

# Torsion Sensor TSA-36A-250Nm-1.00

article-no.: VX34020687  
serial-no.: key 27G



## description

TSA-36A consists of two flanges which are connected about a torsion tube with each other.

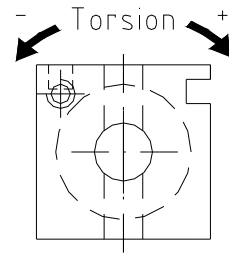
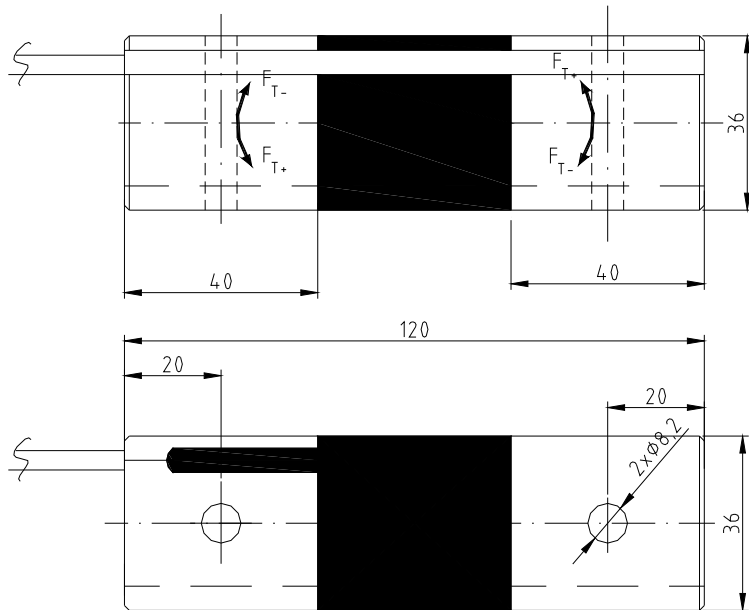
The sensor is suited for torsion measurements and the measurement of reaction moments for orthopaedic measuring devices. It is applicable for measurements of friction forces.

The strain gauge full bridge measure the torsion movement appearing in the tube of the lattice structure.

The bridge balance is balanced in the unloaded state on approx. 0,01 mV/V.

TSA-36A is carried out in 4-leading technology and is planned for the direct connection with an amplifier about a short distance.

## specification



### mechanical execution

<b>weight</b>	approx. 450 g
<b>mounting</b>	2 x boreholes Ø 8,2 mm
<b>material</b>	aluminium
<b>environmental protection</b>	IP 67
<b>TSA</b>	
<b>nominal moment</b>	<b>36A-250Nm</b>
<b>max. use moment</b>	±250 Nm
<b>rupture moment</b>	150 % of the nominal moment
	300 % of the nominal moment

### electrical execution

<b>measuring principle</b>	strain gauge full bridge
<b>input and output resistance</b>	350 Ω
<b>sensitivity</b>	ca. 2,3 mV / V (exactly details on type label or banderole of the cable)
<b>operating voltage</b>	max. 12 V AC / DC
<b>calibration in</b>	Nm
<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>	≤ 0,05 % of the final value / K
<b>rec.</b>	≤ 0,06 % of the set point / K
<b>insulation resistance</b>	> 5.000 MΩ
<b>operating voltage</b>	-25 °C to +80 °C**

### connection

<b>cable type</b>	LiYCY 4 x 0,14 mm <sup>2</sup>										
<b>cable length</b>	2,5 m										
<b>cable end</b>	tinned										
<b>electrical connections</b>	<table border="0" style="width: 100%;"> <tr> <td>brown</td> <td>strap voltage U<sub>s</sub>+</td> </tr> <tr> <td>green</td> <td>strap voltage U<sub>s</sub>-</td> </tr> <tr> <td>yellow</td> <td>strap signal U<sub>b</sub>+</td> </tr> <tr> <td>white</td> <td>strap signal U<sub>b</sub>-</td> </tr> <tr> <td>blue</td> <td>protection</td> </tr> </table>	brown	strap voltage U <sub>s</sub> +	green	strap voltage U <sub>s</sub> -	yellow	strap signal U <sub>b</sub> +	white	strap signal U <sub>b</sub> -	blue	protection
brown	strap voltage U <sub>s</sub> +										
green	strap voltage U <sub>s</sub> -										
yellow	strap signal U <sub>b</sub> +										
white	strap signal U <sub>b</sub> -										
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