

## 1/1: GS8591-EX.3

Communication signals input isolated barriers, realize the bi-direction communication between the RS-485(half duplex) digital signals generated by the field instrument and the RS-485(half duplex) /RS-422 digital signals in the safe area. It also provides isolated power supply for field instruments. The product needs an independent power supply and galvanic isolation among power supply, input and output.

### Specification

**Supply Voltage:** 20~35V DC

**Current Consumption:**

≤175mA(Supply voltage: 24V, Distribution current: 100mA)

≤120mA(Supply voltage: 24V, distribution current: 50mA)

**Safe-area:**

Signal: RS-485(full duplex) /RS-422 digital signals

Transmission delay: ≤10μs

Signal transmission rate: ≤56kbps

Drive Ability: up to 32 transceivers

**Hazardous-area:**

Signal: RS-485(half duplex)

Distribution Power: 5V/100mA、6V/100mA、8V/50mA、9V/50mA、  
12V/50mA

Distribution Voltage Deviation: ±10%

Function of the DIP Switches:

Distribution voltage	K1	K2	K3	K4
12V/50mA	OFF	OFF	OFF	OFF
9V/50mA	ON	OFF	OFF	OFF
8V/50mA	ON	ON	OFF	OFF
6V/100mA	ON	ON	ON	OFF
5V/100mA	ON	ON	ON	ON

**Power Supply Protection:** Power supply reverse protection

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

**Ambient Temperature:** -25°C~+60°C

**Dielectric Strength:**

Between non-intrinsically safe part and intrinsically safe part ≥2500V AC

Between power supply part and output part ≥500V AC

**Insulation Resistance:** Between non-intrinsically safe part and intrinsically safe part ≥100MΩ

Between power supply part and output part ≥100MΩ

Between power supply part and output part ≥100MΩ

**Structure:** GS8500 range structure customized by Phoenix Contact

**Weight:** Approx.150g

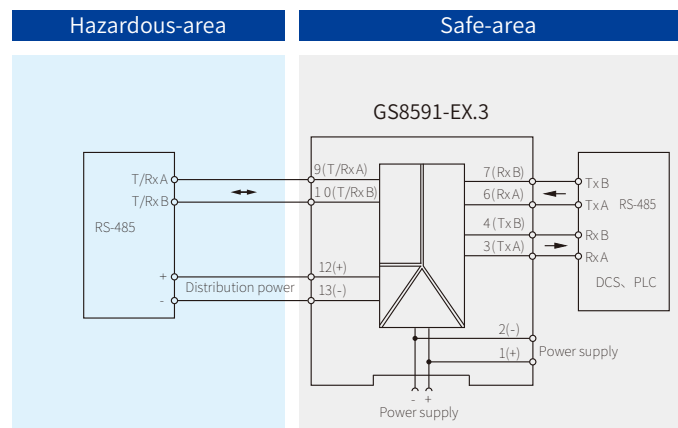
**Suitable Location:** Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone0 IIC and zone20 IIIC.

**Suitable Field Apparatus:** With RS-485 half duplex communication interface device



Dimensions: 118.9mm × 106.0mm × 17.5mm

### Connection



Note: Bus-powered function is optional, if necessary please specified when ordering, and purchase bus power accessories in additional.

### Explosion-proof Certificate

**Certifying Authority:** NEPSI(China)

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

[Ex iaD]

**Maximum Voltage:** Um=250V

**Intrinsic Safety Parameters(9、10 terminals):**

$U_o=6.6V, I_o=65mA, P_o=110mW$

II C:  $C_o=22\mu F, L_o=8mH$

\* II B:  $C_o=500\mu F, L_o=24mH$

II A:  $C_o=1000\mu F, L_o=64mH$

**(12、13 terminals):**

$U_o=23.1V, I_o=187mA, P_o=1.08W$

II C:  $C_o=0.1\mu F, L_o=0.8mH$

\* II B:  $C_o=1.0\mu F, L_o=2.4mH$

II A:  $C_o=3.6\mu F, L_o=6.4mH$

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