

Force Transducer SKL-50-135-4.00

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description

The force transducer works according to the principle of shear force measurement normally to the longitudinal axis.

It was developed especially for use on hydraulic cylinders of work platforms, in cranes and conveyor technics.

Ist construction is cylindrical with two measurement chambers. For mounting a notch with 8 mm width and 7 mm depth is milled into the pin.

The measurement chamber including the strain gauge protected against mechanical and chemical damage by seal welding.

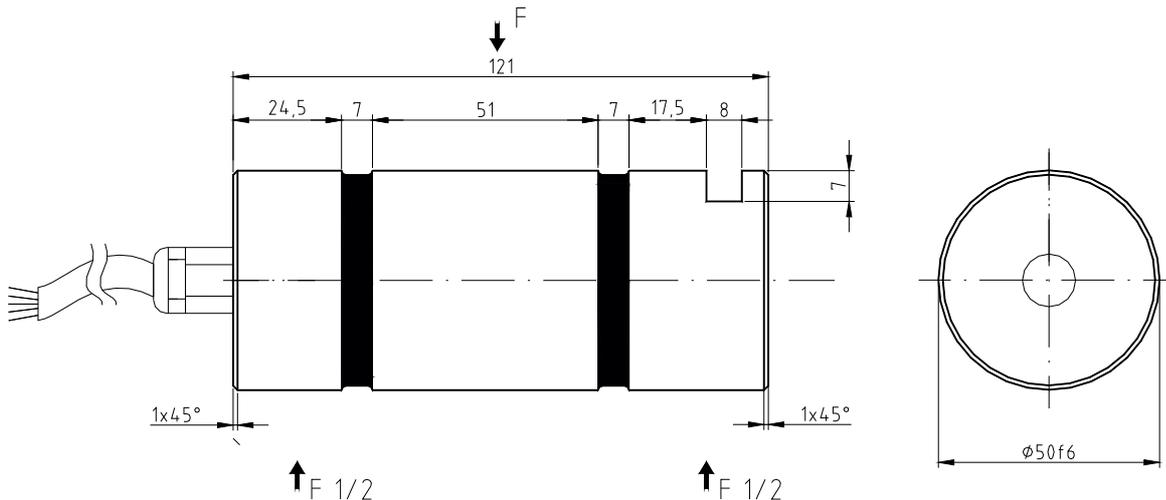
Strain gauge full bridges measure the deformation due to shear forces acting on the bolt.

The bridges are adjusted in the unloaded state to approx. $\pm 0,01$ mV/V.

The transducer SKL-50 is designed for connection to an amplifier.

The shield of the cable is connected with the force transducer.

specification



mechanical execution

diameter, force transmission and mounting see assembly drawing

weight approx. 1,5 kg
 material rod = stainless steel / case = aluminium
 degree of protection IP 67

SKL **50-135**
 nominal force / nominal load 135 kN
 max. overload range / force limit 150 % of nominal force
 breaking force 400 % of nominal force

electrical execution

measuring principle wheatstone full bridge of strain gauges
 input / output resistance 350 Ω / 350 Ω
 nominal sensitivity approx. 1 mV / V (accurate value: see type label / banderole)
 excitation voltage max. 12 V AC / DC
 current consumption max. 35 mA
 calibration tolerance < 0,50 % of final value*
 non-linearity < 0,25 % of final value*
 hysteresis < 0,15 % of final value*
 temperature coefficient:
 of zero signal $\leq 0,04$ % of final value / K
 of the sensitivity $\leq 0,04$ % of set point / K
 insulation resistance > 5.000 M Ω
 nominal temperature range -15 °C to +70 °C
 operating temperature range -25 °C to +80 °C**

cable and connection

cable length / cable type 5 m LiYCY 4 x 0,34 mm²
 cable end wire-end-sleeve
 wiring connections
 brown excitation voltage Us+ / B+
 green excitation voltage Us- / B-
 yellow signal Ud+ / S+
 white signal Ud- / S-
 blue shielding (only in the case of a shielded cable)

* These details are depending on the fit, the resistance moment and the installation length. They are reached with favorable values.

** only for the case that the cable is laid with fastening (depending on cable type)

*** This cable should be connected at the operating voltage unless the calibration signal is used. (only applicable to executions with amplifier)