

需求

- 需读取一线制 5 V 的脉冲信号，信号频率为 2 Hz ~ 573 Hz
- 因只有 x20ds1119 模块，故需用此模块进行数值读取 5 V 信号

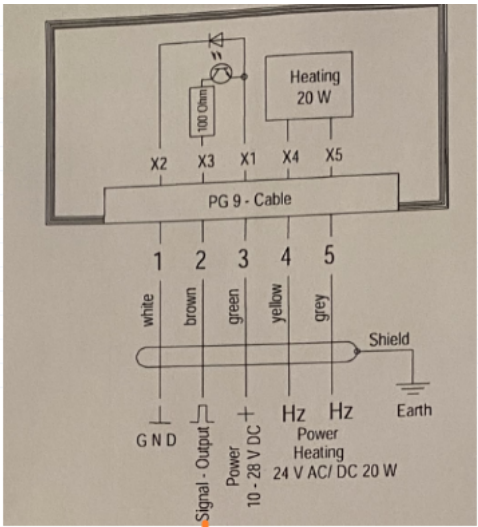
实现思路

- 由于信号非常低频且变化缓慢，因此用不上 x20ds1119 模块的 Counter 功能与 Edge Detection 功能
- 仅需以普通 DI 信号的方式进行数据读取，PLC 以 1 ms 的任务周期检测通道 BOOL 值是否有变化，配合程序计算频率。

配置与接线方式

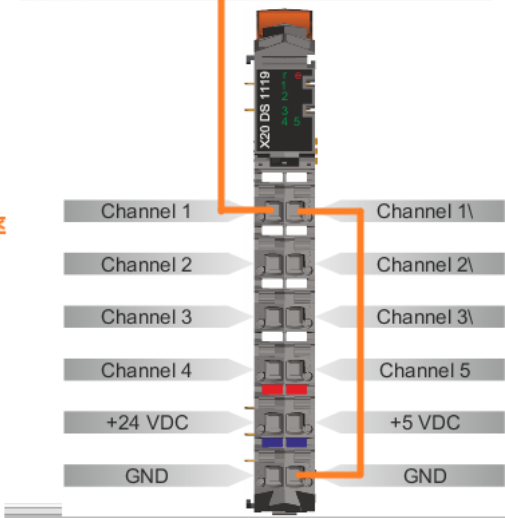
name	Value
X20DS1119	
Function model	default
General	
System timer	
Physical I/O channel configuration	
I/O handling	
Direct I/O	
Direct I/O handling	on
Read input status	on
Output update cycle	X2X cycle optimized
Direct control of output channel 01	default
Direct control of output channel 02	default
Direct control of output channel 03	default

模块配置



Channel Name	Process Varia...	Data Type	Description [1]
ModuleOk		BOOL	Module status (1 = module present)
StaleData		BOOL	Data not from latest cycle
SerialNumber		UDINT	Serial number
ModuleID		UINT	Module ID
HardwareVariant		UINT	Hardware variant
FirmwareVersion		UINT	Firmware version
DigitalInput01		BOOL	5 VDC, <0.1 us switching delay, differential
DigitalInput02		BOOL	5 VDC, <0.1 us switching delay, differential
DigitalInput03		BOOL	5 VDC, <0.1 us switching delay, differential
DigitalInput04		BOOL	24 VDC, <2 us switching delay, sink
DigitalInput05		BOOL	24 VDC, <2 us switching delay, sink
DigitalOutput01		BOOL	5 VDC, differential
DigitalOutput02		BOOL	5 VDC, differential
DigitalOutput03		BOOL	5 VDC, differential

通过程序读取此通道数值变化，统计得到频率



接线说明