检测端安全栅 Isolated Safety Barrier at Detection Side

PHD-11TC-33*

RS485半双工输入/RS485半双工输出
一入一出

RS485 half-duplex input /RS485 half-duplex output
1 input 1 output

概述 Overview

隔离式检测端安全栅：PHD-11TC-33*，通讯信号输入，一路输入一路输出。
安全栅可实现：在危险区的RS485接口与在安全区的RS485接口之间，半双工数字信号的双向通讯。
电路为现场仪表提供配电电源。
本产品需要外接20～35VDC电源。
产品带信号状态指示灯(黄色)。
型号字母中：PHD-11TC-33*的“*”表示配电电压，规定如下：

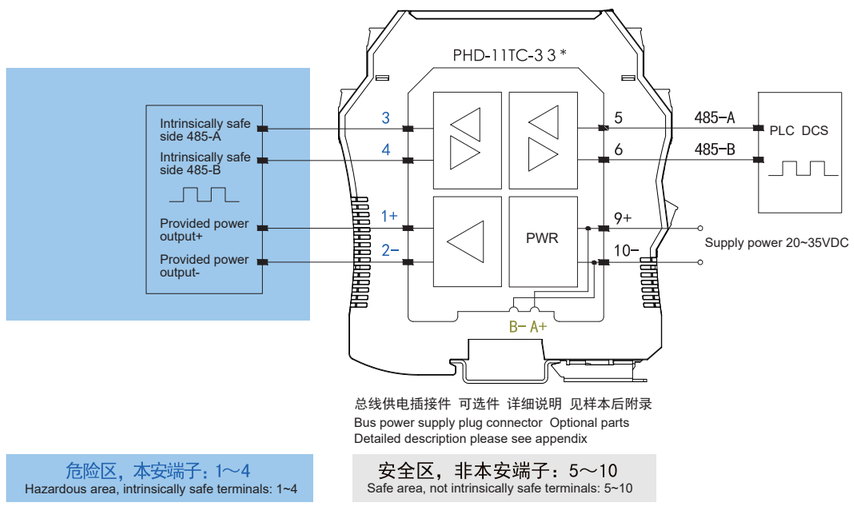
代码Code	配电电压，电流 Provided voltage, current
无 No	无配电 No provided power
A	5V
B	6V
C	12V
F	24V
H	用户自定义 User defined

*总线端子供电，详见附录。

Isolated safety barrier at detection end: PHD-11TC-33*, communication signal input, single input and single output. The safety barrier can realize the bilateral communication of half duplex digital signals between RS485 interface in dangerous area and RS485 interface in safe area.
The circuit provides for field instruments power supply.
This product needs an external 20~35VDC power supply.
The product is equipped with signal status indicator (yellow)
In model letter: PHD-11C-33* the character "*" represents the provided voltage, and the regulations are as follows:

* 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

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Communication Signal Input 通讯信号输入

技术数据 Specifications

供电电压 Supply voltage	20～35VDC，功耗＜2.5W（24VDC，配电5V带载80mA时） 20~35VDC, power consumption <2.5W (24VDC, when provided power supply is 5V with 80mA load)
输入信号 Input signal	RS485半双工数字信号 RS485 half-duplex digital signal
配电电压 Provided voltage	为现场仪表提供配电电源：5V、6V、12V、24V For field instruments provides supply power: 5V, 6V, 12V, 24V
输出信号 Output signal	RS485半双工数字信号 RS485 half-duplex digital signal
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	带RS485半双工的通讯接口设备 Equipment with RS485 half-duplex communication interface
传输速度 Transmission rate	传输速率≤115.2kbps Transmission rate ≤115.2kbps
传输延时 Transmission delay	≤10μs
发送与接收切换时间 Sending and receiving switching time	≥20ms
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=17.85V Io=250mA Co=0.22μF Lo=0.25mH Po=1.12mW
认证参数(端子3-4之间) Authentication parameters (between terminals 3-4)	Um=250V Uo=7.7V Io=80mA Co=6.9μF Lo=5.0mH Po=0.15mW
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	≤100000小时（h）

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 -	
3	本安侧RS485-A Intrinsically safe side RS485-A	
4	本安侧RS485-B Intrinsically safe side RS485-B	
1	配电电源+ Provided power supply+	
2	配电电源- Provided power supply-	
6	RS485-A	
7	RS485-B	

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

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