

## NPEXA-C61P1

Single input, single output

## NPEXA-C611P1

Single input, double outputs

Input: frequency

Output: 4 ~ 20 mA

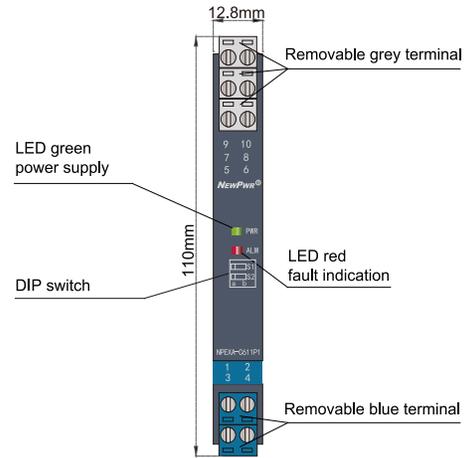
Frequency input isolated barrier, it converts the frequency signals from a hazardous area into 4~20mA signals to a safe area by isolation. The input, output, and power supply are galvanically isolated from each other. Calibrate the apparatus or modify parameters by using a handheld programmer.

### Parameters

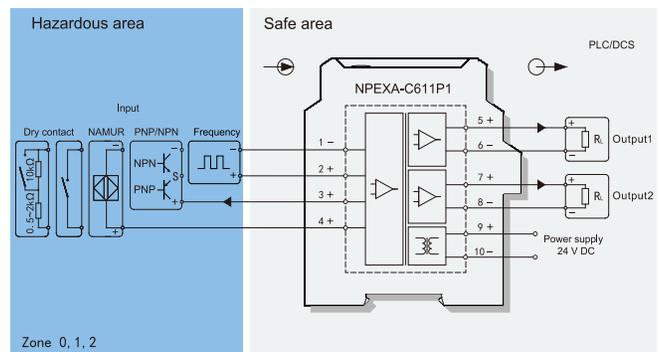
Power supply:	18V DC ~ 60V DC (Reverse power protection)																				
Power dissipation:	1.6W (single output) 2W (double outputs)																				
Input signal:	<table border="0"> <tr> <td>Frequency</td> <td>Min. Input amplitude: 1V<sub>p-p</sub></td> </tr> <tr> <td></td> <td>Max. Input voltage: 30V<sub>p-p</sub></td> </tr> <tr> <td></td> <td>Frequency range: 0Hz~100kHz</td> </tr> <tr> <td></td> <td>Pulse width: ≥ 5μs</td> </tr> <tr> <td>PNP/NPN</td> <td>Distribution voltage: 12V</td> </tr> <tr> <td></td> <td>Current: ≤ 20mA</td> </tr> <tr> <td></td> <td>Frequency range: 0Hz~100kHz</td> </tr> <tr> <td>NAMUR switch</td> <td>Distribution voltage: approx.8.2V</td> </tr> <tr> <td></td> <td>Short-circuit current: approx.8mA</td> </tr> <tr> <td></td> <td>Frequency range: 0Hz~10kHz</td> </tr> </table>	Frequency	Min. Input amplitude: 1V <sub>p-p</sub>		Max. Input voltage: 30V <sub>p-p</sub>		Frequency range: 0Hz~100kHz		Pulse width: ≥ 5μs	PNP/NPN	Distribution voltage: 12V		Current: ≤ 20mA		Frequency range: 0Hz~100kHz	NAMUR switch	Distribution voltage: approx.8.2V		Short-circuit current: approx.8mA		Frequency range: 0Hz~10kHz
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Resolution ratio:	<table border="0"> <tr> <td>Input frequency &lt; 1kHz:</td> <td>0.01Hz</td> </tr> <tr> <td>1kHz ≤ Input frequency &lt; 10kHz:</td> <td>0.1Hz</td> </tr> <tr> <td>Input frequency ≥ 10kHz:</td> <td>1Hz</td> </tr> </table>	Input frequency < 1kHz:	0.01Hz	1kHz ≤ Input frequency < 10kHz:	0.1Hz	Input frequency ≥ 10kHz:	1Hz														
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Distribution voltage:	12V DC, ≥ 9V at 20mA																				
Output signal:	4 ~ 20mA																				
Load resistance:	R <sub>L</sub> ≤ 550Ω																				
Accuracy:	0.1%F.S.																				
Temperature drift:	30ppm/°C																				
Response time:	≤ 500ms																				
Electromagnetic compatibility:	IEC 61326-3-1																				
Dielectric strength:	≥ 3000V AC (intrinsically safe side / non-intrinsically safe side) ≥ 1500V AC (Power supply/non-intrinsically safe side)																				
Insulation resistance:	≥ 100MΩ (Input /Output/Power supply)																				
Operation temperature:	-20°C ~ +60°C																				
Storage temperature:	-40°C ~ +80°C																				
Dimension:	12.8mm (W) × 110mm (H) × 117mm (D)																				
Fault states:	Input signal state indicator (red), it is remain bright when input over-range. it is flicker when input breakage.																				

### DIP switch settings

DIP switch S1	DIP switch S2	Input signal
a	a	Frequency
a	b	NPN
b	a	PNP
b	b	NAMUR switch



### Wiring diagram



### Explosive-proof parameters

National Supervision and Inspection Center for Explosion Protection and Safety of Instrumentation (NEPSI)

Ex marking: [Ex ia Ga] IIC  
[Ex ia Da] IIIC

Um: 250V

Certified parameters (Terminals 1, 2/4):

U<sub>o</sub>=10.5V, I<sub>o</sub>=11.4mA, P<sub>o</sub>=30mW

IIC: Co=2.3μF, Lo=100mH

IIIC(IIB): Co=16.6μF, Lo=999mH

Certified parameters (Terminals 1, 3):

U<sub>o</sub>=15.8V, I<sub>o</sub>=107mA, P<sub>o</sub>=423mW

IIC: Co=0.478μF, Lo=1.8mH

IIIC(IIB): Co=2.88μF, Lo=5.4mH

### Model rules

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- PB: BUS powered
- Default: Terminals powered
- The second output signal<sup>[note1]</sup>
- Default: null
- The first output signal<sup>[note1]</sup>

note1: output signal

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