


Installation Information

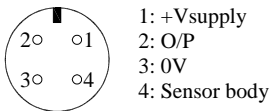
LIPS[®] M100 CYLINDER – LINEAR POSITION SENSOR

INTRINSICALLY SAFE FOR HAZARDOUS MINING ENVIRONMENTS

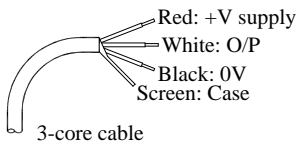
ATEX Qualified to Intrinsic Safety Standard Certificate number Sira 00ATEX2076X

Output Description:	Barrier Supply Voltage:	Barrier Output:	 I/II M1/IGD EEx ia I/IIC T4 (Ta = -40°C to +80°C) Ex iaD 20 T135°C (Ta = -40°C to +80°C)
Voltage (BX002)	20-35V dc	0.5 to 9.5V	
Current Loop (BX003)	20-35V dc	4-20mA	

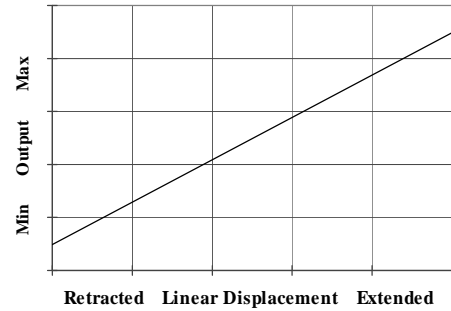
Connector pin layout:



Conductor Identification:



Output Characteristic - Standard



Putting Into Service:

The sensor must be used with a galvanically isolated three port barrier designed to supply the sensor with a nominal 5V and to transmit the buffered output to a safe area. Various Barrier output versions are available. The barrier parameters must not exceed:

- **Ui = 11.4V Ii = 0.20A Pi = 0.51W**

Ci = 1.16µF with connector, **Ci** = 1.36µF with 1000m of cable. **Li** = 50µH with connector, **Li** = 710µH with 1000m of cable.

The sensor is certified to be used with up to **1000m** of cable with parameters not exceeding:-

Capacitance = **200 nF** total, Inductance = **660µH** total

The performance of the sensor may be affected by voltage drops in long cables; these can be eliminated by using a 5 wire connection. The typical supply current is 10mA and the sensor output is ratiometric to the supply voltage at the sensor.

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: accumulated dust layer must not exceed a depth of 50mm.

Mechanical Mounting:

Via mounting thread, maximum tightening torque: 100Nm. For fluid ingress protection an O ring seal is provided, size BS908 for M20 & 3/4 UNF thread or 14.3 x 2.4 for M18 thread.

Install the target tube using the flange provided or fix directly into the piston rod using adhesive for instance, the end of the target tube can be proud or flush with the piston end face as required.

Output Characteristic:

Target position at start of normal travel is 36.0 mm from seal face.

The output increases as the target is moved away from the sensor body, the calibrated stroke is between 20 and 600 mm.

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

Warning - the connector on 'J' coded sensors can 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 lead to damage to the internal wiring.

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.