

Generic Installation Information

H SERIES SENSORS

INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR & DUST ATMOSPHERES

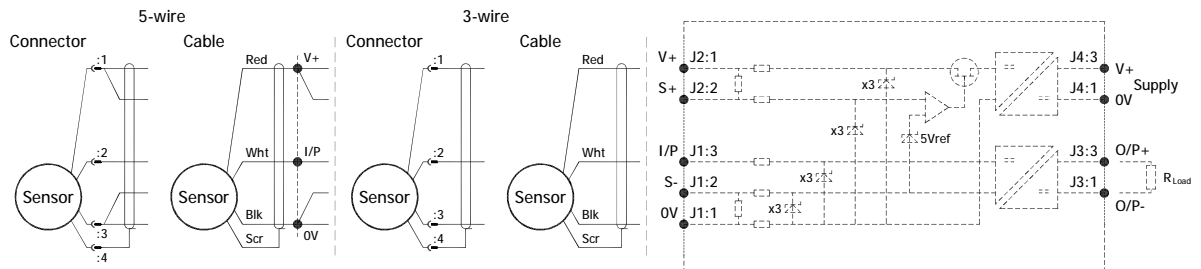
CSA Qualified Intrinsically Safe Device Certificate number 13.2588225		Class I, Zone 0 Ex ia IIC T4 (Ta = -40°C to +80°C) AEx ia IIC T4 / Ex ia IIC T4 (Ta = -40°C to +80°C) AEx ia D IIC T93°C (Ta = -40°C to +80°C)	
Electronics Option	Output Description:	Supply Voltage: V _s (tolerance)	Load resistance:
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:-

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

*Figures for 1km cable where: C_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:-

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

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

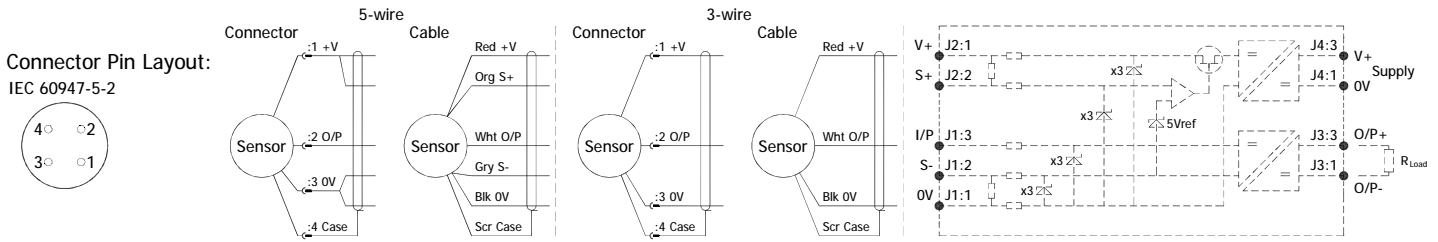
Maintenance:

Accumulated dust layer must not exceed a depth of 50mm.

Installation Information

LIPS[®] H138 MID STROKE SLIM-LINE LINEAR POSITION SENSOR

INTRINSICALLY SAFE FOR HAZARDOUS DUST ATMOSPHERES



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

The H138 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.

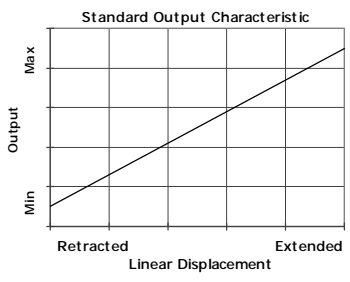
Cable Up to 150m of 0.2 mm², screened, PUR jacket; 3 core cable 4 mm dia. black, 5 core cable 4.6 mm dia. Blue.

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

Mechanical Mounting: Via the two slots in the flange, the slots are 3.2 mm by 30 degrees wide on a 25 mm pitch.

Output Characteristic: Plunger extended 34 mm* from mounting face at start of normal travel.

*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.