



Assembly Instructions
wireSENSOR

Precautionary Measures

- Do not let the measuring wire rewind without control (snap back).
- > Danger of injury from whiplash effect of the wire with assembly bolts/clips, destruction of wire and/or of sensor
- Do not pull the measuring wire over range.
- > Damage to or destruction of the sensor is possible.
- Do not damage the measuring wire.
- Do not oil or grease the measuring wire.
- Do not bend the measuring wire.
- Do not pull the measuring wire at an angle.
- Do not allow to loop the measuring wire around objects.
- Do not fix the measuring wire to the target when wound up.
- Do not loop the measuring wire around parts of the body.

Sensor Assembly

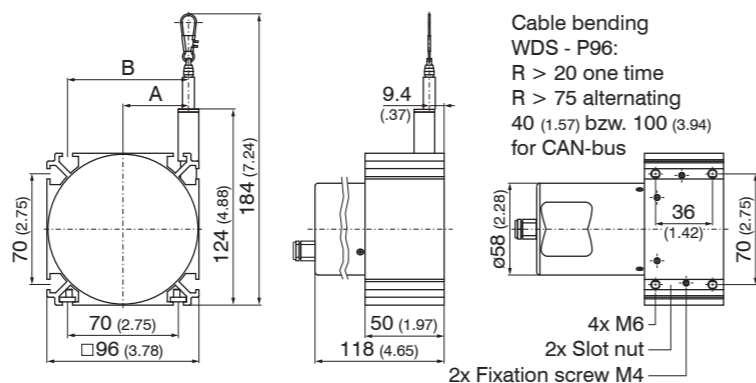
Mount the sensor through mounting grooves for nut M4 DIN 934 or bolt M4 DIN 931.

The sensor does not have to be oriented in a special way. Choose the installation position so that damage and soiling of the measuring wire is avoided.

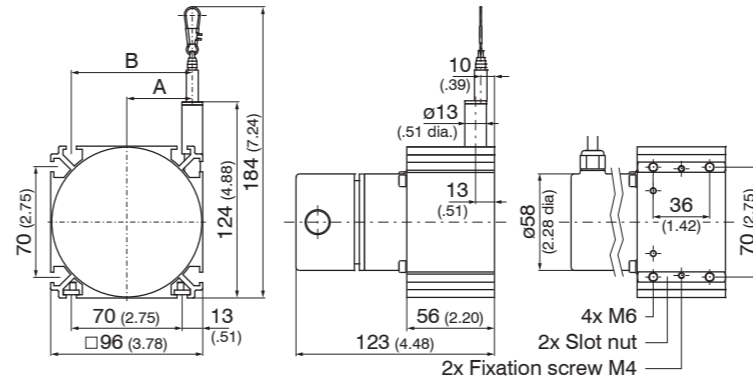
Proper Environment

- Protection class of sensor: IP 65¹
- Operating temperature: -20 to +80 °C (-4 to +176 °F)
- Storage temperature: -40 to +80 °C (-40 to +176 °F)
- Humidity: 5 - 95 % (non-condensing)
- Ambient pressure: atmospheric pressure
- Vibration: according to IEC 68-2-6
- Mechanical shock: according to IEC 68-2-27

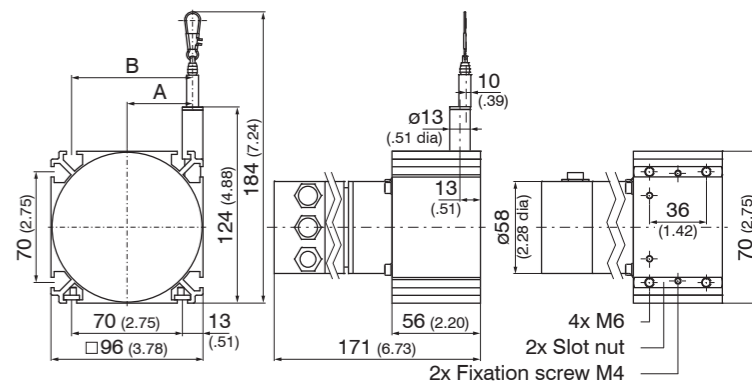
¹ Models with male plug connection only with gasketed female plug



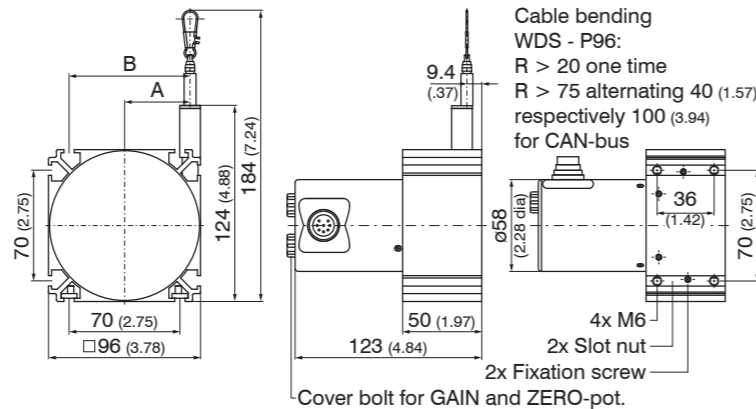
WDS- ... - P96 - CA - P, dimensions in mm (inches), not to scale



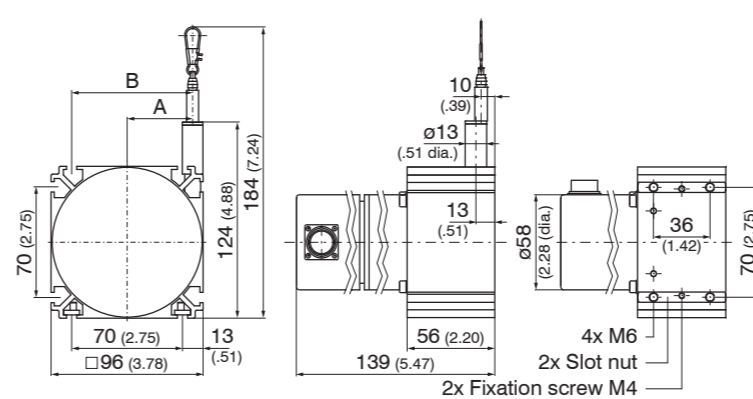
WDS- ... - P96 - HTL/TTL, dimensions in mm (inches), not to scale



WDS- ... - P96 - CO/PB, dimensions in mm (inches), not to scale



WDS- ... - P96 - SR - U/I, dimensions in mm (inches), not to scale



WDS- ... - P96 - SSI, dimensions in mm (inches), not to scale

Model		A	B
WDS - P96 - CA - P	WDS-2000-P96	32 (1.26)	67 (2.64)
WDS - P96 - SR - U/I	WDS-2500-P96	41.4 (1.63)	76.4 (3.00)
WDS - P96 - HTL/TTL	WDS-2000-P96	26 (1.02)	61 (2.40)
WDS - P96 - SSI	WDS-3000-P96	41.4 (1.63)	76.4 (3.00)
WDS - P96 - CO/PB			

Dimensions in mm (inches)



Wire Guide and Fastening

If the measuring wire has to be extracted from the sensor to guide the wire resp. to fix it to the target

- the sensor may not be held by another person
- the measuring wire may not be further extracted but only to the specified measuring range
- the surroundings of the sensor have to be protected against snapping of the measuring wire

Fix the measuring wire to the target using a wiring clip.

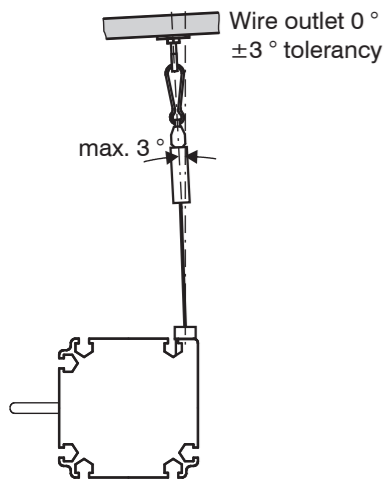
Fed the measuring wire perpendicularly from the sensor housing.

A misalignment is only permissible up to 3 degrees.

If you drag of the measuring wire on the inlet hole or other objects, this leads for damaging and/or snapping of the measuring wire.

If you cannot fed the measuring wire vertically out of the housing, it is essential to use a guide pulley (accessory TR1-WDS).

Keep the measuring wire in an area where it cannot be snagged or otherwise be violated.



Dimensional wire fastening and misalignment

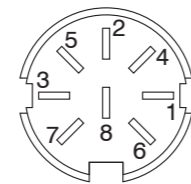
Power Supply and Display/Output Device

Electrical connection		Output
- CR - integrated cable	- SR - connector	- P - potentiometer
color DIN 47 100	Pin	
white	1	input +
brown	2	ground
green	3	signal
screen	screen	housing

Connection pin assignment WDS- ... - Pxx - CR - P

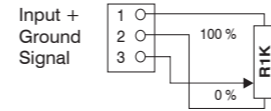
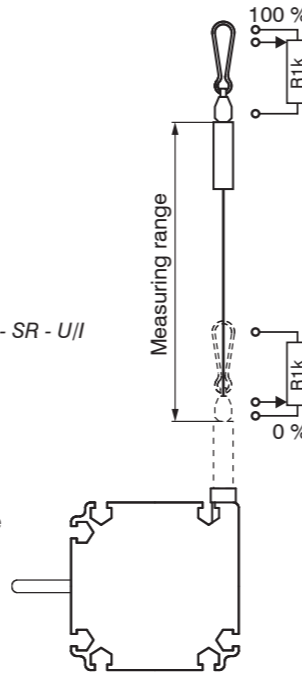
Electrical connection	Output	Output
-- SR- ¹ device plug DIN 45 326	- U voltage	- I current
Pin - Nr.		
1	supply +	
2	ground	
3	signal	---
4	ground (signal)	---

Connection pin assignment WDS- ... - Pxx - SR - U/I



View of solder pin side 8-pole female cable connector

¹⁾ Pin 5 - 8 are not connected.



Model with potentiometer output

A pre-assembled connecting cable PC3/8 is available as an accessory.

Note for the user-side assembly of a cable:

- Use a screened cable.
- Earth the screen on electronics side.
- Recommended conductor cross-section 0.14 mm² (up to 9 m/30 ft cable length)
- Maximum cable diameter 8 mm / 0.3 inch

Note the pin assignment for draw-wire displacement sensors with **encoder output**. The sensor contains an additional supplement for detailed information.

For further information, please refer to the online documentation.

You will find the latest version at:

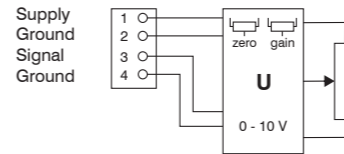
www.micro-epsilon.com/link/wire

> "wireSENSOR WDS-P60 / P96 Analogue" or

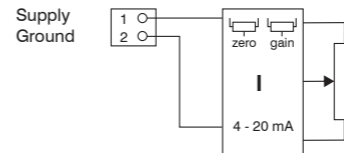
"wireSENSOR WDS-P115 Analogue".

Operation

Draw wire sensors with voltage output (U) or current output (I) are equipped with integrated electronics with setting potentiometers (trimmers) for zero and gain. The access holes for the trimmers are located in the housing cover. With the zero trimmer the zero point can be shifted by $\pm 20\%$ of the range with voltage output ($\pm 18\%$ with current output). With the gain trimmer the signal span (sensitivity) is adjusted by $\pm 20\%$ with voltage output ($\pm 15\%$ with current output). For draw wire sensors with encoder output (E, A) there are no adjustment and setting elements.



Model with voltage output



Model with current output

Declaration of incorporation

Declaration of incorporation according to the EC Machinery Directive

2006/42/EC, Annex II B

Manufacturer and authorized representative for the compilation of the relevant technical documents

MICRO-EPSILON MESSTECHNIK GmbH & Co. KG

Königbacher Straße 15, 94496 Ortenburg / Germany

hereby declares that the machine designated below, as a result of its manner of design, construction as well as version that has been placed on the market - to the extent possible in the scope of delivery - corresponds to the relevant, fundamental health and safety requirements of the EC Machinery Directive, including the valid changes at the time of this declaration.

Model: wiresensor

Type designation: WDS-xxx, WPS-xxx

The following fundamental health and safety requirements in accordance with Annex I of the above-named directive are applied and maintained:

- No. 1.1.2. Principles of safety integration
- No. 1.7.3. Marking of machinery
- No. 1.7.4. Instructions

Furthermore, the compliance with the following standards is explained, including the valid changes at the time of this declaration:

- EN ISO 13857 Safety of machinery - Safety distances to prevent hazard zones being reached by upper and lower limbs
- EN 60204-1: 2006/A1: 2009 Safety of machinery - Electrical equipment of machines - Part 1: General requirements
- DIN EN 61326-1: 2013
- DIN EN 61326-2-3: 2013

Moreover, we declare that the relevant technical documentation for this partly completed machinery has been created in accordance with part B of Annex VII, and that we shall be obligated to deliver these upon the request of the market surveillance authorities.

The described partly completed machinery is intended for installation in a production line. The commissioning of this partly completed machinery shall be prohibited until the partly completed machinery has been installed in a machine that complies with the provision of the EC Machinery Directive and for which an EC Declaration of Conformity in accordance with Annex II A is available.

Ortenburg, October 8th 2015


Dr. Thomas Wisspeintner
Managing Director