

Force Transducer SZ-80-17t/25t/35t-1.XX



description

The compressing cylinder serves for the taking of axial pressure strengths. Use is carried out for including of static and dynamic strengths to feathers, screw connections, presses etc. The robust form makes a universal use possible under rough conditions in the industry.

It works according to the compressing cylinder principle. With it can be strength, caused by weights, one pressing strengths and friction strengths measured. The strength introduction is alone carried out via compressing pipe foot and end wall (red labeled).

The force transducer can get prestressed like a washer.

The application room for the stretching measuring stripe (strain gauge) is offered protection against chemical and mechanical charges with one of a very elastic mass.

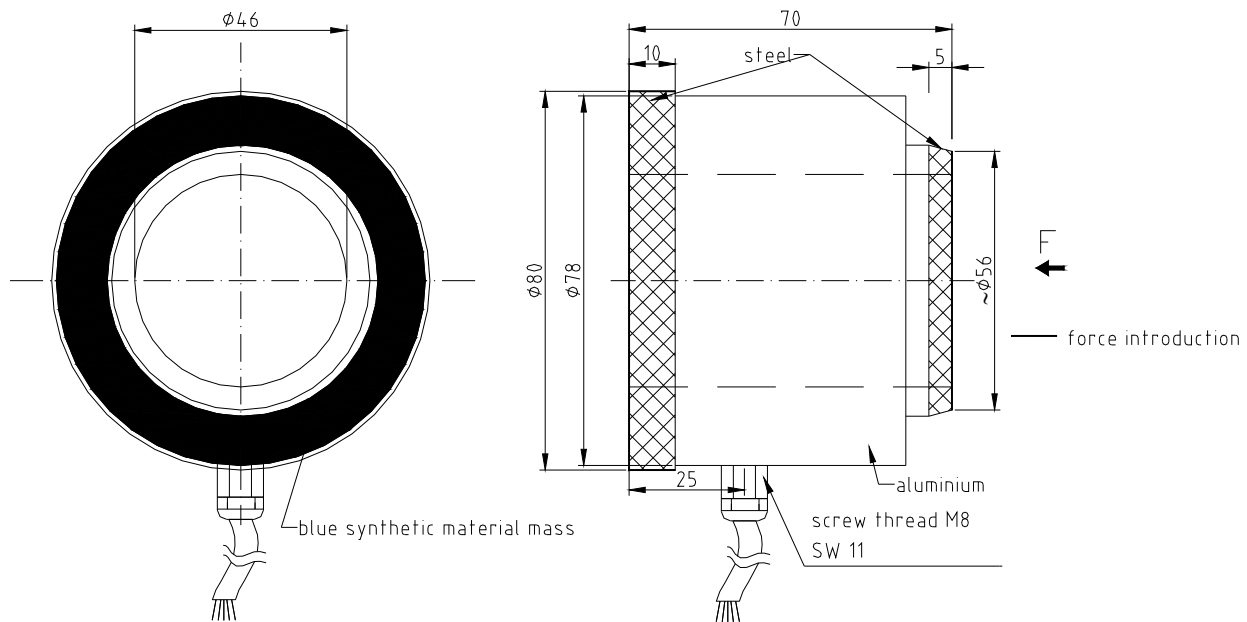
ATTENTION! Not using protection tube and blue synthetic material mass for the strength introduction under any fuss.

The strain gauge full bridges measure this one for appeared deformations for the cylinder by the compression. 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 SZ-80 is planned according to execution for the direct connection with an amplifier or a control.

specification



mechanical execution

weight	approx. 750 g
dimension	ground plate \varnothing 80 mm, load introduction ring \varnothing 56 mm, inside diameter 46 mm
material	steel / aluminium
environmental protection	IP 67

SZ	80-17	80-25	80-35
nominal force	170 kN	250kN	350kN
max. use force	150 % o.t.n.f.	150 % o.t.n.f.	150 % of the nominal force
rupture force	400 % o.t.n.f.	400 % o.t.n.f.	400 % of the nominal force

electrical execution

measuring signal	4 - 20 mA
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.	\leq 0,04 % of the final value / K
rec.	\leq 0,04 % of the set point / K
operating condition	-25 $^{\circ}$ C to +80 $^{\circ}$ 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_o+ / measuring signal output
	white strap signal U_o- / 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.