

Force Transducer SKA-30D-20-4.70

article-no: VX34020462

serial-no: key 21J



description

The redundant force transducer works according to the principle of the clipping strength measuring crossways to the longitudinal axis.

The SKA-30D is designed for the 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 components. The force introduction is carried through by use of a M12 screw thread. The measuring straps has been arranged redundant, if failed one measuring cell or the amplifier, then the other strap from the second channel take over this one service.

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

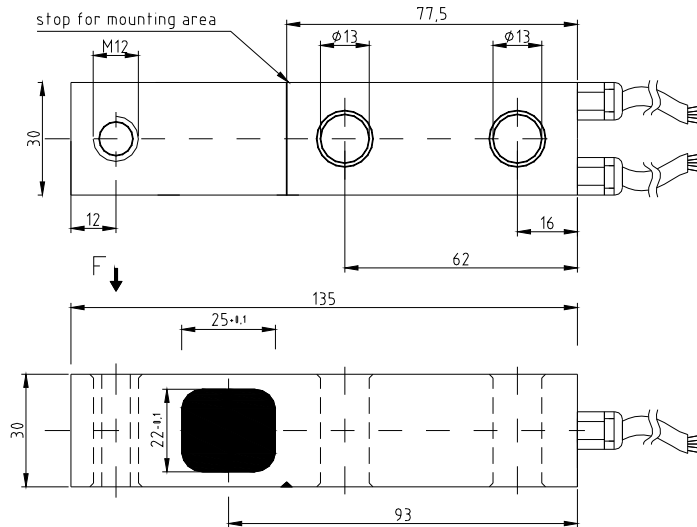
The strain gauge bridges measure the caused deformation in every measuring cell due to the shear forces at the beam. One integrated amplifier each delivers the measuring signal from 4 to 20 mA.

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 amplifier and the following measuring facilities is possible with that.

The SKA-30D is assigned for the direct coupling to an control system or comparator switch.

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. 1,3 kg
 material stainless steel
 degree of protection IP 67

SKA **30D-20**
 nominal force / nominal load 2.000 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 8,0 m SD 200 C 4 x 0,25 mm²
 cable end wire-end-sleeve
 wiring connections
 brown operating voltage U_B
 green ground / earth GND
 yellow measuring signal output I_m
 white calibration signal (low active) CC***
 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 (depending on cable type)

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