

Product Description

Compression Force Load Cell DK3

Special Features

- Minimum space requirement due to compact design
- Simple mounting
- Design in stainless steel
- Nominal force ratings from 1 up to 50 kN

Scope of Supply

Compression force load cell with fixed cable (PVC), 5 m in length with straight receptacle

- Load button

Additional Accessories

- **Option F:** Use in potentially explosive atmospheres (Adaption Modul J-Box contained in the scope of supply)



Application

The cylindrical form and small dimensions of the compression force load cell series DK3 make them especially suitable for confined spaces. The completely enclosed stainless-steel design with the protection class IP 67 is able to withstand wet conditions in machinery and equipment. The screw top ensures an optimal force path.

The compression force load cell of the DK series consists primarily of a single sensor element designed and optimized with finite element analysis. As a result all sensors have the same dimensions. The load cells with nominal force ratings of 1 and 2 kN function according to the shearing principle, the other according to the compression principle. Strain gauges applied to the active areas of the sensor body capture the acting forces.

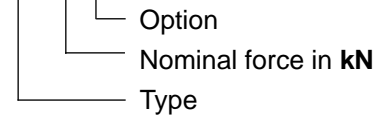
A measuring amplifier e. g. the **HAEHNE MV125** is available for the voltage supply to the full bridge and the processing of the measuring signals.

The signals at the output terminals of the amplifier are proportional to the acting compression force. They can be digitally displayed or used as instantaneous values in a control loop. The radial cable entry facilitates simple mounting of the load cell to machine frames.

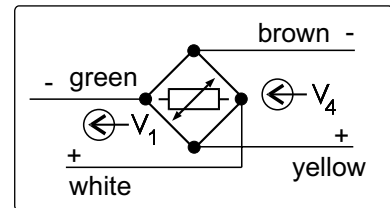
Technical Data	Values (%) based on nominal force
Nominal force	1; 2; 5; 10; 20; 50 kN
Max. operating force	160 %
Nominal rating (with Option F: J-Box necessary)	1,5 mV / V
Comined error	0,5 %
Nominal ambient temperature	+10...+60° C
Operational temperature range	- 10...+75° C
Nominal resistance of the strain gauge bridge	DK3 - 1 ... 2 kN 350 Ω DK3 - 5... 50 kN 700 Ω
Bridge supply voltage	10 VDC
Enclosure protection	IP 67

Ordering example:

DK3-1k-F

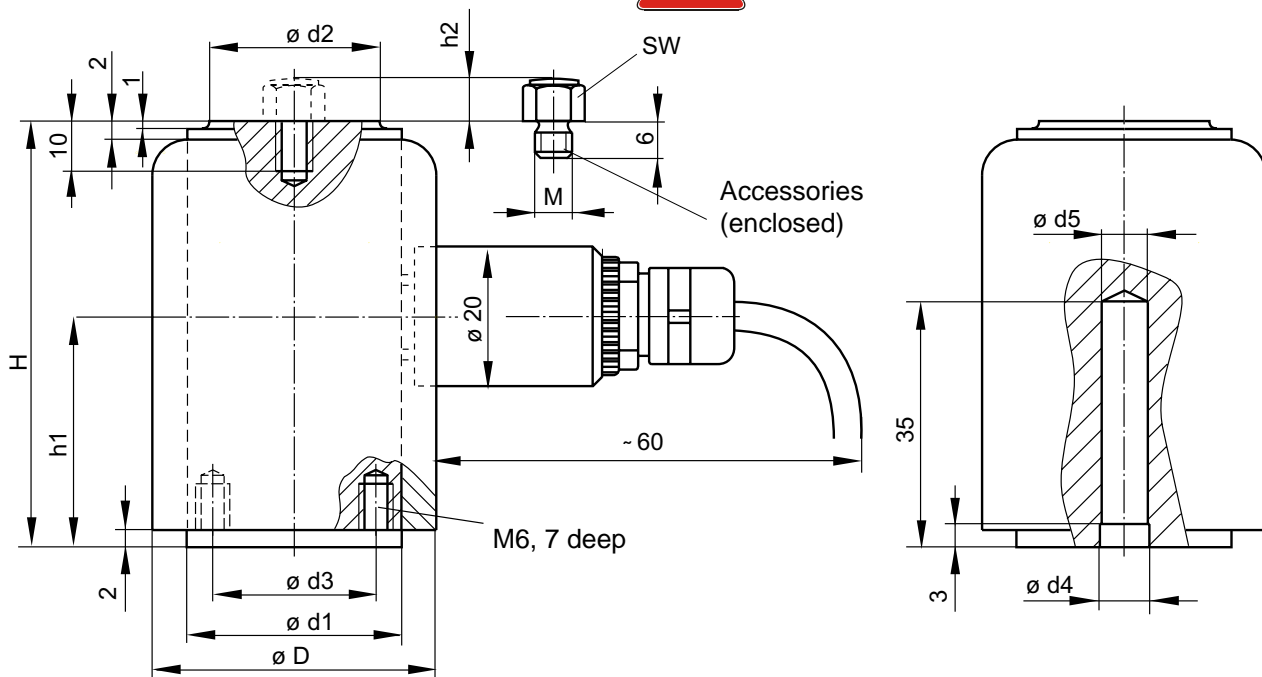


Sensor cable lead colors



V₁: bridge output signal
V₄: bridge supply voltage

tightening torque:
max. 8 Nm



Nominal Force [kN]	D	d1	d2	d3	H	h1	h2	M	SW	d4	d5
1; 2	40	30,2 f7	22	21	60	32	10	6	10	14 H7	14
5; 10; 20; 50										12 H7	11,5