

# Generic Installation Information

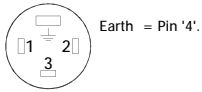
## G SERIES SENSORS

INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR ATMOSPHERES

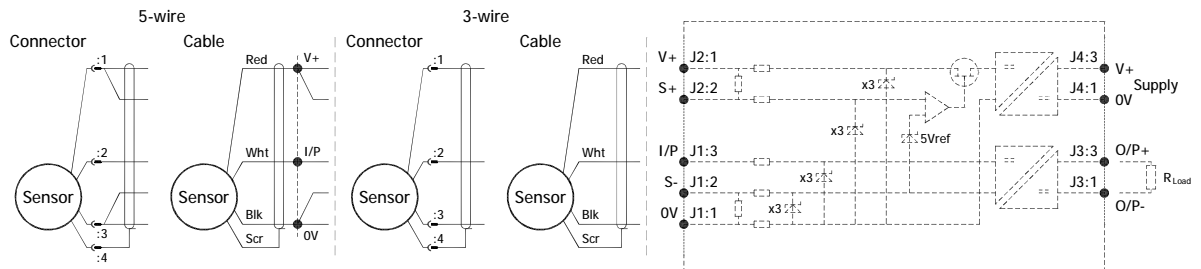
CSA Qualified Intrinsically Safe Device Certificate number 13.2588225		Class I, Zone 0 Ex ia IIC T4 (Ta = -40°C to +80°C) AEx ia IIC T4 / Ex ia IIC T4 (Ta = -40°C to +80°C)	
Electronics Option	Output Description:	Supply Voltage: V <sub>s</sub> (tolerance)	Load resistance:
A	0.5 - 4.5V (ratiometric with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

### Connector Pin Layout:

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:-

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

\*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:-

$$\begin{array}{l}
 \text{Capacitance: } \leq 200 \text{ pF/m for max. total of: } 200 \text{ nF} \\
 \text{Inductance: } \leq 660 \text{ nH/m for max. total of: } 660 \mu\text{H}
 \end{array}$$

### 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:

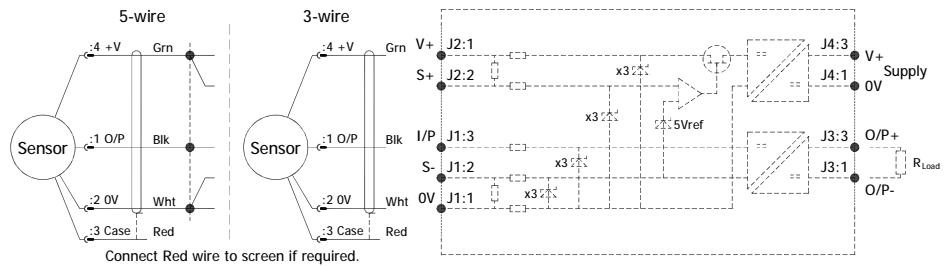
No maintenance is required.

# Installation Information

## LIPS<sup>®</sup> G125 350 BAR SUBMERSIBLE STAND-ALONE LINEAR POSITION SENSOR

### INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR ATMOSPHERES

Connector Pin Layout:  
 MC BH 4 M (face view)



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

**The G125 is supplied with a wet-mate MC BH-4-M connector.**

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.

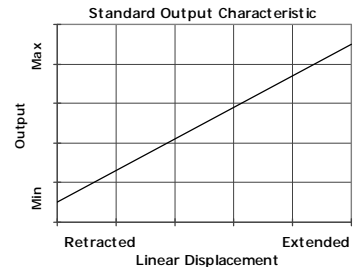
Cable; 50cm of 20AWG 4 core screened cable with moulded MC IL-4-F connector. N.b. Cable free end must be appropriately terminated, including preventing water ingress into the cable. See page 2 for connector handling instructions. The sensor is sealed to IP68 350 Bar.

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

**Maintenance:** No maintenance is required. Any cleaning must be done with a damp cloth.

**Mechanical Mounting:** Depending on options; Body can be mounted by M8 rod eye or by clamping the sensor body - body clamps are available, if not already ordered. Target by M8x1.25 male thread or M8 rod eye. It is assumed that the sensor and target mounting points share a common earth.

**Output Characteristic:** Target is extended 7 mm from end of body at start of normal travel. The output increases as the target extends from the sensor body, the calibrated stroke is between 5 mm and 800 mm.



**Incorrect Connection Protection levels:-** 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.

# Installation Information

## LIPS<sup>®</sup> G125 350 BAR SUBMERSIBLE STAND-ALONE LINEAR POSITION SENSOR

### INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR ATMOSPHERES

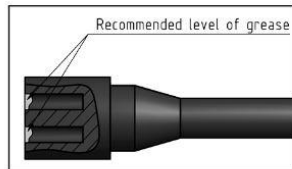
#### Handling

- Always apply grease before mating
- Disconnect by pulling straight, not at an angle
- Do not pull on the cable and avoid sharp bends at cable entry
- When using a bulkhead connector, ensure that there are no angular loads
- Do not over-tighten the bulkhead nuts
- SubConn<sup>®</sup> connectors should not be exposed to extended periods of heat or direct sunlight. If a connector becomes very dry, it should be soaked in fresh water before use

#### Cleaning

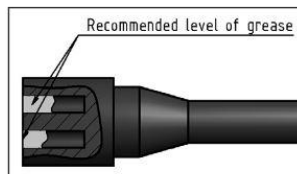
- General cleaning and removal of any accumulated sand or mud on a connector should be performed using spray based contact cleaner (isopropyl alcohol)
- New grease must be applied again prior to mating

#### Greasing and mating above water (dry mate)



- Connectors must be greased with Molykote 44 Medium before every mating
- A layer of grease corresponding to minimum 1/10 of socket depth should be applied to the female connector
- The inner edge of all sockets should be completely covered, and a thin transparent layer of grease left visible on the face of the connector
- After greasing, fully mate the male and female connector in order to secure optimal distribution of grease on pins and in sockets
- To confirm that grease has been sufficiently applied, de-mate and check for grease on every male pin. Then re-mate the connector

#### Greasing and mating under water (wet mate)



- Connectors must be greased with Molykote 44 Medium before every mating
- A layer of grease corresponding to approximately 1/3 of socket depth should be applied to the female connector
- All sockets should be completely sealed, and transparent layer of grease left visible on the face of the connector
- After greasing, fully mate the male and female connector and remove any excess grease from the connector joint