

Position sensor FELIX

Sensors

KEY FEATURES

- High linearity position sensor
- Very high ruggedness at the measuring point
- Tight housing for direct use in e.g. hydraulic transmissions
- Compact and robust design for use in harsh environments
- Long lifetime

TECHNICAL DATA

- Nominal stroke 20 mm
- Analog current loop output
- Operating temperature range from $-30...120\text{ }^{\circ}\text{C}$ / $-22...248\text{ }^{\circ}\text{F}$
- Hall effect based sensor element
- Robust steel housing and plunger

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TECHNICAL DATA

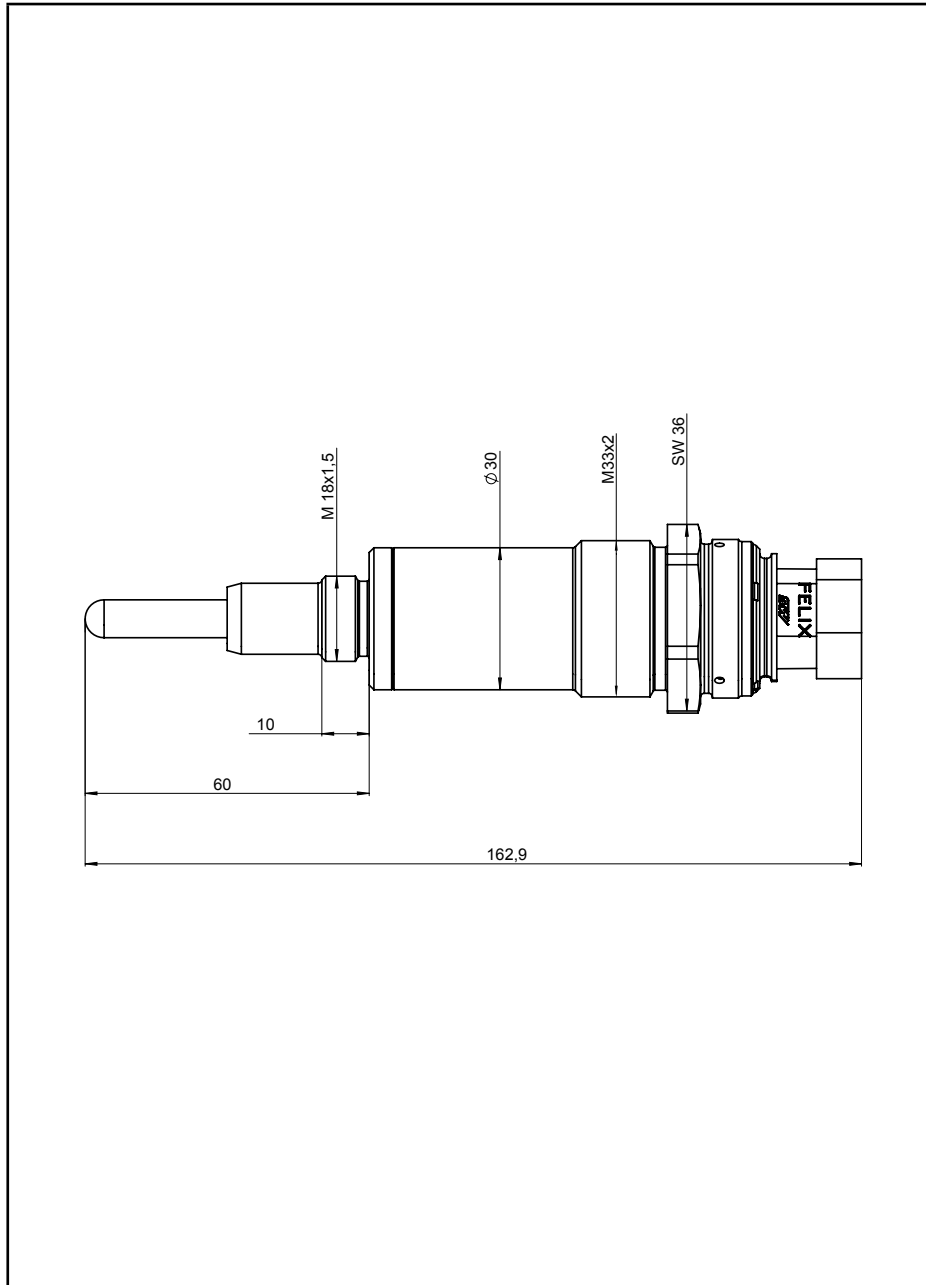
Nominal Stroke	20 mm
Mechanical Stroke	23 mm
Linearity	± 0.8 mm
Actuating force	22...24 N
Hysteresis	< ± 0.1%
Operating temperature	-30... +120 °C / -22... 248 °F
Storage temperature	-40... +140 / -40... 248 °F
Temperature deviation	< ± 0.01 %FS / K (typ.) / < ± 0.026 %FS / K (max.)
Measurement range	0... 20 mm (Stroke in accordance with installation tolerances 0... 23 mm, see drawing)
Material, housing	Steel
Material, connector	Glass fiber reinforced plastic
Material, plunger	Case hardened steel, HCR 60
Pressure resistance (plunger side)	6 bar max. (Hydraulic oil)
Protection	Short circuit, reversed polarity
Ingress protection	IP67
Electrical connection	3-pol connector, AMP-Superseal 1,5
Supply voltage	8... 30 VDC
Current consumption	≤ 30 mA
Resistance	See load diagram
Output Signal	4... 20 mA, 3-wire-technique

QUALIFICATION

Environmental and Testing

EMC Immunity	Automotive standard (without load dump)
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TECHNICAL DRAWING



PIN ASSIGNMENT FELIX

Pin Description

- 1 GND
- 2 Signal
- 3 VCC

Electrical connection		Pin assignment	
Connector for AMP Superseal 1,5, 3-pole, IP67			
Operating area for current output		Recommended terminal layout	
<p>Maximum Load max = $\frac{U_B - 4V}{0.02A}$ (Ω)</p> <p>Load Resistance: $(U_B - 17V) / 21\text{ mA} < R(\text{Last}) < (U_B - 4V) / 21\text{ mA}$; (min. value limited by max. power dissipation)</p>		<p>3-wire-technique</p>	