

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-12TZ-*11，热电阻信号输入，一路输入两路输出。
安全栅可实现将危险区的热电阻信号输入，转换为4~20mA信号输出传送到安全区。电路设一路热电阻信号输入，二路直流信号输出。
输出4~20mA信号，可智能组态，热电阻的实际量程范围可通过计算机进行设定。
PHD-12TZ-*11，“*”表示热电阻的输入类型，请用代码表示。本产品需外接20~35VDC电源。

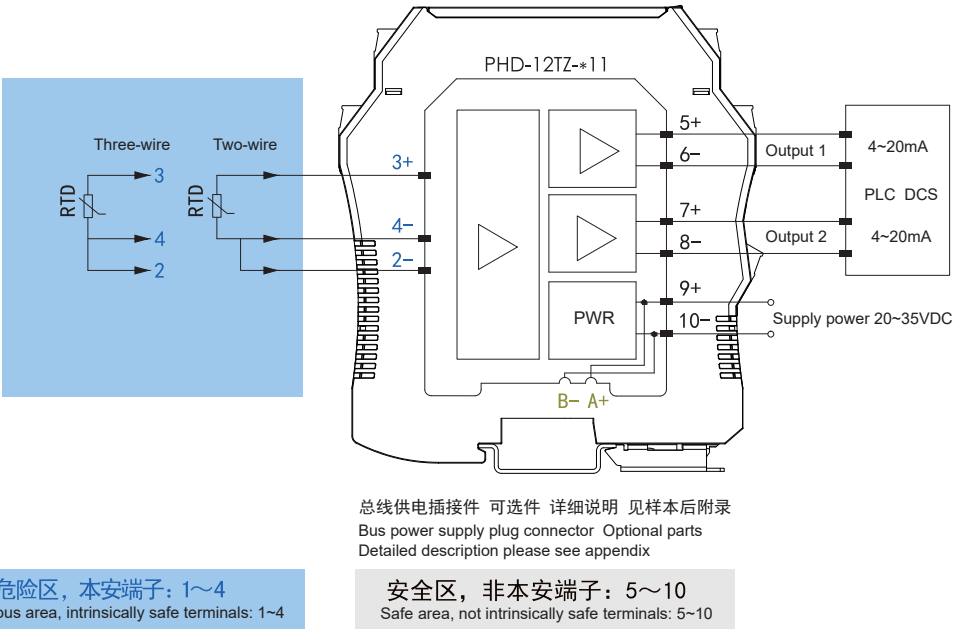
输入信号类型和量程表				
Input signal types and measurement range				
代码	热电阻型号	测量范围	最小量程	转换精度
Code	RTD model	Measurement range	Minimum range	Conversion accuracy
1	G53	-50 ~ 150℃	20℃	0.2℃/0.1%
2	Cu50	-50 ~ 150℃	20℃	0.2℃/0.1%
4	Pt100	-200 ~ 850℃	20℃	0.2℃/0.1%
6	Pt1000	-200 ~ 850℃	20℃	0.2℃/0.1%
7	Ni1000	-60 ~ 250℃	20℃	0.2℃/0.1%

例：检测端安全栅Pt100输入，温度范围0~400℃，输出二路4~20mA，电源20~35VDC。型号为PHD-12TZ-411(0~400℃)，量程范围可通过计算机设定为指定的0~400℃范围。
*总线端子供电，详见附录。

接线图 Wiring diagram

- 注：1、三线制热电阻输入时，要尽可能保证三根导线等长。
2、二线制热电阻输入时，安全栅端子4和2必须短接。

Note: 1. When the input is with three-wire thermal resistance, it is better to ensure that the length of the three wires should be equal as much as possible.
2. When the input is with two-wire thermal resistance, terminals 4 and 2 of safety barrier must be shorted connected.



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

Information maybe revised without prior notice

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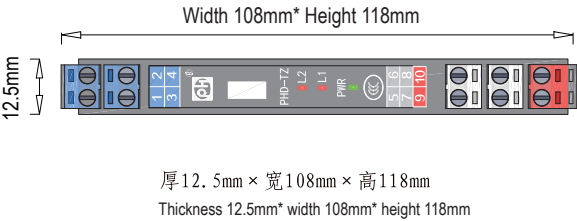
RTD Input 热电阻输入

技术数据 Specifications

供电电压	20~35VDC，功耗<1.8W（24VDC供电，20mA输出时）
Supply voltage	20~35VDC, power consumption<1.8W (when power supply 24VDC, output 20mA)
输入信号	二线制或三线制热电阻
Input signal	Two-wire or three-wire RTD
输出信号	4~20mA
Output signal	4~20mA
信号范围及量程范围	信号范围：对应热电阻的测量范围 Signal range: corresponding to the measurement range of RTD 量程范围：用户订货时自行制定组态，在尾号指明或另说明 Measurement range: When make an order, the user shall make the configuration by himself, which shall be indicated in the tail number or extra explained.
Signal and measurement range	
允许输出负载能力	0~500Ω（可定制）
Allowable output load capacity	0~500Ω (customizable)
报警指示	低量程报警L1灯亮；高量程报警L2灯亮
Alarm indication	L1 light is on at low-measurement range alarm; L2 light is on at high-measurement range alarm
输入输出路数	一路输入，两路输出
Channel number of input and output	1 input 2 outputs
适用的现场设备	二线制或三线制热电阻G53、Cu50、Pt100、Pt1000、Ni1000
Applicable field devices	2-wire or 3-wire RTD G53, Cu50, Pt100, Pt1000, Ni1000
输出精度	见上页“输入信号类型和量程表”
Output accuracy	Please see the "Input signal types and measurement table" in above page
温度漂移	0.005%F.S/℃
Temperature drift	0.005%F. S/℃
温度参数	工作温度：-20℃~+60℃，存储温度：-40℃~+80℃
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
空气相对湿度	10%~95%RH无凝露
Relative humidity	10%~95% RH no condensation
绝缘强度	本安端与非本安端（≥3000VAC/min）；电源与非本安端之间（≥1500VAC/min）
Dielectric strength	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	≥100MΩ（输入/输出/电源间）
Insulation resistance	≥100MΩ (between input/output/power supply)
电磁兼容性	符合IEC 61326-1（GB/T 18268），IEC 61326-3-1
Electromagnetic compatibility	According to IEC 61326-1 (GB/T 18268), IEC 61326-3-1
功能安全认证	SIL3 符合IEC 61508 EN 61511标准
Functional safety certification	SIL3 according to IEC 61508 EN 61511 standards
防爆标志	[Exia Ga]IIC
认证机构	国家防爆电气产品质量监督检验中心CQST认证
Certification body	CQST (China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
认证参数(端子2-3-4之间)	Um=250V Uo=8.4V Io=31mA
Certified parameters (between terminals 2-3-4)	Co=4.8μF Lo=20mH Po=65mW
安装场所要求	可与具有IIA、IIB、IIC危险气体的0区本安仪表相连接
Installation place requirements	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 +
10	供电电源-	Power supply -
	二线制 2-wire	三线制 3-wire
2	与4短接	with 4 short connected
3	输入+	Input+
4	输入-	Input-
5	输出1+	Output 1+
6	输出1-	Output 1-
7	输出2+	Output 2+
8	输出2-	Output 2-



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