Generic Installation Information

H SERIES SENSORS

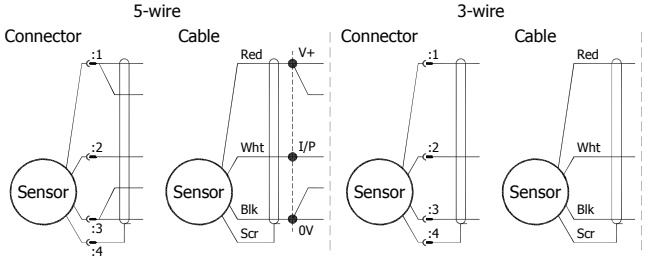
INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR & DUST ATMOSPHERES

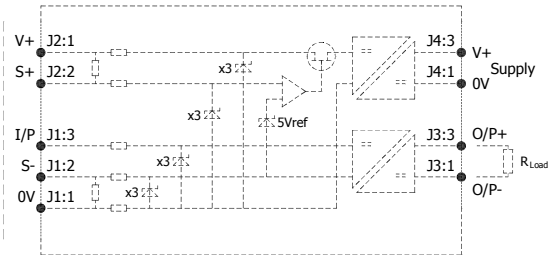
CSA Qualified Intrinsically Safe Device Certificate number 13.2588225			Class I, Zone 0 Ex ia IIC T4 (Ta = -40°C to +80°C) AEx ia IIC T4 / Ex ia IIC T4(Ta = -40°C to +80°C) AEx ia D IIIC T93°C (Ta = -40°C to +80°C)
Electronics Option	**Output Description:**	**Supply Voltage:** V_s (tolerance)	**Load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

Ui = 11.4V **Ii = 0.20A** **Pi = 0.51W**
Ci = 1.36µF* **Li = 710µH*** (with maximum length integral cable)
Ci = 1.16µF **Li = 50µH** (without integral cable)

*Figures for 1km cable where: Ci = 200pF/m & Li = 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:

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

For further information please contact:
www.positek.com sales@positek.com
Tel: +44(0)1242 820027 fax: +44(0)1242 820615
Positek Ltd, Andoversford Industrial Estate, Cheltenham GL54 4LB. U.K.

256053

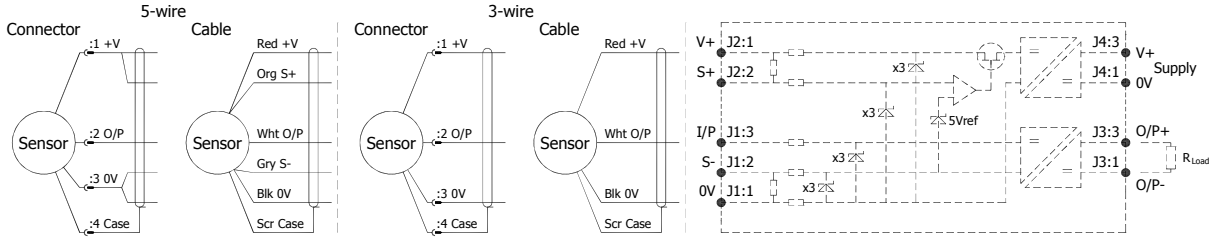
POSITEK LIMITED

Installation Information

LIPS® H103 SHORT STROKE LINEAR POSITION SENSOR

INTRINSICALLY SAFE FOR HAZARDOUS DUST ATMOSPHERES

Connector Pin Layout:
IEC 60947-5-2



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

The H103 is available with the following connections:-

IP67	IEC 60947-5-2 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.

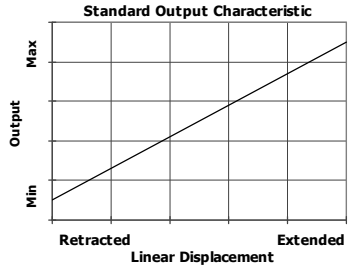
Cable Up to 150m of 0.2 mm², screened, PUR jacket; 3 core cable 4 mm dia. black,
5 core cable 4.6 mm dia. Blue.

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

Warning - The M12 IEC 60947 connector may be rotated for purposes of convenient orientation of the connector and cable, however rotating the connector more than one complete revolution is not recommended.
Repeated rotation of the connector will damage the internal wiring!

Mechanical Mounting: Via the two slots in the flange, the slots are 4.5 mm by 30 degrees wide on a 48 mm pitch.

Output Characteristic: Plunger extended 10 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 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.

For further information please contact:
www.positek.com sales@positek.com
Tel: +44(0)1242 820027 fax: +44(0)1242 820615
Positek Ltd, Andoversford Industrial Estate, Cheltenham GL54 4LB. U.K.

256053

H103-19d