北京平和
Bei Jing Ping He

6年 质保 功能安全产品
Warranty 6 years! Functional safety product

H series

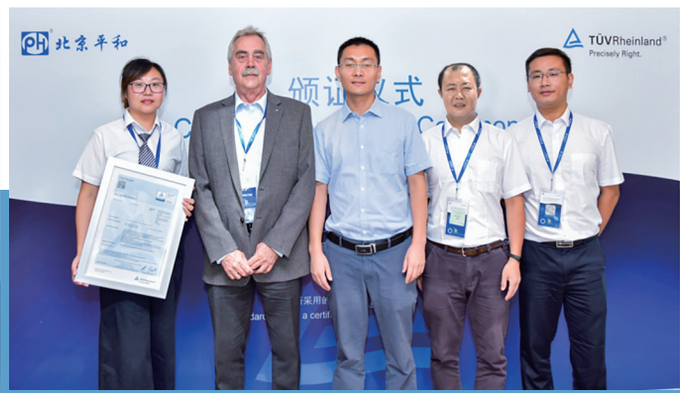
Backplane Mounting Isolated Safety Barriers

ABOUT BEIJING PINGHE

Beijing Pinghe was founded in January 2004 and is located in Beijing Zhongguancun Science and Technology Park with registered capital 80 million CNY. We are a national high-tech enterprise dedicated to industrial signal interface modules.

As a top brand recognized by the industry, Beijing Pinghe has main focused on R&D, production and sales in the industrial control area, possesses two big intelligent production bases. The products are broad-range used in the military nuclear power, aerospace, petrochemical, metallurgical power, energy and environmental protection, shipbuilding and biomedicine industries. So far, more than 5 million pieces run stable in domestic and foreign markets, our excellent quality and outstanding service have been highly recognized and praised by a vast number of partners.

Excellent R&D Team



We benefit from talent and technical advantages of the capital Beijing, our senior engineers account for 60% of the R&D team, and R&D personnel more than 30% of the total number of employees. In these nearly 20 years, we have obtained a number of patents and independent intellectual property rights, and mastered the core technologies of the products, which fully meets the requirements of process industry.

Partial test equipments

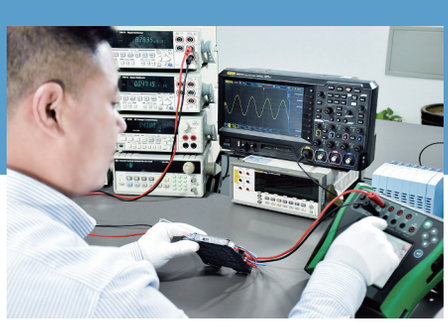
EMC electromagnetic compatibility test lab

An intelligent environmental experiment center

A lightning protection test lab

Vibration test benches

High and low temperature test chambers



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PHD-11HD-21

Overview

Isolated safety barrier at detection side: PHD-11HD-21, analog input and output, single input and single output.

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

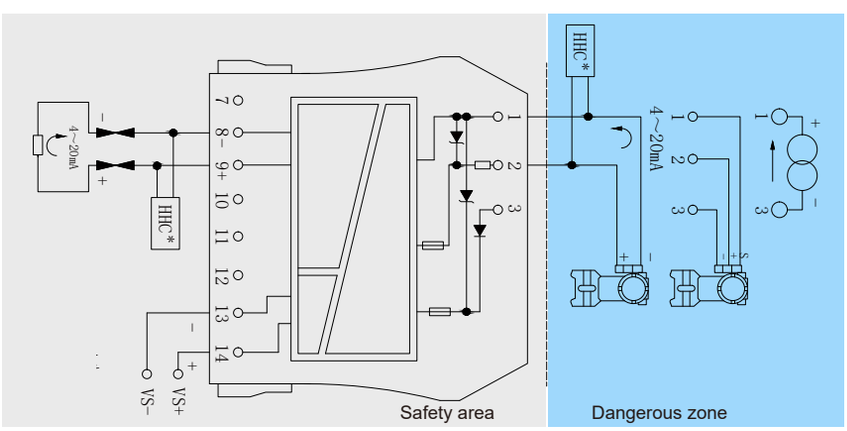
This product needs independent power supply.

This product supports HART signal and disconnection alarm.

Two or three-wire transmitter or current source input /4~20mA output 1 input 1 output

Specifications

Supply voltage	20~35VDC, power consumption<1.5W (when supply power 24VDC, transmitter input, output 20mA)
Output power supply with provided power	When the circuit output is 20mA, the provided voltage is≥16V
Input signal	Two-wire or three-wire transmitter or current source signal (HART)
Output signal	4~20mA (HART)
Allowable output load capacity	0~500Ω (customizable)
Output accuracy	0.1%F.S (Typical value: 0.05% F.S)
Temperature drift	0.005% F.S/℃
Number of input and output	1 input 1 output
Applicable field equipments	2-wire, 3-wire transmitter and current source signal, this product is suitable for ABB, Fisher, Rosemount, Honeywell 11, as well as 3351, EJA, SIEMENS and other products with imported technology
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Insulation strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥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]IIIC
Functional safety certification	SIL2 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 1-3)	Um=250V Uo=7.2V Io=-- Po=-- Co=12μF Lo=--
Certified parameters (between terminals 2-3,2-1)	Um=250V Uo=28V Io=93mA Po=0.65W Co=0.083μF Lo=4.2mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-12HD-211

Overview

Isolated safety barrier at detection side: PHD-12HD-211, analog input and output, single input and dual output.

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

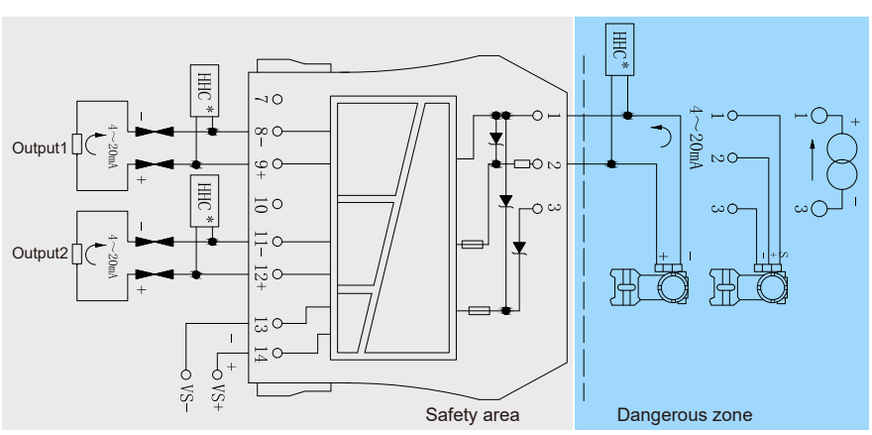
This product needs independent power supply.

This product supports HART signal and disconnection alarm.

Two or three-wire transmitter or current source input /4~20mA output 1 input 2 outputs

Specifications

Supply voltage	20~35VDC, power consumption<2W (when supply power 24VDC, transmitter input, output 20mA)
Output power supply with provided power	When the circuit output is 20mA, the provided voltage is≥16V
Input signal	Two-wire or three-wire transmitter or current source signal (HART)
Output signal	4~20mA (HART)
Allowable output load capacity	0~500Ω (customizable)
Output accuracy	0.1%F.S (Typical value: 0.05% F.S)
Temperature drift	0.005% F.S/℃
Number of input and output	1 input 2 outputs
Applicable field equipments	2-wire, 3-wire transmitter and current source signal, this product is suitable for ABB, Fisher, Rosemount, Honeywell 11, as well as 3351, EJA, SIEMENS and other products with imported technology
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Insulation strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥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]IIIC
Functional safety certification	SIL2 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 1-3)	Um=250V Uo=7.2V Io=-- Po=-- Co=12μF Lo=--
Certified parameters (between terminals 2-3,2-1)	Um=250V Uo=28V Io=93mA Po=0.65W Co=0.083μF Lo=4.2mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-22HD-2121

Overview

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

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

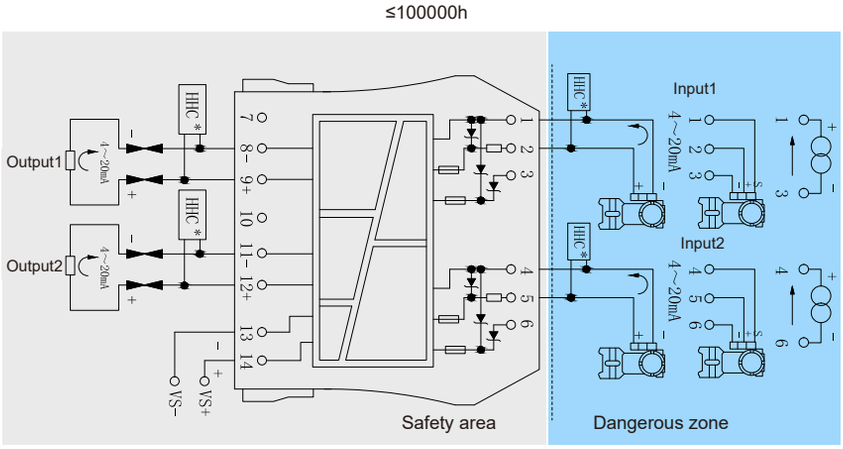
This product needs independent power supply.

This product supports HART signal and disconnection alarm.

Two or three-wire transmitter or current source input /4~20mA output 2 inputs 2 outputs

Specifications

Supply voltage	20~35VDC, power consumption<2.8W (when supply power 24VDC, transmitter input, output 20mA)
Output power supply with provided power	When the circuit output is 20mA, the provided voltage is≥16V
Input signal	Two-wire or three-wire transmitter or current source signal (HART)
Output signal	4~20mA (HART)
Allowable output load capacity	0~500Ω (customizable)
Output accuracy	0.1%F.S (Typical value: 0.05% F.S)
Temperature drift	0.005% F.S/℃
Number of input and output	2 inputs 2 outputs
Applicable field equipments	2-wire, 3-wire transmitter and current source signal, this product is suitable for ABB, Fisher, Rosemount, Honeywell 11, as well as 3351, EJA, SIEMENS and other products with imported technology
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Insulation strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥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]IIIC
Functional safety certification	SIL2 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 1-3,4-6)	Um=250V Uo=7.2V Io=-- Po=-- Co=12μF Lo=--
Certified parameters (between terminals 2-3,2-1,5-6,5-4)	Um=250V Uo=28V Io=93mA Po=0.65W Co=0.083μF Lo=4.2mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-11HF-27

Overview

H serie backplane mounting isolated safety barriers at detection side: PHD-11HF-27, digital input and output, single input and single 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.

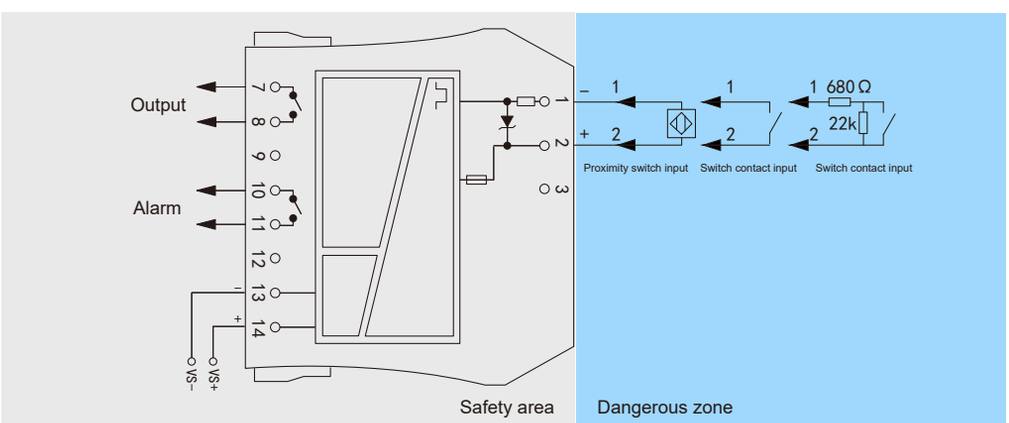
This product needs independent power supply.

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 1 output

Specifications

Supply voltage	20~35VDC, power consumption<1.0W
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 dial switch K1 is at "ON" side, the relay output is "OFF" When dial switch K1 is at "OFF" side, the relay output is "ON" When dial switch K2 is at "ON" side, the circuit selects indicating red light 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 1 output
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]IIIC
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 ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



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.

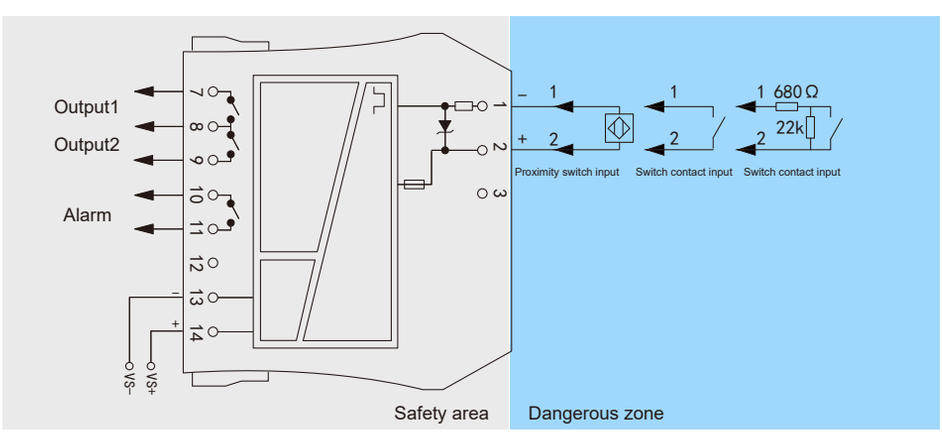
This product needs independent power supply.

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]IIIC
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 ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-22HF-2727

Overview

H serie backplane mounting isolated safety barriers at detection side: PHD-22HF-2727, digital input and output, dual 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.

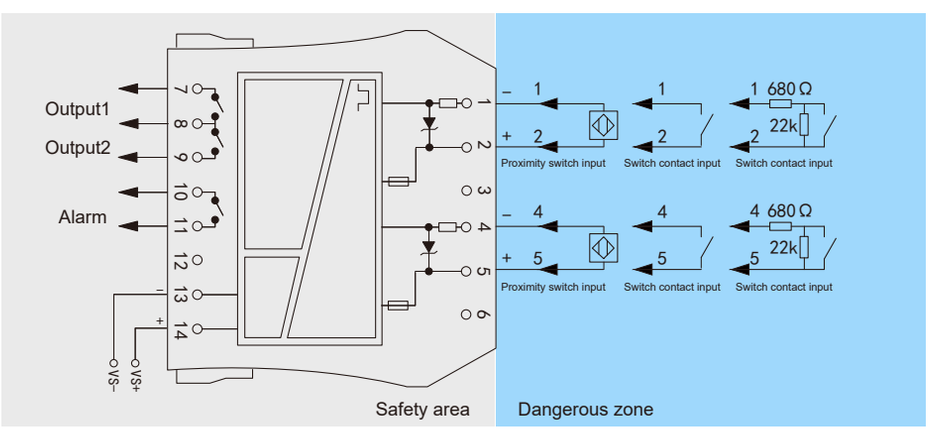
The output relay is equipped with selection switch of "ON/OFF" situation. In addition, there is an input signal short-circuit or open-circuit alarm indication, the circuit provides power for the input sensor.

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 2 inputs 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	2 inputs 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]IIIC
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 1-2,4-5)	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 ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-11HZ-*1

Overview

Isolated safety barrier: PHD-11HZ-*1, RTD signal input, one input and one output.
The isolated safety barrier can convert the RTD input signal in hazardous area to 4~20mA signal output and transmit it to the safe area. The circuit is equipped with single RTD signal input and DC signal output.
The output 4~20mA signal, can be intelligently configured. The actual range of RTD can be set by computer.
PHD-11HZ-*1, "*" indicates the input type of RTD, please use the code to indicate.
This product needs independent power supply.

Input signal types and measurement range

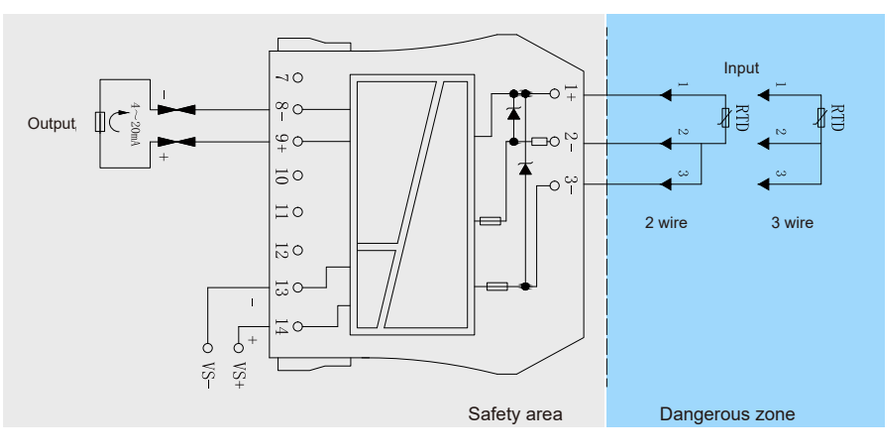
Code	RTD model	Measurement range	Minimum range	Conversion accuracy
1	G53	−50 ~ 150℃	20℃	0.2℃/0.1%
2	Cu50	−50 ~ 150℃	20℃	0.2℃/0.1%
4	Pt100	−200 ~ 850℃	20℃	0.2℃/0.1%
6	Pt1000	−200 ~ 850℃	20℃	0.2℃/0.1%
7	Ni1000	−60 ~ 250℃	20℃	0.2℃/0.1%

Example: Isolated safety barrier Pt100 input, temperature range 0~400℃, the output channel 1 is 4~20mA, the power supply is 20~35VDC, the model is PHD-11HZ-41(0~400℃), the measurement range can be set to the specified range of 0~400℃ by computer.

RTD input/4~20mA output (configurable) 1 input 1 output

Specifications

Supply voltage	20~35VDC, power consumption<1.2W (when power supply 24VDC, output 20mA)
Input signal	Two-wire or three-wire RTD
Output signal	4~20mA
Signal and measurement range	Signal range: corresponding to the measurement range of RTD 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
Allowable output load capacity	0~500Ω (customizable)
Alarm indication	L1 light is on at low-measurement range alarm; L2 light is on at high-measurement range alarm
Channel number of input and output	1 input 1 output
Applicable field devices	2-wire or 3-wire RTD (G53, Cu50, Pt100, Pt1000, Ni1000)
Output accuracy	0.1%F.S (Typical value: 0.05%F.S)
Temperature drift	0.005%F.S/℃
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Insulation strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥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]IIIC
Certification body	CQST (China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
Certified parameters (between terminals 1-3,2-3)	Um=250V Uo=8.4V Io=31mA Po=65.1mW Co=4.8μF Lo=20mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-12HZ-*11

Overview

Isolated safety barrier: PHD-12HZ-*11, RTD signal input, single input and dual output.
The isolated safety barrier can convert the RTD input signal in hazardous area to 4~20mA signal output and transmit it to the safe area. The circuit is equipped with single RTD signal input and DC dual output.
The output 4~20mA signal, can be intelligently configured. The actual range of RTD can be set by computer.
PHD-12HZ-*11, "*" indicates the input type of RTD, please use the code to indicate.
This product needs independent power supply.

Input signal types and measurement range

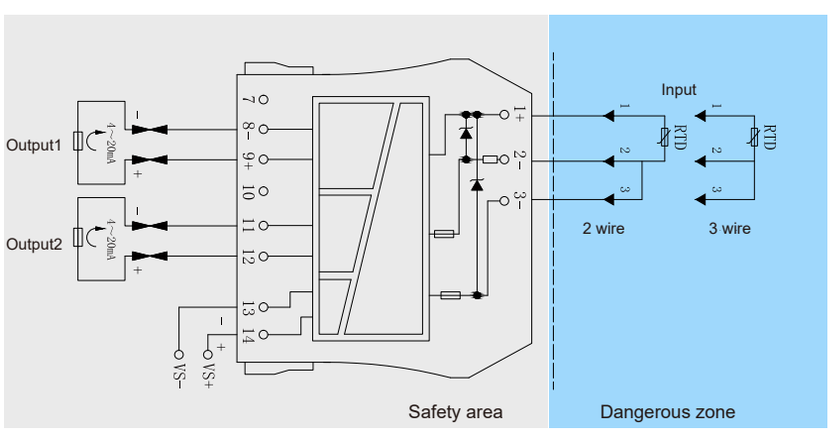
Code	RTD model	Measurement range	Minimum range	Conversion accuracy
1	G53	−50 ~ 150℃	20℃	0.2℃/0.1%
2	Cu50	−50 ~ 150℃	20℃	0.2℃/0.1%
4	Pt100	−200 ~ 850℃	20℃	0.2℃/0.1%
6	Pt1000	−200 ~ 850℃	20℃	0.2℃/0.1%
7	Ni1000	−60 ~ 250℃	20℃	0.2℃/0.1%

Example: Isolated safety barrier Pt100 input, temperature range 0~400℃, dual output 4~20mA, the power supply is 20~35VDC.When the model is PHD-12HZ-411: (0~400℃) the measurement range can be set to the specified range of 0~400℃ by computer.

RTD input/4~20mA output (configurable) 1 input 2 outputs

Specifications

Supply voltage	20~35VDC, power consumption<1.8W (when power supply 24VDC, output 20mA)
Input signal	Two-wire or three-wire RTD
Output signal	4~20mA
Signal and measurement range	Signal range: corresponding to the measurement range of RTD 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
Allowable output load capacity	0~500Ω (customizable)
Alarm indication	L1 light is on at low-measurement range alarm; L2 light is on at high-measurement range alarm
Channel number of input and output	1 input 2 outputs
Applicable field devices	2-wire or 3-wire RTD (G53, Cu50, Pt100, Pt1000, Ni1000)
Output accuracy	0.1%F.S (Typical value: 0.05%F.S)
Temperature drift	0.005%F.S/℃
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Insulation strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥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
Functional safety certification	SIL3 according to IEC 61508 EN 61511 standards
Explosion-proof mark	[Exia Ga]IIC, [Exia Da]IIIC
Certification body	CQST (China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
Certified parameters (between terminals 1-3,2-3)	Um=250V Uo=8.4V Io=31mA Po=65.1mW Co=4.8μF Lo=20mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-22HZ-*1*1

Overview

Isolated safety barrier: PHD-22HZ-*1*1, RTD signal input, dual input and dual output.
The isolated safety barrier can convert the RTD input signal in hazardous area to 4~20mA signal output and transmit it to the safe area. The circuit is equipped with dual RTD signal input and DC dual output.
The output 4~20mA signal, can be intelligently configured. The actual range of RTD can be set by computer.
PHD-22HZ-*1*1, "*" indicates the input type of RTD, please use the code to indicate.
This product needs independent power supply.

Input signal types and measurement range

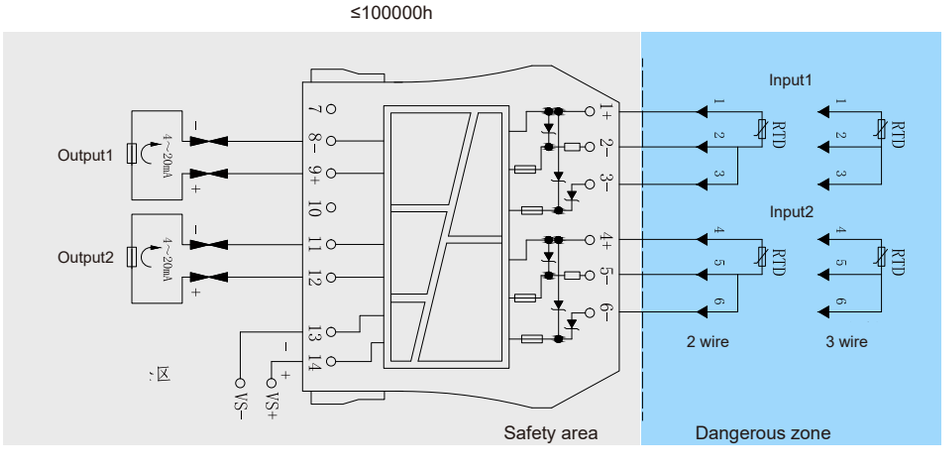
Code	RTD model	Measurement range	Minimum range	Conversion accuracy
1	G53	−50 ~ 150℃	20℃	0.2℃/0.1%
2	Cu50	−50 ~ 150℃	20℃	0.2℃/0.1%
4	Pt100	−200 ~ 850℃	20℃	0.2℃/0.1%
6	Pt1000	−200 ~ 850℃	20℃	0.2℃/0.1%
7	Ni1000	−60 ~ 250℃	20℃	0.2℃/0.1%

Example: Isolated safety barrier Pt100 input, temperature range 0~400℃, two outputs are with 4~20mA, the power supply is 20~35VDC. The model is PHD-22HZ-4141 (0~400℃), the measurement range can be set to the specified range of 0~400℃ by computer.

RTD input/4~20mA output (configurable) 2 inputs 2 outputs

Specifications

Supply voltage	20~35VDC, power consumption<2W (when power supply 24VDC, output 20mA)
Input signal	Two-wire or three-wire RTD
Output signal	4~20mA
Signal and measurement range	Signal range: corresponding to the measurement range of RTD 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
Allowable output load capacity	0~500Ω (customizable)
Alarm indication	L1 light is on at low-measurement range alarm; L2 light is on at high-measurement range alarm
Channel number of input and output	2 inputs 2 outputs
Applicable field devices	2-wire or 3-wire RTD (G53, Cu50, Pt100, Pt1000, Ni1000)
Output accuracy	0.1%F.S (Typical value: 0.05%F.S)
Temperature drift	0.005%F.S/℃
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Insulation strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥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]IIIC
Certification body	CQST (China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
Certified parameters (between terminals 1-3,2-3,4-6,5-6)	Um=250V Uo=8.4V Io=31mA Po=65.1mW Co=4.8μF Lo=20mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-11HT-*1

Overview

Isolated safety barrier at detection side: PHD-11HT-*1, thermocouple signal input, single input and single output.The safety barrier can realize the conversion of thermocouple signal input in dangerous area into 4~20mA signal output and transmit it to safe area. The circuit has one thermocouple input and one DC signal 4~20mA output.
The output 4~20mA signal can be intelligently configured, and the actual measuring range can be set by computer.
PHD-11HT-*1, "*" indicates the input type of thermocouple, please use code to indicate it.
This product needs independent power supply.

Input signal types and measurement range

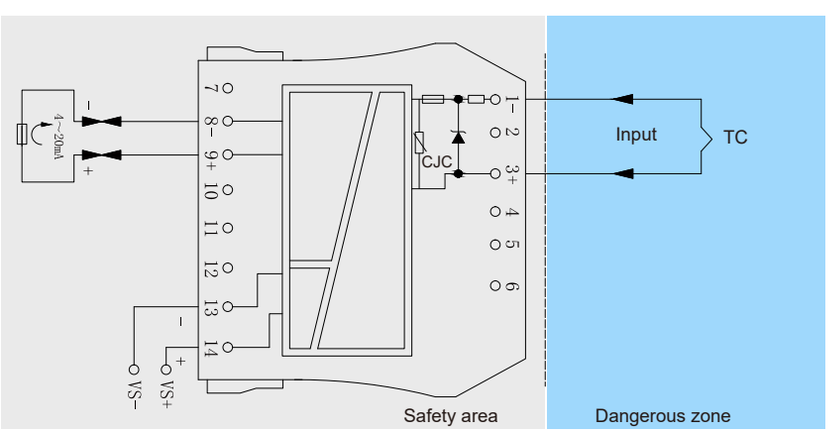
Code	RTD model	Measurement range	Minimum range	Conversion accuracy
1	K	-200 ~ 1370℃	50℃	0.5℃/0.1%
2	S	-50 ~ 1760℃	500℃	1.5℃/0.1%
3	E	-140 ~ 1000℃	50℃	0.5℃/0.1%
4	J	-160 ~ 1200℃	50℃	0.5℃/0.1%
5	B	250 ~ 1800℃	500℃	1.5℃/0.1%
6	T	-200 ~ 400℃	50℃	0.5℃/0.1%
7	R	-50 ~ 1760℃	500℃	1.5℃/0.1%
8	N	-200 ~ 1300℃	50℃	0.5℃/0.1%

Example: when the input is with K-couple, temperature range is 0~1200 ℃, output 4~20mA, power supply 20~35VDC, then the model should be PHD-11HT-11 (0~1200 ℃). The measuring range can be set to the specified 0~1200 ℃ range by computer.

TC input/4~20mA output (configurable) 1 input 1 output

Specifications

Supply voltage	20~35VDC, power consumption<1.2W (when power supply 24VDC, output 20mA)
Input signal	K, S, E, J, B, T, R, N, TC Signals
Output signal	4~20mA
Signal and measurement range	Signal range: corresponding to the measuring range of TC -10~100mV 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
Allowable output load capacity	0~500Ω (customizable)
Alarm indication	L1 light is on at low-measurement range alarm; L2 light is on at high-measurement range alarm
Channel number of input and output	1 input 1 output
Applicable field devices	K, S, E, J, B, T, R, N TC sensors
Output accuracy	0.1%F.S (Typical value: 0.05%F.S)
Cold junction compensation	±1℃ (Compensation range -20℃-+60℃)
Temperature drift	0.005%F.S/℃
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Insulation strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥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]IIIC
Certification body	CQST (China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
Certified parameters (between terminals 3-1)	Um=250V Uo=8.4V Io=31mA Po=65.1mW Co=4.8μF Lo=20mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-12HT-*11

Overview

Isolated safety barrier at detection side: PHD-12HT-*11, thermocouple signal input, single input and dual output.The safety barrier can realize the conversion of thermocouple signal input in dangerous area into 4~20mA signal output and transmit it to safe area. The circuit has one thermocouple input and one DC signal 4~20mA output.
The output 4~20mA signal can be intelligently configured, and the actual measuring range can be set by computer.
PHD-12HT-*11, "*" indicates the input type of thermocouple, please use code to indicate it.
This product needs independent power supply.

Input signal types and measurement range

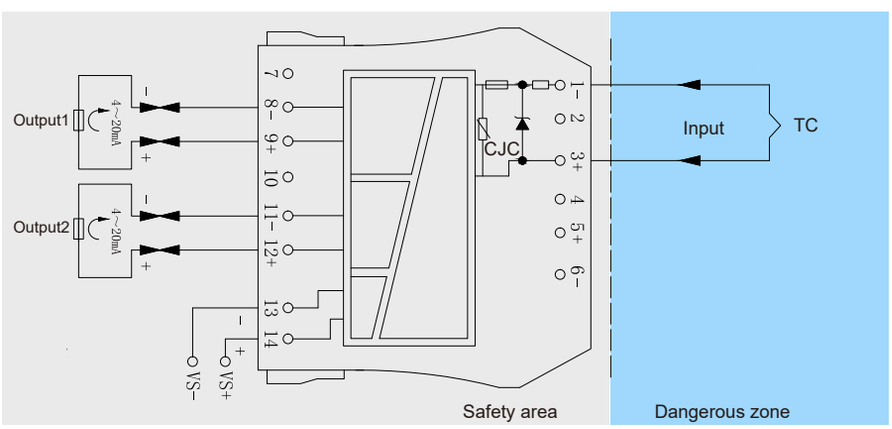
Code	RTD model	Measurement range	Minimum range	Conversion accuracy
1	K	-200 ~ 1370℃	50℃	0.5℃/0.1%
2	S	-50 ~ 1760℃	500℃	1.5℃/0.1%
3	E	-140 ~ 1000℃	50℃	0.5℃/0.1%
4	J	-160 ~ 1200℃	50℃	0.5℃/0.1%
5	B	250 ~ 1800℃	500℃	1.5℃/0.1%
6	T	-200 ~ 400℃	50℃	0.5℃/0.1%
7	R	-50 ~ 1760℃	500℃	1.5℃/0.1%
8	N	-200 ~ 1300℃	50℃	0.5℃/0.1%

Example: when the input is with K-couple, temperature range is 0~1200℃, 2 outputs are 4~20mA, power supply 20~35VDC, then the model should be PHD-12HT-111 (0~1200℃). The measuring range can be set to the specified 0~1200℃ range by computer.

TC input/4~20mA output (configurable) 1 input 2 outputs

Specifications

Supply voltage	20~35VDC, power consumption<1.8W (when power supply 24VDC, output 20mA)
Input signal	K, S, E, J, B, T, R, N, TC Signals
Output signal	4~20mA
Signal and measurement range	Signal range: corresponding to the measuring range of TC -10~100mV 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
Allowable output load capacity	0~500Ω (customizable)
Alarm indication	L1 light is on at low-measurement range alarm; L2 light is on at high-measurement range alarm
Channel number of input and output	1 input 2 outputs
Applicable field devices	K, S, E, J, B, T, R, N TC sensors
Output accuracy	0.1%F.S (Typical value: 0.05%F.S)
Cold junction compensation	±1℃ (Compensation range -20℃-+60℃)
Temperature drift	0.005%F.S/℃
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Insulation strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥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]IIIC
Functional safety certification	SIL2 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 3-1)	Um=250V Uo=8.4V Io=31mA Po=65.1mW Co=4.8μF Lo=20mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHD-22HT-*1*1

Overview

Isolated safety barrier at detection side: PHD-22HT-*1*1, thermocouple signal input, dual input and dual output.The safety barrier can realize the conversion of thermocouple signal input in dangerous area into 4~20mA signal output and transmit it to safe area. The circuit has two thermocouple inputs and two DC signal 4~20mA outputs.
The output 4~20mA signal can be intelligently configured, and the actual measuring range can be set by computer.
PHD-22HT-*1*1, "*" indicates the input type of thermocouple, please use code to indicate it.
This product needs independent power supply.

Input signal types and measurement range

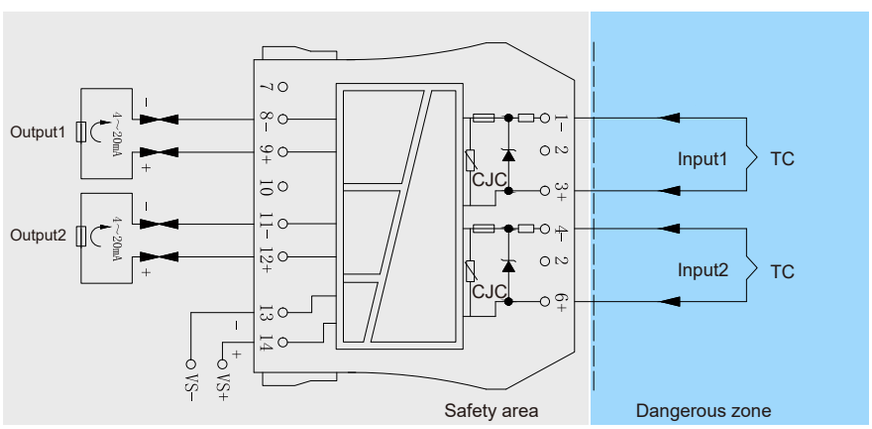
Code	RTD model	Measurement range	Minimum range	Conversion accuracy
1	K	-200 ~ 1370℃	50℃	0.5℃/0.1%
2	S	-50 ~ 1760℃	500℃	1.5℃/0.1%
3	E	-140 ~ 1000℃	50℃	0.5℃/0.1%
4	J	-160 ~ 1200℃	50℃	0.5℃/0.1%
5	B	250 ~ 1800℃	500℃	1.5℃/0.1%
6	T	-200 ~ 400℃	50℃	0.5℃/0.1%
7	R	-50 ~ 1760℃	500℃	1.5℃/0.1%
8	N	-200 ~ 1300℃	50℃	0.5℃/0.1%

Example: when the input are 2 inputs with K-couple, temperature range is 0~1200℃, 2 outputs are 4~20mA, power supply 20~35VDC, then the model should be PHD-22HT-1111 (0~1200℃).
The measuring range can be set to the specified 0~1200℃ range by computer.

TC input/4~20mA output (configurable) 2 inputs 2 outputs

Specifications

Supply voltage	20~35VDC, power consumption<2W (when power supply 24VDC, output 20mA)
Input signal	K, S, E, J, B, T, R, N, TC Signals
Output signal	4~20mA
Signal and measurement range	Signal range: corresponding to the measuring range of TC -10~100mV 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
Allowable output load capacity	0~500Ω (customizable)
Alarm indication	L1 light is on at low-measurement range alarm; L2 light is on at high-measurement range alarm
Channel number of input and output	2 inputs 2 outputs
Applicable field devices	K, S, E, J, B, T, R, N TC sensors
Output accuracy	0.1%F.S (Typical value: 0.05%F.S)
Cold junction compensation	±1℃ (Compensation range -20℃-+60℃)
Temperature drift	0.005%F.S/℃
Temperature parameters	Working temperature: -20℃~+60℃, storage temperature: -40℃~+80℃
Relative humidity	10%~95% RH no condensation
Insulation strength	Between intrinsically safe side and non-intrinsically safe side (≥3000VAC/min); between power supply and non-intrinsically safe side (≥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]IIIC
Certification body	CQST (China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
Certified parameters(between terminals 3-1, 6-4)	Um=250V Uo=8.4V Io=31mA Po=65.1mW Co=4.8μF Lo=20mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	≤100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHC-11HD-11

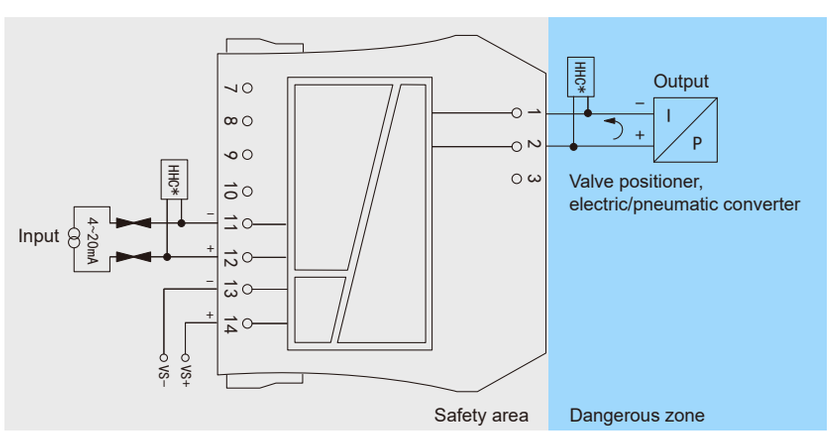
Overview

H serie backplane mounting isolated safety barriers at operating side: PHC-11HD-11, input and output with analog, single input and single output.
The safety barrier can transmit the 4~20mA signal from safe area to the dangerous area, to drive the valve positioner, electric/gas converters and other actuators to work.
This product needs independent power supply.
Terminal isolation between power supply, input and output.

4~20mA input/4~20mA output **1 input 1 output**

Specifications

Supply voltage	20~35VDC, power consumption about 1.2W (when 24 VDC, output 20mA)
Input signal	4~20mA (HART)
Output signal	4~20mA (HART)
Allowable output load capacity	0~800 Ω
Output accuracy	0.1%F.S (Typical value: 0.05%F.S)
Temperature drift	0.005%F.S/℃
Number of input and output	1 input 1 output
Applicable field equipments	Valve positioner, electric/pneumatic converter
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]IIIC
Functional safety certification	SIL2 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 2-1)	Um=250V Uo=28V Io=93mA Po=0.65W Co=0.083μF Lo=4.2mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	About 100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHC-22HD-1111

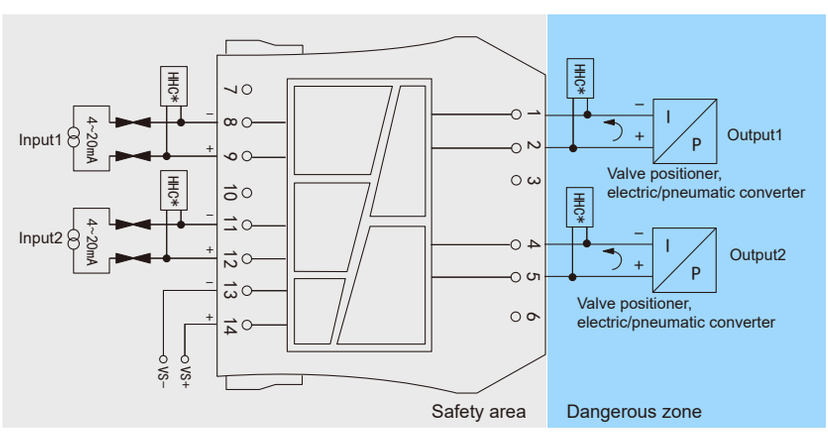
Overview

H serie backplane mounting isolated safety barriers at operating side: PHC-22HD-1111, dual input and dual output with analog signal.
The safety barrier can transmit the 4~20mA signal from safe area to the dangerous area, to drive the valve positioner, electric/gas converters and other actuators to work.
This product needs independent power supply.
Terminal isolation between power supply, input and output.

4~20mA input/4~20mA output **2 inputs 2 outputs**

Specifications

Supply voltage	20~35VDC, power consumption about 2W (when 24 VDC, output 20mA)
Input signal	4~20mA (HART)
Output signal	4~20mA (HART)
Allowable output load capacity	0~800 Ω
Output accuracy	0.1%F.S (Typical value: 0.05%F.S)
Temperature drift	0.005%F.S/℃
Number of input and output	2 inputs 2 outputs
Applicable field equipments	Valve positioner, electric/pneumatic converter
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]IIIC
Certification body	CQST(China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
Certified parameters (between terminals 2-1,5-4)	Um=250V Uo=28V Io=93mA Po=0.65W Co=0.083μF Lo=4.2mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	About 100000h



H Serie Backplane Mounting Isolated Safety Barriers

PHC-11HF-14

Overview

H serie backplane mounting isolated safety barriers at operating side: PHC-11HF-14, digital input and output, single input and single output.

Safety barrier can convert the input quantity of contact switch and logic level in safety area into the driving quantity of intrinsically safe equipments, and output it to the field of dangerous area, so as to control solenoid valve, audible and visual alarm, etc.

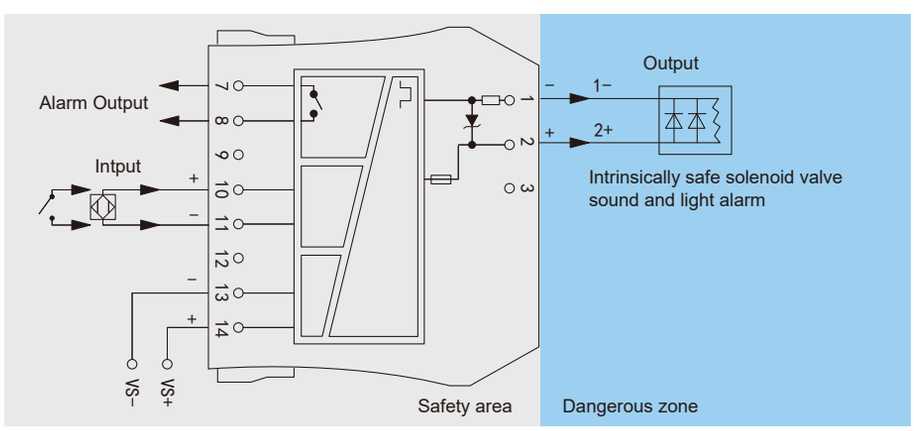
The status indicator has red and yellow light colors, when alarm then the light is red, when it is with the output solenoid valve, then the light is yellow.

This product needs independent power supply.

Contact and logic level input/switch driving output 1 input 1 output

Specifications

Supply voltage	20~35VDC, power consumption<2.2W
Input signal	Switch contact, logic level
Output signal	Open circuit voltage>24V, UE/IE=12.8V/45mA Inversion function: K1 is set to the "ON" side, the circuit output is inverted
Alarm relay function	The dial switch K2 is set to the "ON" side, the circuit adopts the alarm function Load Resistance<50Ω, short-circuit alarm (SC), load resistance>10KΩ, open circuit alarm (LB)
Alarm relay output characteristics	Response time: 20ms, driving capacity: 250VAC/2A, 30VDC/2A under resistive load
Number of input and output	1 input 1 output
Applicable field equipments	Safety solenoid valve, audible and visual alarm
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
Explosion-proof mark	[Exia Ga]IIC, [Exia Da]IIIC
Functional safety certification	SIL2 according to IEC 61508 EN 61511 standards
Electromagnetic compatibility	According to IEC 61326-1 (GB/T 18268), IEC 61326-3-1
Certification body	CQST (China National Quality Supervision and Test Centre for Explosion Protected Electrical Products)
Certified parameters (between terminals 1-2)	Um: 250VAC/DC Uo=25.2V Io=147mA Po=0.92W Co=0.107μF Lo=1.5mH
Installation site requirements	It can be connected with instruments in 0 zone with ⅡA, ⅡB, ⅡC dangerous gas
MTBF	About 100000h



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