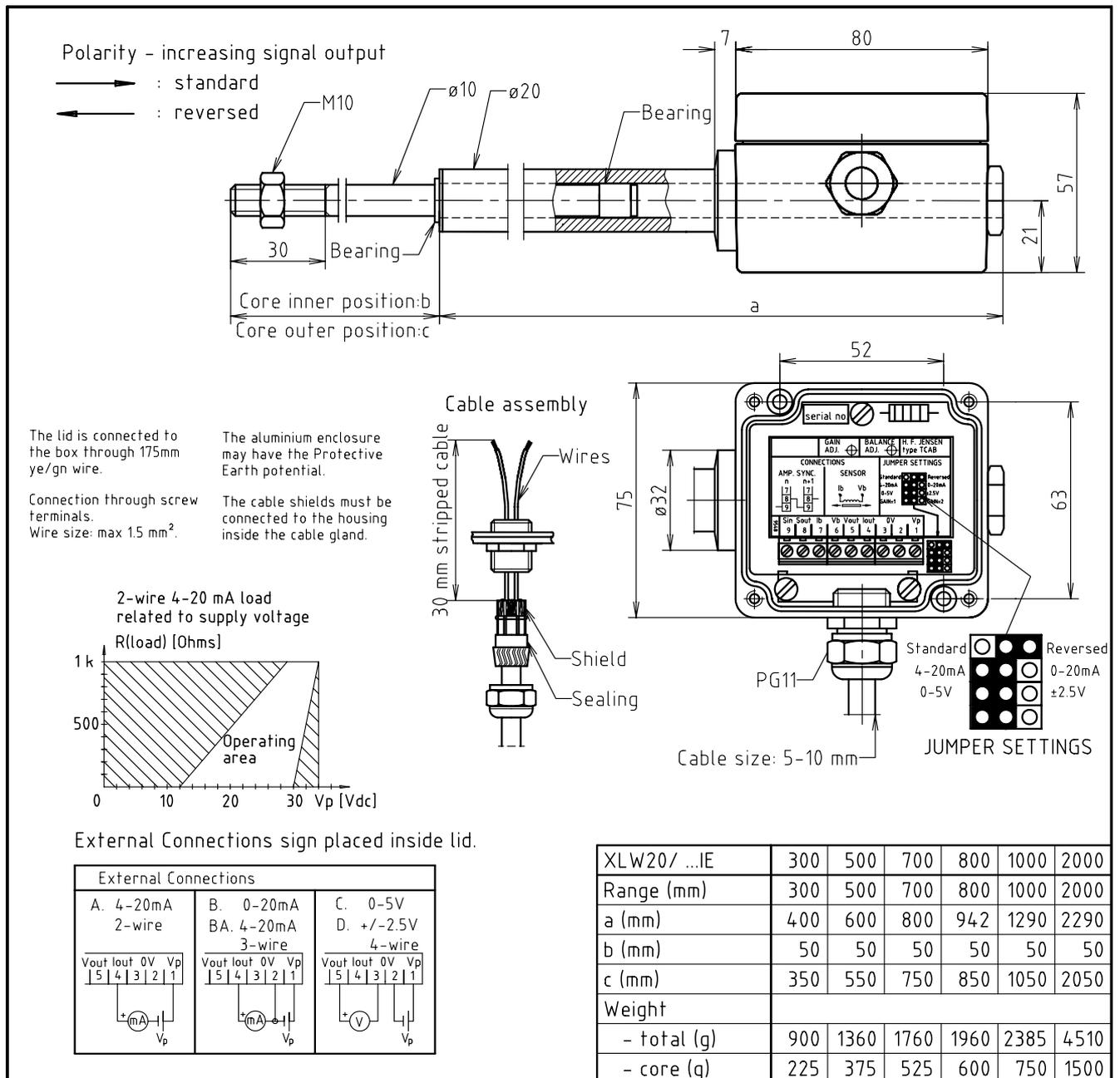


DISPLACEMENT TRANSMITTER XLW 20/..IE - integrated electronics



DESCRIPTION

The XLW 20/... IE is a series of displacement transmitters based on the displacement sensor XLW 20/x and the industrial signal conditioner TCAB, 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 90% 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 except the Al-box with the signal conditioner. 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 IP65 construction ensures compatibility to most environments. The product offers various calibrated output signals, configured by the user through jumpers.

SPECIFICATIONS

Linear ranges	300 mm to 2.000 mm - see table
Supply voltage	12-30 V _{DC}
Supply voltage rejection	min. 86 dB between 12 and 32 V _{DC}
Non-linearity	< 0.5 % of FSO.
Output signals and load - A - B - BA - C - D	Selected by jumpers placed beside the terminals 4-20 mA _{DC} , 2-wire, R _L : see diagram, C _L < 1μF 0-20 mA _{DC} , 3-wire, R _L < 700 Ω , C _L < 1μF 4-20 mA _{DC} , 3-wire, R _L < 700 Ω , C _L < 1μF 0-5 V _{DC} , 4-wire, R _L > 5 kΩ. C _L < 1μF ±2.5 V _{DC} , 4-wire, R _L > 20 kΩ. C _L < 1μF
Load resistance rejection	min. 60 dB for max ΔR _L
ZERO adjustment	± 10 % of FSO
SPAN adjustment	± 10 % of signal output
Response time (0-100 %)	6 msec.
Output ripple	< 0.05 % of FSO
Temperature range	-25 °C to +85 °C
Temperature coefficient	< 0.03 %/°C of FSO
Transducer material - amplifier housing - coil housing - core	Box of AL Si 12 - Cable glands of brass Austenitic stainless steel AISI 316 L Ferritic stainless steel Sandvik 18.0.2.
Electrical connections	Screw terminals max. 1.5 mm ² , cable ø5 to ø10 mm
Environmental conditions - electromagnetic immunity - electromagnetic emission	According to EN 50082-2 (generic industrial standard) According to EN 50081-1 (generic industrial standard)
Protection class	IP65
Cable length	max 250 m

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 20. NOTE! The anodized MBO 20 does not provide GND connection. The core rod ends with a M10 thread for easy attachment and it is marked at 3 positions indicating the nominal mid, inner and outer positions to ease mechanical installation and calibration. Before installation remove the yellow cap holding the core. Check the jumper setting according to the application and connect the transmitter following the *External Connections* sign. Use only shielded cables for connection. The cable shield should be connected inside the transmitter cable gland and to the EMC-reference of the associated electronics.

ADJUSTMENT

The transmitter is factory calibrated with reference to the requested output signal and type sign, and followed by a *Certificate of Calibration*. Calibration should be checked after service performed by the user or according to a user maintenance procedure. The output signal can be changed by moving the jumpers on the PCB. Calibration is within 2 %. To recalibrate, place core in its mid-position. BALANCE to the 50 % output signal value (0 V_{DC} in the D-configuration). Move the core to an inner position and adjust to 0 % or 100 % output signal value with GAIN. Check output with core in opposite position and repeat if necessary. A new offset within the sensors linear range can now be adjusted with BALANCE. Output signal polarity is changed with the *standard/reversed* jumper placed next to the terminals.

ORDERING INFORMATION

XLW 20/x IE x



A/B/BA/C/D: Factory output configuration for "Certificate of Calibration".
Range in mm.