

Digital Input

1/1: GS8512-EX.11
 1/2: GS8512-EX.12
 2/2: GS8512-EX.22

Digital input, relay output isolated barrier, transfers digital signals(dry contact or NAMUR proximity switch) from hazardous area to safe area. Each channel can be provided to select phase reversal and to enable the line fault detection. The product needs an independent power supply and galvanic isolation among power supply, input and output.

Specification

Supply Voltage: 20~35V DC

Current Consumption: (Supply voltage: 24V; Output energized)
 $\leq 30\text{mA}$ (GS8512-EX.11)
 $\leq 40\text{mA}$ (GS8512-EX.12 / GS8512-EX.22)

Safe-area Relay Output:

Response Time: $\leq 10\text{ms}$
 Contact loading: 250V AC, 2A or 30V DC, 2A
 Load Type: resistive load

Hazardous-area Input:

Signal: Dry contact or NAMUR proximity switch
 Open-circuit Voltage: $\approx 8\text{V}$
 Short-circuit Current: $\approx 8\text{mA}$

Input and Output Characteristics(Normal phase)

If field switch closes or input loop current $> 2.1\text{mA}$, output relay will be energized, with yellow LED ON.

If field switch closes or input loop current $< 1.2\text{mA}$, output relay will be de-energized, with yellow LED OFF.

Function of the DIP Switch:

| Sta. | K1(OUT1), K3(OUT2) | K2(OUT1), K4(OUT2) |
|------|--------------------|--------------------|
| ON | Inverted phase | LFD enabled |
| OFF | Normal phase | LFD disenabled |

Note: Switch input (I) needs the K2 and K4 to be set to OFF state, without line fault (breakage, short-circuit) detection. When using line fault (breakage, short-circuit) detection function, resistances must be fitted: $22\text{k}\Omega$ in parallel with switch, 680Ω in series with switch. See Switch (II), K2 and K4 are set to ON state.

Power Supply Protection: Power supply reverse protection

EMC: According to IEC 61326-1(GB/T 18268), IEC 61326-3-1

Ambient Temperature: $-20^{\circ}\text{C} \sim +60^{\circ}\text{C}$

Dielectric Strength:

Between non-intrinsically safe part and intrinsically safe part $\geq 2500\text{V AC}$

Between power supply part and output part $\geq 500\text{V AC}$

Insulation Resistance:

Between non-intrinsically safe part and intrinsically safe part $\geq 100\text{M}\Omega$

Between power supply part and output part $\geq 100\text{M}\Omega$

Structure: GS8500 range structure customized by Phoenix Contact.

Weight: Approx. 100g

Suitable Location: Mounting in safe area or zone2(for ec protection), and connected to the IS apparatus in hazardous area up to zone 0 IIC and zone 20 IIIC.

Suitable Field Apparatus: Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch, temperature switches, liquid level switches, etc.)

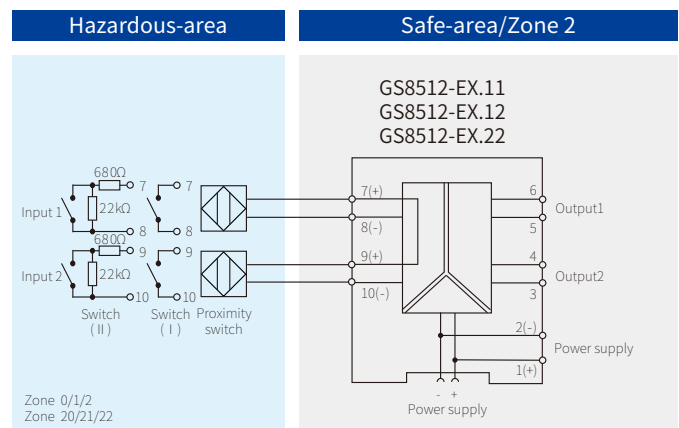
SIL3
IEC61508



Dimensions: 118.9mm × 106.0mm × 12.5mm



Connection



Note: a) GS8512-EX.11 only contains input1、output1;
 b) GS8512-EX.12 only contains input1、output1、output2;
 c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Explosion-proof Certificate

Certifying Authority: NEPSI(China)

Ex Marking: [Ex ia Ga] II C

[Ex iaD]

Ex nA nC IIC T4 Gc

Maximum Voltage: $U_m=250\text{V}$

Intrinsic Safety Parameters(7、 8; 9、 10 terminals):

$U_o=10.5\text{V}$, $I_o=14\text{mA}$, $P_o=37\text{mW}$

II C: $C_o=2.4\mu\text{F}$, $L_o=165\text{mH}$

*II B: $C_o=16.8\mu\text{F}$, $L_o=495\text{mH}$

II A: $C_o=75.0\mu\text{F}$, $L_o=1000\text{mH}$

I: $C_o=95.0\mu\text{F}$, $L_o=2380\text{mH}$

*II B Intrinsic Safety Parameters are also suitable for dust explosion protection[Ex iaD]