

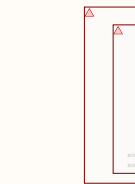
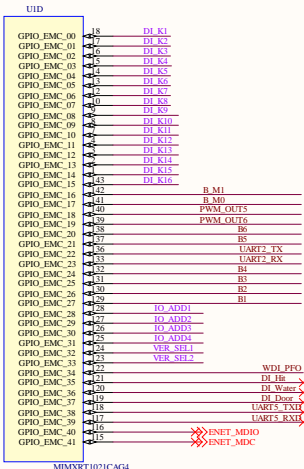
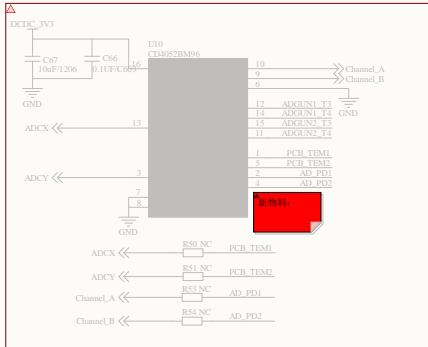
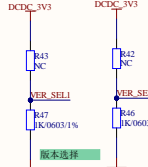
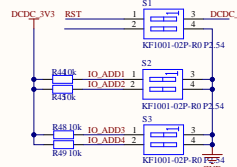




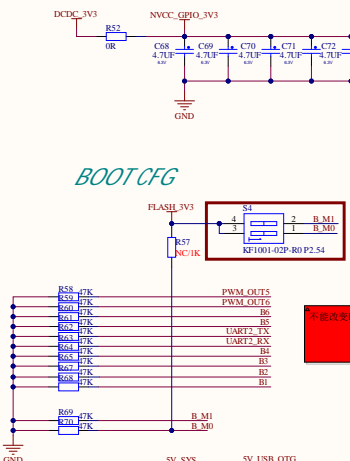
4. 板上回路控制继电器  
K1, DC+  
K2, DC-  
K5, 继电器  
继电器回路控制继电器  
K3, DC+  
K4, DC-  
K6, 继电器  
K7, 继电器  
PWM\_OUT1-3, A相对应红板控制  
PWM\_OUT4-6, B相对应红板控制

UART1: RS232  
UART2: 485/Debug  
UART3: RS232  
UART4: RS232  
UART5: RS232  
UART6: 485  
UART7: 485

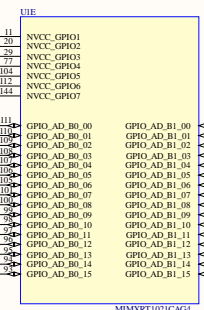
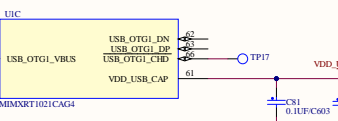
## MCU PINOUT



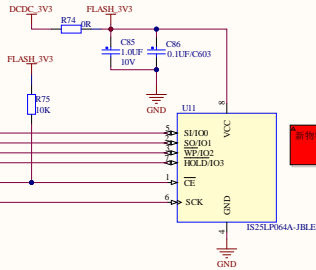
## BOOT CFG



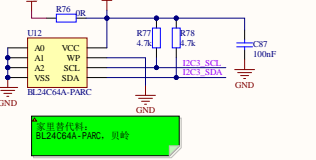
不能改变BOOT状态



## 3v3 QSPI Flash



## 3v3 EEPROM



概述：标红的是开发板默认配置，重点关注颜色标量的IO口配置有无问题？  
问题：  
1. 上电复位POR电路？  
2. 8个串口分配有无问题？1-5用作RS232，2、6-8作为RS485。  
3. CAN1、CAN2引脚分配有无问题？  
4. I2C1、I2C0引脚分配有无问题？  
5. ADC引脚分配有无问题？  
6. PWM\_OUT1-6引脚分配有无问题？定时操作PWM  
7. 以太网ENET，CNS\_DV（979N改为122）有无问题？开发板以太网电路是否考虑EMI？  
8. 外部flash启动，BOOT配置有无问题？  
9. 其他GPIO配置有无问题，是否需要特别上下拉？  
10. SH800只使用HC接口，设计电路有无问题？

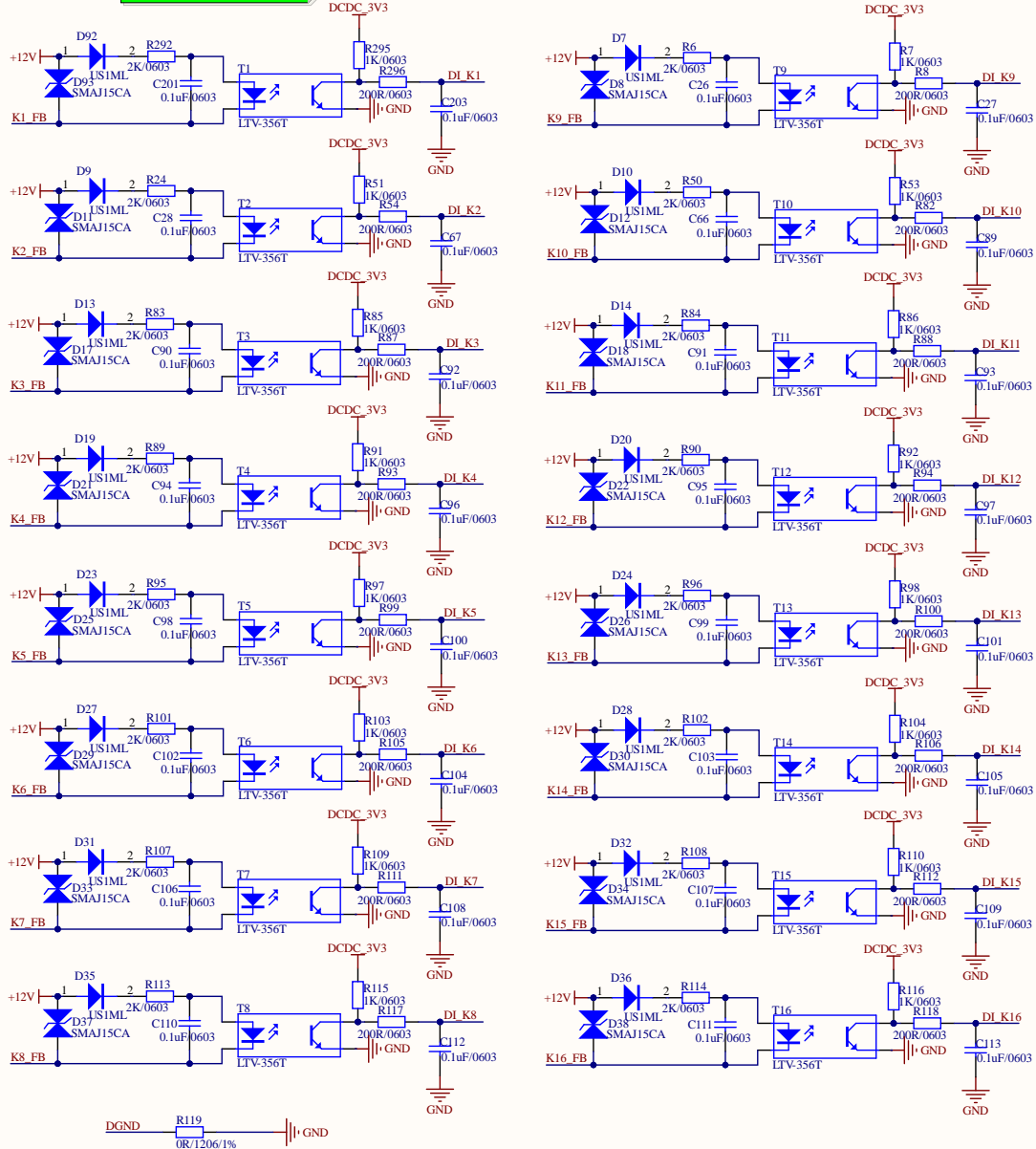
1. 滤波电容尽量靠近MCU引脚  
2. TVS靠近连接器接口位置  
3. 替代H1：R33PMK LMY2248 SR 4阻 500K 144封装

1. 滤波电容尽量靠近MCU引脚  
2. TVS靠近连接器接口位置  
3. 替代H1：R33PMK LMY2248 SR 4阻 500K 144封装

03.MCU RT1021			
Size: A4	Number: 4/14	Revision: V01	
Date: 2024/12/5	Time: 10:32:58	Drawn by:	

继电器反馈

- 家里替代料:  
DIODE 长晶 US1ML 1000V 1A  
SOD-123FL 贴片
- 1、滤波电容尽量靠近MCU采样口  
2、TVS靠近连接器接口放置



03.DI		
Size: A4	Number: 2/14	Revision: V01
Date: 2024/12/5	Time: 10:32:58	DrawnBy:

A

B

C

D

A

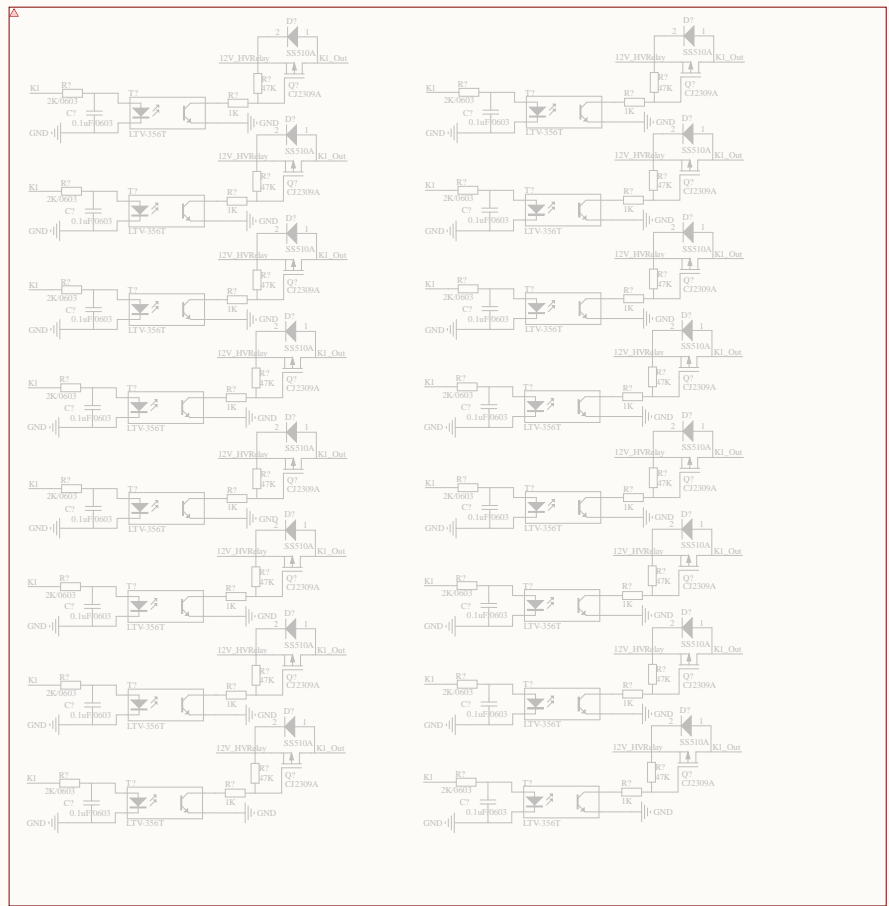
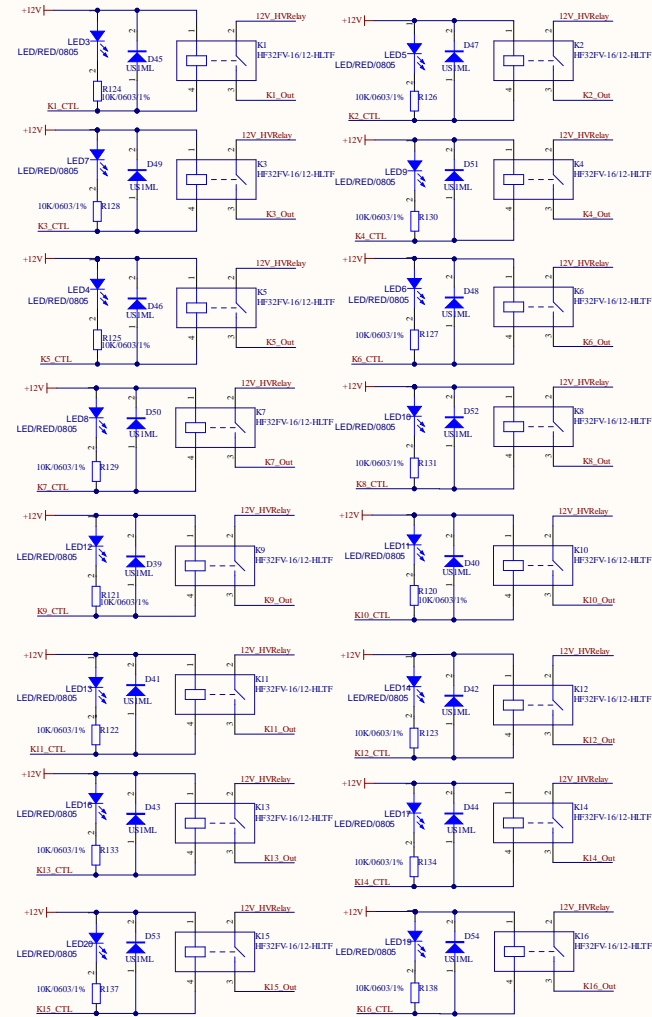
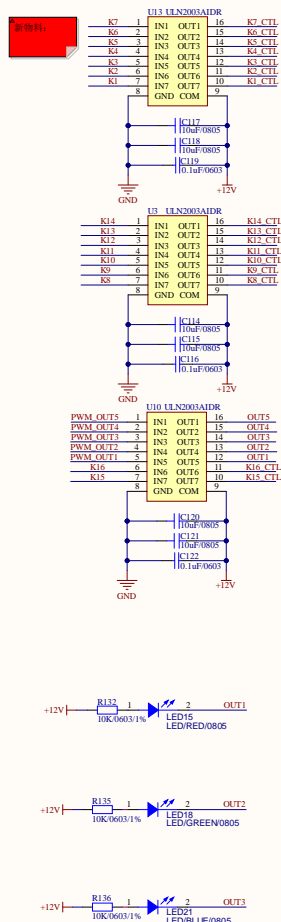
B

C

D

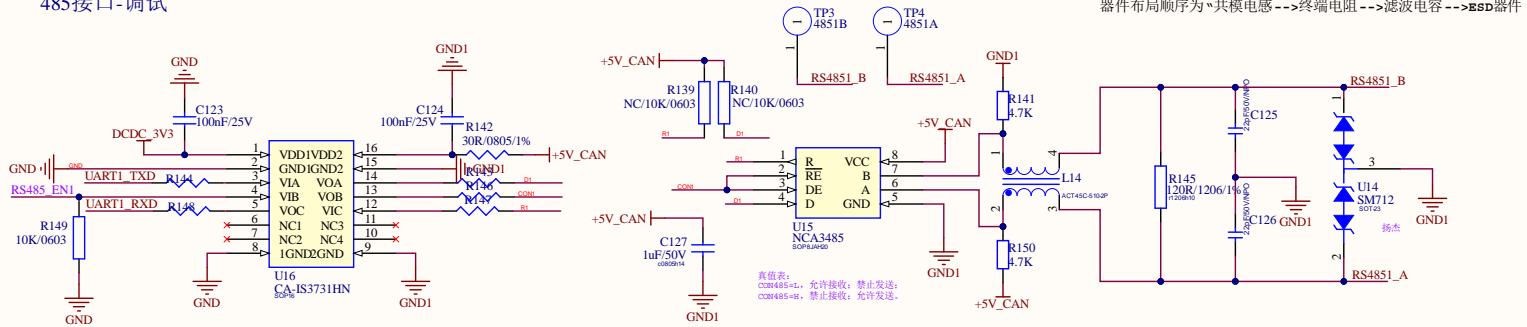
主回路继电器\*4、预充控制\*2

泰思特代用：片端需修改  
安太 HF32FV-16/12-HLTF  
12V DC 4000V 16A 机座

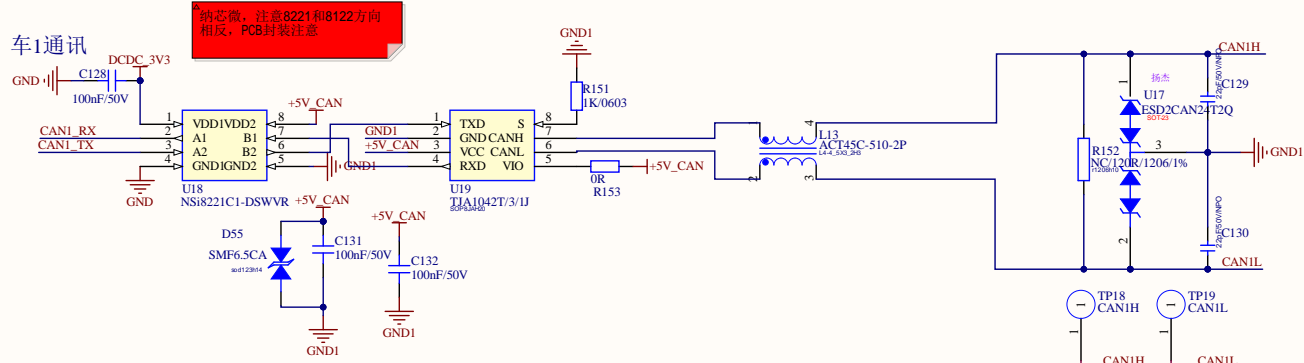


04.D0		
Size: A4	Number: 4/14	Revision: V01
Date: 2024/12/5	Time: 10:32:59	DrawnBy:

## 485接口-调试



## 车1通讯

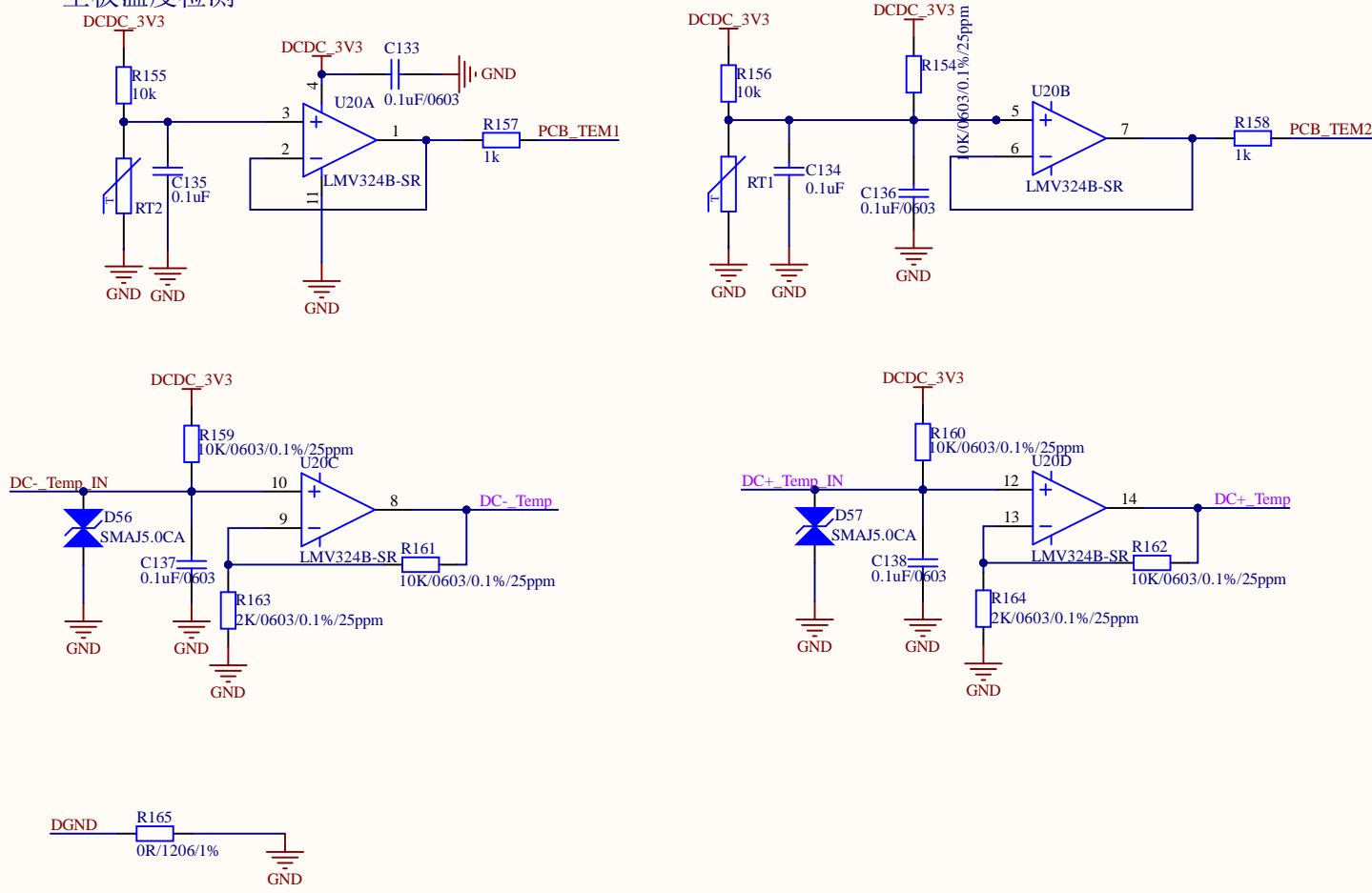


## 06 RS232

Size: A4	Number: 11/14	Revision: V01
Date: 2024/12/5	Time: 10:32:59	DrawnBy:

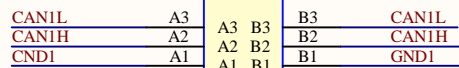
温度检测

主板温度检测



10. ADC		
Size: A4	Number: 14/14	Revision: V01
Date: 2024/12/5	Time: 10:32:59	DrawnBy:

立式  
12V电源输入



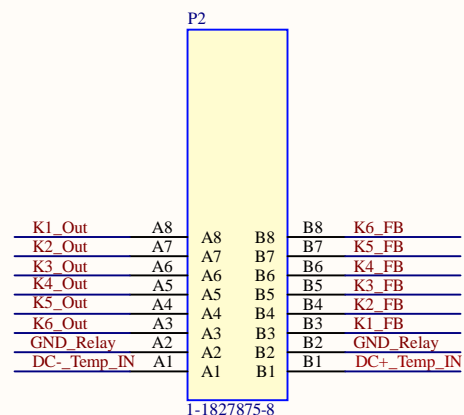
P7

3	RS485_A
2	RS485_B
1	GND1

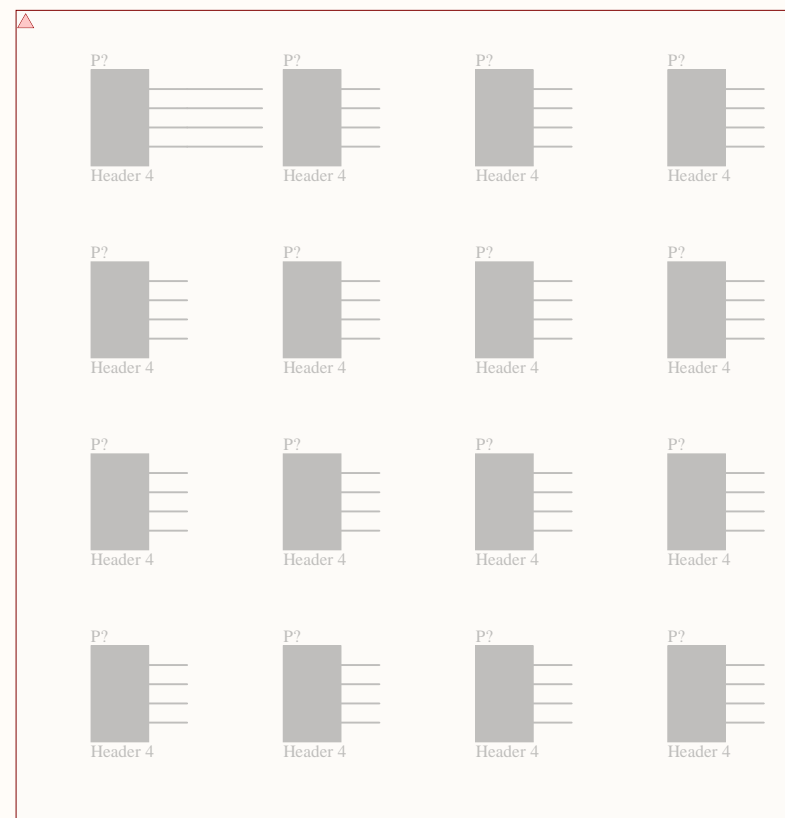
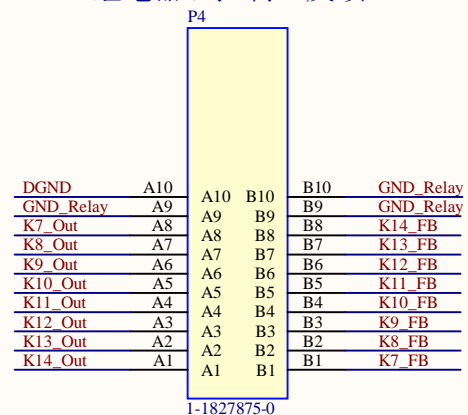
调试口

立式

继电器组1-6控制、反馈&amp;温度采样



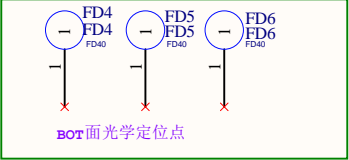
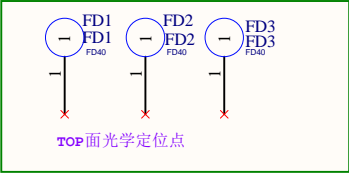
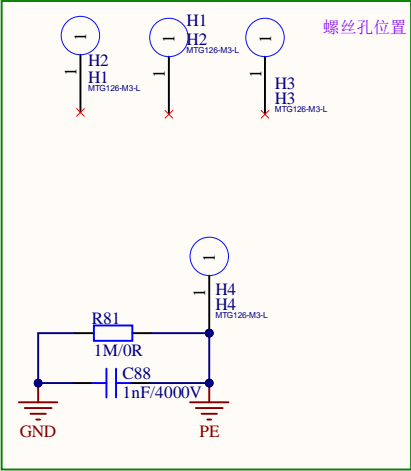
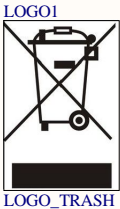
继电器组控制、反馈7-14



## 11 Connect

Size: A4	Number: 4/14	Revision: V01
Date: 2024/12/5	Time: 10:32:59	DrawnBy:





MARK1 MARK2 MARK3

12 Logo			
Size: A4	Number: 4/14	Revision: V01	
Date: 2024/12/5	Time: 10:32:59	DrawnBy:	