

# DO (loop powered) Isolated Barrier

## NPEXB-K512L

Single input, single output

Input: wet contact  
Output: 45mA

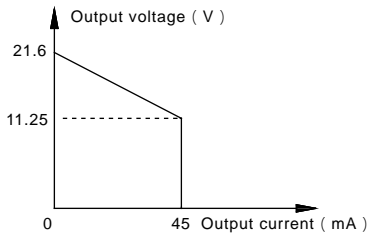
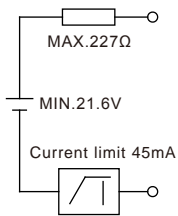
Digital output isolated barrier. By switch signal controlling, transfers the wet contact signals from a safe area into current signals to a hazardous area, and drives field device like intrinsically safe valves, audible alarms, etc. It has loop powered. The input and output is galvanically isolated from each other.

### Parameters

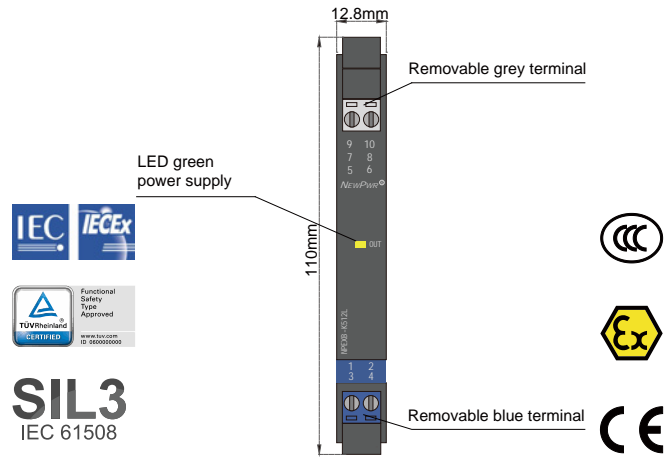
Loop Powered: 20V DC ~ 30V DC (Reverse power protection)  
Power dissipation: 1.4W  
Input signal: wet contact  
Output voltage: > 11.25V DC  
Open-circuit voltage: 21.6V DC  
Output current: ≤ 45mA

Output equivalent circuit

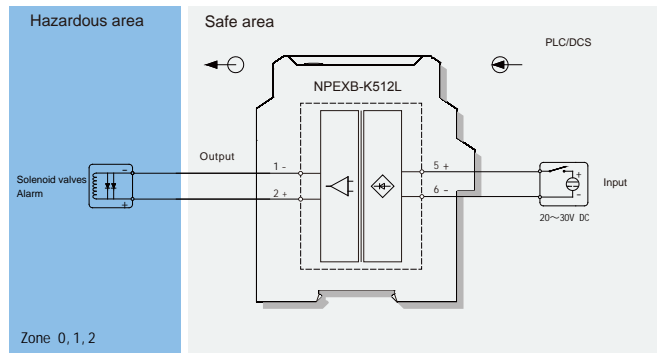
Output characteristics diagram



Response time: < 20ms  
Electromagnetic compatibility: IEC 61326-3-1  
Dielectric strength: ≥ 3000V AC (intrinsically safe side / non-intrinsically safe side)  
Insulation resistance: ≥ 100MΩ (Input /Output)  
Operation temperature: -40°C ~ +70°C  
Storage temperature: -40°C ~ +80°C  
Dimension: 12.8mm (W) × 110mm (H) × 117mm (D)  
Safe state: de-energized



### Wiring diagram



### Explosive-proof parameters

Germany TÜV (TÜV Rheinland)  
Safety Integrity Level (SIL): SIL3, SC3 according to IEC 61508  
Ex marking: EU:  $\text{Ex}$  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=116mA, Po=731mW  
IIC: Co=0.107μF, Lo=2.6mH  
IIIC(II B): Co=0.82μF, Lo=10.5mH  
IIA: Co=2.9μF, Lo=21.1mH  
I: Co=4.8μF, Lo=34.6mH