HySense PO 180

Position sensor with measuring wire

Highly accurate position measurement

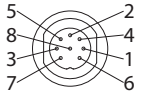
The HySense PO 180 works on the measuring wire principle. It can be easily mounted and does not need linear guiding. It is suitable for use at load cranes, hydraulic presses and other installations where distances need to be measured or changes of position detected. All mechanical and electronic components are protected by a solid casing.

The measuring wire principle – a specially manufactured and calibrated wire is tightly wound around a high-precision drum that is driven against the pulled direction by a spring motor. Through the detection of the winding process the sensor converts the linear movement into an electrical signal.

Major advantages – The sensor is compact, has a very high resolution and accuracy. It has a high dynamic and is insensitive to environmental influences.

Please consider when using the PO 180: The exit angle of the wire from casing must be 90°, or there may be friction between the measuring wire and the casing, causing wear and tear. The top of the sensor should be protected against dirt and splash water and the measuring wire should not be positioned next to a machine or device part. The wire should never be loosened suddenly to avoid retraction into the casing.

Qualities	
Measuring principle	measuring wire
Output signal	4 ... 20 mA
Protection type (EN 60529 / IEC 529)	IP 65 (only with serial cable box)
Material casing / measuring wire	aluminium and high-grade steel / high-grade steel
Signal type	two wires
Supply voltage Ub	12 ... 27 VDC
Current consumption	max. 35 mA
Temperature coefficient	±0.01 % / K
Nonlinearity	< ±0.1 % of the measuring range
Output noise	50 mVeff
Resolution	quasi infinite
Environmental temperature	-20 ... +85 °C
Storage temperature	-20 ... +85 °C
EMV test	IEC 1000-4-2, -4, -5
Vibrational stability	on request
Shock stability	on request

Pin assignment	4 ... 20 mA
	Pin 1 = + Ub / signal +
	Pin 2 = – Ub / signal –
	Pin 3 – 8 = free

Measuring range	Extraction force (max.)	Retraction force (max.)	Measure A	Weight	Order number
mm	N	N	mm	g	
0 ... 100	4.7	3.0	8.0	800	3183-13-03.37
0 ... 375	7.4	3.9	12.5	800	3183-13-05.37
0 ... 1,000	5.3	2.9	8.0	800	3183-13-02.37
0 ... 3,000	6.2	3.0	10.0	1,550	3183-12-02.37

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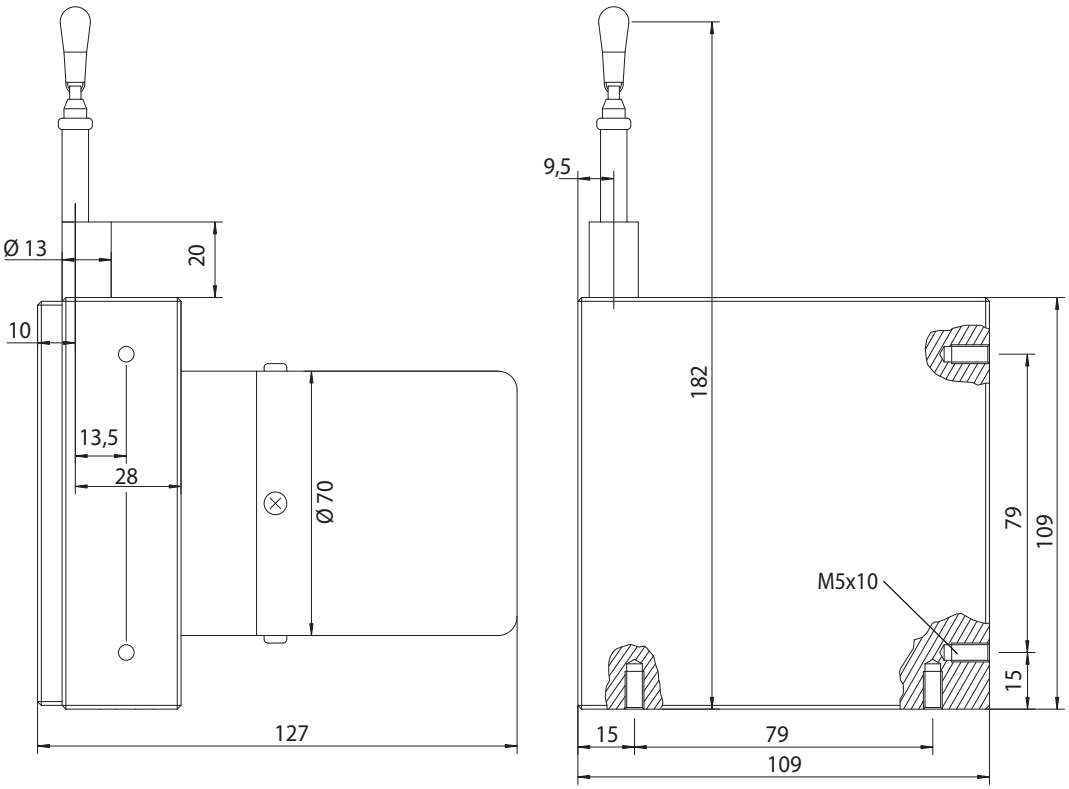
Dimensions

PO 180 • measuring range 0 ... 3,000 mm



PO 180 • other measuring ranges