

LINEAR POSITIONS SENSOR LPS-X



GENERAL

The LPS-X is a precision Linear Position Sensors with unlimited mounting options for demanding industrial environments. A rugged solid-steel vernier, which can be configured to fit unlimited machine mechanics replaces unshielded sensor requiring a problematic magnetic pick-up. Produced for industrial process machinery where stability is critical, the LPS-X has set new standards for minimum absolute temperature drift achieving < 0.25 mm over the full operating and measurement scale. This unique inductive sensor is fully shielded for flush-mounting with no influences from surrounding metal surfaces, strong electrical / magnetic fields or metal filings. Absolute position is output as a constant analog voltage or mA signal independent of rotational speed. The sealed-metal housing of the sensor is compact and easy to mount with a very small 20% blind zone.



APPLICATION

- Machine tool, Production Automation
- Valves, Pistons
- Punching machine, Welding robot
- Process systems

FEATURES

- 24VDC power supply
- analog, digital and binary interface
- vernier made of steel
- no magnetic pick up required
- transitional motion detected via a rotary or roof-shaped steel vernier
- absolute measurement
- embedded mounting

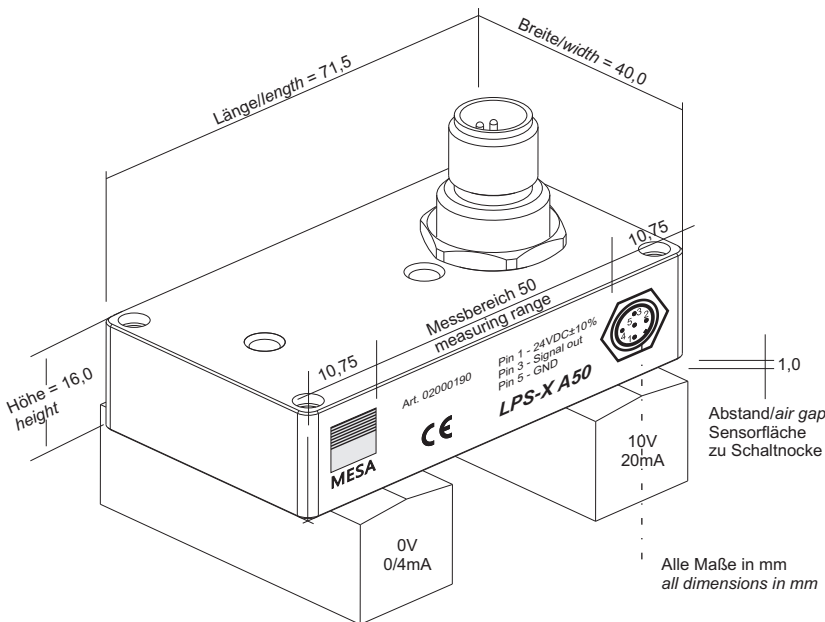
YOUR BENEFITS

- Vernier easy machined out of steel
- no influence by metal filings
- high resolution and repeatability
- very low temperature drift
- no minimum distance to magnetizable material required
- no influence by strong electrical and magnetic fields
- only 20% blind zone of total length
- no maintenance required
- nothing to wear out
- rpm independent readings
- rugged aluminium die cast and XF

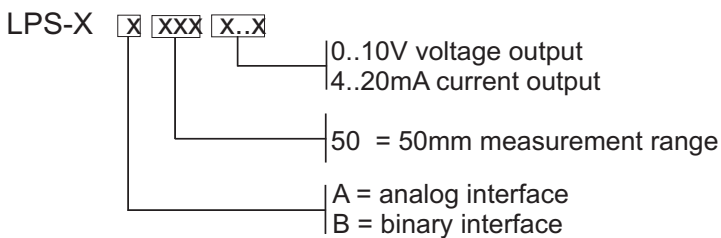
TECHNICAL DATA

Typ	LPS-X
Description	
Measuring range	50mm
Dimension (L x W x H)	71.5 x 40 x 16mm
Connection	5-pin connector M12x1
Protection class	IP67
Housing	aluminum (anodized), PBT
Operating temperature	0°C to +70°C
Mounting	2 each M5 x 6 threaded holes in the back of housing
Installation	embedded
Power supply	24VDC (70mA), +/-10% ,reverse/over voltage protected
Interface	0...10V, short-circuit-proof, 4...20mA ,10bit binary, strobe
Resolution, analog out	5mV = 0.025mm
Repeatability	<0.1mm
Linearity	<0.2mm
Temperature drift	<0.25mm FS (@ temperature change from 20°C to 70°C)
Measuring frequency	33Hz
Vernier (pick up)	vernier can be configured in ring or bar-shape For details please contact MESA
Installation remarks	no magnet field limitations

DIMENSION



ORDERING INFORMATION



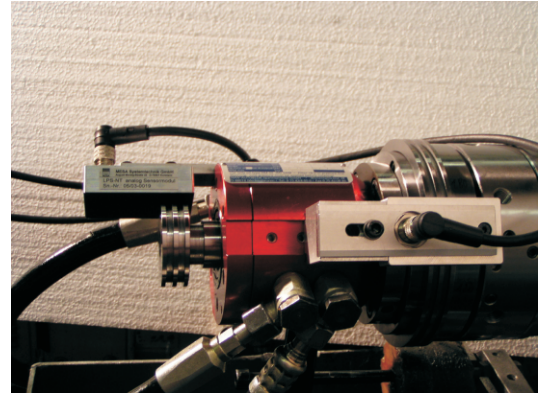
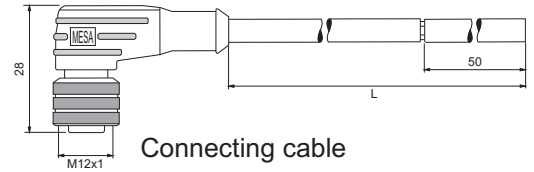
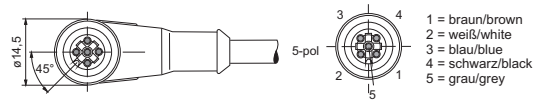
Remarks for 10 bit binary interface:

- A supplement box is required
- A strobe signal indicates valid measurement data

Connecting cable:

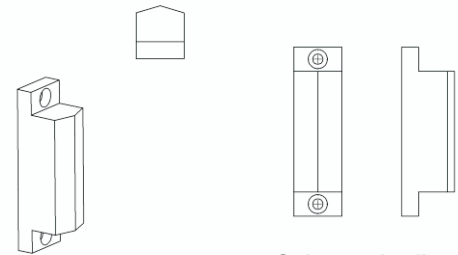
- 5-pin M12 female cable connector, 5m long, shielded, PUR, oil proof
- 5-pin M12 female angled connector, 5m long, shielded, PUR, oil proof

ACCESSORIES



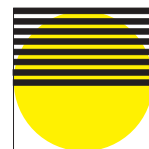
LPS-NT on hydraulic cylinder

VERNIER



Schematic diagram

YOUR REPRESENTATIVE



MESA

MESA Systemtechnik GmbH
 Turmstrasse 8
 78467 Konstanz - Germany
 Phone: ++49 7531/9371-0
 Fax: ++49 7531/9371-71
 email: info@mesa-systemtechnik.de
 http:// www.mesa-systemtechnik.de