Load Pin
SKL-50(S)-60-2.XX

VELOMAT MESSELEKTRONIK

conditional-principled style

description

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

The SKL-50(S) was developed especially for use at hydraulics cylinders of work stages, pulley blocks to cranes, building vehicles and for conveyor technology.

It is executed as a round bolt with two measuring chambers. Two thread drillings each, M8 to the end walls as well as a groove (20 mm x 5 mm), serve for the fastening of blank plates or another assembly.

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

DMS-full bridges measure the deformation caused by clipping strengths on the bolt in the measuring chambers. Executions with strap output or amplifier with a measuring signal of 1 - 9 mA or 4 - 20 mA are possible for it.

By application of an amplifier the nominal output current can be produced in the unloaded state by add-ons of the calibrating checking signal (software calibration). A check of the load pin with the amplifier and the following measuring facilities is possible with that.

The SKL-50(S) is planned according to execution for the direct connection with an amplifier or a control.

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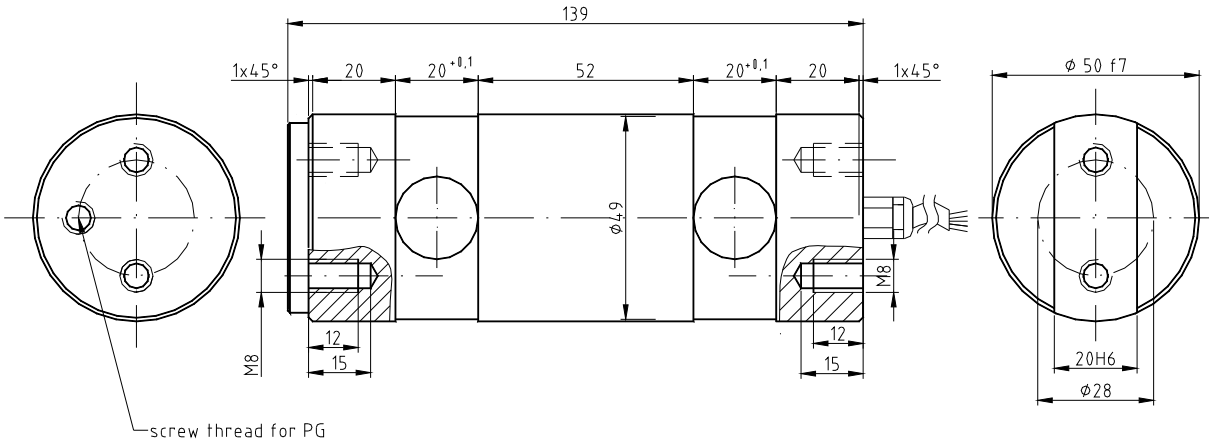
specification



mechanical execution

weight	approx. 2,7 kg
mounting	2 x thread M8 at the end wall, groove 20 mm x 5 mm
material	X35CrMo17 1.4122
environmental protection	IP 65
SKL	**50-60**
nominal force	60 kN
max. use force	150 % of the nominal force
fracture load	500 % of the nominal force

electrical execution

operating voltage	when strap with 350 Ω: max. 12 V AC / DC when amplifier: 9 - 30 V DC
current consumption	max. 35 mA / 40 mA (according to execution)
output / measuring signal	350 Ω / 1 - 9 mA / 4 - 20 mA (options)
calibration in	N / kg
calibration tolerance	< 0,50 % of the final value*
nonlinearity	< 0,25 % of the final value*
hysteresis	< 0,15 % of the final value*
temperature coeff.	
zp.	≤ 0,04 % of the final value / K
rec.	≤ 0,04 % of the set point / K
operating condition	-25 °C to +80 °C**

connection

cable type	1,5 m LiYCY 4 x 0,14 mm² (example)
electrical connections	**when** — **strap / amplifier**
brown	strap voltage U_S+ / operating voltage
green	strap voltage U_S- / GND (ground)
yellow	strap signal U_D+ / measuring signal output
white	strap signal U_D- / calibration signal (low activ)***
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
*** If the calibration signal is not used, then this cable should be clamped together with the brown wire at the operating voltage.