

DI Isolated Safety Barrier

NPEXA-C5D111

double input, double output

Input: dry contact or proximity switch

Output: relay

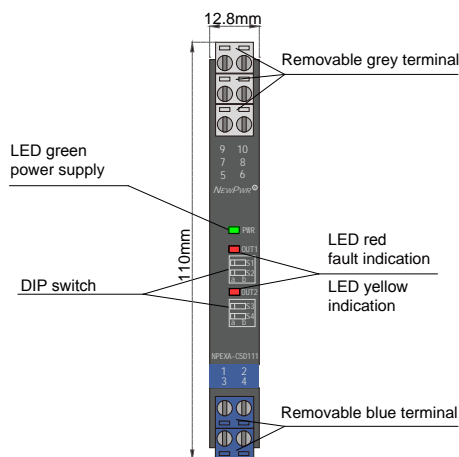
This type of isolated safety barrier transmits digital signals (dry contact or proximity switch) from hazardous area to safe area. The normal output state and line fault detection function can be set with the DIP switch on the front side. The input, output, and power supply are galvanically isolated from each other.

Parameters

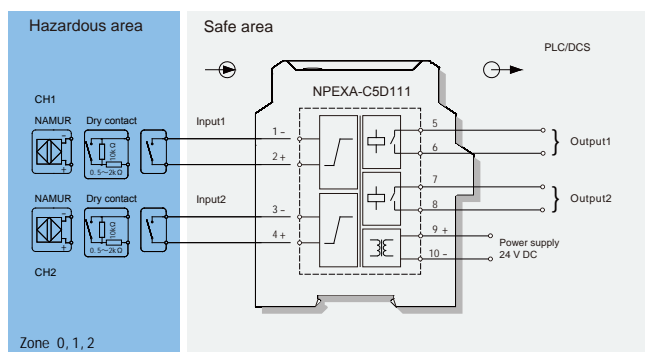
Power supply:	18V DC ~ 60V DC (Reverse power protection)
Power dissipation:	1W
Input signal:	Dry contact or NAMUR
Switching trigger point:	Input signal > 2.1mA, signal "1", the yellow LED is always bright Input signal < 1.2mA, signal "0", the yellow LED goes out
Open-circuit voltage:	Approx. 8.5V
Short-circuit current:	Approx. 8.5mA
Output signal:	Relay contact
Load capacity:	250VAC/2A, 30VDC/2A
LFD function:	When input current $\leq 80\mu A$, considers the input line breakdown, the output relay de-energized. If input current $\geq 6mA$, considers the input circuit short-circuit, the output relay de-energized, the indicator red flashing
Relay mechanical life:	> 100000 switching cycles
Switch frequency:	< 10Hz
Energized/De-energized delay:	< 20ms
Electromagnetic compatibility:	IEC 61326-3-1
Dielectric strength:	$\geq 3000V$ AC (intrinsically safe side / non-intrinsically safe side) $\geq 1500V$ AC (Power supply/non-intrinsically safe side)
Insulation resistance:	$\geq 100M\Omega$ (Input /Output/Power supply)
Operation temperature:	-20°C ~ +60°C
Storage temperature:	-40°C ~ +80°C
Dimension:	12.8mm (W) × 110mm (H) × 117mm (D)

DIP switch settings

Switch	State	a	b
S1		output1 normal mode	output1 inverted mode
S2		output1 LFD on	output1 LFD off
S3		output2 normal mode	output2 inverted mode
S4		output2 LFD on	output2 LFD off



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: 250V

Certified parameters (Terminals 1, 2; 3, 4):

Uo=10.5V, Io=11.3mA, Po=29.7mW

II C: Co=0.97μF, Lo=100mH

II B: Co=11μF, Lo=300mH

II A: Co=52μF, Lo=700mH