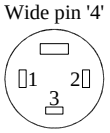
Installation Information
LIPS® 103 Short Stroke Linear Sensor

Electronics Option	A	B	C	D	E	F	H
Output Description:	Voltage ratiometric with supply	Voltage	Voltage	Voltage	2 wire 4 to 20mA	3 wire 4 to 20mA Sink	3 wire 4 to 20mA Source
Supply Voltage (Vs):	5±0.5V	±13 to 17V	13 to 28V	±13 to 17V	18 to 28V	13 to 28V	13 to 28V
Output:	0.5 to 4.5V	±5V	0.5 to 9.5V	±10V	4 to 20mA	4 to 20mA	4 to 20mA
Load resistance: (inclusive of leads for 4 to 20mA versions)	2kΩ min	1kΩ min	5kΩ min	5kΩ min	R_L = Vs-18/20mA 300Ω @ 24V	R_L = Vs-5/20mA 950Ω @ 24V	300Ω max
Load connected to:	0V	0V	0V	0V	In supply lead	Vs	0V

Connector pin layout:

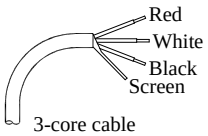
Wide pin '4'



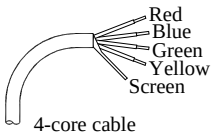
1: +V supply
2: O/P
3: 0V
4: Sensor body 'A','C','E-H', -V supply options 'B' or 'D'

Cable conductor colours:

Red: +V supply
White/Blue: O/P
Black/Green: 0V
Yellow: -V supply options 'B' or 'D'
Screen: Sensor body

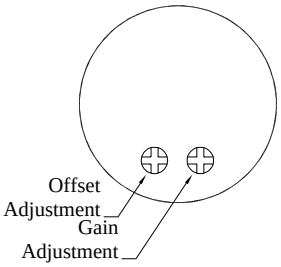


3-core cable

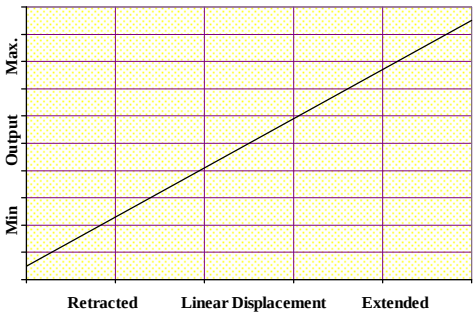


4-core cable

Sensor Adjustments



Output Characteristic



Gain and Offset Adjustment: (Where accessible - Typically ± 10% Min available)
To adjust the gain or offset remove the taptite screw from the cover and insert a small potentiometer adjuster or screwdriver 2mm across, 30mm long. The trim potentiometers are accessed through holes in the cover; the other electronics are protected from damage by a inner lid. Do not apply too much force on the potentiometers.

Mechanical Mounting:
Flange or body mounted, body clamps are available.

Output Characteristic:
Plunger extended, at start of normal travel, from mounting face by:
Standard body : 25 mm
Flanged body : 10 mm
Note: where ball end option is fitted add 5 mm.
The output increases as the plunger extends from the sensor body, the calibrated stroke is between 10 and 50 mm.

Incorrect Connection Protection levels:-

A	**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.
B & D	Supply leads diode protected. Output must not be taken outside ± 12V.
C	Supply leads diode protected. Output must not be taken outside 0 to 12V.
E, F & H	Protected against any misconnection within the rated voltage.

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