

DI Isolated Safety Barrier

NPEXA-C512

Single input, single output

NPEXA-C5122

Single input, double output

Input: dry contact or proximity switch

Output: transistor

This isolated safety barrier converts switch or proximity detector signals (dry contact or NAMUR) from a hazardous area into transistor signals to a safe area by isolation. Operation mode, the second output function (as a transistor output or a fault output) and the input circuit 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.

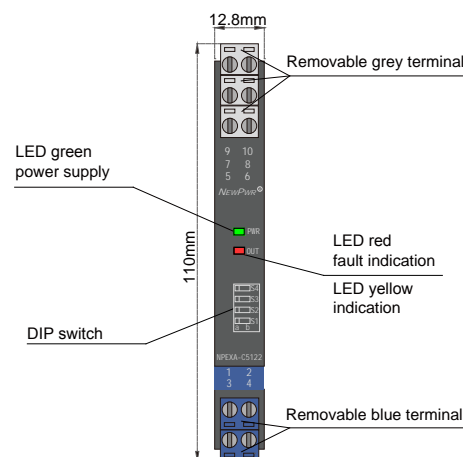
Parameters

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:	Output signal Transistor
Sink current:	≤ 40mA
External voltage:	< 40V DC
LFD function:	When input current ≤ 80μA, considers the input line breakdown, the output transistor de-energized. If input current ≥ 6mA, considers the input circuit short-circuit, the output transistor de-energized, the indicator red flashing
Switching frequency:	< 5kHz
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)

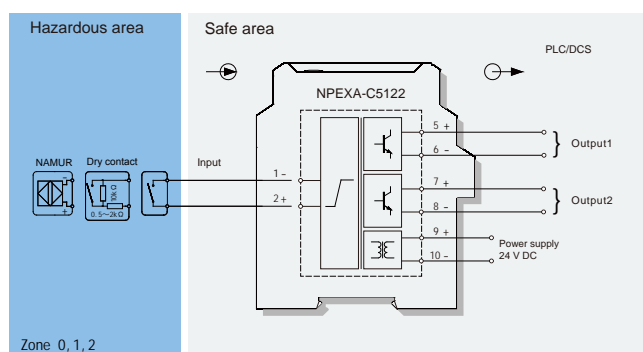
DIP switch settings

NPEXA-C512/NPEXA-C5122(NPEXA-C512 can set S1、S2)

Switch	State	a	b
S1		output1 normal mode	inverted mode
S2		LFD on	LFD off
S3		output2 normal mode	fault signal output



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):

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