

ASSEMBLY GUIDE

Draw wire sensors series SX300

For further information please see the data sheet at www.waycon.biz/products/draw-wire-sensors/

MOUNTING OF A ROTARY TRANSDUCER WP TO A SX300

Step 1:

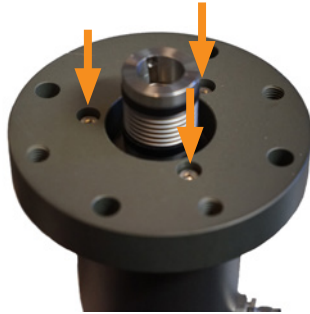
Mount the coupling onto the shaft of the rotary transducer WP. Make sure to leave a gap of 3-4 mm between coupling and WP flange (picture 1).



picture 1

Step 2:

Mount the WP onto the adapter flange with three DIN912 M4 x 20 screws. Use the bores as shown in picture 2.



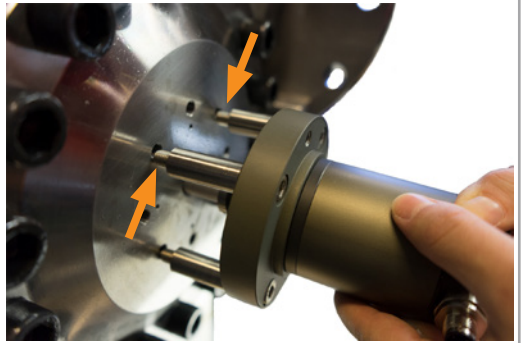
picture 2

MOUNTING OF A ROTARY TRANSDUCER WP TO A SX300

Step 3:

Mount the adapter flange with the WP onto the SX300 (picture 3).

To fix, use four DIN912 M8 x 55 screws and four spacer sleeves 8 x 14 x 35.



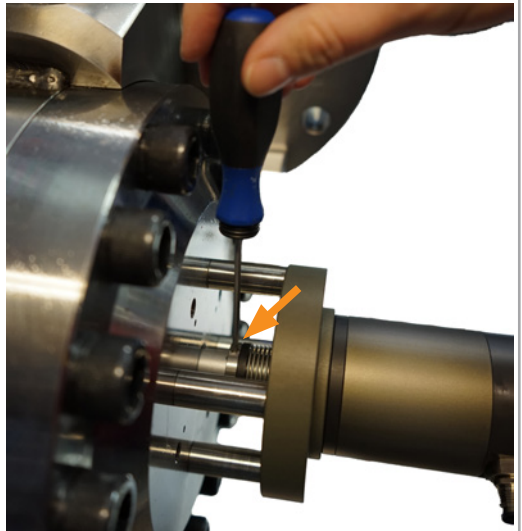
picture 3

Step 4:

Carefully turn the coupling counterclockwise (ccw, view on the WP) until you feel the blockade. Then, turn the coupling approx. 5° clockwise (cw) and fix the coupling with two set screws (picture 4).

Use a torque of 2-2,5 Nm.

Attention: Do not apply excessive force!

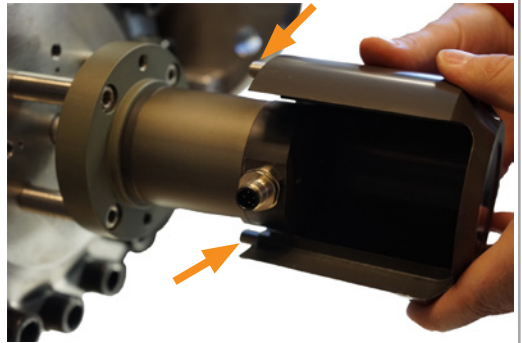


picture 4

MOUNTING OF A ROTARY TRANSDUCER WP TO A SX300

Step 5:

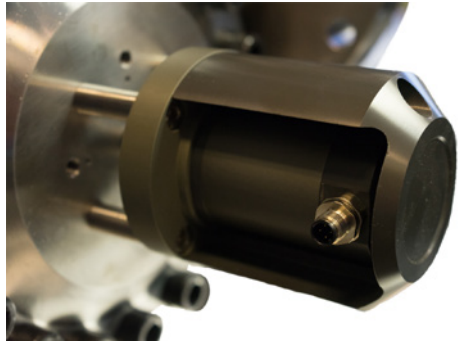
Fix the protection cap with three M8 x 90 screws. Make sure that the opening leaves the connector output free (picture 5).



picture 5

Picture 6:

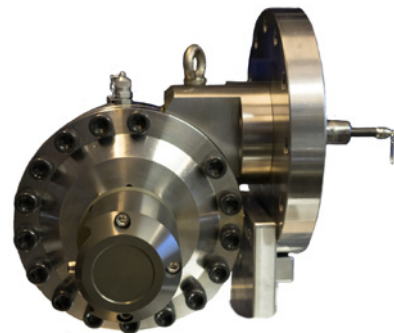
Protection cap completely mounted.



picture 6

Picture 7:

Draw wire sensor SX300 with the completely mounted rotary transducer WP.



picture 7



MOUNTING OF A SX300 INTO A CYLINDER

Please make sure that the SX300 has the correct measurement range, before starting the installation.

In order to calculate the correct measurement range the pre-extraction (distance between the piston and the sensor, while the piston is in its end position = the closest to the SX300; picture 8) has to be deducted from the nominal measurement range. The result is the actual usable measurement range.

As a result the nominal measurement range of the SX300 has to be greater than the cylinder stroke + the pre-extraction + reserve (picture 9).

If the calculation of the measurement range was done incorrectly, a tearing of the wire rope may happen!

Example: SX300-15-420A, cylinder stroke 9.5 m

Nominal measurement range SX300: 15 m

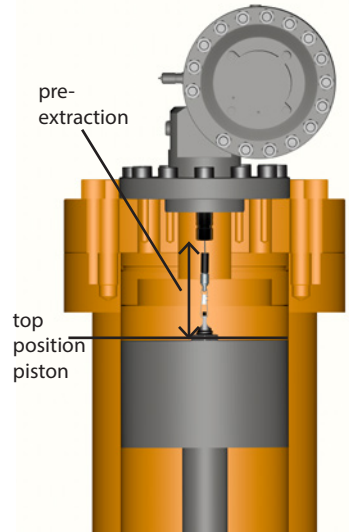
Output signal: 4...20 mA

The output signal is approx. 4 mA while the wire rope is retracted.

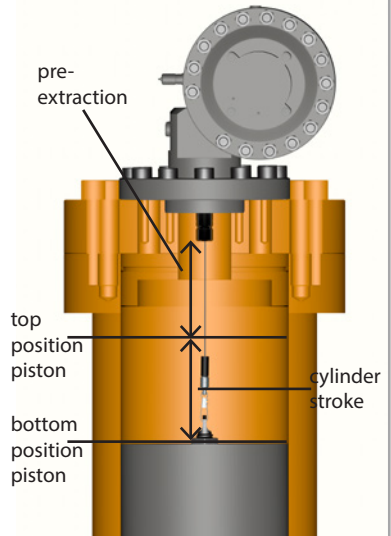
The output signal is approx. 20 mA while the wire rope is extracted.

The wire rope gets connected to the piston, while the piston is in its top position (picture 8). In case this pre-extraction would be 1 m, the output signal would be 5.07 mA. As the cylinder stroke is 9.5 m, the output signal at the pistons bottom position would be 15.2 mA.

In this example the wire rope would be totally extracted for 10.5 m. For this reason a SX300 with a nominal measurement range of 10 m would not be sufficient, although the cylinder stroke is only 9.5 m.



picture 8



picture 9