

Force Transducer ZKA-12-20-1.10

article-no: VX34020044
serial-no: key 23D



description

The force transducer works according to the principle of the strength measuring in the direction of the longitudinal axis.

Pulling forces can be included among others at lifts, cranes, gondolas as well as at braced of masts, towers, platforms etc.

The force transducer ZKA-12 is listed as a threaded rod (on both sides M12). This permits a simple and universal fastening. About as accessories available rod ends arise broader fastening possibilities.

The application room for the strain gauge is protected by an aluminium tube, which is spilled with a highly elastic mass from mechanical and chemical damages.

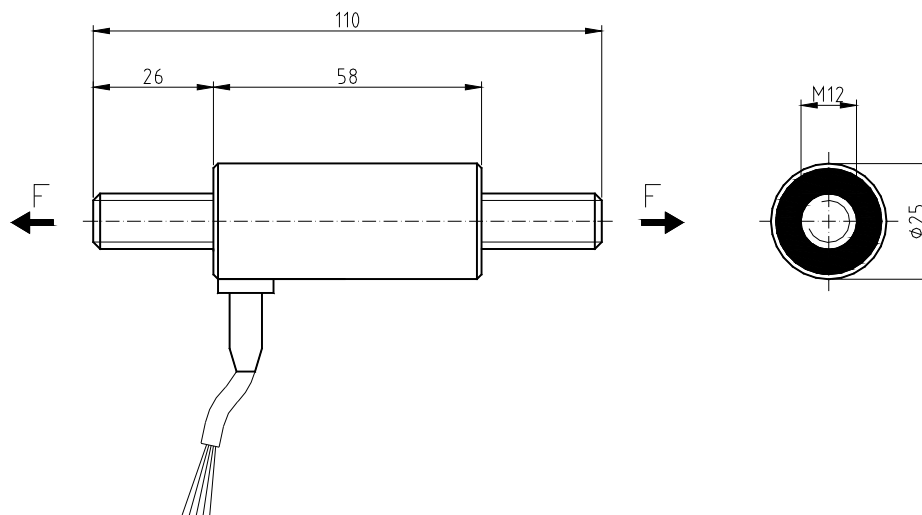
The strain gauge bridges measuring the length change and crossways stretching (vertical and horizontal expansion) caused by pulling forces on the force transducer. An integrated amplifier provides a measuring signal of 1 to 9 mA.

In the unloaded state can by add-ons of the calibrating checking signal (software calibration) the nominal output current be produced. A check of the force transducer with the amplifier and the following measuring facilities is possible with that.

The ZKA-12 is assigned for the direct coupling to an automatic control or a controlling switch.

The shield of the cable is not connected basically with the surface of the force transducer.

specification



mechanical execution

diameter, force transmission and mounting see assembly drawing

weight approx. 0,15 kg
 material rod = stainless steel / case = aluminium
 degree of protection IP 67

ZKA **12-20**
 nominal force / nominal load 2000 kg
 max. overload range / force limit 150 % of nominal force
 breaking force 400 % of nominal force

electrical execution

measuring signal (output) 1 - 9 mA
 operating voltage 12 - 24 V DC ± 20 %
 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 1,5 m LiYCY 4 x 0,14 mm²
 cable end 6-pole connector (series 680)
 pin assignment
 PIN 1 measuring signal output Im
 PIN 2/6 not connected
 PIN 3 ground / earth GND
 PIN 4 calibration signal (low active) CC***
 PIN 5 operating voltage UB
 housing shielding (only in the case of metall casing and 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)