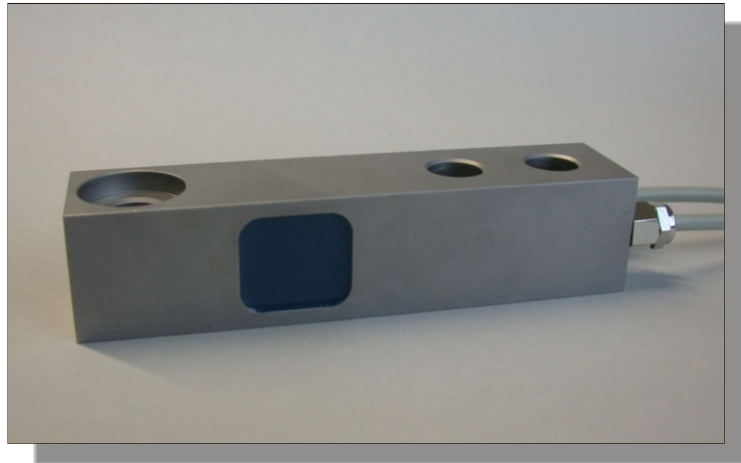


# Force Transducer SKA-30D-10-1.70

article-no: VX34020308  
serial-no: key 046



## description

The redundant force transducer works according to the strength measuring principle on a transverse basis to the longitudinal axis.

The SKA-30D is designed for application at conveyor scales, bin-type weighing devices, platform scales and overhead conveyor scales, but can also be used for measuring the forces applied on machine parts, levers, axles etc.

The device has been designed as a beam with two measuring cells. Due to the beam shape and two 13 mm size boreholes, all machine building requirements will be met when mounting this component. The force introduction is carried through by use of a M12 screw thread with one countersink 24 mm. The measuring bridge has been arranged redundant, if failed one measuring cell or the amplifier, then the other bridge take over this one service.

The measuring cell for the strain gauge has been cast with a high-elastic compound and is thus protected against mechanical or chemical damages.

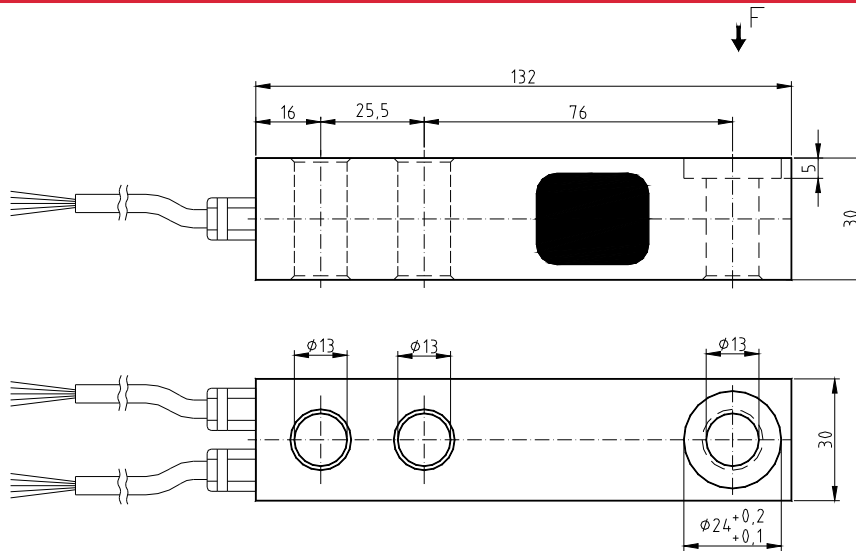
The strain gauge bridges measure the caused deformation in the measuring cell due to the shear forces at the beam. Per integrated amplifier gives a measuring signal between 4 and 20 mA.

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 redundant force transducer with the amplifiers and the following measuring facilities is possible with that.

The SKA-30D is assigned for the direct coupling to an automatic control.

The shield of the cable connected with the surface of the force transducer.

## specification



## mechanical execution

diameter, force transmission and mounting see assembly drawing

weight approx. 1,0 kg  
 material stainless steel  
 degree of protection IP 67

**SKA** **30D-10**  
 nominal force / nominal load 1.000 kg  
 max. overload range / force limit 150 % of nominal force  
 breaking force 400 % of nominal force

## electrical execution

per channel  
 measuring signal (output) 4 - 20 mA  
 operating voltage 12 - 24 V DC  $\pm 20\%$   
 current consumption max. 45 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  $> 5.000\text{ M}\Omega$   
 nominal temperature range  $-15\text{ }^\circ\text{C}$  to  $+70\text{ }^\circ\text{C}$   
 operating temperature range  $-25\text{ }^\circ\text{C}$  to  $+80\text{ }^\circ\text{C}^{**}$

## cable and connection

per channel  
 cable length / cable type 4,0 m LiYCY 4 x 0,14 mm<sup>2</sup>  
 cable end wire-end-sleeve  
 wiring connections  
   brown operating voltage U<sub>B</sub>  
   green ground / earth GND  
   yellow measuring signal output I<sub>m</sub>  
   white calibration signal (low active) CC<sup>\*\*\*</sup>  
   blue shielding (only in the case of 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

\*\*\* This cable should be connected at the operating voltage unless the calibration signal is used. (only applicable to executions with amplifier)