HKM Messtechnik

Miniature compression load cell

DD 1.X

For compression loads
Nominal loads from 50 kg to 100 kg
Smallest design / Miniature version

Metering units
Load and force measurement

Designed, developed and made in Germany

These miniature compression load cells are intended for measuring static and dynamic compressive forces.
In many applications where space is limited, their small size is a decisive advantage. With their metallic housings, these sensors can also be used where they are subject to aggressive environments.
Loads must be applied axially to the compression load cell. To apply a load, all that is necessary is to place the compression load cell on a support surface concentric with the line of action of the force to be measured.
Where the measurement signal must be transmitted over a long distance, miniature compression load cells can be equipped with an external measuring amplifier.

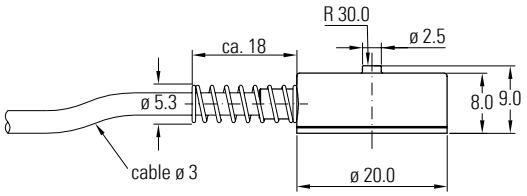
Technical data

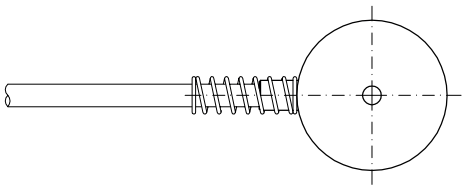
Type		DD 1.0	DD 1.1
Nominal load		50 kg	100 kg
Output signal		≈ 1.8 mV/V	
Power supply U_b		< 10 V	
Dimensions	Diameter	Ø 20 mm	
	Height	9 mm	
Material		Aluminium	Stainless steel
Self weight (with cable)		30 g	36 g
Maximum working load*		1.2 x nominal load	
Limit load*		1.5 x nominal load	
Breaking load*		> 3 x nominal load	
Accuracy		±0.5% f.s.**	
Reference temperature		20°C	
Nominal temperature range		–10°C to +50°C	
Working temperature range		–30°C to +80°C	
Temperature coefficient of gain		< 0.5% f.s.**/10 K	< 0.2% f.s.**/10 K
Temperature coefficient of zero		< 0.2% f.s.**/10 K	
Input bridge resistor		400 Ω	
Output bridge resistor		350 Ω	
Insulation resistance		> 1 GΩ	
Max. power consumption		40 mA	
Electrical protection		Reverse voltage, overvoltage and short circuit protection	
Cable type		LIFY-CB-Y, 4 x 0.1 mm², length 1m	
Connection		U_b : BN | Signal+: GN | GND: WH | Signal–: YE	
Nominal deflection		< 0.1 mm	
Degree of protection		IP 67	

* The sum of the dynamic and static load is decisive
** f.s. = full scale value

Dimensions

in mm





Options

» Other output levels with external measuring amplifier
» Other cable length