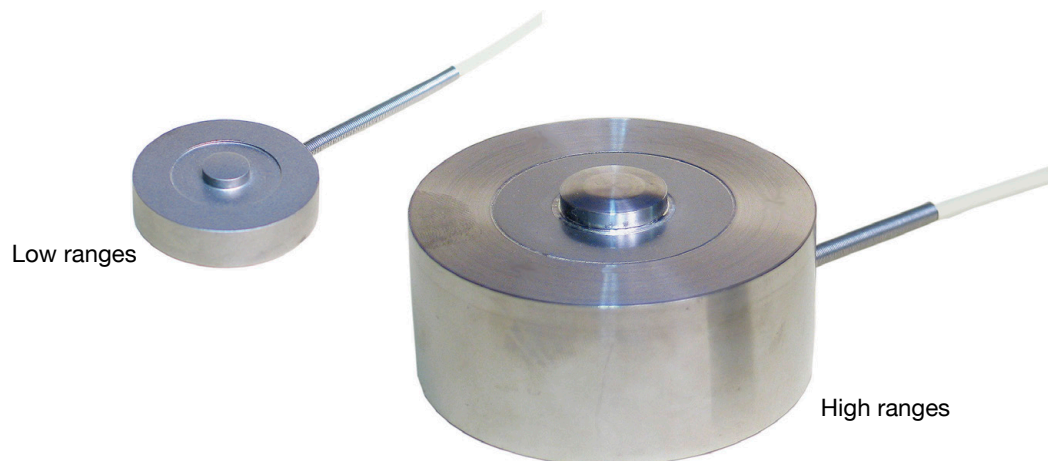


# Compression Load Cell

## Model 8526

Code:	8526 EN
Delivery:	ex stock
Warranty:	24 months



- Measuring ranges from 0 ... 100 N to 0 ...200 kN
- Small dimensions
- Easy to mount
- 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 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.

The standardized nominal value (1.0 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	øA	øB	øC	K	L	M	N			
8526 - 5100	0 ... 100 N	31.8	29.4	21.2	8.1	19.0	9.9	8.1	25.5	-	3	2	-	40	2.5	3	M 2.5	0.04	2
8526 - 5200	0 ... 200 N	31.8	29.4	21.2	8.1	19.0	9.9	8.1	25.5	-	3	2	-	40	2.5	3	M 2.5	0.04	3
8526 - 5500	0 ... 500 N	31.8	29.4	21.2	8.1	19.0	9.9	8.1	25.5	-	3	2	-	40	2.5	3	M 2.5	0.04	5
8526 - 6001	0 ... 1 kN	31.8	29.4	21.2	8.1	19.0	9.9	8.1	25.5	-	3	2	-	40	2.5	3	M 2.5	0.04	8
8526 - 6002	0 ... 2 kN	31.8	29.4	21.2	8.1	19.0	9.9	8.1	25.5	-	3	2	-	40	2.5	3	M 2.5	0.04	11
8526 - 6005	0 ... 5 kN	31.8	29.4	21.2	8.1	19.0	9.9	8.1	25.5	-	3	2	-	40	2.5	3	M 2.5	0.04	17
8526 - 6010	0 ... 10 kN	31.8	29.4	21.2	8.1	19.0	9.9	8.1	25.5	-	3	2	-	40	2.5	3	M 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	-	4.5	3	-	40	3	3	M 2.5	0.05	25
8526 - 6050	0 ... 50 kN	38.1	35.0	28.0	10.7	27.0	16.0	14.0	31.5	-	4.5	3	-	40	3	3	M 2.5	0.05	40
8526 - 6100	0 ... 100 kN	50.8	48.0	36.0	15.2	33.0	25.4*	22.4	42.0	7	4.5	3	11	45	6	6	M 4	0.3	40
8526 - 6200	0 ... 200 kN	76.2	74.0	46.0	20.0	45.0	38.1*	33.5	60.0	7	4.5	3	11	45	6	6	M 4	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: 1.0 mV/V ± 0.25 % for ranges to 0 ... 1 kN  
1.0 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 consisting of non-linearity, hysteresis and non-repeatability in constant installation position.  
ranges up to 0 ... 1 kN ≤ 0.25 % F.S.  
ranges from 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 and dimensional drawing.

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 1.0 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

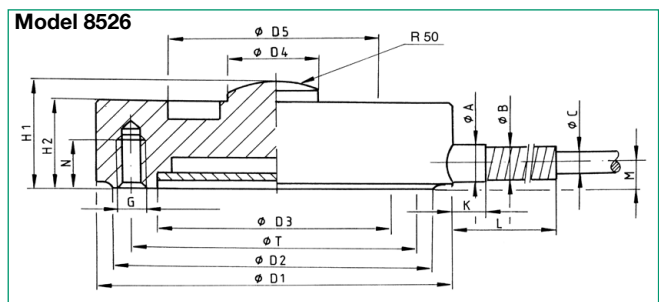
measuring range 0...20 kN and 0...50 kN high flexible, shielded TPE insulated cable, ø 3 mm, with bare ends for soldering, length 2 m, at sensor body 40 mm anti-kink coil, ø 5 mm, bending radius ≥ 30 mm

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**



**Order Information**

Compression 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 SENSORMASTER and DIGIFORCE® **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. digital display model 9180, USB sensor interface model 9206, modular amplifier model 9243 and DIGIFORCE® refer to section 9 of the catalog.

**Factory Calibration Certificate (WKS)**

Calibration of a load cell separately as well as connected to an indicator. Standard is a certificate with 11 points, starting at zero, running up and down in 20% increments covering the complete measuring range for preferential direction. Special calibrations on request. Calculation of costs by base price plus additional costs per point.

**Order Code 85WKS-85...**

