Force Transducer
SKL-45-125-8.S60

VELOMAT
MESSELEKTRONIK GmbH

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description

The load pin works according to the principle of the clipping strength measuring crossways to the longitudinal axis.

The SKL-45 was developed especially for the application in hydraulic cylinders by work platforms, cranes and in the conveyor technology.

It is executed as a round bolt with two measuring chambers. Two threaded holes M8 in the front of the load pin can be used for fixation and mechanical fastening.

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 the measuring cell due to the shearing forces at the beam. An external amplifier supplies the measuring signal of 4 - 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 plate load cell with the amplifier and the following measuring facilities is possible with that.

The SKL-45 is provided for the direct connection to an automatic control or a controller switch.

The shield of the cable is not connected basically with the surface of the force transducer.

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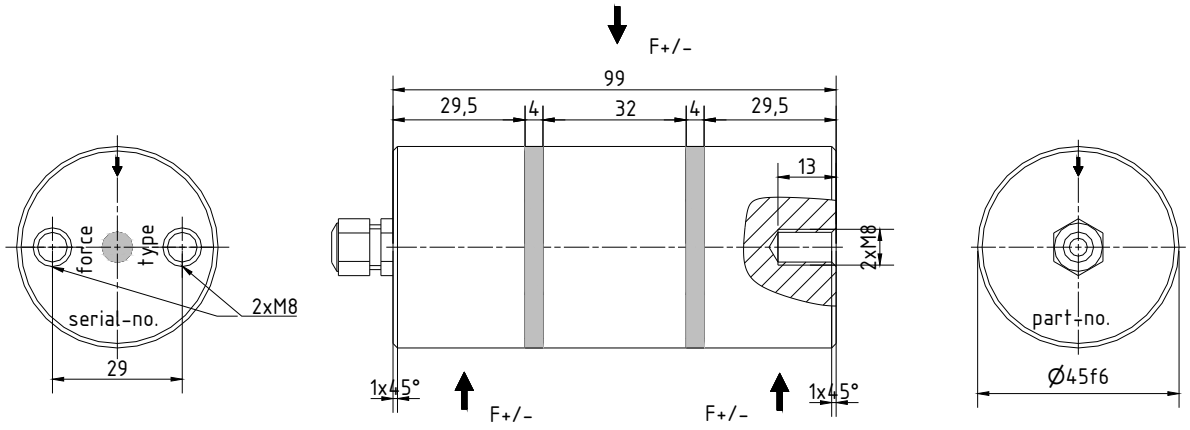
specification



mechanical execution

diameter, force transmission and mounting see assembly drawing

weight	approx. 1,7 kg
material	stainless steel
degree of protection	IP 67
SKL	**45-125**
nominal force / nominal load	+ / -125 kN
max. overload range / force limit	200 % of nominal force
breaking force	400 % of nominal force

electrical execution

measuring signal (output)	4...12(zero point)...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:		
sensor - amplifier	0,5 m SD 200 C 4 x 0,25 mm²	
amplifier - cable end	10 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 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)