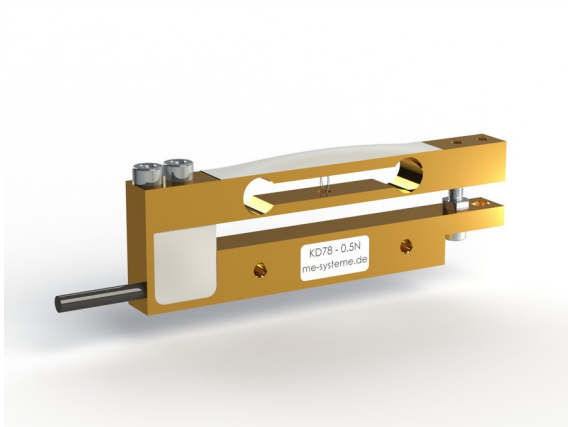


Force Sensor KD78 500mN

Item number: 22

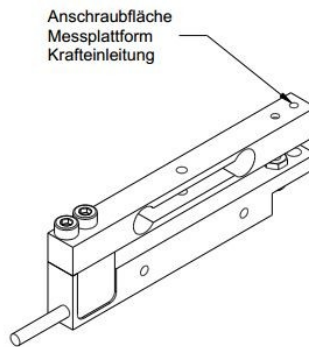
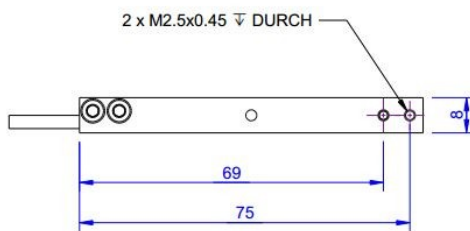
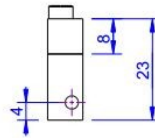
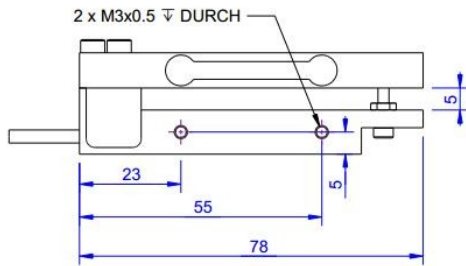
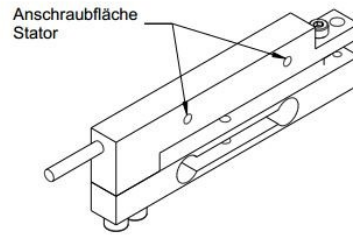
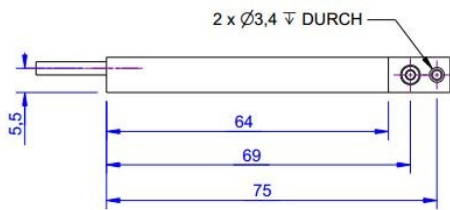


The force sensor KD78 is used for force measurement in the millinewton range or for weighing purposes with a resolution of approx. 10 mg.

Due to the sensor's low weight and its high natural frequency of approx. 400Hz, high measurement rates of up to 50Hz can be realized despite the low measurement range of 0.5 newton. Also filtering in order to refine resolution can be conducted.

The best possible resolution is achieved with the 24bit measuring amplifier GSV-2.

Technical Drawing



Technical Data

Basic Data			Unit
Type	Kraftsensor		
Force direction	Tension/Compression		
Rated force Fx	500		mN
Force introduction	Internal thread		
Dimension 1	2xM2,5x0,45		
Sensor Fastening	Internal thread		
Dimension 2	2xM3x0,5		
Operating force	200		%FS
Rated displacement	0.25		mm
Lateral force limit	100		%FS
Material	aluminum-alloy		
Natural frequency fx	250		Hz
Dimensions	78mm x 8mm x 23mm		
Height	23		mm
Length or Diameter	78		mm
Variants	500mN		

Electrical Data		Unit
Input resistance	390	Ohm
Tolerance input resistance	40	Ohm
Output resistance	350	Ohm
Tolerance output resistance	3	
Insulation resistance	2	GOhm
Rated range of excitation voltage from	2.5	V
Rated range of excitation voltage to	5	V
Operating range of excitation voltage from	1	V
Operating range of excitation voltage to	10	V
Zero signal	0.05	mV/V
Rated output	1	mV/V / FS
Characteristic value range from	0.6	mV/V
Characteristic value range to	1.2	mV/V

Accuracy Data		Unit
Accuracy class	0,1	
Relative linearity error	0.02	%FS
Relative zero signal hysteresis	0.02	%FS
Temperature effect on zero signal	0.02	%FS/K
Temperature effect on characteristic value	0.1	%RD/K
Relative creep	0.1	%FS

Environmental Data		Unit
Rated temperature range from	-10	°C
Rated temperature range to	70	°C
Operating temperature range from	-10	°C
Operating temperature range to	85	°C
Storage temperature range from	-10	°C
Storage temperature range to	85	°C
Environmental protection	IP65	

Abbreviation: RD: „Reading“; FS: „Full Scale“;1) The exact characteristic value is indicated in the test report.

Pin Assignment

Channel	Symbol	Description	Wire color	PIN
	+Us	positive bridge supply	red	
	-Us	negative bridge supply	black	
	+Ud	positive bridge output	green	
	-Ud	negative bridge output	white	

Pressure load: positive output signal. Shield- transparent.