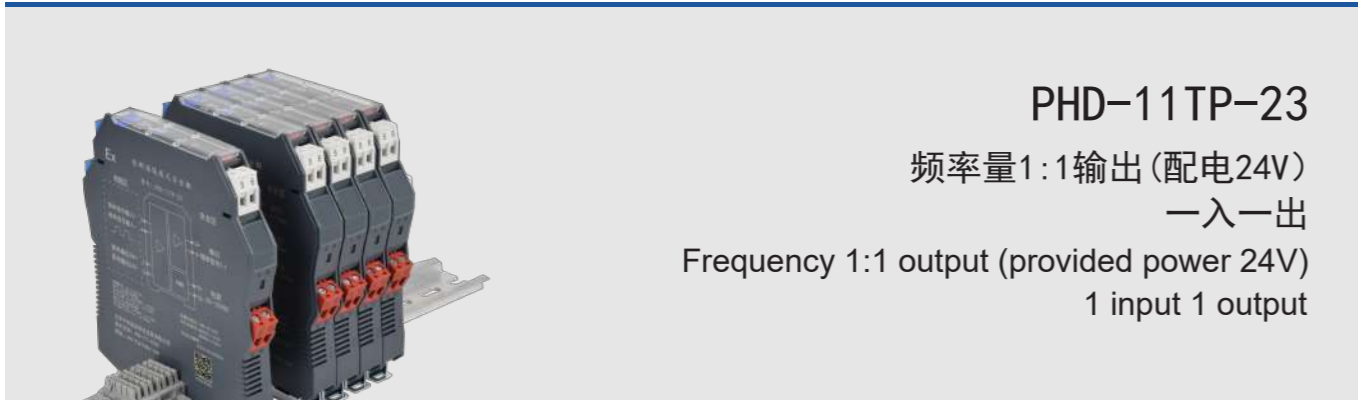


检测端安全栅 Isolated Safety Barrier at Detection Side

Frequency Input 频率量输入



PHD-11TP-23

频率量1:1输出(配电24V)
一入一出

Frequency 1:1 output (provided power 24V)
1 input 1 output

概述 Overview

隔离式检测端安全栅: PHD-11TP-23, 频率量输入, 一路输入一路输出。

安全栅可实现将危险区的频率信号传输到安全区, 频率量1:1输出, 具有较强的抗干扰能力。
电路为现场仪表提供24VDC配电电压。
本产品需要外接20~35VDC电源。

*总线端子供电, 详见附录。

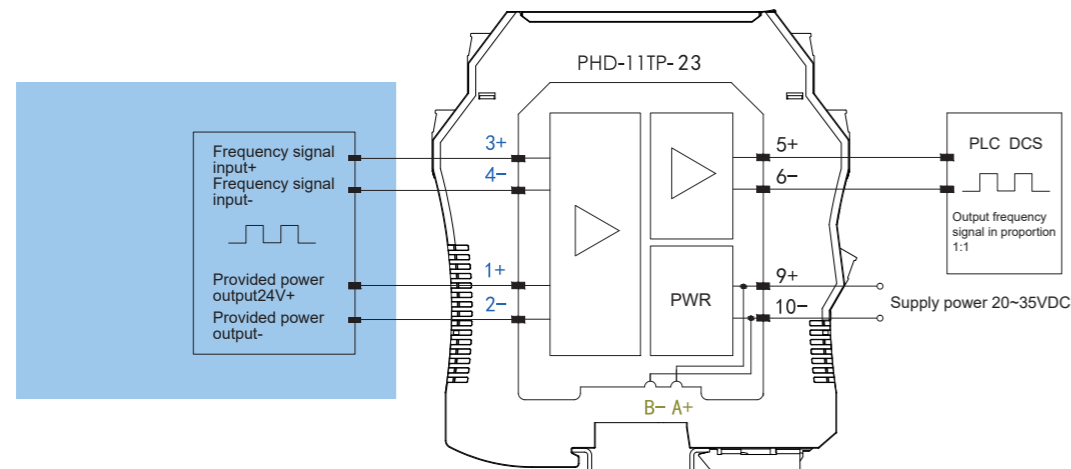
Isolated safety barrier at detection end: PHD-11TP-23, frequency input, single input and single output.

The safety barrier can transmit the frequency signal in dangerous area to safe area and output with frequency in proportion 1:1, has very strong an-interference ability.

The circuit provides for the field instrument 24 VDC provided power supply. This product needs an external 20~35VDC power supply.

* Bus terminal power supply, please see appendix for details.

接线图 Wiring diagram



总线供电插接件 可选件 详细说明 见样本后附录
Bus power supply plug connector Optional parts Detailed description please see appendix

危险区, 本安端子: 1~4
Hazardous area, intrinsically safe terminals: 1~4

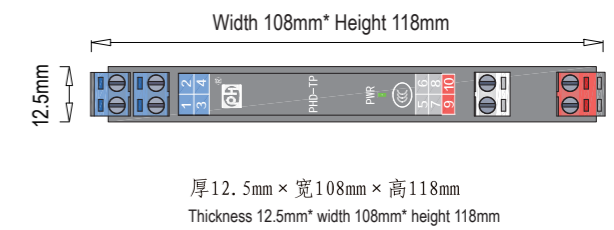
安全区, 非本安端子: 5~10
Safe area, not intrinsically safe terminals: 5~10

技术数据 Specifications

供电电压 Supply voltage	20~35VDC, 功耗约2.0W 20~35VDC, power consumption about 2.0W
配电电压 Provided voltage	开路电压≤25V, 带载25mA时配电电压≥16V Open circuit voltage≤25V, provided voltage ≥16V when with load 25mA
输入信号 Input signal	频率≤100KHz, 幅值≤24V, 占空比≥20%, 高电平≥4V, 低电平≤1V Frequency ≤100KHz, amplitude ≤24V, duty cycle ≥20%, high level ≥4V, low level ≤1V
输出信号 Output signal	频率量1:1输出, 高电平≥20V, 低电平≤0.5V, 驱动电流≤15mA, 负载电阻≥1KΩ Frequency 1:1 output, high level ≥20V, low level ≤0.5V, driving current ≤15mA, load resistance ≥1KΩ
输入输出路数 Channel number of input and output	一路输入, 一路输出 1 input 1 output
适用的现场设备 Applicable field devices	频率量设备 Frequency equipment
温度参数 Temperature parameters	工作温度: -20℃~+60℃, 存储温度: -40℃~+80℃ Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
空气相对湿度 Relative humidity	10%~95%RH无凝露 10%~95% RH no condensation
绝缘强度 Dielectric strength	本安端与非本安端 (≥3000VAC/min); 电源与非本安端之间 (≥1500VAC/min) Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe terminal (≥1500VAC/min)
绝缘电阻 Insulation resistance	≥100MΩ (输入/输出/电源间) ≥100MΩ (between input/output/power supply)
电磁兼容性 Electromagnetic compatibility	符合IEC 61326-1 (GB/T 18268), IEC 61326-3-1 According to IEC 61326-1 (GB/T 18268), IEC 61326-3-1
防爆标志 Explosion-proof mark	[Exia Ga] IIC
认证机构 Certification Body	国家防爆电气产品质量监督检验中心CQST认证 CQST (China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
认证参数(端子1-2之间) Authentication parameters (between terminals 1-2)	Um=250V Uo=28V Io=93mA Co=0.05 μF Lo=2.4mH Po=0.65mW
认证参数(端子3-4之间) Authentication parameters (between terminals 3-4)	Um=250V Uo=8V Io=2.5mA Co=3.5 μF Lo=100mH Po=5mW
安装场所要求 Installation place requirements	可与具有IIA、IIB、IIC危险气体的0区本安仪表相连接 It can be connected with instruments in 0 zone with IIA, IIB, IIC dangerous gas
平均无故障时间 MTBF	约100000小时 About 100000h

端子定义及外形尺寸 Terminal assignments and dimensions

端子 Terminal	接线端子功能定义 Terminal assignments	
9	供电电源+ Power supply +	20~35VDC
10	供电电源- Power supply -	
1	配电电源24V+ Provided power supply 24V+	
2	配电电源- Provided power supply-	
3	输入+ Input+	频率量
4	输入- Input-	Frequency
5	输出+ Output+	频率量
6	输出- Output-	Frequency



厚12.5mm × 宽108mm × 高118mm
Thickness 12.5mm* width 108mm* height 118mm