

1/1: GS8519-EX.11
 1/2: GS8519-EX.12
 2/2: GS8519-EX.22

Digital input, transistor output isolated barriers, transfer 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, transistor energized)
 $\leq 40\text{mA}$ (GS8519-EX.11)
 $\leq 60\text{mA}$ (GS8519-EX.12 / GS8519-EX.22)

Safe-area Output:

Digital Output: $4.5\text{V} \leq V_H \leq 12\text{V}$, $V_L \leq 0.5\text{V}$
 Drive current $\leq 10\text{mA}$, Load resistance $\geq 1\text{k}\Omega$

Transistor Collector Output:

$V_H = V_{CC}$; $V_L \leq 2.5\text{V}$ (On-state current=10mA, $V_{CC}=24\text{V}$)
 Max.Rated Current $\leq 40\text{mA}$, Load resistance: $2\text{k}\Omega \leq R_L \leq 20\text{k}\Omega$

Transistor Emitter Output:

$V_H \geq V_{CC}-2.5\text{V}$; $V_L \leq 0.5\text{V}$ (On-state current=10mA, $V_{CC}=24\text{V}$)
 Max.Rated Current $\leq 40\text{mA}$, Load resistance: $2\text{k}\Omega \leq R_L \leq 10\text{k}\Omega$

Note: "Vcc" refers to the supply voltage at the output, $V_{CC} \leq 40\text{V}$

Hazardous-area Input:

Signal: Dry contact or NAMUR proximity switch input, frequency $\leq 5\text{kHz}$
 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 transistor will be energized, with yellow LED ON.

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

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

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)

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. 150g

Suitable Location: Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.

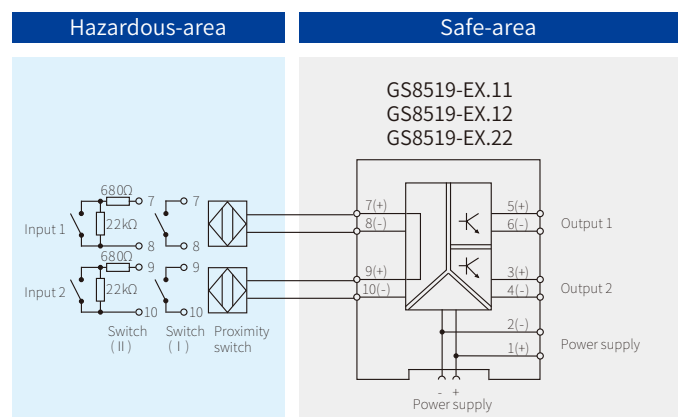
Suitable Field Apparatus: Dry contact or DIN19234 standard NAMUR proximity switch input field devices (including the intrinsically safe type pressure switch、temperature switches、liquid level switches, etc.)



Dimensions: 118.9mm × 106.0mm × 12.5mm

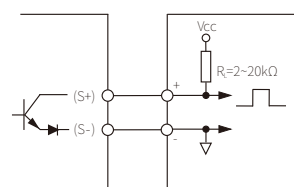


Connection

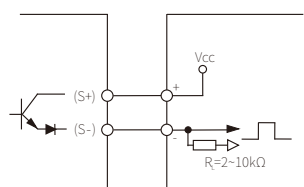


Note: a) GS8519-EX.11 only contains input2 and output2;
 b) GS8519-EX.12 only contains input1、output1、output2;
 c) Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power supply accessories in additional.

Application 1: Transistor Collector Output



Application 2: Transistor Emitter Output



Explosion-proof Certificate

Certifying Authority: NEPSI(China)

Ex Marking: [Ex ia Ga] II C
 [Ex iaD]

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

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