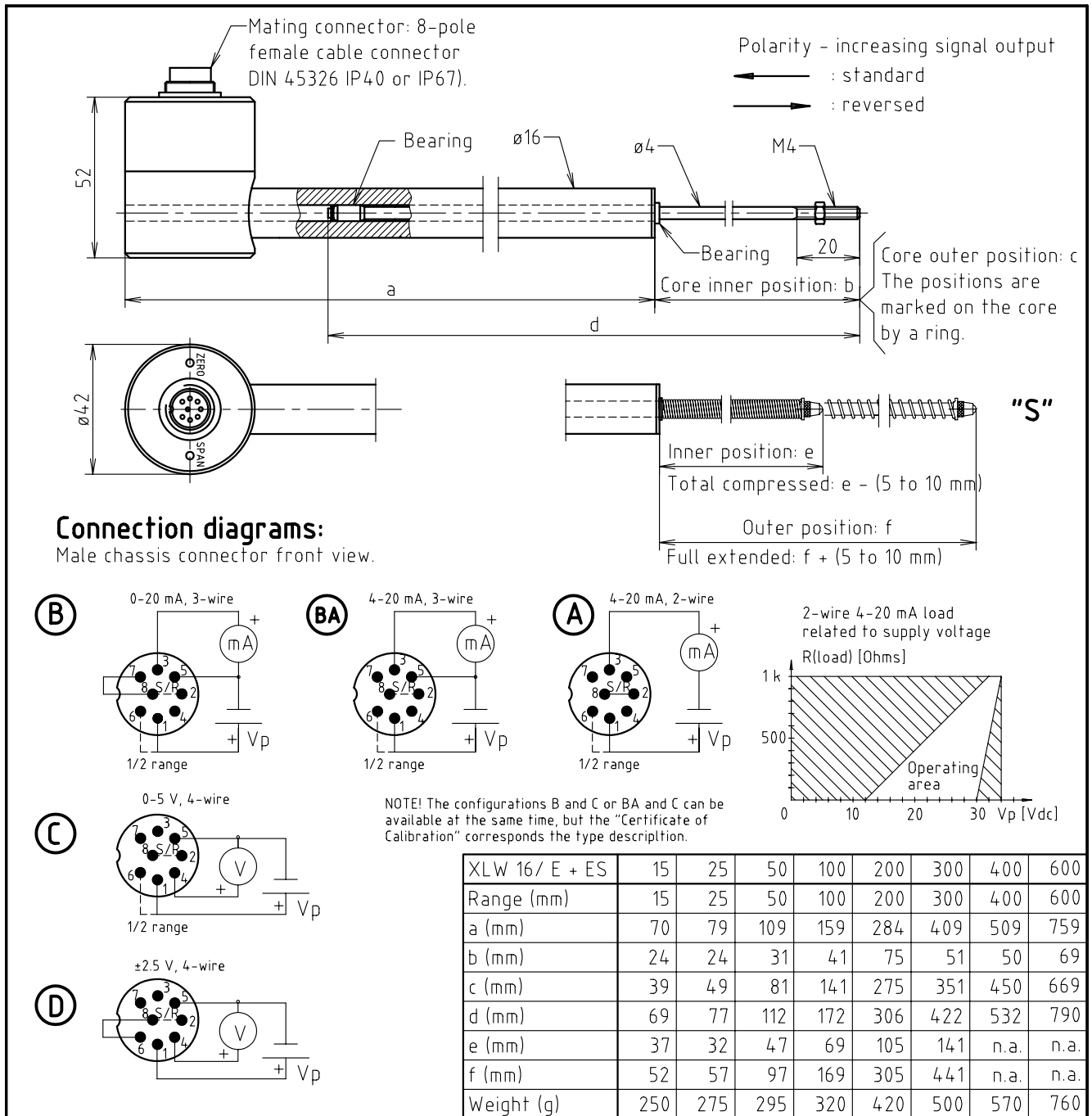


# DISPLACEMENT TRANSMITTER

## XLW 16/..E - integrated electronics

## XLW 16/..E S - springloaded movement



### DESCRIPTION

The XLW 16/ E or ES is a series of displacement transmitters based on the displacement sensor XLW 16/ or XLW 16/ S and the industrial signal conditioner TCAT, containing an excitation oscillator with temperature compensation, amplifier, a low-pass filter and output stage. The sensing element consists of only one coil. Special winding technique has made it possible to obtain a measuring range up to 80% of the body length. The basic principle makes the measurement electronically contactless and teflon bearings in the bore liner offers excellent wear resistance (> 100 mio strokes). All outer surfaces are made of high corrosion resistant stainless steel. The housing also functions as an electromagnetic shielding. All electrical connections are filtered by capacitors and protected against voltage transients. This together with a watertight laserwelded construction ensures compatibility to most environments. The product offers various calibrated output signals, configured by the user through the connector control pins.

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## SPECIFICATIONS

<b>Linear ranges</b>	15 to 600 mm - see table
<b>Supply voltage</b>	12-30 V <sub>DC</sub>
<b>Supply voltage rejection</b>	min. 86 dB between 12 and 32 V <sub>DC</sub>
<b>Non-linearity</b>	< 0.5 %.
<b>Output signals and load</b>	See Connection Diagrams on front page
- A	4-20 mA <sub>DC</sub> , 2-wire, R <sub>L</sub> : see diagram, C <sub>L</sub> < 1μF.
- B	0-20 mA <sub>DC</sub> , 3-wire, R <sub>L</sub> < 700 Ω , C <sub>L</sub> < 1μF
- BA	4-20 mA <sub>DC</sub> , 3-wire, R <sub>L</sub> < 700 Ω , C <sub>L</sub> < 1μF
- C	0-5 V <sub>DC</sub> , 4-wire, R <sub>L</sub> > 5 kΩ , C <sub>L</sub> < 1μF
- D	± 2.5 V <sub>DC</sub> , 4-wire, R <sub>L</sub> > 20 kΩ , C <sub>L</sub> < 1μF
<b>Connections and configurations</b>	NOTE! connector pins 5 and 8 internally connected
- Standard/Reversed	Reversed polarity with pin 2 and 8 connected
<b>Load resistance rejection</b>	min. 60 dB for max ΔR <sub>L</sub>
<b>ZERO adjustment</b>	± 10 % of FSO
<b>SPAN adjustment</b>	± 10 % of signal output
<b>Response time (0-100 %)</b>	6 msec.
<b>Output ripple</b>	< 0.05 % of FSO
<b>Temperature range</b>	-25 °C to +85 °C
<b>Temperature coefficient</b>	< 0.03 %/°C of FSO
<b>Transducer material</b>	
- coil housing	Austenitic stainless steel AISI 316
- core	Ferritic stainless steel Sandvik 18.0.2.
<b>Protection class</b>	IP67
<b>Cable length</b>	max 250 m
<b>Outer / Inner position force - model "S"</b>	0.3 kp / 0.4 kp
<b>Measuring tip diameter / thread - model "S"</b>	Ø3 mm / M2.5, different types available

## INSTALLATION

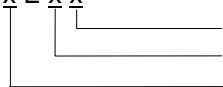
To minimize wear, make sure that there is no bending of the transmitter core when mounting. The coil housing is easily placed with one or two mounting blocks, MBO 16. NOTE! The anodized MBO 16 does not provide GND connection. The core rod ends with a M4 thread for easy attachment and it is marked at 3 positions (NOT the S-version) indicating the nominal mid, inner and outer positions to ease mechanical installation and calibration. Before installation remove the yellow cap holding the core. A laserwelded stopring inside the bore liner prevents the core from falling out during installation. Connect the transmitter according to the connection diagram and check the output configuration. Use only shielded cables for connection. The cable shield should be connected to both the mating cable connector of the transmitter and the reference level of the associated electronics.

## ADJUSTMENT

Place the core in its mid-position. ZERO to the 50 % output signal value (0 V<sub>DC</sub> in the D-configuration). Move the core to the inner position and adjust by SPAN to either 0 % or 100 %. Check opposite position and repeat if necessary. All transmitters are factory calibrated and followed by a "Certificate of Accuracy". Calibration should be checked after every new installation or service, where parts have been changed. Output signal polarity is changed with the *standard/reversed* jumper placed next to the terminals.

## ORDERING INFORMATION

XLW 16/x E x x



S: Spring loaded core movement

A/B/BA/C/D: Factory output configuration for "Certificate of Accuracy".

Range in mm.