

Frequency Isolated Safety Barrier

NPEXA-H61A1P1

Single input, double output

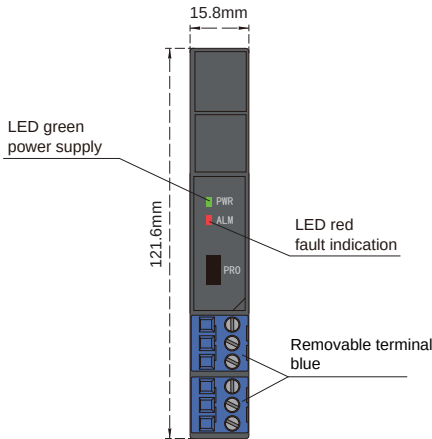
Input: Frequency

Output: 4 ~ 20 mA, relay

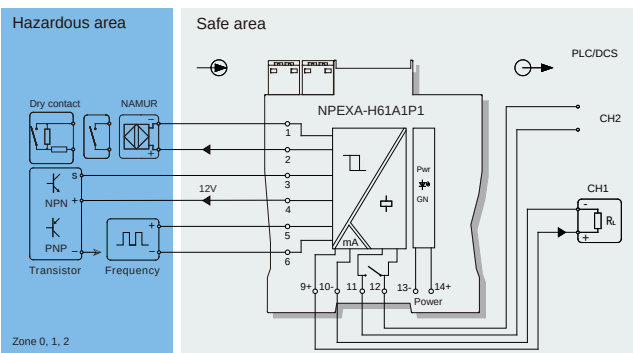
This isolated safety barrier converts the frequency signals from a hazardous area into current or voltage signals to a safe area by isolation, a relay alarm output. The input, output, and power supply are galvanically isolated from each other. A self-test feature is also available on this device. You can use PC or handheld programmer to modify parameters.

Technical data

Power supply:	18 V DC~32 V DC (Reverse power protection)
Power dissipation:	1.8 W (24V DC, double output)
Input signal:	Frequency Max. Input voltage: 30V Min. Input amplitude: 2V Frequency range: 0.1Hz~100kHz PNP/NPN Distribution voltage: 12V Current: ≤ 20mA Frequency range: 0.1Hz~10kHz NAMUR switch Distribution voltage: approx.8.2V Short-circuit current: approx.8mA Frequency range: 0.1Hz~10kHz
Output signal:	Output1: 4 ~ 20 mA Output2: relay contact
Load capacity:	Output1: $R_L \leq 500 \Omega$ Output2: 0.5A/35V DC
Accuracy:	± 0.1%F.S.
Temperature drift:	≤ 0.01%F.S./°C
Response time:	≤ 500ms
Electromagnetic compatibility:	IEC 61326-3-1
Dielectric strength:	≥ 2500 V AC (intrinsically safe side / non-intrinsically safe side) ≥ 500 V AC (Power supply side /non-intrinsically safe side)
Insulation resistance:	≥ 100 MΩ (Input /Output/Power supply)
Operation temperature:	-20°C ~ +60°C
Storage temperature:	-40°C ~ +80°C
Dimension:	15.8 mm (W) × 121.6 mm (H) × 104.8 mm (D)
Fault states:	Input signal state indicator (red), it is remain bright when input over-range. it is flicker when input breakage.



Wiring diagram



Explosive-proof parameters

National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI)
Explosive-proof grade: [Ex ia Ga] II C
Um: 250 V
Certified parameters (Terminals 1, 2):
Uo=10.5V, Io=13mA, Po=35mW, Co=1.68μF, Lo=100mH
Certified parameters (Terminals 5, 6):
Uo=10.5V, Io=6mA, Po=16mW, Co=1.68μF, Lo=700mH
Certified parameters (Terminals 3, 4, 6):
Uo=15.8V, Io=107mA, Po=423mW, Co=0.478μF, Lo=1.8mH

Model rules

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The output signal^[note 1]

note 1 : Output signal

Number	Output
1	4~20mA
2	1~5V
3	0~10mA
4	0~5V
5	0~10V
6	0~20mA