

Generic Installation Information

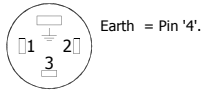
G SERIES SENSORS

INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR ATMOSPHERES

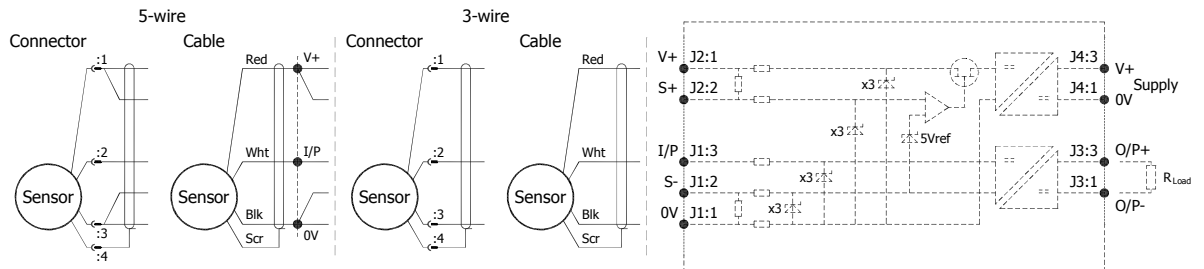
| CSA Qualified Intrinsically Safe Device Certificate number 13.2588225 | | Class I, Zone 0 Ex ia IIC T4 (Ta = -40°C to +80°C) AEx ia IIC T4 / Ex ia IIC T4(Ta = -40°C to +80°C) | |
|--|--------------------------------------|--|------------------|
| Electronics Option | Output Description: | Supply Voltage: V _s (tolerance) | Load resistance: |
| A | 0.5 - 4.5V (ratiometric with supply) | +5V (4.5 - 5.5V) | 5kΩ min |

Connector Pin Layout:

DIN 43650 C



IEC 60947-5-2



Putting Into Service:

The sensor must be used with a galvanic isolation barrier designed to supply the sensor with a nominal 5V and to transmit the sensor output to a safe area. The barrier parameters must not exceed:-

U_i = 11.4V **I_i = 0.20A** **P_i = 0.51W**
C_i = 1.36μF* **L_i = 710μH*** (with maximum length integral cable)
C_i = 1.16μF **L_i = 50μH** (without integral cable)

*Figures for 1km cable where: C_i = 200pF/m & L_i = 660nH/m

The sensor is certified to be used with up to **1000m** of cable, cable characteristics must not exceed:-

Capacitance: ≤ 200 pF/m for max. total of: 200 nF
 Inductance: ≤ 660 nH/m for max. total of: 660 μH

Use:

The sensor is designed to measure Linear or rotary displacement and provide an analogue output signal.

Assembly and Dismantling:

The unit is not to be serviced or dismantled and re-assembled by the user.

WARNING: Substitution of components may impair intrinsic safety

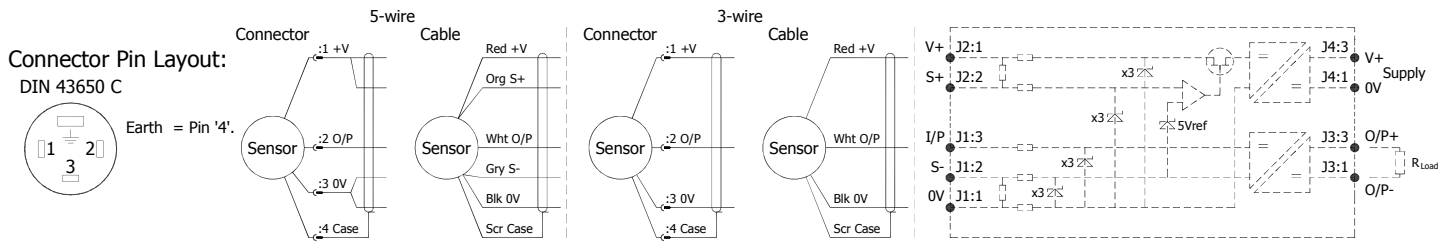
AVERTISSEMENT: La substitution de composants peut altérer la sécurité intrinsèque

Maintenance:

No maintenance is required.

Installation Information

LIPS[®] G103 SHORT STROKE LINEAR POSITION SENSOR INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR ATMOSPHERES



Approval only applies to specified ambient temperature range and atmospheric conditions in the range: 0.80 to 1.10 Bar, oxygen ≤ 21%.

The G103 is available with the following connections:-

| | | | |
|------|------------------------|-------|---------------------------------------|
| IP65 | DIN 43650 C Connector | Axial | Option 'J' |
| IP67 | Cable gland with cable | Axial | Options 'Lxx' 'LQxx', 'Mxx' or 'MQxx' |

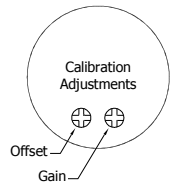
The performance of the sensor may be affected by voltage drops associated with long cable lengths; For cable lengths exceeding 10 metres a five wire connection is recommended to eliminate errors introduced by cable resistance and associated temperature coefficients.

Cable Up to 150m of 0.2 mm², screened, PUR jacket; 3 core cable 4 mm dia. black, 5 core cable 4.6 mm dia. Blue.

N.b. sensors supplied with cable, the free end must be appropriately terminated.

Gain and Offset Adjustment: (Where accessible - Typically ± 10% Min available)

To adjust the gain or offset use a small potentiometer adjuster or screwdriver 2mm across. Do not apply too much force on the potentiometers.



Mechanical Mounting: Flange mounted or by clamping the sensor body - body clamps are available, if not already ordered. The flange slots are 4.5 mm by 30 degrees wide on a 48 mm pitch.

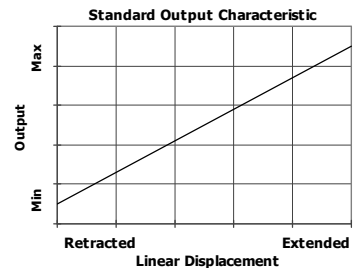
Output Characteristic: Plunger extended, at start of normal travel, from mounting face by:

Standard body : 24.5 mm*

Flanged body : 10 mm*

*Note: where ball end option is fitted add 5 mm.

The output increases as the plunger extends from the sensor body, the calibrated stroke is between 2 mm and 50 mm.



Incorrect Connection Protection levels: Not protected – the sensor is **not** protected against either reverse polarity or over-voltage. The risk of damage should be minimal where the supply current is limited to less than 50mA.