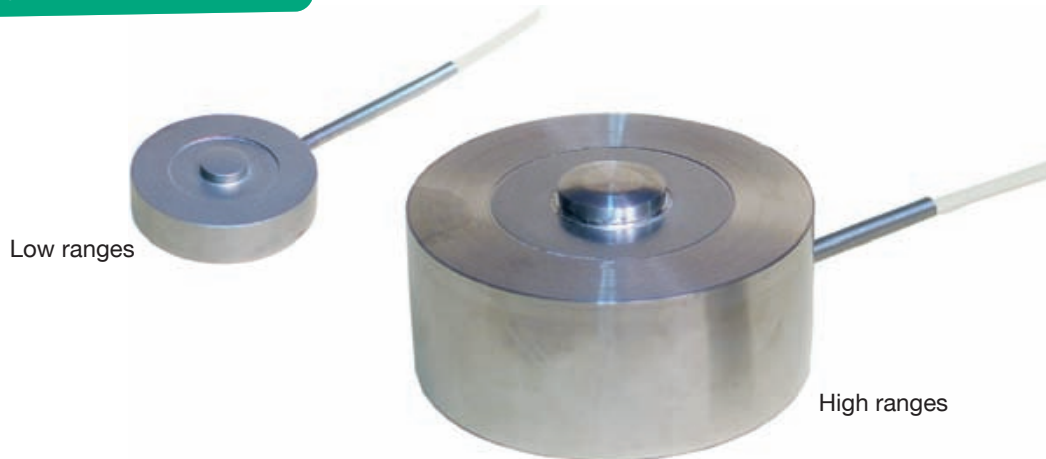


Compression Load Cell

Model 8526

CAD data 2D/3D for this sensor:
Download directly at www.traceparts.com
Info: refer to data sheet 80-CAD-EN



- 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 IP64
- With standardized output signal 1 mV/V
- Three threaded holes on bottom for mounting

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.

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 gauges are applied at the measuring element of the sensor body. The measuring element inside the body carries a strain gauge 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 centrally 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.

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.

Technical Data

Dim. tolerances acc. ISO 2768-f

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

Electrical values

 Bridge resistance (full bridge):
 foil-model strain gauge

350 Ω, nominal**

 Excitation: measuring range ≤ 0 ... 1 kN max. 5 V DC
 measuring range ≥ 0 ... 2 kN max. 10 V DC

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

 Calibration resistor: 100 kΩ ± 0.1 %, model 1148-6080
 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 between supply lines max. 500 Ω for standardization.

Environmental conditions

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

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

 Temperature: to effect zero ≤ ± 0.02 % F.S./K
 to effect span ≤ + 0.03 % Rdg./K

Mechanical values

 Measuring 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: 150 % of capacity

 Dynamic performance: recommended 50 % of capacity
 permitted 70 % of capacity

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.

Design: bending membrane, welded cover

Material: high-grade stainless steel 1.4542

Protection class acc. to EN 60529: IP64

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

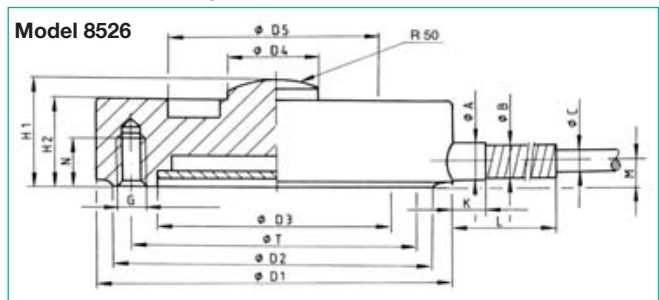
measuring range ≤ 0...10 kN high flexible, shielded TPE insulated cable, ø 2 mm, with bare ends for soldering, length 2 m, at sensor body 40 mm anti-kink coil, ø 3 mm, bending radius ≥ 25 mm

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

measuring range ≥ 0...100 kN high flexible, shielded TPE insulated cable, ø 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, ø 5 mm, bending radius ≥ 30 mm cable outlet centric between two threaded holes

 Wiring code: white supply positive
 brown supply negative
 yellow signal output positive
 green signal output negative

Dimensions and weight: see table and dimension drawing

Dimensional drawing

The CAD drawing (3D/2D) for this sensor can be imported online directly into your CAD system.

 Download via www.burster.com or directly at www.traceparts.com. For further information about the burster traceparts cooperation refer to data sheet 80-CAD-EN.

Order Information

Load cell, measuring range 0 ... 2 kN

8526-6002
Accessories
Mating connector, 12 pins, for burster desktop devices **Model 9941**
Mating connector, 9 pins, for 9235 and 9310 **Model 9900-V209**

 Mounting of mating connector on sensor cable **Order Code 99004**

 only for connection to SENSORMASTER model 9163 desktop version **Order Code 99002**
Strain gauge simulator

 The simulator replaces the strain gauge sensor for the adjustment or verification of the amplifier **Model 9405**
refer to data sheet 76-9405 in section 7 of the catalog.
Signal processing

 Amplifier, supplies and process controllers e.g. indicator model 9180, USB sensor interface model 9205, DIGIFORCE® model 9306/9310, modular amplifier model 9243 **refer to section 9 of the catalog.**
Manufacturer Calibration Certificate (WKS)

Load cell or load cells and measurement device calibration in 20 % steps up and down, unchanged installation position.