

# H Serie Backplane Mounting Isolated Safety Barriers

## PHD-12HF-277



### Overview

H serie backplane mounting isolated safety barriers at detection side: PHD-12HF-277, digital input and output, single input and dual output.

The isolated barrier can convert the proximity switch and contact input in the dangerous area to the relay contact signal and transmit it to the safe area.

The output relay is equipped with selection switch of "ON/OFF" situation. In addition, there is an input signal short-circuit or open-circuit alarm indication, the circuit provides power for the input sensor.

This product needs independent power supply.

The signal status indicator is set in red and yellow light to indicate the working status of the output relay, when it is for alarming then the light is red, during normal operation the light is yellow.

### Switch or NAMUR proximity detector input /relay output 1 input 2 outputs

Specifications	
Supply voltage	20~35VDC, power consumption<1.5W
Input signal	Switch or NAMUR proximity detector
Supply voltage of sensor on site	8V
Signal input characteristics	On-site input current: >2.1mA, it means ON; On-site input current: <1.2mA, it means OFF
Output and alarm relay characteristics	Response time: 20ms, driving capacity: 250VAC/2A, 30VDC/2A under resistive load
Output and alarm relay characteristics	When the dial switch K1, K3 is at "ON" side, the relay output is "OFF" When the dial switch K1, K3 is at "OFF" side, the relay output is "ON" When the dial switch K2, K4 is at "ON" side, the circuit selects indicating red light relay alarm function
Indicator light alarm function	On-site input current>7mA, short-circuit alarm (SC) , on-site input current<0.1mA, open-circuit alarm ( LB) For switch contact input, when the disconnection detection function is required, a 22KΩ resistor must be connected parallel at both ends of the switch (Please see the switch contact II in the below wiring diagram)
Number of input and output	1 input 2 outputs
Applicable field equipments	Dry contact or NAMUR proximity switch in accordance with DIN 19234 standard
Temperature parameter	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Dielectric strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe terminal (≥1500VAC/min)
Insulation resistance	≥100MΩ (between input/output/power supply)
External dimensions	Thickness 15.8mm * width 104.8mm * high 116.1mm
Electromagnetic compatibility	According to IEC 61326-1 (GB/T 18268), IEC 61326-3-1
Explosion-proof mark	[Exia Ga]IIC, [Exia Da]IIC
Functional safety certification	SIL3 according to IEC 61508 EN 61511 standards
Certification body	CQST(China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
Certified parameters (between terminals 1-2)	Um=250V Uo=10.5V Io=15mA Po=39.4mW Co=1.7μF Lo=165mH
Installation site requirements	It can be connected with instruments in 0 zone with Ⅱ A, Ⅱ B, Ⅱ C dangerous gas
MTBF	≤100000h

