

Force Transducer ZKA-14-10/12,5-1.XX



description

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

Greater 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-14 is listed as a threaded rod (on both sides M14). This permits a simple and universal fastening. About as accessories available rod ends arise broader fastening possibilities.

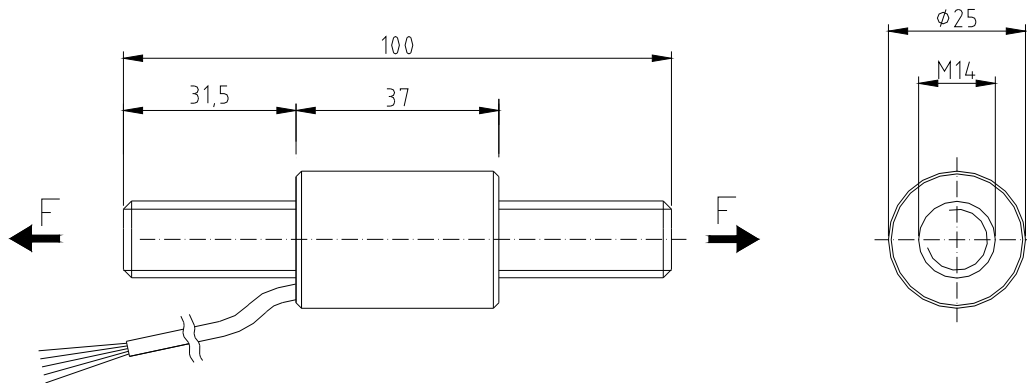
The application room for the strain gauge is protected by an aluminium tube, which is spilled with a highly elastic mass from mechanical and chemical damages.

The strain gauge bridges measuring the length change and crossways stretching (vertical and horizontal expansion) caused by pulling forces on the force transducer. Executions with strap output or amplifier with a measuring signal of 1 - 9 mA or 4 - 20 mA are possible for it.

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

The ZKA-14 is planned according to execution for the direct connection with an amplifier or a control.

specification



mechanical execution

weight	approx. 150 g
mounting	2 x screw threads M14 (optional with rod end EF15)
material	steel
environmental protection	IP 65

ZKA	14-10	14-12,5
nominal force	10 kN	12,5 kN
max. use force	150 % of the nominal force	150 % of the nominal force
rupture force	500 % of the nominal force	500 % of the nominal force

electrical execution

operating voltage	when strap with 350 Ω: max. 12 V AC / DC when amplifier: 9 - 30 V DC
current consumption	max. 35 mA / 40 mA (according to execution)
output / measuring signal	350 Ω / 1 - 9 mA / 4 - 20 mA (options)
calibration in	N / kg
calibration tolerance	< 0,50 % of the final value*
nonlinearity	< 0,25 % of the final value*
hysteresis	< 0,15 % of the final value*
temperature coeff.	
zp.	≤ 0,04 % of the final value / K
rec.	≤ 0,04 % of the set point / K
operating condition	-25 °C to +80 °C**

connection

cable type	1,5 m LiYCY 4 x 0,14 mm ² (example)
electrical connections	when strap / amplifier
	brown strap voltage U _s + / operating voltage
	green strap voltage U _s - / GND (ground)
	yellow strap signal U _d + / measuring signal output
	white strap signal U _d - / calibration signal (low activ)***
	blue protection

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

** in case the laid cable is fixed

*** If the calibration signal is not used, then this cable should be clamped together with the brown wire at the operating voltage.