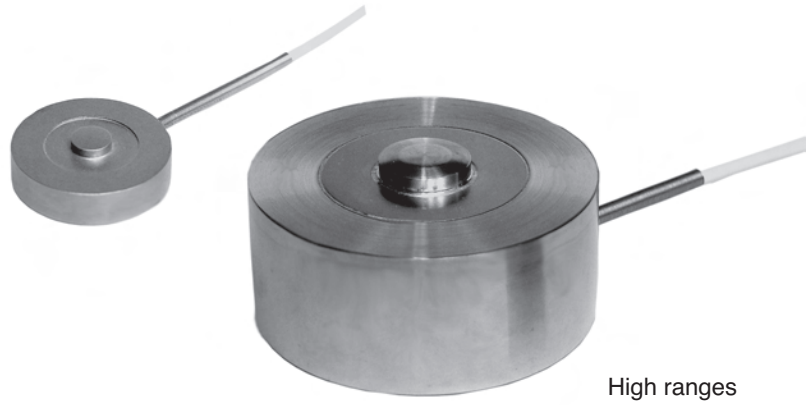
Compression Load Cell

Model 8526

Code:	8526 E
Manufacturer:	burster
Delivery:	ex stock
Warranty:	24 months



Low ranges

High ranges

CAD data in 3D/2D available on powerPARTS by web2CAD
Info: data sheet 80-CD-ROM-E

- **Measuring ranges from 0 ... 100 N to 0 ...200 kN**
- **Small dimensions**
- **For static and dynamic measurements**
- **Made of high-grade stainless steel**
- **Welded construction, protection class IP 64**
- **With standardized output signal 1 mV/V**
- **Three threaded holes on bottom for mounting**

8526-E

Application

A high price/performance ratio and robust design characterize the compression load cells even in the high measuring ranges. Their small dimensions allow these load cells to be used for measuring static and dynamic compressive forces in restricted spaces. These load cells can be integrated easily thanks to their standardized output and threaded holes on bottom.
The model 8526 load cell has a sealed body, allowing it to be used even under dirty and harsh industrial conditions.
These sensors are used as measuring elements mainly in

- device manufacture
- production lines
- measurement and control systems
- manufacture of fixtures and special machines
- geological applications.

Description

The model 8526 load cell is designed as a flat, circular disc. 4 strain gages are applied at the measuring element of the sensor body. The measuring element inside the body carries a strain gage full bridge which outputs a voltage directly proportional to the measurement variable on the application of a force.

The load application knob for receiving compressive forces is an integral part of the sensor. The compressive force must be applied with a part that leans on a sensor parallel plain with reference to the application knob. This ensures only minor influence of smaller angle faults between the force application and the sensor axis to the measurement signal. Basically the measurement force must be applied centrically without any lateral vectors of force.

A ground bearing surface for the sensor as well as a hardness of at least 60 HRC of the bearing surface of the force application are precondition for an optimum in measurement quality. Ensure that the sensor is mounted on a planar, smoothed and hardened surface.

The standardized nominal value (1 mV/V) simplifies the exchange of sensors. Furthermore the sensors can be switched parallel for the summation of singular forces.

Technische Daten

Dim. tolerances acc. ISO 2768-f

Order Code	Measuring Range	Dimensions [mm]									Dimensions [mm]							Mass [kg]	Natural Frequency [kHz]
		øD1	øD2	øD3	øD4	øD5	H1	H2	øT	3 mounting holes G on ø T with metric thread	N	øA	øB	ø C	K	L	M		
8526 - 5100	0 ...100 N	31.8	29.4	20.6	8.1	19.0	9.9	8.1	25.5	M 2.5; 3 deep	3	-	3	2	-	40	2.5	0.04	2
8526 - 5200	0 ...200 N	31.8	29.4	20.6	8.1	19.0	9.9	8.1	25.5	M 2.5; 3 deep	3	-	3	2	-	40	2.5	0.04	3
8526 - 5500	0 ...500 N	31.8	29.4	20.6	8.1	19.0	9.9	8.1	25.5	M 2.5; 3 deep	3	-	3	2	-	40	2.5	0.04	5
8526 - 6001	0 ... 1 kN	31.8	29.4	20.6	8.1	19.0	9.9	8.1	25.5	M 2.5; 3 deep	3	-	3	2	-	40	2.5	0.04	8
8526 - 6002	0 ... 2 kN	31.8	29.4	20.6	8.1	19.0	9.9	8.1	25.5	M 2.5; 3 deep	3	-	3	2	-	40	2.5	0.04	11
8526 - 6005	0 ... 5 kN	31.8	29.4	20.6	8.1	19.0	9.9	8.1	25.5	M 2.5; 3 deep	3	-	3	2	-	40	2.5	0.04	17
8526 - 6010	0 ... 10 kN	31.8	29.4	20.6	8.1	19.0	9.9	8.1	25.5	M 2.5; 3 deep	3	-	3	2	-	40	2.5	0.05	25
8526 - 6020	0 ... 20 kN	38.1	35.0	28.0	10.7	27.0	16.0	14.0	31.5	M 2.5; 3 deep	3	-	4.5	3	-	40	3	0.05	25
8526 - 6050	0 ... 50 kN	38.1	35.0	28.0	10.7	27.0	16.0	14.0	31.5	M 2.5; 3 deep	3	-	4.5	3	-	40	3	0.05	40
8526 - 6100	0 ...100 kN	50.8	48.0	36.0	15.2	33.0	25.4	22.4	42.0	M 4; 6 deep	6	7	4.5	3	11	45	6	0.3	40
8526 - 6200	0 ...200 kN	76.2	74.0	46.0	20.0	45.0	38.1	33.5	60.0	M 4; 6 deep	6	7	4.5	3	11	45	6	1.2	40

Electrical

Bridge resistance:
full bridge, foil-type strain gauge 350 Ω, nominal*

Excitation:
Measuring range ≤ 0 ... 1000 N max. 5 V DC or AC
Measuring range ≥ 0 ... 2000 N max. 10 V DC or AC

Output: 1 mV/V ± 0.25 % for ranges ≤ 0 ... 1 kN
1 mV/V ± 0.5 % for ranges ≤ 0 ... 2 kN

Insulation resistance: > 10 MΩ

Calibration resistor: 100 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. Resistance beween supply lines max. 500 Ω for standardization.*

Environmental

Temperature operating: - 20 °C ... +100 °C

Temperature compensated: +15 °C ... + 70 °C

Temperature effect zero: ≤ ± 0.02 % F.S./K

Temperature effect span: ≤ + 0.03 % Rdg./K

Mechanical

Mesuring accuracy:
combined value of non-linearity, hysteresis and non-repeatability
ranges ≤ 0 ... 1 kN ≤ 0.25 % F.S.
ranges ≥ 0 ... 2 kN ≤ 0.5 % F.S.

Deflection, full scale: 40 µm ... 80 µm

Overload safe: 50 % over capacity

Dynamic performance:
permitted 70 % of capacity
recommended 50 % of capacity
(for very large number of load cycles)

Design: bending membrane, welded cover

Mounting:
Bottom side with three 3 mm (M 2.5) or 6 mm (M 4) deep mounting holes on diameter T, sharing 120°, see table.

Material: High-grade stainless steel 1.4542

Electrical termination:
For all measuring ranges the adapter for standard output 1 mV/V (length 70 mm, diameter 8 mm) is integrated in the connection cable distanced 30 cm from wire end.

Measuring range ≤ 0 ... 10 kN
Shielded, TPE-insulated cable, diameter 2 mm, with bare ends for soldering, length 2 m, at sensor body 40 mm anti-kink coil, diameter 3 mm, bending radius ≥ 25 mm.

Measuring range 0 ... 20 kN and 0 ... 50 kN
Shielded, TPE-insulated cable, diameter 3 mm, with bare ends for soldering, length 2 m, at sensor body 40 mm anti-kink coil, diameter 5 mm, bending radius ≥ 30 mm.

Measuring range ≥ 100 kN
Shielded, TPE-insulated cable, diameter 3 mm, with bare ends for soldering, length 2 m, reinforced strain relief through a 10 mm long metal sleeve at cable outlet at sensor body 45 mm anti-kink coil, diameter 5 mm bending radius ≥ 30 mm.

Protection class: according to EN 60529 IP 64

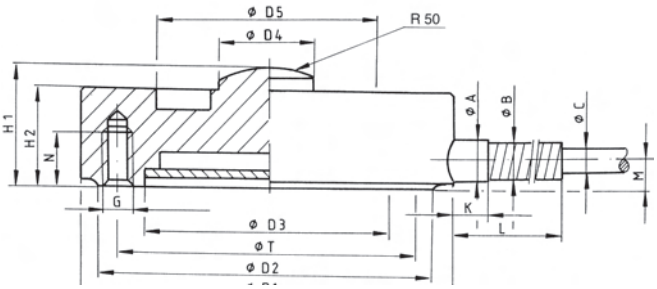
Wiring code:

White	Supply	(positive)
Brown	Supply	(negative)
Yellow	Signal output	(positive)
Green	Signal output	(negative)

Dimensions: See table and scale drawing

Weight: see table

Scale Drawing



Sensor CAD drawing can be imported in 3D or 2D version from CD-ROM or downloaded from the Internet.
For more information on *powerPARTS* by web2CAD please refer to the introduction of product section 8 in the catalog.

Accessories

Mating connector
-12 pole for burster desktop devices **Model 9941**
- 9 pole for DIGIFORCE® 9310 and 9235 **Model 9900-V209**

Mounting of mating connector
to connector cable **Model 99004**

Strain gauge simulator replaces
strain gauge sensor for the adjustment or verification of the amplifier
Model 9405
refer to product section 9 of the catalog.

Amplifiers, supplies and process controllers as e.g. digital measuring indicator, series 9180, modular amplifier model 9243 or DIGIFORCE® model 9306 **see section 9 of this catalog.**

Special Calibration

Special calibration 6 points up/5 down 20 % steps also together with instrumentation.

Order Code 85WKS-8526

Order Information

Load cell
Measuring range 0 ... 2 kN **Model 8526-6002**