

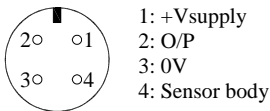
Installation Information

LIPS[®] M100 CYLINDER – LINEAR POSITION SENSOR

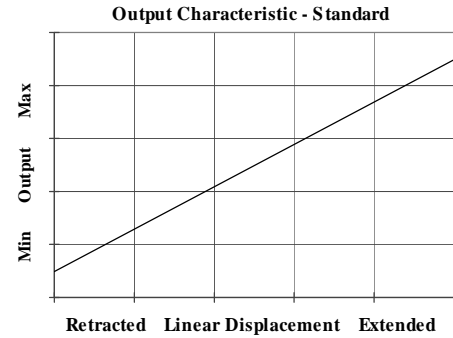
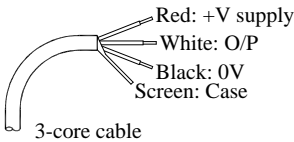
INTRINSICALLY SAFE FOR HAZARDOUS MINING ENVIRONMENTS

ATEX Qualified to Intrinsic Safety Standard Certificate number Sira 00ATEX2076X			EX I/II M1/1GD EEx ia I/IIC T4 (Ta = -40°C to +80°C) Ex iaD 20 T135°C (Ta = -40°C to +80°C)		
Electronics Option	Output Description:	Supply Voltage: (Vs)	Output:	Load resistance:	Load connected to:
A	Voltage (ratiometric with supply)	5±0.5V	0.5 to 4.5V	2kΩ min	0V

Connector pin layout:



Conductor Identification:



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:-

- U_i = 11.4V I_i = 0.20A P_i = 0.51W
- C_i = 1.36µF* L_i = 710µH* (Lxx option)
- C_i = 1.16µF L_i = 50µH (J option)

*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:-

- Capacitance: ≤ 200 pF/m for max. total of: 200 nF
- Inductance: ≤ 660 nH/m for max. total of: 660 µH

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.

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.