

AO Isolated Barrier

NPEXB-KM31

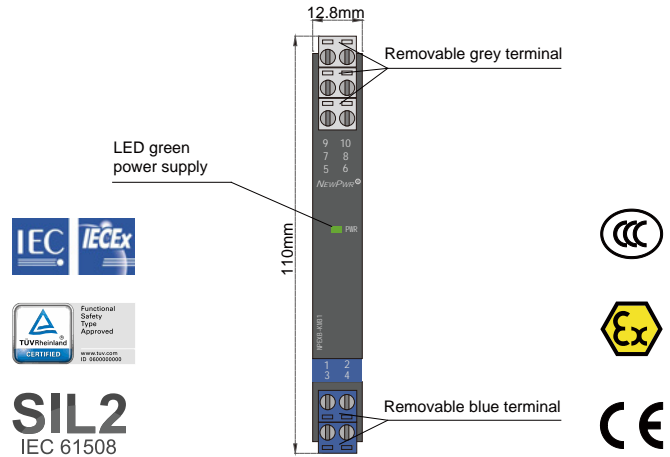
Single input, single output

Input: 4 ~ 20 mA
Output: 4 ~ 20 mA

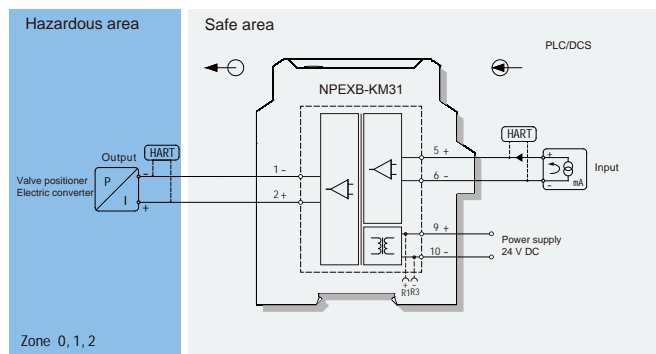
Analog output isolated barrier, it transfers 4~20mA signals from a safe area to a hazardous area. It allows transmission of HART communication signals. The input, output, and power supply are galvanically isolated from each other. Besides, the LFD (line fault detection of field connections) function of output circuit is available.

Parameters

Power supply:	20V DC ~ 30V DC (Reverse power protection)
Power dissipation:	1.0W
Input signal:	4 ~ 20mA, HART
Output signal:	4 ~ 20mA, HART
Load resistance:	80 ~ 800 Ω
Input voltage drop:	≤ 1.2V
Line Failure state:	When the output load resistance was detected less than 30Ω, the output is in the fault of short circuit. When the output load resistance was detected more than 8000Ω, the output is in the fault of line breakage. If the output is in the fault, the input current value is limited to within 1mA and the output current value is limited to 3mA.
Accuracy:	0.1%F.S.
Temperature drift:	30ppm/°C
Response time:	≤ 2ms
Electromagnetic compatibility:	IEC 61326-3-1
Dielectric strength:	non-intrinsically safe side) ≥ 1500V AC (Power supply/non-intrinsically safe side)
Insulation resistance:	≥ 100MΩ (Input /Output/Power supply)
Operation temperature:	-40°C ~ +70°C
Storage temperature:	-40°C ~ +80°C
Dimension:	12.8mm (W) × 110mm (H) × 117mm (D)
Safe state:	The output signal is less than 3.6mA or greater than 21.5mA



Wiring diagram



Explosive-proof parameters

Germany TÜV (TÜV Rheinland)
Safety Integrity Level (SIL): SIL2, SC3 according to IEC 61508
Ex marking: EU: Ex I (M1) [Ex ia Ma] I
 II (1)G [Ex ia Ga] IIC
 II (1)D [Ex ia Da] IIIC
 II 3(1)G Ex ec [ia Ga] IIC T4 Gc
 IECEx: [Ex ia Ma] I
 [Ex ia Ga] IIC
 [Ex ia Da] IIIC
 Ex ec [ia Ga] IIC T4 Gc

Um: 250V

Certified parameters (Terminals 1, 2):

Uo=25.2V, Io=93mA, Po=586mW
 IIC: Co=0.107μF, Lo=4.2mH
 IIIC(II B): Co=0.82μF, Lo=16.4mH
 IIA: Co=2.9μF, Lo=32.9mH
 I: Co=4.8μF, Lo=53.9mH