Force Transducer
SKA-30A-0,98-1.50

MESSELEKTRONIK GmbH

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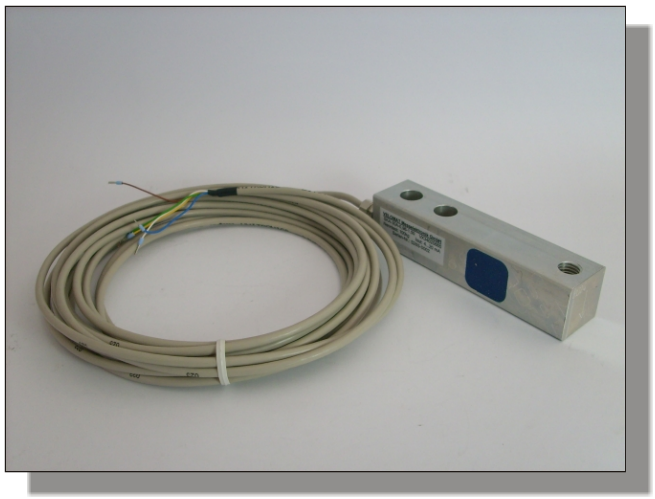

description

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

The SKA-30A is suitable for use to band, containers, platform and hanging train balances but also for measuring strengths in terms of machine parts, levers, axes etc.

It is executed as a beam with measuring cells. The beam shape and two drillings with 13 mm of diameters permit an assembly suitable for mechanical engineerings. The strength introduction is carried out via a thread M12.

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

The strain gauge bridges measure the deformation caused by clipping strengths on the beam in the measuring cell. An integrated amplifier 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 force transducer with the amplifier and the following measuring facilities is possible with that.

The SKA-30A is provided for the direct connection to a control or a controlling switch.

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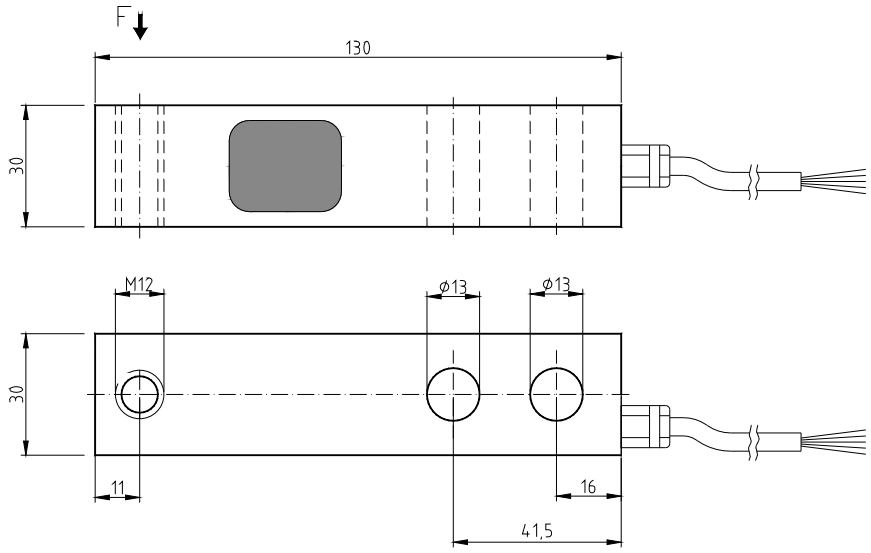
specification



mechanical execution

diameter, force transmission and mounting see assembly drawing

weight	approx. 0,40 kg
material	aluminium
degree of protection	IP 67
SKA	**30A-0,98**
nominal force / nominal load	980,7 N (100 kg)
max. overload range / force limit	150 % of nominal force
breaking force	400 % of nominal force

electrical execution

measuring signal (output)	4 - 20 mA
operating voltage	12 - 24 V DC ±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	≤ 0,04 % of final value / K
of the sensitivity	≤ 0,04 % of set point / K
insulation resistance	> 5.000 MΩ
nominal temperature range	-15 °C to +70 °C
operating temperature range	-25 °C to +80 °C**

cable and connection

cable length / cable type	6,0 m LiYCY 4 x 0,14 mm²	
cable end	wire-end-sleeve	
wiring connections	brown	operating voltage U_B
	green	ground / earth GND
	yellow	measuring signal output Im
	white	calibration signal (low activ) 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)