

Analogue Output Isolated Safety Barrier

PHC-11TD-11

1 input 1 output

PHC-12TD-111

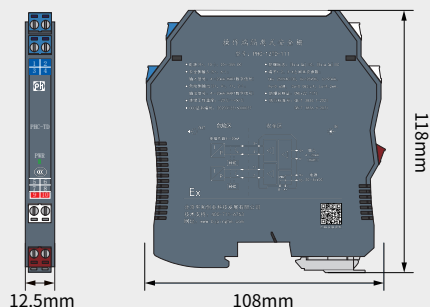
1 input 2 outputs

Input: 4~20mA (HART digital signal)

Output: 4~20mA (HART digital signal)



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Overview

The analog output isolated safety barrier can realize the isolated transmission of 4~20mA signals from the instruments in the safe area to the dangerous area, drive the valve positioner, electric/pneumatic converter and other equipment on site, and support the bidirectional transmission of HART digital signals. This product needs independent power supply, and the power supply, input and output are isolated.

Specifications

Input in hazardous area:

Input signal: 4~20mA (HART digital signal)

Safety side output:

Output signal: 4~20mA (HART digital signal)

Load resistance: When outputting 20mA, 0~800 Ω (customizable)

Basic parameters:

Supply voltage: 18~35V DC

Power consumption: 24V power supply, 20mA output

≤50mA(PHC-11TD-11)

≤80mA(PHC-12TD-111)

LED indicator: Green: Power indicator

Output accuracy: 0.1%FS (Typical value: 0.05%F.S)

Response time: Reaching 90% of the final value within 2ms

Temperature drift: 0.005%F.S/°C

Temperature parameters: Working temperature: -20°C~+60°C
storage temperature:-40°C~+80°C

Relative humidity: 10%~95% RH no condensation

Insulation strength: Between intrinsically safe side and non-intrinsically safe side (≥3000V AC/min); between power supply and non-intrinsically safe side (≥1500V AC/min)

Insulation resistance: ≥100M Ω (between input/output/power supply)

EMC: According to IEC 61326-1(GB/T 18268), IEC 61326-3-1

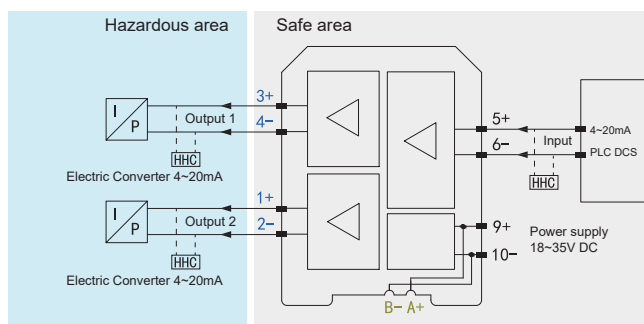
Wire requirements: Cross-section ≥0.5mm²

Insulation strength ≥500V

Applicable field equipments: Valve positioner, electric/pneumatic converter

Installation place: Installed in a safe zone, it can be connected to intrinsic safety instruments in hazardous areas up to Zone 0, IIC, Zone 20, and IIC

Connection wiring



Note: 1. PHC-11TD-11 does not contain output 2.

2. The power supply of the power rail is an optional function. Users need to specify the power supply mode when ordering. Please refer to "Annex".

Safe certification

Functional safety certification: SIL2 according to IEC 61508 standards

Explosion-proof mark: [Ex ia Ga] IIC [Ex ia Da] IIIC

Explosion-proof standard: GB/T 3836.1-2021 GB/T 3836.4-2021

Terminals 1-2, 3-4: Um: 250V AC/DC Uo=28V DC Io=93mA

Po=0.65W Co=0.083 μ F Lo=4.2mH

Certification body: CQST(China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)