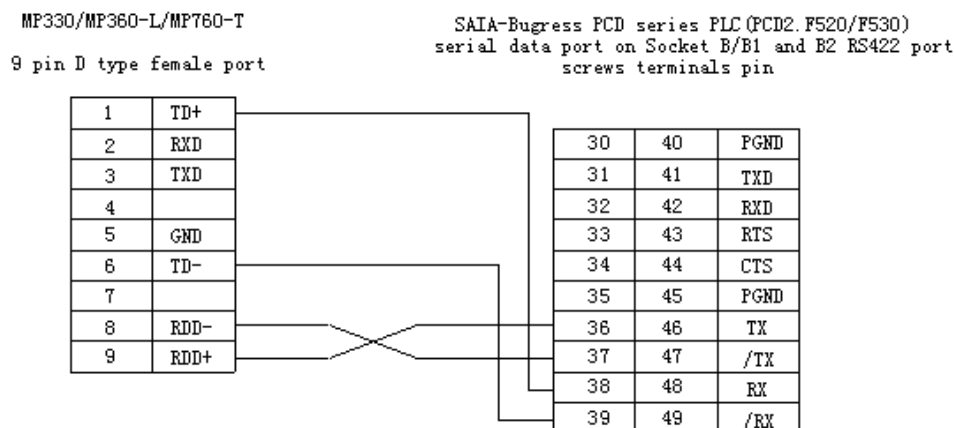
Suitable model: MP360-L、MP760-T

(9) connect to the serial data port of Socket B/B1 and B2 (PCD2.520/F530)



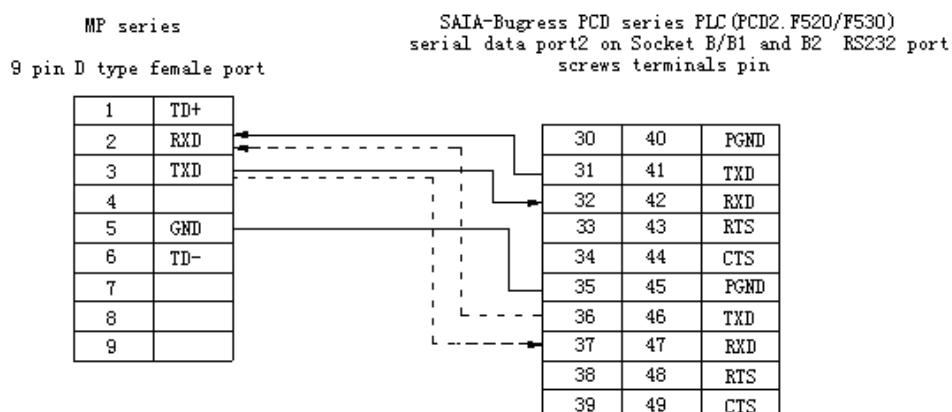
Suitable model: MP330、MP330-S、MP360-L、MP760-T

(10) connect to the serial data port of Socket B/B1 and B2 (PCD2.F520/F530)



Suitable model: MP330、MP360-L、MP760-T

(11) connect to the port of Socket B/B1 and B2 (PCD2.F520/F530)



Suitable model: MP330、MP330-S、MP360-L、MP760-T

3-16. Fuji SPB series

1. Software settings

| parameters | Recommended settings |
|------------------------|----------------------|
| MP communication port | Communication port |
| PLC communication port | Terminal port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification | Odd |
| Baud rate | 19200 |
| Modbus number | 1 |

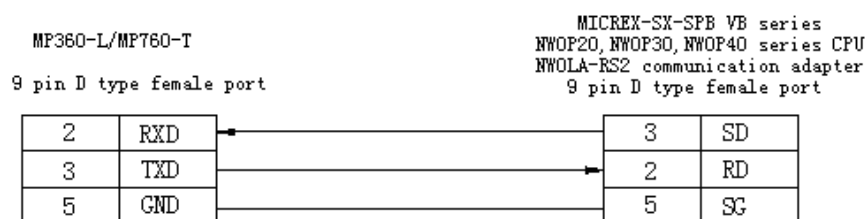
2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-------------|-------------------------|
| X | 0~15 | Bit | External input coil |
| Y | 0~15 | Bit | External output coil |
| M | 0~15 | Bit | Internal auxiliary coil |
| L | 0~15 | Bit | Special auxiliary coil |
| T | 0~511 | Bit | Timer status |
| C | 0~255 | Bit | Counter coil |
| SM | 0~15 | Bit | Special auxiliary coil |
| WX | 0~63 | Word/D Word | registers |
| WY | 0~63 | Word/D Word | registers |
| WM | 0~63 | Word/D Word | registers |

| | | | |
|-----|-------------|-------------|-----------|
| WL | 0~255 | Word/D Word | registers |
| WSM | 32768~33023 | Word/D Word | registers |
| D | 0~8191 | Word/D Word | registers |
| TW | 0~511 | Word/D Word | registers |
| CW | 0~255 | Word/D Word | registers |
| LD | 0~10000 | Word/D Word | registers |
| SD | 32768~33023 | Word/D Word | registers |

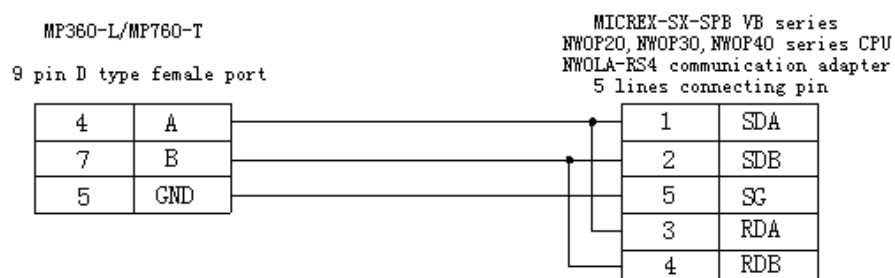
3. Connection type

(1) connect to NW0LA-RS2 (RS232)



Suitable model: MP360-L、MP760-T

(2) connect to NW0LA-RS4 (RS485)



Suitable model: MP360-L、MP760-T

3-17. Bosch Rexroth IndraControl L40 series

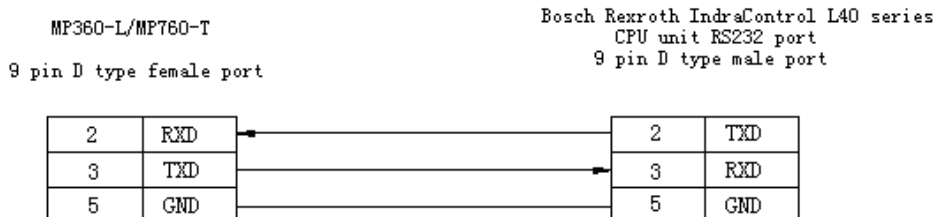
1. Software settings

| parameters | Recommended settings |
|------------------------|----------------------|
| MP communication port | Communication port |
| PLC communication port | Terminal port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | None |
| Baud rate | 38400 |
| Modbus number | 1 |

2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-----------|--------------------------------|
| X | 0~9999 | Bit | External input and output coil |
| B | 0~9999 | Byte | Registers |
| W | 0~9999 | Word | Registers |
| D | 0~9999 | D Word | Registers |
| R | 0~9999 | D Word | Registers |
| SB | 0~9999 | Byte | Registers |
| SW | 0~9999 | Word | Registers |
| SD | 0~9999 | D Word | Registers |

3. Connection type



Suitable model: MP360-L、MP760-T

3-18. OEMax NX7 series

1. Software settings

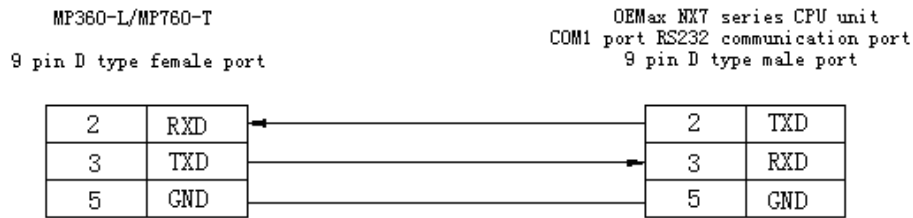
| parameters | Recommended settings |
|------------------------|----------------------|
| MP communication port | Communication port |
| PLC communication port | Terminal port |
| Communication type | RS232 |
| Communication distance | 15m |
| Data bit | 8 |
| Stop bit | 1 |
| Verification mode | None |
| Baud rate | 9600 |
| Modbus number | 1 |

2. Address

| PLC address | Operational range | Data type | Description |
|-------------|-------------------|-------------|--|
| R | R000.00~R31.15 | Bit | External input and output coil |
| | R32.00~R127.15 | Bit | Special contacts |
| L | L000.00~L063.15 | Bit | Value way contacts, it can be used as internal contacts without using for connection |
| M | M000.00~M127.15 | Bit | Internal auxiliary contacts |
| K | K000.00~K127.15 | Bit | Internal keeping contacts |
| F | F000.00~F015.15 | Bit | Special contacts |
| TC | TC0~TC255 | Bit | Timer/counter contacts |
| W | 0~6000 | Word/D Word | Data registers |
| R | 0~127 | Word/D Word | registers |
| L | 0~63 | Word/D Word | registers |
| M | 0~127 | Word/D Word | registers |
| K | 0~127 | Word/D Word | registers |
| F | 0~15 | Word/D Word | registers |
| SV | 0~255 | Word/D Word | Timer/counter set value area |
| PV | 0~255 | Word/D Word | Timer/counter current value |
| SR | 0~511 | Word/D Word | Special registers |

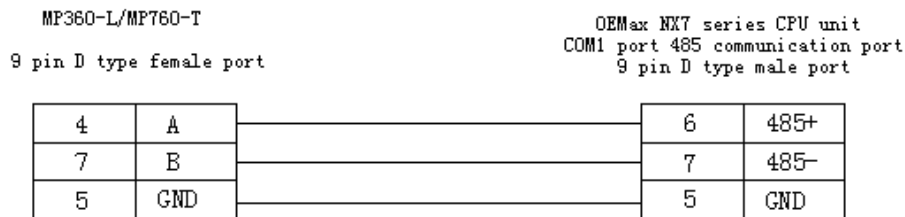
3. Connection type

(1) connect to COM1communication port (RS232)



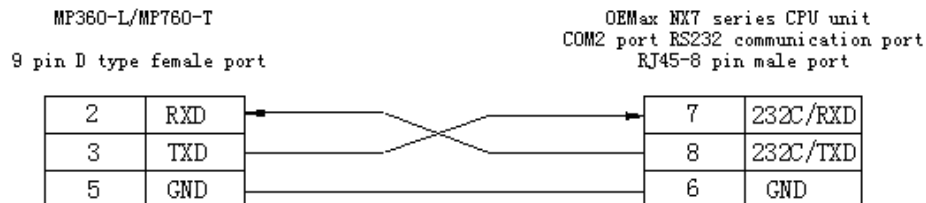
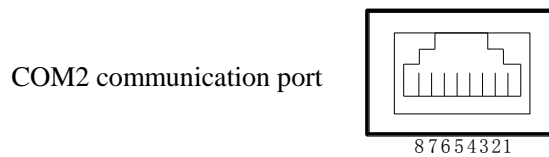
Suitable model: MP360-L、MP760-T

(2) connect to COM1 communication port (RS485)



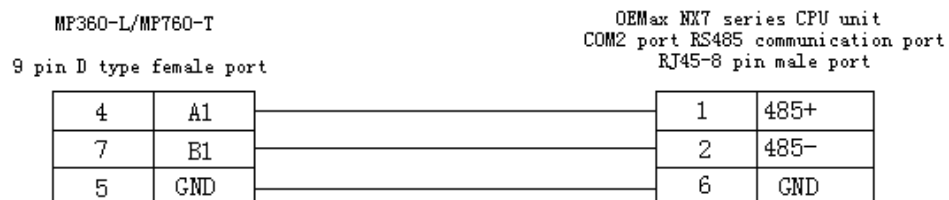
Suitable model: MP360-L、MP760-T

(3) connect to COM2 communication port (RS232)



Suitable model: MP360-L、MP760-T

(4) COM2 communication port (RS485)



Suitable model: MP360-L、MP760-T

or

MP360-L/MP760-T
9 pin D type female port

OEMax NX7 series CPU unit
COM2 port RS485 communication port
RJ45-8 pin male port

| | | | | |
|---|-----|--|---|------|
| 4 | A1 | | 3 | 485+ |
| 7 | B1 | | 4 | 485- |
| 5 | GND | | 6 | GND |

Suitable model: MP360-L、MP760-T

Notice: COM2 communication is RJ-45 standard 8 pin female. Pin 1 RS485+ and pin 3 RS485+ are connected inside together, and the pin 2 RS485- and pin 4 RS485- are also connected inside together.



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