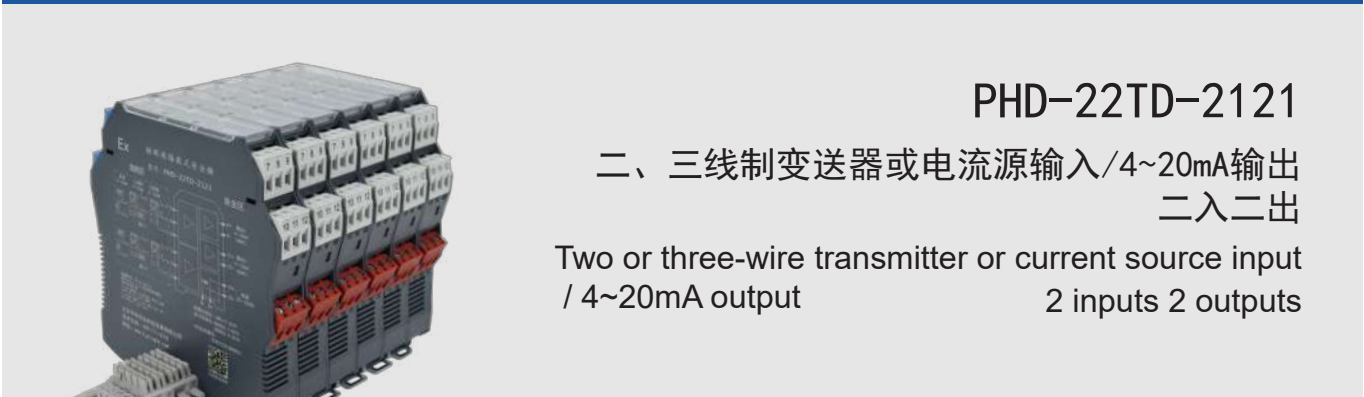


检测端安全栅 Isolated Safety Barrier at Detection Side



概述 Overview

隔离式检测端安全栅：PHD-22TD-2121，模拟量输入输出，两路输入两路输出。

安全栅可实现将危险区变送器产生的4~20mA信号或直流4~20mA信号，隔离传送到安全区。输出4~20mA信号，现场变送器为二、三线制时，安全栅为变送器提供配电电源。

本产品需外接20~35VDC电源。  
\*总线端子供电，详见附录。

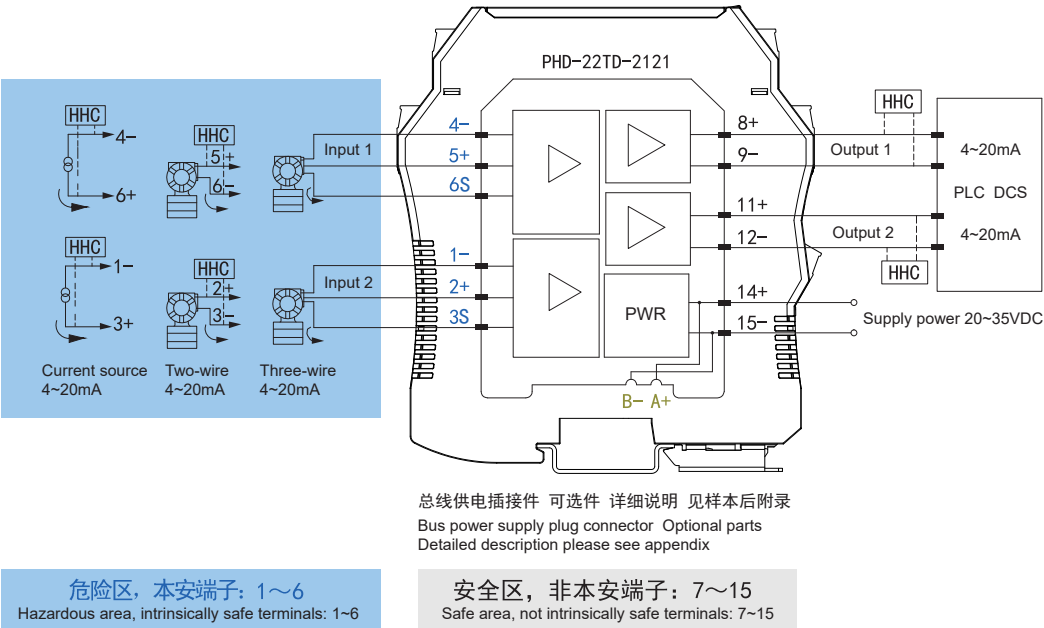
Isolated safety barrier at detection side: PHD-22TD-2121, dual input and dual output with analog signal.

The isolated barrier can isolate and transmit the 4~20mA signal or DC 4~20mA signal generated by the transmitter in the dangerous area to the safe area, the output signal is 4~20mA. When the transmitter is two-wire or three-wire system, the safety barrier provides power for the transmitter.

This product needs an external 20~35VDC power supply.

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

接线图 Wiring diagram



Analog Input 模拟量输入

技术数据 Specifications

|                                                                       |                                                                                                                                                                                                                                                                                      |
|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 供电电压<br>Supply voltage                                                | 20~35VDC，功耗<2.8W（24VDC，变送器输入，输出20mA时）<br>20~35VDC, power consumption<2.8W (when supply power 24VDC, transmitter input, output 20mA)                                                                                                                                                  |
| 配电输出电源<br>Output power supply with provided power                     | 电路输出20mA时，配电电压≥16V<br>When the circuit output is 20mA, the provided voltage is ≥16V                                                                                                                                                                                                  |
| 输入信号<br>Input signal                                                  | 二、三线制变送器或电流源信号（HART）<br>Two-wire or three-wire transmitter or current source signal (HART)                                                                                                                                                                                           |
| 输出信号<br>Output signal                                                 | 4~20mA（HART）                                                                                                                                                                                                                                                                         |
| 允许输出负载能力<br>Allowable output load capacity                            | 0~500Ω（可定制）<br>0~500Ω (customizable)                                                                                                                                                                                                                                                 |
| 输出精度<br>Output accuracy                                               | 0.1%F.S（典型值：0.05%F.S）<br>0.1%F.S (Typical value: 0.05% F.S)                                                                                                                                                                                                                          |
| 温度漂移<br>Temperature drift                                             | 0.005%F.S/℃                                                                                                                                                                                                                                                                          |
| 输入输出路数<br>Number of input and output                                  | 两路输入，两路输出<br>2 inputs 2 outputs                                                                                                                                                                                                                                                      |
| 适用的现场设备<br>Applicable field equipments                                | 二、三线制变送器、电流源信号，本产品适用于（ABB、Fisher、Rosemount、Honeywell，以及引进技术的3351、EJA、SIEMENS等产品）<br>2-wire, 3-wire transmitter and current source signal, this product is suitable for ABB, Fisher, Rosemount, Honeywell, as well as 3351, EJA, SIEMENS and other products with imported technology. |
| 温度参数<br>Temperature parameters                                        | 工作温度：-20℃~+60℃，存储温度：-40℃~+80℃<br>Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃                                                                                                                                                                                      |
| 空气相对湿度<br>Relative humidity                                           | 10%~95%RH无凝露<br>10%~95% RH no condensation                                                                                                                                                                                                                                           |
| 绝缘强度<br>Insulation strength                                           | 本安端与非本安端（≥3000VAC/min）；电源与非本安端之间（≥1500VAC/min）<br>Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥1500VAC/min)                                                                                |
| 绝缘电阻<br>Insulation resistance                                         | ≥100MΩ（输入/输出/电源间）<br>≥100MΩ (between input/output/power supply)                                                                                                                                                                                                                      |
| 电磁兼容性<br>Electromagnetic compatibility                                | 符合IEC 61326-1（GB/T 18268），IEC 61326-3-1<br>According to IEC 61326-1 (GB/T 18268), IEC 61326-3-1                                                                                                                                                                                      |
| 防爆标志<br>Explosion-proof mark                                          | [Exia Ga] IIC                                                                                                                                                                                                                                                                        |
| 功能安全认证<br>Functional safety certification                             | SIL2 符合IEC 61508 EN 61511标准<br>SIL2 according to IEC 61508 and EN 61511 standards                                                                                                                                                                                                    |
| 认证机构<br>Certification body                                            | 国家防爆电气产品质量监督检验中心CQST认证<br>CQST (China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)                                                                                                                                                      |
| 认证参数（端子1-3、4-6之间）<br>Certified parameters (between terminals 1-3,4-6) | Um=250V Uo=3.5V Io=--mA<br>Co=100 μF Lo=--mH Po=--W                                                                                                                                                                                                                                  |
| 认证参数（端子2-3、5-6之间）<br>Certified parameters (between terminals 2-3,5-6) | Um=250V Uo=28V Io=93mA<br>Co=0.05 μF Lo=2.4mH Po=0.65W                                                                                                                                                                                                                               |
| 安装场所要求<br>Installation place requirements                             | 可与具有IIA、IIB、IIC危险气体的0区本安仪表相连接<br>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 |                                |
|-------------|-------------------------------|--------------------------------|
| 14          | 供电电源+ Power supply +          | 20~35VDC                       |
| 15          | 供电电源- Power supply -          |                                |
|             | 二线制 2-wire                    | 三线制 3-wire                     |
| 5           | 输入1+ Input1+                  | 配电电源1+ Provided power supply1+ |
| 4           | 输入1- Input1-                  | 输入1- Input1-                   |
| 6           | 输入1+ Input1+                  | 输入1+ Input1+                   |
| 2           | 输入2+ Input2+                  | 配电电源2+ Provided power supply2+ |
| 1           | 输入2- Input2-                  | 输入2- Input2-                   |
| 3           | 输入2+ Input2+                  | 输入2+ Input2+                   |
| 8           | 输出1+ Output1 +                | 4~20mA                         |
| 9           | 输出1- Output1 -                |                                |
| 11          | 输出2+ Output2+                 | 4~20mA                         |
| 12          | 输出2- Output2 -                |                                |

