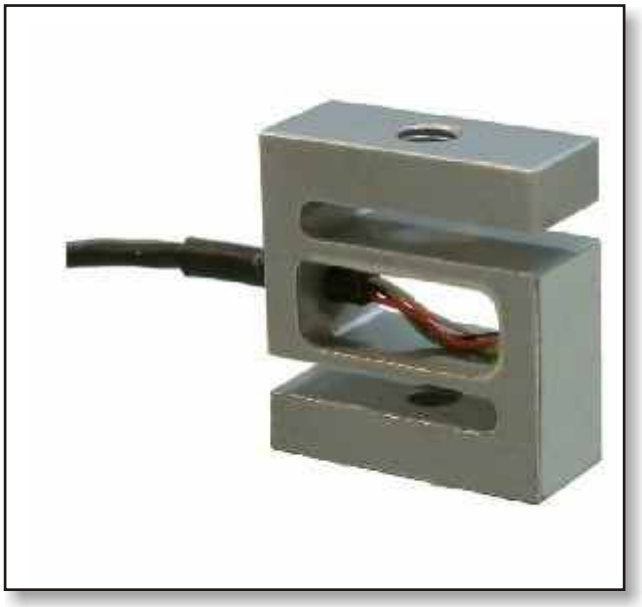
Force Transducer
DZA-24A-8N/80N/400N-1.XX

VELOMAT MESSELEKTRONIK



description

The force transducer is useable for tension or compression and works according to the principle of the bend strength measuring.

The DZA-24A are suitable for use to pondering technology, load measuring to platforms, deciding of kick loads etc.

It is executed as a z/s shaped bend beam with a measuring cell. The beam form and two screw threads M5 on the upper and underside permit a simple assembly and strength introduction. It allows the measuring of train and pressure strengths.

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

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

The DZA-24A is planned according to execution for the direct connection with an amplifier or a control.

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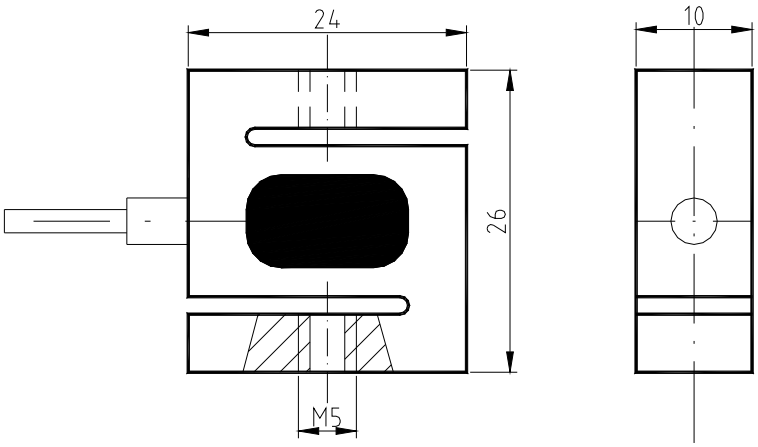
specification



mechanical execution

structural design	double bend beam
strengh direction	attraction / pressure
length x width x height	24 mm x 26 mm x 10 mm
force introduction	screw thread M5
mounting	screw thread M5
material	aluminium
precision grade	0,1

DZA	**24A-8N**	**24A-80N**	**24A-400N**
nominal force F_N	8 N	80 N	400 N
nominal measurement way	0,2 mm	0,152 mm	0,08 mm
rupture force	20 N	290 N	1500 N
limit cross strength	10 % F_N		

electrical execution

nominal index (S_N)	2 mV / V $\pm$ 0,1 % (when strap)
zero signal tolerance	$\pm$ 10 % F_N
max. operating voltage	10 V
input resistance	415 $\Omega \pm 10\ \Omega$
output resistance	350 $\Omega \pm 1{,}5\ \Omega$
insulation resistance	> 5 x $10^9\ \Omega$
linearity error	$\leq$ 0,1 % S_N
reversal margin	$\leq$ 0,1 % S_N
temperature coeff.	
zero signal	$\leq \pm$ 0,02 % F_N / K
index	$\leq \pm$ 0,01 % S_N / K
zero point return error (30 min)	$\leq$ 0,1 % S_N
creeping error (30 min)	$\leq$ 0,1 % S_N

connection

connection 4 ladder open	2 m (example)	
electrical connection	red	strap voltage U_S+
(when strap)	black	strap voltage U_S-
	green	strap output U_D+
	white	strap output U_D-