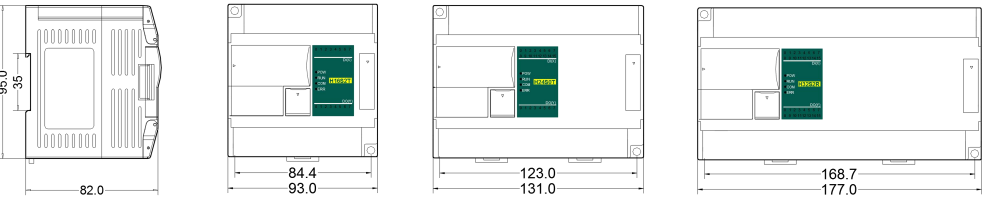


一、产品型号列表

| 以太网型号      | 功率(24VDC) | 以太网型号      | 功率(220VAC) | 型 号      | 功率(24VDC) | 型 号      | 功率(220VAC) | 外形尺寸        |
|------------|-----------|------------|------------|----------|-----------|----------|------------|-------------|
| H16S0R-e   | 0.56A     | H16S2R-e   | 10.2W      | H16S0R   | 0.53A     | H16S2R   | 9.6W       | 93×95×82mm  |
| H16S0T/P-e | 0.58A     | H16S2T/P-e | 10.9W      | H16S0T/P | 0.55A     | H16S2T/P | 10.3W      |             |
| N16S0T/P-e | 0.58A     | N16S2T/P-e | 10.7W      | N16S0T/P | 0.55A     | N16S2T/P | 10.1W      |             |
| H24S0R-e   | 0.6A      | H24S2R-e   | 11.3W      | H24S0R   | 0.57A     | H24S2R   | 10.7W      |             |
| H24S0T/P-e | 0.62A     | H24S2T/P-e | 11.7W      | H24S0T/P | 0.59A     | H24S2T/P | 11.1W      | 131×95×82mm |
| N24S0T/P-e | 0.62A     | N24S2T/P-e | 12.3W      | N24S0T/P | 0.58A     | N24S2T/P | 11.7W      |             |
| H32S0R-e   | 0.64A     | H32S2R-e   | 13.1W      | H32S0R   | 0.61A     | H32S2R   | 12.5W      |             |
| H32S0T/P-e | 0.66A     | H32S2T/P-e | 12.7W      | H32S0T/P | 0.63A     | H32S2T/P | 12.1W      |             |
| H40S0R-e   | 0.68A     | H40S2R-e   | 13.3W      | H40S0R   | 0.65A     | H40S2R   | 12.7W      | 177×95×82mm |
| H40S0T/P-e | 0.7A      | H40S2T/P-e | 14.7W      | H40S0T/P | 0.67A     | H40S2T/P | 14.1W      |             |
| N40S0T/P-e | 0.71A     | N40S2T/P-e | 14.9W      | N40S0T/P | 0.68A     | N40S2T/P | 14.3W      |             |
| H60S0R-e   | 0.78A     | H60S2R-e   | 17.1W      | H60S0R   | 0.75A     | H60S2R   | 16.5W      |             |
| H60S0T/P-e | 0.8A      | H60S2T/P-e | 17.8W      | H60S0T/P | 0.77A     | H60S2T/P | 17.2W      | 177×95×82mm |
| N60S0T/P-e | 0.81A     | N60S2T/P-e | 17.9W      | N60S0T/P | 0.78A     | N60S2T/P | 17.3W      |             |



二、指示灯说明

- 1、PWR: 电源指示灯。绿色，常亮 - 电源正常；不亮 - 电源异常。
- 2、RUN: 运行指示灯。绿色，常亮 - PLC 处于运行状态；不亮 - PLC 处于停机状态。
- 3、COM: 通讯指示灯。绿色，闪烁 - 正在通讯，闪烁频率表示通讯速度的快慢；不亮 - 没有通讯。
- 4、ERR: 错误指示灯。双色（红色、黄色），如下表：

| 参考处理方式                       | 指示信息分类                      | ERR 指示灯状态             |
|------------------------------|-----------------------------|-----------------------|
| 正常                           | 无错误                         | 不亮                    |
| 正常，仅提示用户注意有锁定数据              | PLC 存在锁定数据的元件               | 黄色闪烁：指示灯亮 0.2s 灭 0.8s |
| 修改 PLC 硬件配置                  | 软件设置问题，允许继续运行用户程序           | 黄色闪烁：指示灯亮 0.2s 灭 0.8s |
| 检查模块并行总线（检查 RTC 电池；检查扩展模块供电） | 模块间通讯异常，自动去除异常模块，允许继续运行用户程序 | 黄色闪烁：指示灯亮 0.8s 灭 0.2s |
| 重新升级系统固件或修改用户程序              | 固件异常或用程序异常，不可运行用户程序         | 红色闪烁：指示灯亮 0.5s 灭 0.5s |
| 返厂维修                         | 硬件故障，不可运行用户程序               | 红色常亮                  |

三、电源规格

| 项 目            | AC 交流电源                  | DC 直流电源                 |
|----------------|--------------------------|-------------------------|
| 输入电压           | 100~240VAC               | DC24V -15%~+20%         |
| 电源频率           | 50~60Hz                  | —                       |
| 电源出力           | MAX 25VA                 | —                       |
| 瞬间电涌           | MAX 20A 1.5ms @220VAC    | MAX 20A 1.5ms @24VDC    |
| 允许瞬间断电时间       | 20ms 以内 @220VAC          | 10ms 以内                 |
| 电源保险丝          | 2A，250VAC                | 2A，250VAC               |
| 5V 输出(CPU 用)   | 5V,-2%~+2%,1.2A(最大)      | 5V,-2%~+2%,1.2A(最大)     |
| 24V 输出(输出及扩展用) | 24V,-15%~+15%,500 mA(最大) | 24V,-15%~+15%,500mA(最大) |
| 24V 输出(输入及外设用) | 24V,-15%~+15%,200mA(最大)  | 直接取用 24VDC 输入电源         |
| 隔离方式           | 变压器/光电隔离,1500VAC/1 分钟    | 无电气隔离                   |
| 电源保护           | DC24V 输出过流保护             | 直流输入电源极性反接、过压保护         |

四、产品环境规格

| 项 目   | 环境规格                                                  |                         |
|-------|-------------------------------------------------------|-------------------------|
| 温度/湿度 | 工作温度：0~+55℃ 储存温度：-25~+70℃ 湿度：5~95%RH，无凝露              |                         |
| 抗振动能力 | 10~57Hz 振幅 0.075mm，57Hz~150Hz 加速度 1G，X、Y、Z 三轴方向各 10 次 |                         |
| 抗冲击能力 | 15G，持续 11ms，X、Y、Z 三轴方向各 6 次                           |                         |
| 抗干扰能力 | AC EFT：±2500V，浪涌：±2500V                               | DC EFT：±2500V，浪涌：±1000V |
| 耐压能力  | AC 端子对地线端子间 1500VAC，1 分钟 DC 端子对地线端子间 500VAC，1 分钟      |                         |
| 绝缘阻抗  | AC 端子对地线端子间 500VDC，5MΩ 以上(所有输入/输出点对地间 500VDC)         |                         |
| 接地    | 第三种接地（不可与强电系统通用接地）                                    |                         |
| 使用环境  | 防尘、防潮、防腐蚀、免受电击及外力冲击等环境                                |                         |

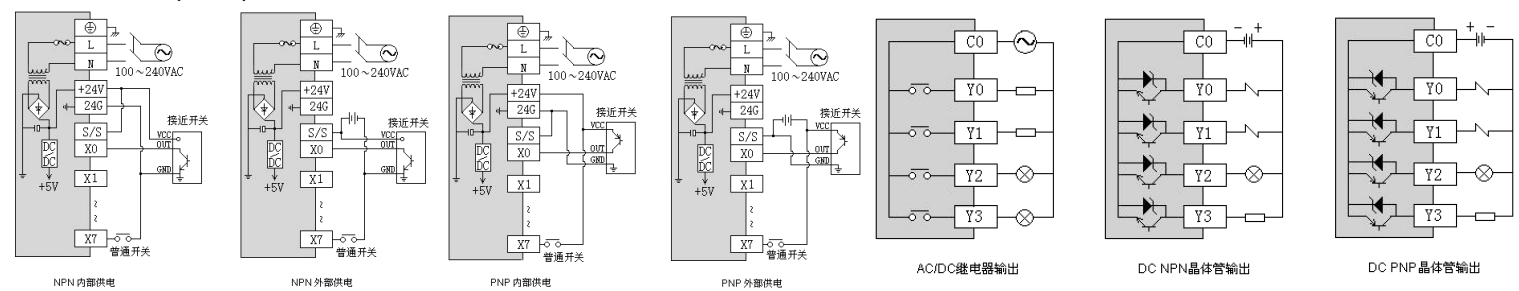
五、开关量输入（DI）规格

| 项 目    | 开关量输入 DI                                  |
|--------|-------------------------------------------|
| 输入信号   | 无电压接点或 NPN/PNP                            |
| 动作驱动   | ON: 3.5mA 以上 OFF: 1.5mA 以下                |
| 输入阻抗   | 约 4.3KΩ                                   |
| 输入最大电流 | 10mA                                      |
| 响应时间   | 默认 6.4ms，可配置为 0.8~51.2ms                  |
| 隔离方式   | 每通道单独光电隔离                                 |
| 输入指示   | LED 灯亮表示 ON，不亮表示 OFF                      |
| 电源输入   | PLC 主机内部供电：直流电源（SINK 或 SOURCE）5.3mA@24VDC |

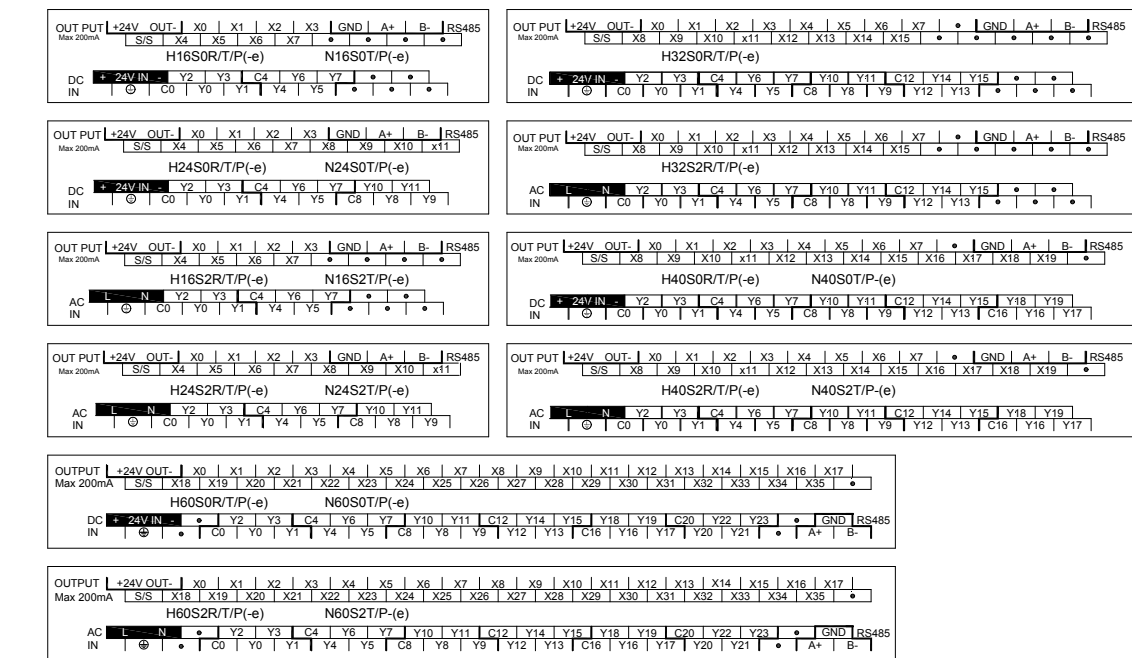
六、开关量输出（DO）规格

| 项 目  | 继电器输出-R                | NPN 或 PNP 晶体管输出-T/P           |
|------|------------------------|-------------------------------|
| 最大负载 | 电阻性负载                  | 2A/1 点，8A/4 点共 COM            |
|      | 电感性负载                  | 0.5A/1 点，2A/4 点共 COM          |
|      | 灯负载                    | 50VA<br>5W/DC24V<br>12W/DC24V |
| 最小负载 | 100W                   | 2mA                           |
| 电压规格 | 10mA                   | 30VDC                         |
| 驱动能力 | 250VAC,30VDC 以下        | 30VDC                         |
| 响应时间 | 最大触点容量：5A/250VAC       | MAX 1A 10 秒                   |
| 隔离方式 | Off-on 10ms，On-off 5ms | Off→On 10μs，On→Off 120μs      |
| 输出指示 | 机械隔离                   | 每通道单独光电隔离                     |
| 电源输入 | LED 灯亮表示 ON，不亮表示 OFF   |                               |
|      | PLC 主机内部供电 24VDC       |                               |

七、开关量输入/出（DI/ DO)的接线图



八、主机端子配线图



九、PLC 安装

请将 PLC 安装在封闭式配电箱内，其四周应与箱体内壁保持一定的空间（如右图所示），以确保 PLC 能良好地散热。  
PLC 安装方式分为：导轨安装方式和螺丝安装方式。

**导轨安装方式：**使用标准 35mm 导轨。

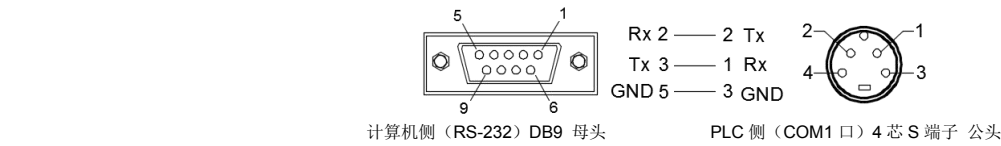
**螺丝安装方式：**每台主机或扩展模块均有两个螺丝定位孔，孔径为 4.5mm，定位孔的位置及间距请参考产品外型尺寸图。为确保 PLC 能良好地散热，请勿将 PLC 安装在柜内靠近柜壁底部和上部的位置，同时请勿垂直安装 PLC。

扩展模块的连接方法

扩展模块与主机或者扩展模块与扩展模块之间使用总线方式连接，每一个扩展模块在出厂时均配有一根模块扩展连接线。

连接方法：翻开其上一个模块（主机或扩展模块）右侧扩展接口，将扩展连接线插入到扩展接口中，插牢后将扩展接口的小翻盖按下使其复位，此模块右侧的扩展接口作为下一个扩展用。如此依次连接所有扩展模块。

十、编程电缆接线图



十一、地址设定

以太网接口 PLC，缺省 IP 地址为：192.168.1.111，子网掩码：255.255.255.0，网关：192.168.1.1。  
硬件 DIP 拨码开关地址设置范围 1-15，缺省地址为 1。如需设置更大地址范围，可将 PLC 联机后在编程软件菜单栏-PLC-设置 PLC 参数-勾选使用软地址，范围 1-254（软地址较硬件拨码地址具有优先级）。

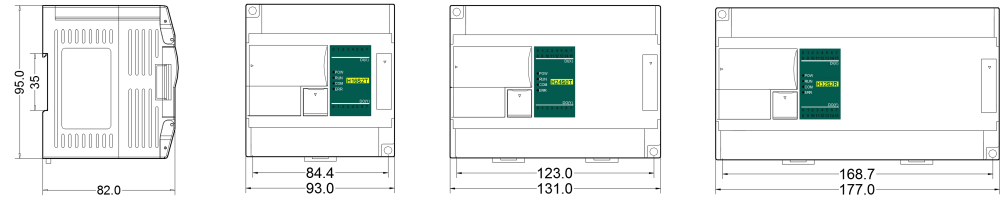
十二、供电电源的接线

PLC 电源输入分为交流输入和直流输入两种，在使用上应注意下列事项：

- 交流电源输入的电压为 100~240VAC 50/60Hz，电源的两根线（火线与零线）请接于主机上侧接线端子的 L、N 两个端子上；在接线时，虽可把交流电源的任意一根线接到 L 或 N 端子上，但为安全起见，请将火线（L）连接到 L 端子上，同时将零线接到 N 端子上。
- 如果将 AC110V 或 AC220V 接至+24V 端或者输入点端，将导致 PLC 损坏，请使用者特别注意。
- 主机的接地端使用线径为 2.5mm 以上的导线接地。

1.Product Model List

| Type with ethernet | 24VDC power supply | Type with ethernet | 220VAC power supply | Type     | 24VDC power supply | Type     | 220VAC power supply | Dimension   |
|--------------------|--------------------|--------------------|---------------------|----------|--------------------|----------|---------------------|-------------|
| H16S0R-e           | 0.56A              | H16S2R-e           | 10.2W               | H16S0R   | 0.53A              | H16S2R   | 9.6W                | 93×95×82mm  |
| H16S0T/P-e         | 0.58A              | H16S2T/P-e         | 10.9W               | H16S0T/P | 0.55A              | H16S2T/P | 10.3W               |             |
| N16S0T/P-e         | 0.58A              | N16S2T/P-e         | 10.7W               | N16S0T/P | 0.55A              | N16S2T/P | 10.1W               |             |
| H24S0R-e           | 0.6A               | H24S2R-e           | 11.3W               | H24S0R   | 0.57A              | H24S2R   | 10.7W               |             |
| H24S0T/P-e         | 0.62A              | H24S2T/P-e         | 11.7W               | H24S0T/P | 0.59A              | H24S2T/P | 11.1W               | 131×95×82mm |
| N24S0T/P-e         | 0.62A              | N24S2T/P-e         | 12.3W               | N24S0T/P | 0.58A              | N24S2T/P | 11.7W               |             |
| H32S0R-e           | 0.64A              | H32S2R-e           | 13.1W               | H32S0R   | 0.61A              | H32S2R   | 12.5W               |             |
| H32S0T/P-e         | 0.66A              | H32S2T/P-e         | 12.7W               | H32S0T/P | 0.63A              | H32S2T/P | 12.1W               |             |
| H40S0R-e           | 0.68A              | H40S2R-e           | 13.3W               | H40S0R   | 0.65A              | H40S2R   | 12.7W               | 177×95×82mm |
| H40S0T/P-e         | 0.7A               | H40S2T/P-e         | 14.7W               | H40S0T/P | 0.67A              | H40S2T/P | 14.1W               |             |
| N40S0T/P-e         | 0.71A              | N40S2T/P-e         | 14.9W               | N40S0T/P | 0.68A              | N40S2T/P | 14.3W               |             |
| H60S0R-e           | 0.78A              | H60S2R-e           | 17.1W               | H60S0R   | 0.75A              | H60S2R   | 16.5W               |             |
| H60S0T/P-e         | 0.8A               | H60S2T/P-e         | 17.8W               | H60S0T/P | 0.77A              | H60S2T/P | 17.2W               |             |
| N60S0T/P-e         | 0.81A              | N60S2T/P-e         | 17.9W               | N60S0T/P | 0.78A              | N60S2T/P | 17.3W               |             |



2.Indicator Description

- ① PWR:Power indicator,green. Continuous ON - Power good; OFF - Power error.
- ② RUN:Running indicator,green. Continuous ON - PLC is in running state; OFF - PLC was shutdown.
- ③ COM:Communication indicator,green. Flickering - PLC is in communicating state, the flicker frequency indicates the speed of the communication; OFF - No communication.
- ④ ERR:Erroe indicator .double(red, yellow),as follows

| Consult manage                                                                         | Signify information type                                                                                            | ERR the state of the indicator                         |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| Normal                                                                                 | Without error                                                                                                       | Not light                                              |
| Normal,just prompt take attention to the locked data                                   | PLC have the component which locked                                                                                 | Yellow flicker:On 0.2 seconds and Off 0.8 seconds      |
| Modificate the PLC hardward configure                                                  | Problem in the soft seting ,permit user keep on operate the user program                                            | Yellow flicker:On 0.2 seconds and Off 0.8 seconds      |
| Check module parallel bus (check the RTC battery; check extension module power supply) | Communication abnormal between modul,auto dislodge the abnormal module,permit user keep on operate the user program | Yellow flicker:On 0.8 seconds and Off 0.2 seconds      |
| Upgrade the fireware or modify the user program                                        | Fireware abnormal or user program abnormal,can not operate the user program                                         | Red slowly flicker:indicator light 0.5s not light 0.5s |
| Maintain                                                                               | Hardware error,user program con not running                                                                         | yellow constant light                                  |

3.Power Supply Specification

| Item                                          | AC Power Supply                                                     | DC Power Supply                               |
|-----------------------------------------------|---------------------------------------------------------------------|-----------------------------------------------|
| Power Supply Voltage                          | 100~240VAC                                                          | DC24V -15%~+20%                               |
| Power Supply Frequency                        | 50~60Hz                                                             | —                                             |
| Power Consumption                             | 25VA MAX                                                            | —                                             |
| Instantaneous Surge                           | 20A 1.5ms MAX @220VAC                                               | 20A 1.5ms MAX @24VDC                          |
| Power Loss Time                               | 20ms or less @220VAC                                                | 10ms or less                                  |
| Fuse                                          | 2A, 250VAC                                                          | 2A, 250VAC                                    |
| 5V Output Voltage (for CPU)                   | 5V, -2%~+2%, 1.2A MAX                                               | 5V, -2%~+2%, 1.2A MAX                         |
| 24V Output Voltage (for output and extension) | 24V, -15%~+15%, 500mA MAX                                           | 24V, -15%~+15%, 500mA MAX                     |
| 24V Output Voltage (for input and peripheral) | 24V, -15%~+15%, 300mA MAX                                           | Use external 24VDC power supply               |
| Insulation Type                               | Transformer isolation or optoelectronic isolation ,1500VAC/1 minute | No Electrical isolation                       |
| Power Protection                              | DC24V output over current                                           | DC input power polarity reverse, over voltage |

4.Environmental specifications for Product

| Item                    | Environment Specification                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------|
| Temperature/Humidity    | Operating temperature:0~+55℃ Storage temperature:-25~+70℃ Humidity: 5~95%RH, No condensation         |
| Vibration Resistance    | 10~57 HZ, amplitude=0.075mm, 57HZ~150HZ acceleration=1G, 10 times each for X-axis, Y-axis and Z-axis |
| Impact Resistance       | 15G, duration=11ms, 6 times each for X-axis, Y-axis and Z-axis                                       |
| Interference Immunity   | AC EFT:±2500V Surge:±2500V DC EFT:±2500V Surge:±1000V                                                |
| Over Voltage Resistance | 1500VAC/1min between AC terminal and PE terminal, 500VAC/1min between DC terminal and PE terminal    |
| Insulation Impedance    | ≥5MΩbetween AC terminal and all input/output points to PE terminal @500VDC                           |
| Ground                  | The third kind of grounding(Connecting to the ground of high voltage system is prohibited)           |
| Operating environment   | Avoid dust, moisture, corrosion, electric shock and external shocks                                  |

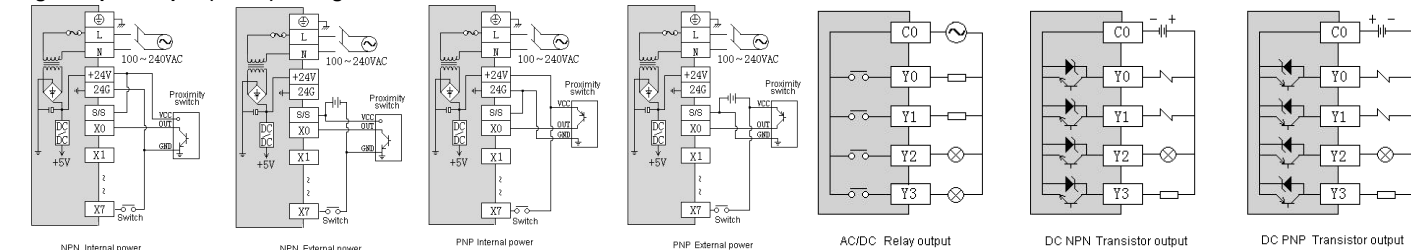
5.Digital Input (DI)Specification

| Item                  | Digital Input (DI)                                                     |
|-----------------------|------------------------------------------------------------------------|
| Input Signal          | No voltage contact or NPN/PNP                                          |
| Action driving        | ON>3.5mA OFF<1.5mA                                                     |
| Input Impedance       | Input Impedance=4.3KΩ                                                  |
| Maximum Input Current | 10mA                                                                   |
| Reaction Time         | 6.4ms DEFAULT, can be configured to 0.8~51.2ms                         |
| Insulation Type       | Optoelectronic isolation for each channel                              |
| Input Indication      | LED's lighting indicates ON, no light indicates OFF                    |
| Power supply          | MPU internal power supply:DC power supply (SINK or SOURCE) 5.3mA@24VDC |

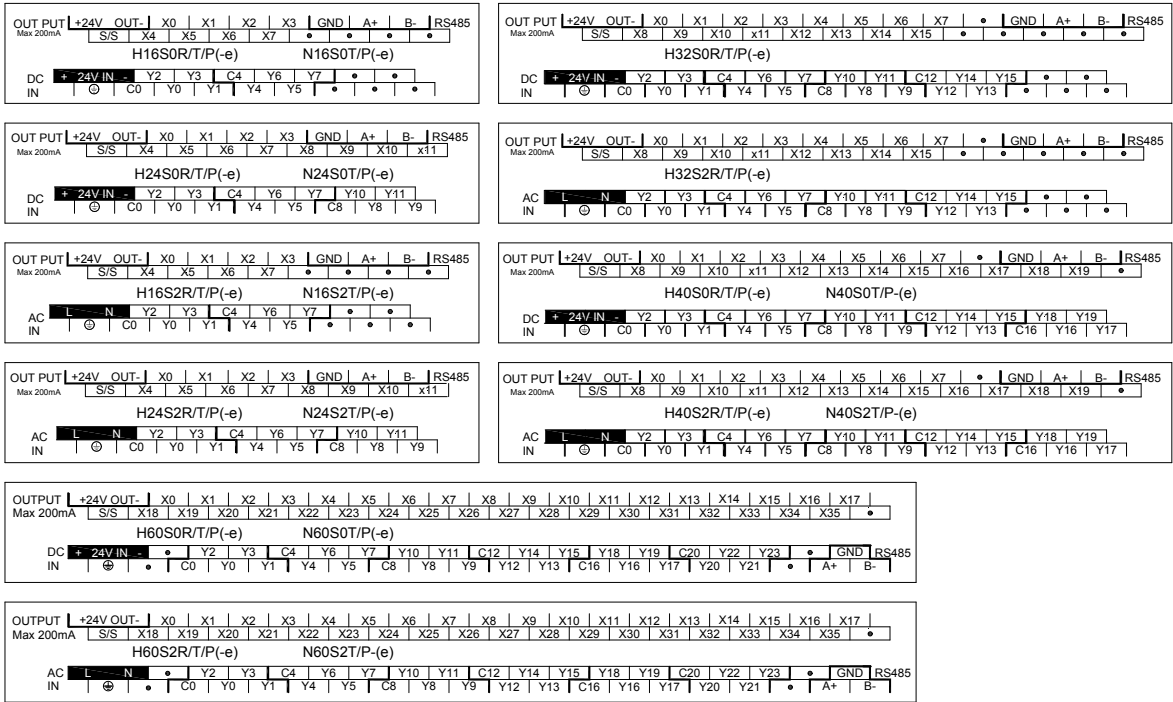
6.Digital Output (DO) Specification

| Item                  | Output point type : Relay - R | NPN or PNP transistor output T/P                    |
|-----------------------|-------------------------------|-----------------------------------------------------|
| Maximum load          | Resistive Load                | 2A/1 point, 8A/4 points COM                         |
|                       | Inductive Load                | 0.5A/1 point, 2A/4 points COM                       |
|                       | Lamp load                     | 5W/DC24V<br>12W/DC24V                               |
| Minimum Load          |                               | 10mA                                                |
| Voltage Specification |                               | 2mA                                                 |
| Drive Capability      |                               | 30VDC                                               |
| Reaction Time         |                               | 1A MAX, 10 seconds                                  |
| Insulation Type       |                               | Off→On 10ms, On→off 5ms                             |
| Output Indication     |                               | Off→On 10μs, On→Off 120μs                           |
| Power Supply          |                               | Optoelectronic isolation for each channel           |
|                       |                               | LED's lighting indicates ON, no light indicates OFF |
|                       |                               | MPU internal 24VDC power supply                     |

7.Digital Input/Output (DI/DO) Wiring



8.MPU Terminal Wiring Diagram



9.Mounting and installation

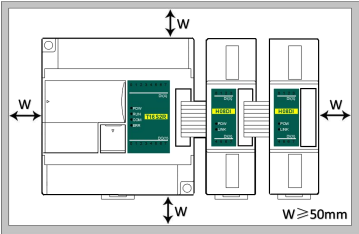
The PLC should be secured to an enclosed cabinet while mounting. For heat dissipation, make sure to provide a minimum clearance of 50mm between the unit and all sides of the cabinet. (See the figure.)

**Rail Mounting:** Use standard 35 mm rail.

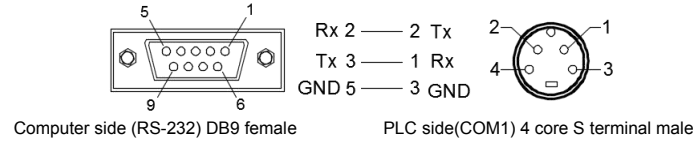
**Screw Mounting:** Each MPU or extension module has two positioning screw holes, the diameter of the hole is 4.5mm. Please refer to the dimension figure for the location of the positioning holes and their spacing.

To avoid over temperature and for a better heat dissipation, do not mount PLC to a position near to the bottom/top of the cabinet. Do not mount PLC in vertical direction.

**Extension Module Wiring:** Connections between extension modules and connections between module and MPU are achieved through bus.An extension cable will be configured to every extension module, for the connection between two different modules.Connection methods: turn the right side of extended interface(the last MPU or extension module) over, plug the extension cable in the extended interface, then press down the cover of the extended interface to reset the interface, the extended interface at the right side of the module will be reserved for extension of the next module. Connect all extension modules in turn in the same way.



10.Programming Cable Wiring



11. Address Setting

Haiwell PLC with Ethernet port,the default IP address is : 192.168.1.111,subnet mask: 255.255.255.0, gateway: 192.168.1.1.

Hardware DIP dial switch address range: 1-15, the default address is 1. If you need to set a bigger adress range, you can set on the software after connection with PLC, it can be set on the PLC parameter option in the software menu by checking on the "soft address" with the range of 1-254(the soft address is prior to the hardware dial address).



12. Power Supply Wiring

There are two kinds of power supplies for PLC: AC input and DC input. Please pay particular attention to the following notes:

- AC input voltage is 100~240VAC 50/60Hz unless otherwise stated. Connecting any one of the AC input wires to the terminal-L and terminal-N on the MPU will be OK, but for safety's sake, please connect the two wires (Live Wire & Neutral Wire) of AC input to terminal-L and terminal-N respectively.

- Any AC110V or AC220V connected to the +24V terminal or input points will permanently damage the PLC.
- Please use wires of 2.5mm or above for the grounding of the MPU.