

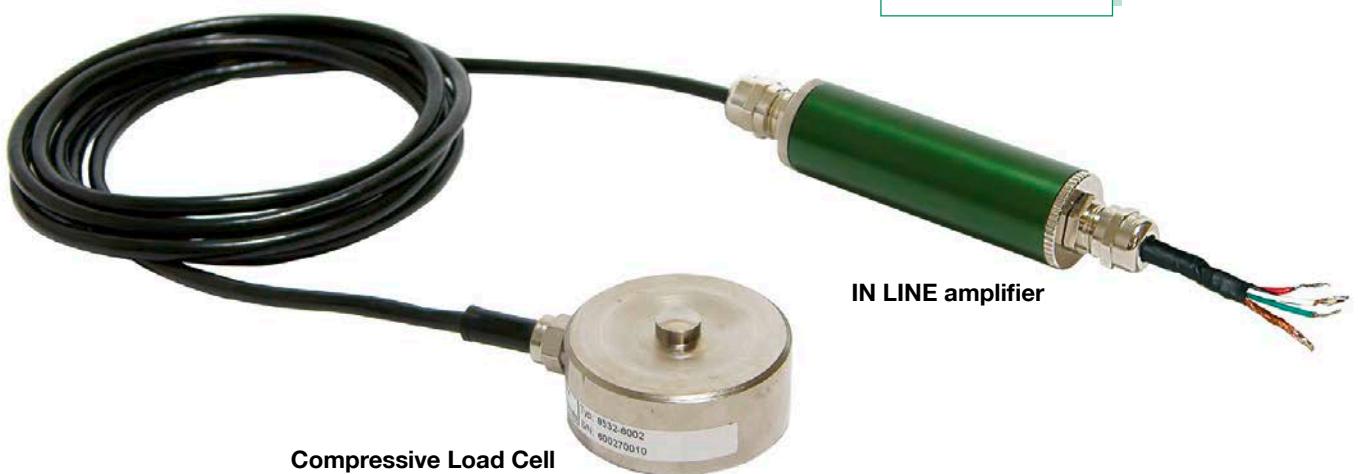
# Low-Cost Compressive Load Cell

With IN-LINE amplifier

Model 8532

Code:	8532 EN
Delivery:	ex stock
Warranty:	24 months

Very economical price



Compressive Load Cell

IN LINE amplifier

- Measuring ranges between 0 ... 500 N and 0 ... 20 kN
- Measurement accuracy < 1% F.S.
- Normalized output signal 0 ... 10 V
- Stainless steel sensor
- Compact design
- Customer-specific versions possible from 20 pieces up

8532 EN

## Application

This force measurement chain was developed for applications where a low cost solution is more important than achieving high levels of accuracy. The sensors strain gauge technology allows the measurement of static and dynamic forces. The load cell is also designed for applications that provide only little space due to its compact design. These properties, together with the sensors dust protection, make the measuring chain suitable for a wide range of applications, such as

- ▶ Industrial manufacture
- ▶ Manufacture of customized machinery
- ▶ Geological investigations
- ▶ Motor vehicle engineering
- ▶ Commercial agriculture
- ▶ Bridge building

## Description

The body of the sensor is a flat, cylindrical disk, into which a domed force application knob is integrated. It is important that the force is applied axially to the center of the sensor. The domed form, however, minimizes the effect of a force that is not exactly axial.

A full-bridge strain gauge is used as the measuring element inside the sensor, by means of which the force to be measured is converted into a proportional electrical voltage.

The in-line amplifier increases this voltage from 0 up to 10 V. The surface against which the sensor rests is important for the quality of the measurement. It should be ground. It must be sufficiently hard and thick and not deform under load.

**Technical Data**

Order Code	Measuring Range	Dimensions [mm]							
		A	B	øC	øD	E	F	øG	R
8532-5500	0 ... 500 N	25	21	50	10	51	M 5 x 0,8 / 5 tief	42	50
8532-6001	0 ... 1 kN	25	21	50	10	51	M 5 x 0,8 / 5 tief	42	50
8532-6002	0 ... 2 kN	25	21	50	10	51	M 5 x 0,8 / 5 tief	42	50
8532-6005	0 ... 5 kN	25	21	50	10	51	M 5 x 0,8 / 5 tief	42	50
8532-6010	0 ... 10 kN	25	21	50	10	51	M 5 x 0,8 / 5 tief	42	50
8532-6020	0 ... 20 kN	25	21	50	10	51	M 5 x 0,8 / 5 tief	42	50

**Electrical values**

Excitation voltage:	15 ... 30 V DC
Output voltage:	0 ... 10 V
Output resistance:	440 Ω, nominal
Limit frequency:	1 kHz
Isolation resistance (sensor):	> 2000 MΩ
Bridge resistance (sensor):	350 Ω, nominal
Power consumption:	max. 0.3 VA

**Environmental conditions**

Sensor	
Range of operation temperature:	- 20 °C ... 80 °C
Range of nominal temperature:	- 10 °C ... 40 °C
Influence of temperature to zero signal:	≤ 0.02 % F.S./K
Influence of temperature to measurement signal:	≤ 0.02 % Rdg./K

**IN-LINE amplifier**

Ambient temperature:	0 °C ... 60 °C
Temperature coefficient:	< 0.1 % / 10 K

**Mechanical values**

Measurement accuracy:	< 1 % F.S. Combined value consisting of non-linearity, hysteresis and non-repeatability in constant installation position.	
Maximum static operational force:	120 % of nominal load	
Dynamic forces:	up to 70 % of nominal load	
Material:	sensor	stainless steel
	amplifier housing	aluminium natural anodized with 2 x PG 7
Protection class according to EN 60529:	Sensor	IP60
	IN-LINE amplifier	IP67
Weight:	Sensor	approx. 250 g
	IN-LINE amplifier	approx. 150 g
Mounting:	Sensor	4 threaded holes on reference cycle G, refer to table and dimensional drawing
	IN-LINE amplifier	cable clip, in scope of delivery

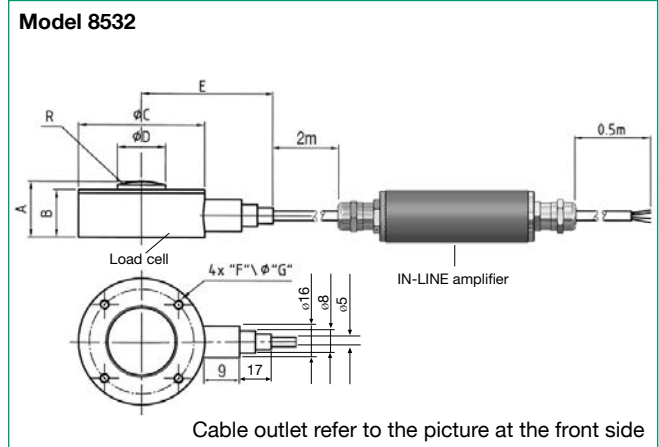
**Electrical connection**

Shielded PVC cable:	ø 5 mm, 4 wires black coated bending radius ≥ 30 mm bend protection, length approx. 20 mm	
Cable length between sensor and amplifier:	2 m	
Cable length between amplifier and open end:	0.5 m	
Wiring code of the IN-LINE amplifier:	red	excitation positive
	black	excitation negative
	white	signal output positive
	green	signal output negative
Wiring code of the load cell cable:	red	excitation positive
	black	excitation negative
	white	measurement signal negative
	green	measurement signal positive
Dimensions:	sensor	refer to table
	amplifier (L x ØD):	120 x 25 [mm]

**Caution!**

Do NOT open the screw joint at the cable outlet!

**Dimensional drawing**



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

Download via [www.burster.com](http://www.burster.com) or directly at [www.traceparts.com](http://www.traceparts.com). For further information about the burster traceparts cooperation refer to data sheet 80-CAD-EN.

**Order Information**

**Low-Cost load cell**, measurement range 0 ... 5 kN with IN-LINE amplifier, output 0 ... 10 V **Model 8532-6005**

**Signal processing**

Supply units, amplifier and process control units like digital indicator model 9180 or sensor profibus module model 9221 **refer to section 9 of the catalog.**

