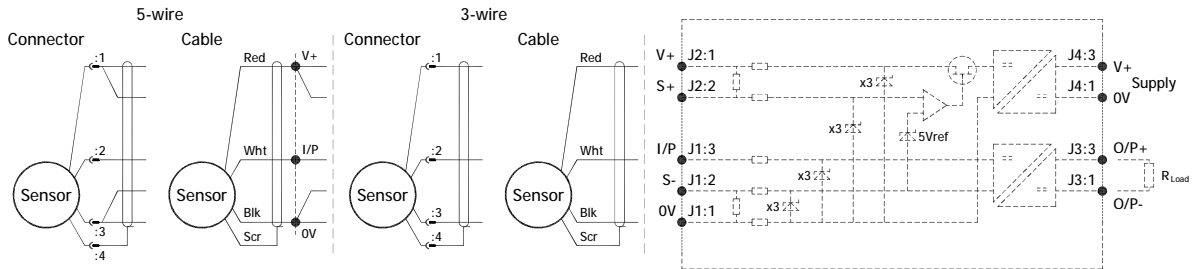
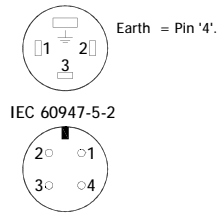


# Generic Installation Information G SERIES SENSORS

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 <sub>s</sub> (tolerance)	Load resistance:
A	0.5 - 4.5V (ratiometric with supply)	+5V (4.5 - 5.5V)	5kΩ min

**Connector Pin Layout:**



**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:-

$$\begin{array}{lll}
 U_i = 11.4V & I_i = 0.20A & P_i = 0.51W \\
 C_i = 1.36\mu F^* & L_i = 710\mu H^* & \text{(with maximum length integral cable)} \\
 C_i = 1.16\mu F & L_i = 50\mu H & \text{(without integral cable)}
 \end{array}$$

\*Figures for 1km cable where: C<sub>i</sub> = 200pF/m & L<sub>i</sub> = 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

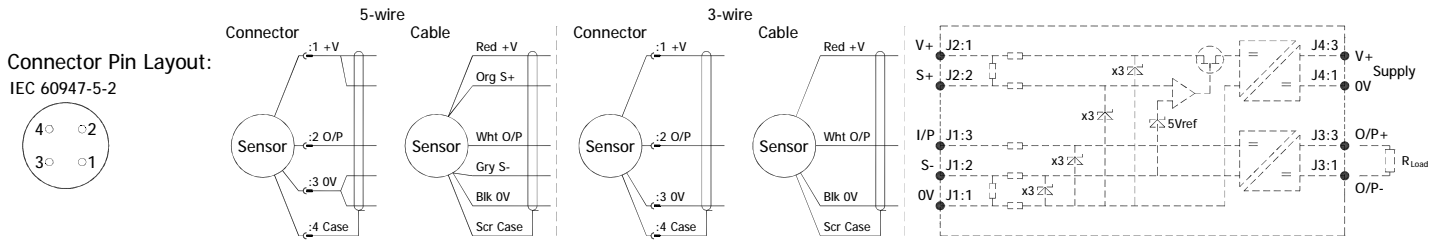
**Maintenance:**

No maintenance is required.

# Installation Information

## LIPS<sup>®</sup> G138 MID STROKE SLIM-LINE 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 G138 is available with the following connections:-**

- |      |                         |       |                         |
|------|-------------------------|-------|-------------------------|
| IP67 | IEC 60947-5-2 Connector | Axial | Option 'J'              |
| IP67 | Cable gland with cable  | Axial | Options 'Lxx' or 'LQxx' |

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 mm<sup>2</sup>, 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.

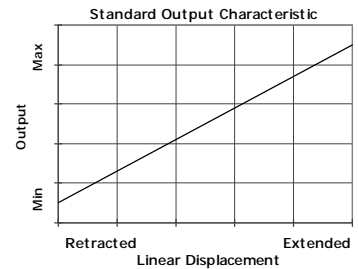
**Mechanical Mounting:** Flange mounted or by clamping the sensor body - body clamps are available, if not already ordered. The flange slots are 3.2 mm by 30 degrees wide on a 28 mm pitch.

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

- Standard body : 36.5 mm\*
- Flanged body : 34 mm\*

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

The output increases as the plunger extends from the sensor body, the calibrated stroke is between 51 mm and 100 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.