

# Frequency Transmitter

## NPFC-C1D

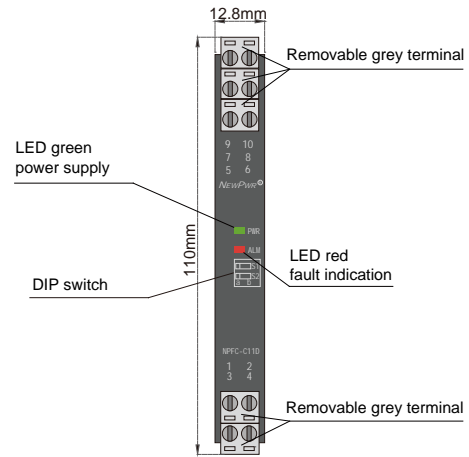
Single input, single output

## NPFC-C11D

Single input, dual output

Input: Frequency  
Output: 4 ~ 20 mA

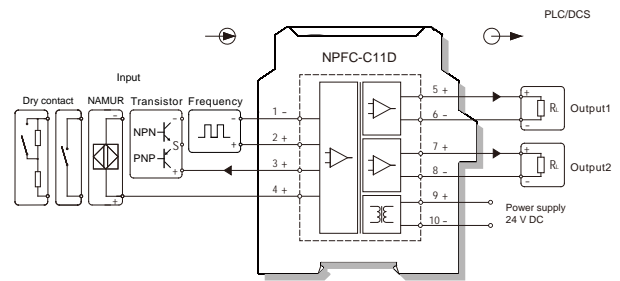
This frequency transmitter converts the frequency signals to current signals. It needs an independent power supply. The input, output, and power supply are galvanically isolated from each other. Modify parameters by using PC or a handheld programmer.



## Parameters

Power supply:	18 V DC ~ 60 V DC (Reverse power protection)						
Power dissipation:	1.6 W (single output) 2 W (double output)						
Input signal:	<table border="0"> <tr> <td>Frequency</td> <td>                     Min. Input amplitude: 1V<sub>p-p</sub>                      Max. Input voltage: 30V<sub>p-p</sub>                      Frequency range: 0Hz~100kHz                      Pulse width: ≥ 5μs                 </td> </tr> <tr> <td>PNP/NPN</td> <td>                     Distribution voltage: 12V or 24V                      Current: ≤ 20mA                      Frequency range: 0Hz~100kHz                 </td> </tr> <tr> <td>NAMUR switch</td> <td>                     Distribution voltage: approx.8.2V                      Short-circuit current: approx.8mA                      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 or 24V Current: ≤ 20mA Frequency range: 0Hz~100kHz	NAMUR switch	Distribution voltage: approx.8.2V Short-circuit current: approx.8mA Frequency range: 0Hz~10kHz
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 or 24V Current: ≤ 20mA Frequency range: 0Hz~100kHz						
NAMUR switch	Distribution voltage: approx.8.2V Short-circuit current: approx.8mA Frequency range: 0Hz~10kHz						
Resolution ratio:	Input frequency < 1kHz: 0.01Hz 1kHz ≤ Input frequency < 10kHz: 0.1Hz Input frequency ≥ 10kHz: 1Hz						
Distribution voltage:	12 V DC, ≥ 11 V at 20 mA 24 V DC, ≥ 22 V at 20 mA						
Output signal:	4 ~ 20 mA						
Load resistance:	R <sub>L</sub> ≤ 550 Ω						
Accuracy:	0.1%F.S.						
Temperature drift:	30 ppm/°C						
Response time:	≤ 500 ms						
Electromagnetic compatibility:	IEC 61326-3-1						
Dielectric strength:	≥ 1500 V AC (Input/Output/Power supply)						
Insulation resistance:	≥ 100 MΩ (Input/Output/Power supply)						
Operation temperature:	-20 °C ~ +60 °C						
Storage temperature:	-40 °C ~ +80 °C						
Dimension:	12.8 mm (W) × 110 mm (H) × 117 mm (D)						
Fault states:	Input signal state indicator (red), it is flicker when input line breakage, rapid flicker when input NAMUR breakage. It is remain bright when input over-range,						

## Wiring diagram



## Model rules

NPFC-C    D

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

## DIP switch settings

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