

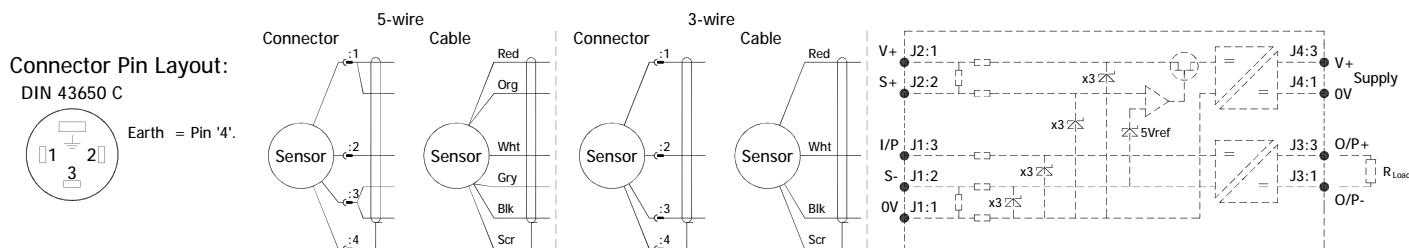
Installation Information

LIPS[®] X103 SHORT STROKE LINEAR POSITION SENSOR

INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR ATMOSPHERES

For certificate number and safety parameters information for product marked EX04, see next page.

ATEX /IECEx Qualified to Intrinsic Safety Standard Certificate numbers SIRA 13ATEX2371X IECEx SIR 13.0154X		Ex II 1G Ex ia IIC T4 Ga (Ta = -40°C to +80°C)	
Electronics Version	Output Description:	Supply Voltage: V _s (tolerance)	Load resistance:
EX07	0.5 - 4.5V (ratiometric with supply) [Output code 'A']	+5V (4.5 - 5.5V)	5kΩ min



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:-

$$\begin{aligned} U_i &= 11.4V & I_i &= 0.20A & P_i &= 0.51W \\ C_i &= 1.36\mu F^* & L_i &= 860\mu H^* & & \text{('Lxx', 'LQxx', 'Mxx' or 'MQxx' options)} \\ C_i &= 1.16\mu F & L_i &= 50\mu H & & \text{('J' option)} \end{aligned}$$

*Figures for 1km cable

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

$$\begin{aligned} \text{Capacitance: } &\leq 200 \text{ pF/m for max. total of: } 200 \text{ nF} \\ \text{Inductance: } &\leq 810 \text{ nH/m for max. total of: } 810 \mu H \end{aligned}$$

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

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.

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

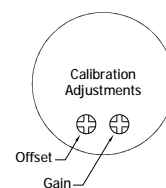
Use: The sensor is designed to measure linear displacement and provide an analogue output signal.

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

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

Gain and Offset Adjustment: (Where accessible - Typically \pm 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.

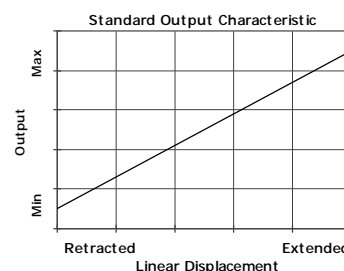
Output Characteristic: Plunger extended, at start of normal travel, from mounting face by:

Standard body : 24.5 mm

Flanged body : 10 mm

Note: where 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.

Installation Information

LIPS[®] X103 SHORT STROKE LINEAR POSITION SENSOR

INTRINSICALLY SAFE FOR HAZARDOUS GAS/VAPOUR ATMOSPHERES

For certificate number and safety parameters information for product marked EX07, see previous page.

ATEX Qualified to Intrinsic Safety Standard Certificate numbers SIRA 00ATEX2076X			Ex II 1G EEx ia IIC T4 (Ta = -40°C to +80°C)
Electronics Version	Output Description:	Supply Voltage: V _s (tolerance)	Load resistance:
EX04	0.5 - 4.5V (ratiometric with supply) [Output code 'A']	+5V (4.5 - 5.5V)	5kΩ min

The barrier parameters must not exceed:-

$U_i = 11.4V$ $I_i = 0.20A$ $P_i = 0.51W$
 $C_i = 1.36\mu F^*$ $L_i = 710\mu H^*$ ('Lxx' or 'Mxx' options) *Figures for 1km cable where: $C_i = 200pF/m$ & $L_i = 660nH/m$
 $C_i = 1.16\mu F$ $L_i = 50\mu H$ ('J' option)

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

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

With the exception of the certificate number and safety parameters above, all other notes regarding Putting Into Service, Use, Assembly and Dismantling etc. on previous page apply to sensors marked EX04 or EX07.