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 65
- 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

Wire SENSOR

Assembly Instructions

Cable bending
WDS - P96:
R > 20 one time
R > 75 alternating 40 (±) respectively 100 (±)
for CAN-bus

Sensor dimensions in mm (inches), not to scale

Dimensions in mm (inches)

Models with male plug connection only with gasketed female plug
**Power Supply and Display/Output Device**

**Electrical connection**

- **Input**
  - Ground
  - Signal
- **Output**
  - Ground
  - Signal

**Cable**
- **Voltage**
  - U
  - I
- **Current**
  - I
- **Signal**
  - U

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

**Pin**

- **1**
  - supply +
- **2**
  - ground
- **3**
  - signal
- **4**
  - ground (signal)

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

**Pin**

- **1**
  - supply +
- **2**
  - ground
- **3**
  - signal
- **4**
  - ground (signal)

**Measuring scope**

- **Input**
  - Ground
  - Signal
- **Output**
  - Ground
  - Signal

**Model with potentiometer output**

A pre-assembled connecting cable PCB/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.
- Use a screened cable.
- Maximum cable diameter 8 mm / 0.3 inch
- Recommended conductor cross-section 0.14 mm² (up to 9 m/30 ft cable length)
- Feeding the measuring wire vertically from the sensor housing.
- Fix the measuring wire to the target using a wiring clip.
- resp. to fix it to the target
- If the measuring wire has to be extracted from the sensor to guide the wire
- The sensor contains an additional supplement for detailed information.

**Drawing wire sensors with voltage output (U) or current output (I)**

- Equipment with integrated electronics with setting potentiometers (trimmers) for zero and sensitivity.
- Draw wire sensors with voltage output (U) or current output (I)

**Operation**

- Draw wire sensors with voltage output (U) or current output (I) are equipped with integrated electronics 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 ±30 % of the range with voltage output (±18 % with current output).
- To adjust ±30 % with voltage output (±15 % with current output).
- Draw wire sensors with encoder output (E) are there no adjust-ment and setting elements.

**Wire Guide and Fastening**

If the measuring wire has to be extracted from the sensor to guide the wire res-pect. 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.

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

**A misalignment is only permissible up to 3 degrees.**

**Fix the measuring wire perpendicularly from the sensor housing.**

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

- 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 zero trimmer the zero point can be shifted by ±30 % of the range with voltage output (±18 % with current output).
- To adjust ±30 % with voltage output (±15 % with current output).
- Draw wire sensors with encoder output (E) are there no adjust-ment and setting elements.

**Dimensional wire fastening and misalignment**

- The zero trimmer the zero point can be shifted by ±30 % of the range with voltage output (±18 % with current output).
- To adjust ±30 % with voltage output (±15 % with current output).
- Draw wire sensors with encoder output (E) are there no adjust-ment and setting elements.