

## 1/2: GS8535-EX

2-wire (HART) transmitter, 3-wire transmitter, current source input isolated barrier, provide isolated power supplies for transmitters which located in hazardous area. Transfer 4~20mA signal from hazardous area to safe area. It also allows bi-directional transmission of HART communication signals. The product needs an independent power supply and galvanic isolation among power supply, input and output.

### Specification

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

**Current Consumption:**  $\leq 75\text{mA}$  (Supply voltage: 24V; output: 20mA)

#### Safe-area Output:

Current: 0/4~20mA, HART digital signal

Load Resistance:  $R_L \leq 300\Omega$

HART Communication Load Resistance:  $R_L \geq 250\Omega$

Voltage: 0/1~5V

Load Resistance:  $R_L \geq 330k\Omega$

Output loop powered voltage  $U_e$ : 12~30V DC

Note: Customers need specify current (active or passive) or voltage output when ordering.

#### Hazardous-area Input:

Current: 0/4~20mA, HART digital signal

Distribution:

Open-circuit Voltage:  $\leq 28\text{V}$

Voltage at 20mA:  $\geq 15.5\text{V}$

Normal working current:  $\leq 25\text{mA}$

**Output Accuracy:** 0.1%F.S. (Typical: 0.05%F.S.)

**Temperature Drift:** 0.005%F.S./ $^{\circ}\text{C}$

**Response Time(0~90%):**  $\leq 2\text{ms}$

**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. 110g

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

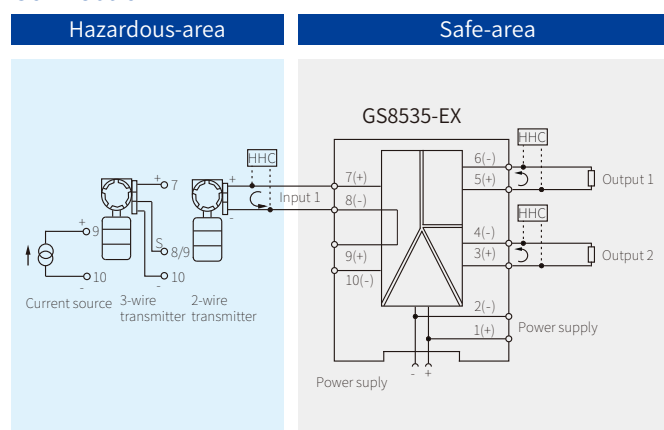
**Suitable Field Apparatus:** 2-wire (HART) transmitter, 3-wire transmitter, current source

**SIL2**  
IEC61508



Dimensions: 118.9mm × 106.0mm × 12.5mm

### Connection



Note: a) Can't use HHC (HART Hand Held Communicator) in hazardous area and safe area at the same time;

b) HHC (HART Hand Held Communicator) used in the hazardous area must get the explosion-proof certificate;

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]

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

**Intrinsic Safety Parameters (7, 8 / 9, 10 terminals):**

$U_0 = 28\text{V}$ ,  $I_0 = 93\text{mA}$ ,  $P_0 = 651\text{mW}$

II C:  $C_0 = 0.083\mu\text{F}$ ,  $L_0 = 4.2\text{mH}$

\* II B:  $C_0 = 0.65\mu\text{F}$ ,  $L_0 = 12.6\text{mH}$

II A:  $C_0 = 2.15\mu\text{F}$ ,  $L_0 = 33.6\text{mH}$

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

**(9, 10 terminals):**

$U_0 = 3.5\text{V}$ ,  $C_0 = 100\mu\text{F}$

$U_1 = 20\text{V}$ ,  $I_1 = 110\text{mA}$