

# Force Transducer DZA-46-15-1.XX



## description

The force transducer is suitable for the measuring of static and dynamic train and pressure strengths, at high precision and low measurements. It works according to the principle of the clipping strength measuring crossways to the longitudinal axis.

The DZA-46 is suitable for use to pondering technology, load measuring to platforms, deciding of kick loads etc.

It is executed as a z/s shaped beam with a measuring cell. The beam shape and two threads M12 on the upper and underside permit a simple assembly and strength introduction.

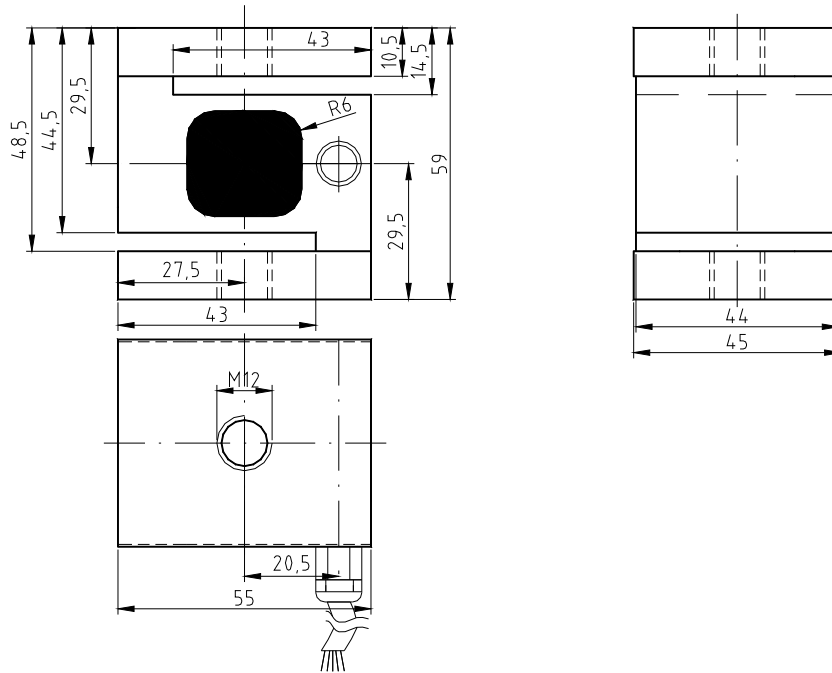
The application room for the strain gauge is spilled with a very elastic mass and protected so from mechanical and chemical damages.

The strain gauge bridges measure in the measuring cell the caused deformation by clipping strengths 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 DZA-46 is planned according to execution for the direct connection with an amplifier or a control.

## specification



### mechanical execution

<b>weight</b>	approx. 850 g
<b>mounting</b>	2 x screw threads M12
<b>material</b>	steel
<b>environmental protection</b>	IP 67
<b>DZA</b>	
<b>nominal force</b>	<b>46-15</b>
<b>max. use force</b>	15 kN
<b>rupture force</b>	150 % of the nominal force
	400 % of the nominal force

### electrical execution

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

### connection

<b>cable type</b>	1,5 m LiYCY 4 x 0,14 mm <sup>2</sup> (example)
<b>electrical connections</b>	<b>when strap / amplifier</b>
	brown strap voltage U <sub>s+</sub> / operating voltage
	green strap voltage U <sub>s-</sub> / GND (ground)
	yellow strap signal U <sub>d+</sub> / measuring signal output
	white strap signal U <sub>d-</sub> / 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.