

# INSTALLATION GUIDE

## Draw wire sensor series LX

For further information please see the data sheet at [www.waycon.biz/products/draw-wire-sensors/](http://www.waycon.biz/products/draw-wire-sensors/)

### FIRST STEPS

WayCon Positionsmesstechnik GmbH would like to thank you for the trust you have placed in us and our products. This manual will make you familiar with the installation and operation of our draw wire sensors. Please read this manual carefully before initial operation!

#### Unpacking and checking:

Carefully lift the device out of the box by grabbing the housing. Do not pull the rope. After unpacking the device, check it for any visible damage as a result of rough handling during the shipment. Check the delivery for completeness.

If necessary consult the transportation company, or contact WayCon directly for further assistance.

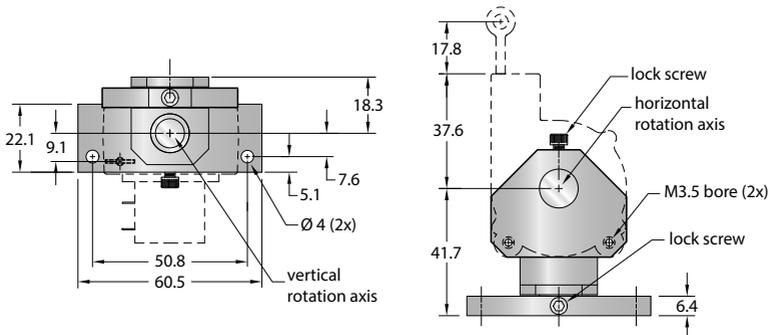
### MOUNTING OF THE SENSOR

Mount the sensor at the designated place before extracting the rope and before attaching the rope to the measuring target.

1. The sensor can be mounted by using the two bore holes in the housing. Use two M3.5 screws and flat washers. A maximum torque of 0.56 Nm is recommended.
2. LX-Mount (two axis swivel base): With a capability of 360° rotation about the vertical axis and 245° rotation about the horizontal axis, the LX-Mount allows easy setup of the LX-PA or the LX-EP2 transducer. The axes may be locked in place after the transducer is oriented.

After mounting the LX sensor in its place, carefully tear the wire rope out of the sensor (do not let the wire rope snap back!) and attach it to the target. The eyelet at the end of the wire rope can be pulled onto a hook or be fixed to the target using a screw. Do not bend the wire rope leaving the eyelet.

#### LX-Mount



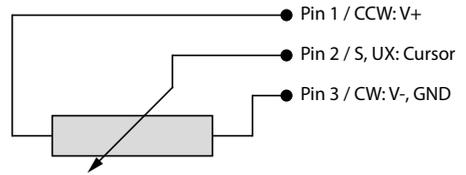
# ELECTRICAL CONNECTION

## LX-PA general information

Power supply: max. 25 V

Output signal: 0...1 kΩ

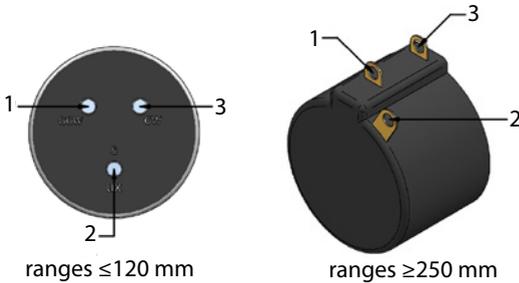
Inverted signal: reverse Pin 1 and Pin 3



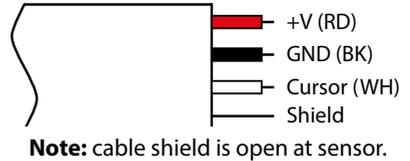
It is generally recommended that shielded, twisted pair cabling be used between transducer and electrical interface. The shield should remain open at the transducer and be tied to ground at the electrical interface.

Units with ranges 120 mm and less employ a single turn potentiometer which has no stops. On these units the wire rope will extend to a total length of approximately 200 to 250 mm. When extension beyond the specified measurement range occurs, the cursor of the potentiometer traverses a deadband after which the electrical output begins again.

## LX-PA with solder terminals



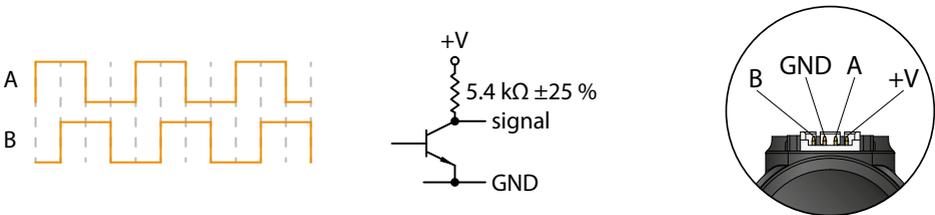
## LX-PA with cable output



## LX-EP2

Power supply: 5 VDC  $\pm 0.25$  VDC

Excitation current: max. 30 mA

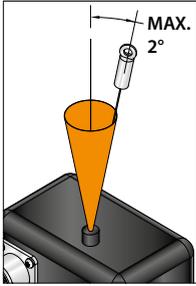


## Connection cable 10517-xM

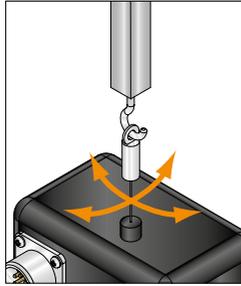
Function	Cable colour
B	GN
GND	BK
A	WH
+V	RD



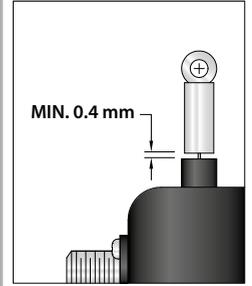
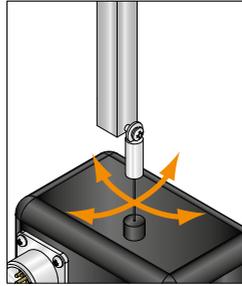
# HANDLING THE WIRE ROPE



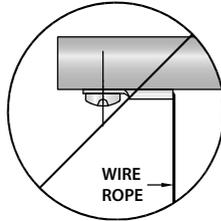
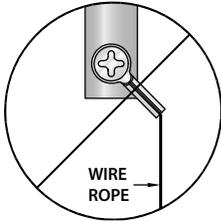
The wire rope should be aligned within 2° of perpendicular when at full extension.



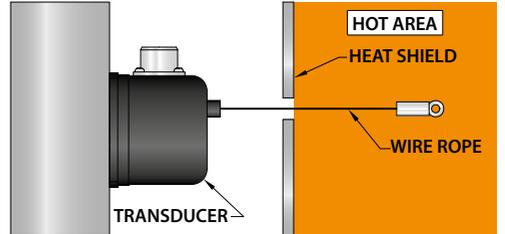
The eye fitting on the end of the wire rope should be mounted to allow rotation both axially about the pivot point and perpendicular to the axis of the pivot. This is to allow the eye fitting to follow the direction of the wire rope. This eliminates all bending stress on the wire rope at the crimp of the eye fitting.



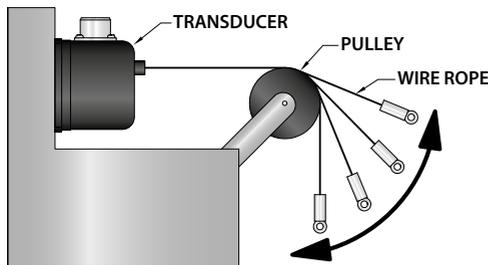
Insure that the wire rope starting point is not less than 0.4 mm from the zero extension position.



Attaching the eye fitting as shown above will put undue bending stress on the wire rope which may cause early fatigue. To prevent premature wire rope failure, eye fitting mounting conditions as shown above should be avoided.



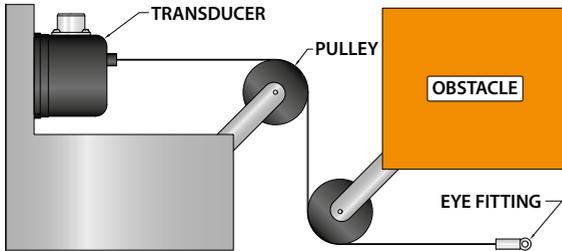
In applications where radiated heat can increase the temperature of the transducer beyond its operating temperature limit, it is advisable to use a heat shield between the transducer and the hot area as shown in image above.



For applications where oscillating motion as shown on the left may be encountered, a pulley should be employed to insure that the wire rope exits the transducer in a perpendicular manner.



## HANDLING THE WIRE ROPE



The wire rope of the transducer may be routed over pulleys to facilitate mounting. To maximize wire rope life the minimum root pulley diameter should be 38 mm.

## DECLARATION OF EU-CONFORMITY

WayCon Positionsmesstechnik GmbH  
Mehlbeerenstrasse 4  
82024 Taufkirchen / Germany

This is to certify that the products

Classification  
Product series

draw wire sensors  
LX

fulfill the current request of the following EU-directives:  
EMC-directive 2004/108/EC (until April 19th, 2016)  
2014/30/EU (from April 20th, 2016)

applied harmonized standards:  
IEC 61326-1:2013

The declaration of conformity loses its validity if the product is misused or modified without proper authorisation.

Taufkirchen, 24.02.2016

Andreas Täger  
CEO