

1/1:GS5031-EX
2/2:GS5032-EX

These products can work as AI isolated barriers to provide a separate power to the transmitter located in the hazardous area and transfer the current from hazardous area to safe area. They can also work as AO isolated barriers to transfer current signal from the safe area to the hazardous area and drive devices like actuator in field. It allows bi-directional transmission of HART communication signals. The input and output are each galvanically isolated, and these products are loop powered.



Dimensions:114.5mm×99mm×17.5mm

Specification

Loop Supply Voltage (U_e):20~30V DC

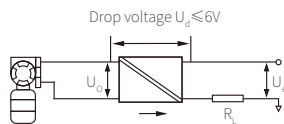
Application 1 (AI) :

Safe-area Output:

Current:4~20mA, HART digital signal
HART Communication Load Resistance $R_L \geq 250\Omega$

Hazardous-area Input:

Current:4~20mA, HART digital signal
Supply Voltage: $U_o \geq U_e - R_L \times 0.02 - 6$



Output Accuracy:0.4%F.S.

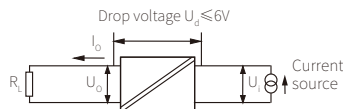
Application 2 (AO) :

Safe-area Input:

Current:4~20mA, HART digital signal

Hazardous-area Output:

Current:4~20mA, HART digital signal
Load Resistance: $R_L \leq (U_i - 6) / 0.02$
HART Communication Load Resistance $R_L \geq 250\Omega$



Output Accuracy:0.2%F.S.

Temperature Drift:0.01%F.S./°C

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

Ambient Temperature:-20°C~+60°C

Dielectric Strength:

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

Insulation Resistance:

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

Weight:Approx. 150g

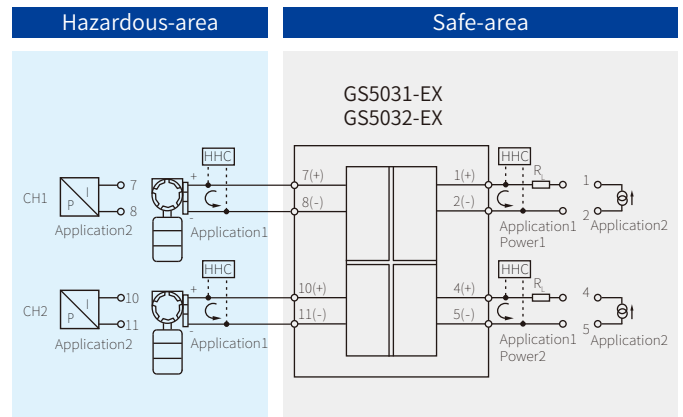
Suitable Location:Mounting in safe area, and connected to the IS apparatus in hazardous area up to zone1 IIC and zone21 IIIC.

Suitable Field Apparatus:

2-wire (HART) transmitter (Application 1)

2-wire valve positioner, electrical converter (Application 2)

Connection



Note: a) GS5031-EX only contains CH1;

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

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

Explosion-proof Certificate

Certificate Authority:NEPSI (China)

Ex Marking:[Ex ib Gb] II C
[Ex ibD]

Maximum Voltage: $U_m=250V$

Intrinsic Safety Parameters:

Terminals (7、8), (10、11)

$U_o=23.1V$, $I_o=29mA$, $P_o=670mW$

II C: $C_o=0.096\mu F$, $L_o=0.5mH$

*II B: $C_o=0.288\mu F$, $L_o=1.5mH$

II A: $C_o=0.528\mu F$, $L_o=4.0mH$

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