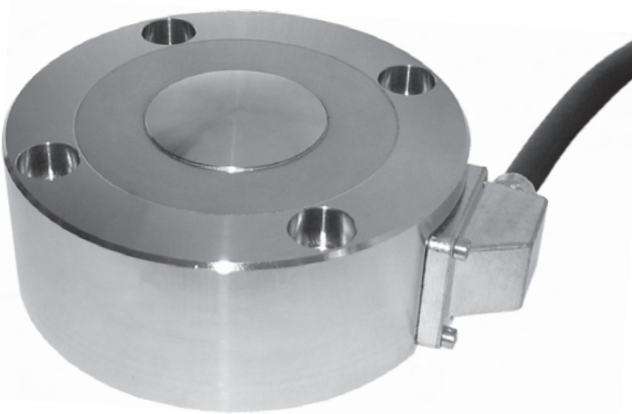


High Precision Compression Load Cell

Model 8527

Code:	8527 E
Manufacturer:	burster
Delivery:	ex stock
Warranty:	24 months



- Measuring ranges from 0 ... 500 N to 0 ... 100 kN
- Very high linearity < 0.05 % F.S.
- Static and dynamic measurements
- Protection class IP 65
- Made of high quality stainless steel
- With standardized output signal
- WKS or DKD calibration optionally

Application

Due to the constantly rising demand in accuracy and reliability in almost all technical fields sensors are required that provide an accordingly high quality. Along with a particularly small linearity error measuring applications often call for an improved hysteresis error, longtime stability and temperature constancy.

This highly precise load cell in combination with qualitatively adequate evaluation electronics can settle many ambitious force measurement tasks. Furthermore its application field expands by today's manifold needs of exact reference systems for quality control.

Application examples:

- Reference sensor for the test and adjustment of force measurement installations in production and laboratory
- Material testing
- Spring core force measurements
- Press-in operations
- Weighing technology

Description

The high precision load cell model 8527 for compression forces consists of a circular body, in which a load button is integrated. Via its convex surface the load to be measured is transferred to the measuring element where it is converted into an electrical voltage by a strain gauge full bridge. The output voltage is proportional to the measuring force.

The measuring element is located between two stabilizing membranes protecting the central body from any off-center displacement upon affecting lateral forces.

Precondition for a high measuring accuracy is a force introduction through a flat and hard stamp or plate while the load cell is mounted on a plane surface. The surface should be correspondingly thick in comparison to the appearing forces in order to avoid any bending. Further it should be polished or better lapped or hardened.

The measurement force should be applied axially and centrally. Even if smaller angle errors produce influences on the measuring signal, those are minimized by the convex and plane surface of the load introduction button.

Two laterally located threaded holes with M8 support the handling and transport of the load cell.

Technical Data

Dim. tolerances acc. ISO 2768-f

Order Code	Measuring Range	Dimensions [mm]													Mass [kg]
		øB	øD1	øD3	øD4	øG	H	H1	K	R	V	W	øX	øY	
8527-5500	0 ... 500 N	21	79	59	58.6	68	20	22	7.5	50	4.6	15.4	4.5	8	0.5
8527-6001	0 ... 1 kN	21	79	59	58.6	68	20	22	7.5	50	4.6	15.4	4.5	8	0.5
8527-6002	0 ... 2 kN	21	79	59	58.6	68	25	27	7.5	50	4.6	20.4	4.5	8	0.6
8527-6005	0 ... 5 kN	43	119	94	92.6	105	30	33	9	150	6.8	23.2	6.6	11	1.6
8527-6010	0 ... 10 kN	43	119	94	92.6	105	45	48	9	150	6.8	38.2	6.6	11	2.4
8527-6020	0 ... 20 kN	43	119	94	92.6	105	60	63	9	150	6.8	53.2	6.6	11	3.2
8527-6050	0 ... 50 kN	59	155	109	107	129	60	63	25	200	13	47	13.5	20	6.5
8527-6100	0 ... 100 kN	59	155	109	107	129	75	78	25	200	13	62	13.5	20	8.0

Electrical

Bridge resistance:

full bridge, foil-type strain gauge

350 Ω, nominal*

Excitation:

max. 10 V DC or AC

Output:

1.5 mV/V ± 0.1 %

Calibration resistor: (burster-Model 1148-6080):

80 kΩ; 0.1 %

The bridge output voltage, resulting from a shunt of this value, is stated in the calibration certificate.

* Deviations from the stated value are possible.

Environmental

Temperature compensated:

15 °C ... 70 °C

Temperature operating:

- 30 °C ... 80 °C

Temperature effect zero:

≤ 0.01 % v.E./K

Temperature effect span:

≤ 0.01 % v.S./K

Mechanical

Non linearity:

≤ ± 0.05 % F.S.

Hysteresis:

≤ ± 0.05 % F.S.

Non-repeatability:

< 0.05 % F.S.

Kind of measurement:

compression force

Deflection, full scale:

< 80 μm

Overload safe:

120 % of capacity

Overload burst: 100 % over capacity

> 200 % of capacity

Dynamic performance:

permitted

70 % of capacity

Material:

High-grade stainless steel 1.4542

Protection class EN 60529:

IP 65

Electrical termination: shielded, flexible PVC cable, 6 wired with bare ends for soldering, length 2 m

Ranges 500 kN to 20 kN:

cable diameter 5 mm

Bending radius at least 30 mm, cable output radial, high-strength cable gland, standardization in cable

Ranges 50 kN and 100 kN:

cable diameter 5 mm

Bending radius at least 30 mm, cable output radial, high-strength cable gland, flange bracket

Wiring code:

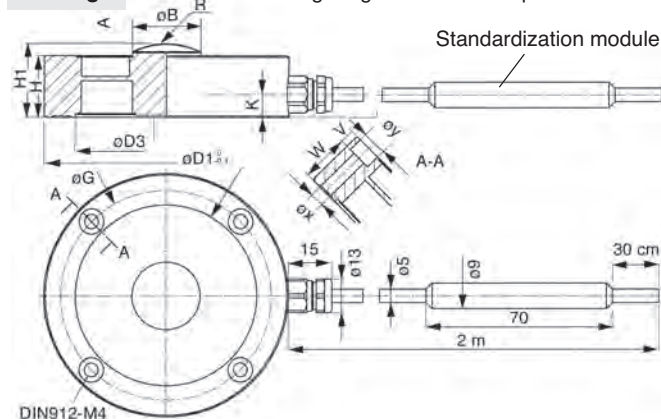
white	Excitation	positive
pink		+ sense wire
brown	Excitation	negative
grey		- sense wire
yellow	Output	positive
green	Output	negative

Weight:

0.5 ... 8.5 kg (see table)

Drawing 1

Measuring ranges 0 ... 0.5 kN up to 0 ... 20 kN



Mounting: 4 through-holes (see drawing and table)

The complete bearing face of the load cell must be seated on an through hardened (60 HRC or better), plane, polished or better lapped mounting surface.

Countersinks according DIN 74-Km, for hexagon socket screws according to DIN 912.

Accessories

Mating connector:

- 12-pole, for burster table instruments
- 9-pole, for 9235 and 9310

Model 9941
Model 9900-V209

Mounting of mating connector

to conductor cable

Model 99004

Order Information

Load cell, range 0 ... 20 kN

Model 8527-6020

Signal Conditioning

Supply units, amplifiers and process-monitoring devices, such as model 9243 modular amplifier, model 9180 digital indicator or model 9714 process interface **refer to section 9 of catalog.**

Factory calibration certificate (WKS)

Calibration of load cell only or with an amplifier or indicator, 20 % steps up and down at unchanged position.

Drawing 2

Measuring ranges 0 ... 50 kN up to 0 ... 100 kN

