

Compression Load Cell

MODEL 8526









Small measuring ranges



Wide measuring range 500 kN



Wide measuring range 1 MN

Highlights

- Measuring ranges from 0 ... 100 N to 0 ... 1 MN,
 0 ... 22.4 lbs up to 0 ... 225 klbs
- Extremely compact design
- For static and dynamic measurements
- Three threaded holes on bottom for easy mounting and cable suitable for drag chain application
- Protection class IP64

Options

- Non-linearity 0.1% F.S.
- Standardized output signal
- burster TEDS

Applications

- All forms of test benches
- Reference sensor for comparative and for calibration jobs
- In cramped assembly situations

Product description

Thanks to its compact shape and three fixing holes on its underside, the 8526 compression load cell can be used in a variety of applications. With its wide choice of measuring ranges from 0 ... 100 N up to 0 ... 1 MN, it really can cover a wealth of measurement tasks, from the laboratory to use in heavy industry.

The integral load button provides an easy and reliable means of applying the force to be measured. Angle errors in the load application with a deviation from the measurement axis of up to 3° have only a minor influence on the measurement signal. For ideal measurement accuracy, the load cell should be mounted on a surface that has been ground and has a hardness of at least 60 HRC.

The model 8526 load cell is designed with an internal elastic membrane, to which strain gages are attached. When a compressive load is applied to the load cell, the membrane is elastically deformed and transfers its tension to the strain gages. These in turn respond with a proportional change in their ohmic resistance, which can be evaluated using a suitable instrumentation amplifier or display device.

Technical Data

8526	-	5100	5200	5500	6001	6002	6005	6010						
Measuring range		0.1 kN	0.2 kN	0.5 kN	1 kN	2 kN	5 kN	10 kN						
calibrated in N and kN from 0		22.4 lbs	44.9 lbs	112.4 lbs	224.8 lbs	449.6 lbs	1.1 klbs	2.2 klbs						
Accuracy														
Relative non-linearity*				±0.25 %	F.S. (option: ±0).1 % F.S.)								
Characteristic curve deviation*			±0.25	5 % F.S.			±0.5 % F.S.							
Relative hysteresis			0.15	% F.S.			0.5 % F.S.							
Temperature effect on zero output				<u> </u>	≤ ±0.02 % F.S./	K								
Temperature effect on nominal sensitivity				<u><</u>	≤ ±0.03 % F.S./	K								
Electrical values														
Sensitivity nominal					1.5 mV/V									
Aeasurement direction Compression direction														
Standardization**			option 1.0 m	V/V (±0.25 %)		optio	n 1.0 mV/V (±0	0.5 %)						
Bridge resistance					$350~\Omega$ nominal									
Excitation		max. 5 V DC recommended 5 V DC or AC; max. 10 V DC												
Insulation resistance		> 30 GΩ at 45 V												
Environmental condi	itions													
Nominal temperature range				+	·15 °C +70 °	°C								
Operating temperature range				-	30 °C +80 °	С								
Mechanical values														
Deflection full scale					< 50-70 µm									
Maximum operating force				1	50 % of capaci	ity								
Overload burst				>	200 % of capa	city								
Dynamic performance			re	commended: 50) %; maximum:	70 % (of capac	ity)							
Protection class (EN 60529)					IP64									
Installation														
Intended mounting screws					3 pieces M2.5									
Tightening torque mounting screws	[N*m]				0.7									
Mounting screws					-									
Installation instructions		The enti	re bearing area		ust be mounted blished or better	on a base which	h is hardened (d	60 HRC),						
Other														
Material				sto	ainless steel 1.43	542								
Natural frequency	[kHz]	2	3	5	8	11	13	15						
Mass	[kg]			0.	04			0.05						

^{*} The data in the area 20 % - 100 % of rated load F

^{**} Realized on board in connection cable, 1.7 m from sensor housing or 0.3 m from cable end (temperature range limited to 0 ... +60 °C)

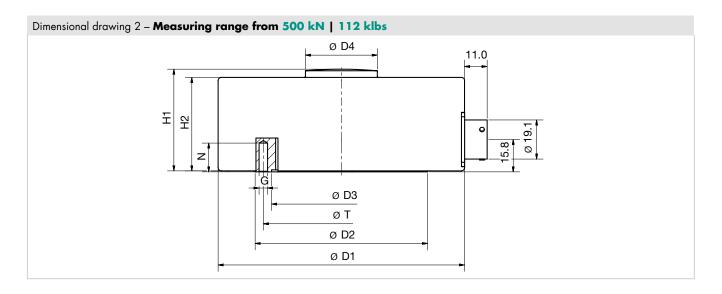
Accuracy Relative non-linearity* £0.25 % F.S. (option: ±0.1 % F.S.) Characteristic curve deviation* Relative hysteresis 0.5 % F.S. Temperature effect on zero output Temperature effect on nominal sensitivity Temperature sensitivity nominal 1.5 mV/V 2.0 mV/V 2.0 mV/V Measurement direction Standardization Option 1.0 mV/V (±0.5 %) Bridge resistance So Ω nominal Excitation recommended 5 V DC or AC; max. 10 V DC or AC Insulation resistance Tervironmental conditions Nominal temperature ange 1.5 °C +70 °C Operating temperature range -30 °C +80 °C Deflection full scale Mechanical values Deflection full scale Meximum operating force Overload burst 200 % of capacity Tecommended: 50 %; maximum: 70 % (of capacity) Pynamic performance recommended: 50 %; maximum: 70 % (of capacity) Protection class [EN 60529] Installation Installation	8526	-	6020	6050	6100	6200	6500	7001					
A.5 klbs 11.2 klbs 22.5 klbs 45.0 klbs 112 klbs 225 klbs			20 kN	50 kN	100 kN	200 kN	500 kN	1 MN					
Relative non-linearity* Characteristic curve deviation* Relative hysteresis Relative hys			4.5 klbs	11.2 klbs	22.5 klbs	45.0 klbs	112 klbs	225 klbs					
Characteristic curve deviation* Relative hysteresis Renperature effect on zero output Renperature effect on no nominal sensitivity Restrictive values Restrictive hysteresis Restrictive values Restrictive values Restrictive nominal Restrictive restriction Restrictive restriction Restrictive restriction	Accuracy												
20.3 % F.S.	Relative non-linearity*				±0.25 % F.S. (op	tion: ±0.1 % F.S.)							
Temperature effect on zero output Temperature effect on zero output Selectrical values Sensitivity nominal sensitivity output Sensitivity nominal Sensitivity output Sensitivity nominal Sensitivity nominal Sensitivity output Sensitivity nominal Sensitivity output Sensitivity nominal Sensitivity output Sensitivity nominal Sensitivity nominal Sensitivity output Sensitivity nominal temperature range Sensitivity nominal Sensitivity Nominal temperature Sensitivity Nominal temperature Sensitivity Nominal temperature Sensitivity Nominal temperature Sensitivity Nominal Sensitivit					±0.5	% F.S.							
Temperature effect on nominal sensitivity Electrical values Sensitivity nominal Measurement direction Standardization Standardization Standardization Option 1.0 mV/V $(\pm 0.5 \%)$ Option TEDS Bridge resistance Excitation Tecommended 5 V DC or AC; max. 10 V DC or AC Insulation resistance Excitation Tecommended 5 V DC or AC; max. 10 V DC or AC Insulation resistance Environmental conditions Nominal temperature Trange -30 °C +80 °C Operating temperature Trange -30 °C +80 °C Deflection full scale Maximum operating Force Overload burst Dynamic performance Protection class (EN ODYnamic performance Protection class (EN ODS29) Installation Intended mounting Screws The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Material Natural frequency Material Natural frequency [KHz] 9 9 6 5 2 1.3	Relative hysteresis				0.5 %	% F.S.							
Seq. 0.3 % F.3./K Electrical values Sensitivity nominal 1.5 mV/V 2.0 mV/V Measurement direction Compression direction Standardization option 1.0 mV/V (±0.5 %) option TEDS Bridge resistance 350 Ω nominal Excitation recommended 5 V DC or AC; max. 10 V DC or AC Insulation resistance > 30 GΩ at 45 V Environmental conditions Nominal temperature range +15 °C +70 °C Coperating temperature range 30 °C +80 °C 0 °C +70 °C Mechanical values Deflection full scale < 50.70 μm					≤ ±0.02	% F.S./K							
Sensitivity nominal 1.5 mV/V 2.0 mV/V					≤ ±0.03	% F.S./K							
Measurement direction Standardization Option 1.0 mV/V (±0.5 %) Option TEDS	Electrical values												
Standardization Option 1.0 mV/V (±0.5 %) Option TEDS	Sensitivity nominal			1.5	mV/V		2.0 r	nV/V					
Bridge resistance 350 Ω nominal Excitation recommended 5 V DC or AC; max. 10 V DC or AC Insulation resistance > 30 GΩ at 45 V Environmental conditions Nominal temperature range Nominal temperature range +15 °C +70 °C Operating temperature range -30 °C +80 °C 0 °C +70 °C Mechanical values Neelection full scale < 50.70 μm < 170 μm < 210 μm Maximum operating force 150 % of capacity 120 % of capacity Dynamic performance recommended: 50 %; maximum: 70 % (of capacity) Protection class (EN 60529) IP64 Installation Installation Intended mounting screws 3 pieces M2.5 3 pieces M4 3 pieces M5 3 pieces M Tightening torque mounting screws Installation instructions The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Material Material St	Measurement direction				Compressi	on direction							
Excitation recommended 5 V DC or AC; max. 10 V DC or AC	Standardization			option 1.0 m	V/V (±0.5 %)		option	TEDS					
Insulation resistance S 30 GΩ at 45 V	Bridge resistance				350 Ω	nominal							
Section Protection Class EN Class EN Class C	Excitation			recomr	nended 5 V DC or	AC; max. 10 V D	C or AC						
Nominal temperature range	Insulation resistance				> 30 G	2 at 45 V							
Comparison C	Environmental condi	tions											
Mechanical values Deflection full scale Maximum operating force Overload burst Dynamic performance Protection class (EN 60529) Installation Intended mounting screws Tightening torque mounting screws Installation instructions The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Maximum operating 120 % of capacity 120 % of					+15 °C .	+70 °C							
Deflection full scale 4 50-70 µm Maximum operating force Overload burst Protection class (EN 60529) Installation Installation graves Mounting screws Mounting screws The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Maximum operating 120 % of capacity 130 % of capacity 140 % of capacity 150 % of capacity 160 % of capacity 160 % of capacity 170 % of capacity 180 % of capacity 18				-30 °C .	+80 °C								
Maximum operating force Overload burst > 200 % of capacity Protection class [EN 60529) Installation Intended mounting screws Tightening torque mounting screws Mounting screws The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Material Natural frequency [kHz] 9 9 6 5 2 1.3	Mechanical values												
Force Overload burst > 200 % of capacity Protection class (EN 60529) Installation Intended mounting screws Tightening torque mounting screws Installation instructions The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Material Natural frequency [KHz] 9 9 6 5 2 1.3	Deflection full scale			< 50-	70 µm		< 170 µm	< 210 µm					
Protection class (EN 60529) Installation Intended mounting screws Installation instructions The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Material Natural frequency [kHz] 9 9 6 5 2 1.3				150 % o	f capacity		120 % of	capacity					
Protection class (EN 60529) Installation Intended mounting screws 3 pieces M2.5 3 pieces M4 3 pieces M5 3 pieces M5 Tightening torque mounting screws Mounting screws The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Material Material Natural frequency [kHz] 9 9 6 5 2 1.3	Overload burst				> 200 % d	of capacity							
Installation Intended mounting screws 3 pieces M2.5 3 pieces M4 3 pieces M5 3 pieces M5 3 pieces M5 3 pieces M5 1 pieces M5 3 pieces M5 4 pieces M5 3 pieces M5 4 pieces M5 5 pieces M5 4 pieces M5 5 pieces M5 6 pieces M5 7 pieces M6 7 pieces M5 7 pieces M6 7 pieces M5 7 pieces M6 7 pieces M5 7 pieces M6 7 pieces M5 7 pieces M5 7 pieces M5 7 pieces M6 7 pieces M7 7 pieces M7 7 pieces M7 7 pieces M6 7 pieces M7 7	Dynamic performance			recomm	nended: 50 %; ma:	ximum: 70 % (of c	apacity)						
Intended mounting screws 3 pieces M2.5 3 pieces M4 3 pieces M5 3 pieces M5 1 pieces M5 3 pieces M5 3 pieces M5 1 pieces M5 3 pieces M5 4 pieces M6 5 pieces M6 5 pieces M6 6 pieces M7	Protection class (EN 60529)				IPo	64							
Screws 3 pieces M2.5 3 pieces M2 3 pieces M3 4 pieces M3 4 pieces M3 5 pieces M3 4 pieces M3 4 pieces M3 5 pieces M3 4 pieces M3 5 pieces M3 6 pieces M3 7 pieces	Installation												
Mounting screws Mounting screws The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Material Stainless steel 1.4542 Natural frequency [kHz] 9 9 6 5 2 1.3	•		3 pieces M2.5		3 pieces M4		3 pieces M5	3 pieces M8					
The entire bearing area of the sensor must be mounted on a base which is hardened (60 HRC), flat, polished or better lapped Other Material Natural frequency [kHz] 9 9 6 5 2 1.3		[N*m]	0.7	0.7 2.5 21									
flat, polished or better lapped Other Stainless steel 1.4542 Material 5 2 1.3	Mounting screws					-							
Material stainless steel 1.4542 Natural frequency [kHz] 9 9 6 5 2 1.3	Installation instructions		The entire b	earing area of th			which is hardened	(60 HRC),					
Natural frequency [kHz] 9 9 6 5 2 1.3	Other												
	Material				stainless st	eel 1.4542							
Mass [kg] 0.05 0.3 1.2 3.4 16.8	Natural frequency	[kHz]	9	9	6	5	2	1.3					
	Mass	[kg]	0.0)5	0.3	1.2	3.4	16.8					

^{*} The data in the area 20 % - 100 % of rated load F



^{**} Realized on board in connection cable, 1.7 m from sensor housing or 0.3 m from cable end (temperature range limited to 0 ... +60 °C)

8526	-	5100	5200	5500	6001	6002	6005	6010	6020	6050	6100	6200		
Measuring range from 0		0.1 kN	0.2 kN	0.5 kN	1 kN	2 kN	5 kN	10 kN	20 kN	50 kN	100 kN	200 kN		
Geometry														
Ø D1	[mm]				31.8				38	3.1	50.8	76.2		
Ø D2	[mm]				29.4				35	5.0	48.0	74.0		
Ø D3	[mm]				21.2				28	3.0	36.0	46.0		
Ø D4	[mm]				8.1				10).7	15.2	20.0		
Ø D5	[mm]				19				27	7.0	33.0	45.0		
H1	[mm]				9.9				16	5.0	25.4	38.1		
H2	[mm]				8.1				14	1.0	22.4	33.5		
ØT	[mm]				25.5				31	1.5	42.0	60.0		
ØA	[mm]				-					-	6	6.5		
Ø B	[mm]				3.0				4.5					
ØC	[mm]				2.0				3.0					
K	[mm]				-					-	11	.0		
L	[mm]				40.0				40	0.0	45	5.0		
M	[mm]				2.5				3	.0	6	.0		
N	[mm]				3	.5	6	.0						
G	[mm]				$3 \times M2.5$					3 x	M4			
General tolerance of dimension						I	SO 2768	-f						



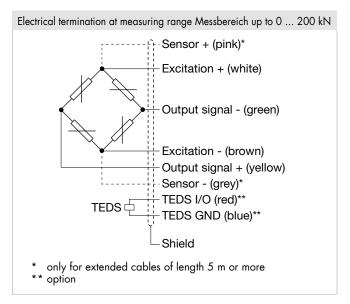
8526	-	6500
Measuring range from 0		500 kN
Geometry		
Ø D1	[mm]	120.0
Ø D2	[mm]	84.0
Ø D3	[mm]	68.0
Ø D4	[mm]	35.0
Ø D5	[mm]	60.0
H1	[mm]	50.0
H2	[mm]	46.0
ØT	[mm]	76.0
ØA	[mm]	-
ØB	[mm]	-
ØC	[mm]	
K	[mm]	
L	[mm]	-
M	[mm]	15.75
N	[mm]	12
G	[mm]	3 x M5
General tolerance of dimension		ISO 2768-f

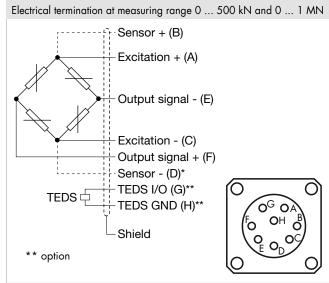
8526	-	7001
Measuring range from 0		1 MN
Geometry		
Ø D1	[mm]	200.0
Ø D2	[mm]	150.0
Ø D3	[mm]	116.0
Ø D4	[mm]	58.0
Ø D5	[mm]	103.0
H1	[mm]	90.0
H2	[mm]	83.0
ØT	[mm]	130.0
ØA	[mm]	-
Ø B	[mm]	-
ØC	[mm]	-
K	[mm]	-
L	[mm]	-
М	[mm]	29.8
N	[mm]	12
G	[mm]	3 x M8
General tolerance of dimension		ISO 2768-f

Electrical termination

Output signal

burster load cells are based on a strain-gage Wheatstone bridge. This measurement principle means that the output voltage mV/V is highly dependent on the sensor supply voltage. Our website contains details of suitable instrumentation amplifiers, indicator and display devices and process instruments.





8526	-	5100	5200	5500	6001	6002	6005	6010	6020	6050	6100	6200		
Measuring range from 0		0.1 kN	0.2 kN	0. 5 kN	1 kN	2 kN	5 kN	10 kN	20 kN	50 kN	100 kN	10 kN		
Electrical termination														
Specifications		Highly flexible, oil resistant, drag chains suitable.												
Cable fastening						C	cable cove	r						
Bending protection						bend	protection	spiral						
Bending radius	[mm]	Bending	radius thre	ee times the	e diameter	for fixed	cable, ten	times the	diameter f	or cable p	ermanently	moving.		
Cable type		PUR, Ø = 2.0 mm												

8526	-	6500	7001
Measuring range from 0		500 kN	1 MN
Electrical termination			
Specifications		Bajonett connector 8 pin 9900-V643;	mating connector in scope of delivery
Cable fastening			-
Anti-kink coil			-
Bending radius	[mm]		-
Cable type			-

Accessories

Connectors and units

Order Code

Connection cable	
99643-000A-0570030	Connection cable for measuring ranges 500 kN and 1 MN, length 3 m, open ends on one side
Connectors	
9941	Connectors 12 pin, suitable to all burster desktop units
9900-V209	Connectors 9 pin, suitable to SENSORMASTER, DIGIFORCE® and TRANS CAL
9900-V229	Connectors 9 pin with TEDS
9900-V245	Connectors 8 pin, suitable to ForceMaster
Units	
7281-V0001	Mobile measuring device with strain gage simulator and sensor test (R _i , R _a , Shunt, R _{ISO})
refer to section 9	Sensor electronics, amplifier and process control units like digital indicator model 9180, model 9163, modular amplifier model 9250 or DIGIFORCE® model 9307

Calibration

Test and calibration cert	ificate											
Included in scope of delivery of sensor	Amongst other data, includes figures for zero point, full-scale output and calibration offset											
Standard factory calibration certificate for load cells or measurement chains (WKS)												
Optionally available	Our standard factory calibration certificate includes 11 measurement points, starting at zero, spread evenly in 20% steps over the full measuring range, for increasing and decreasing load under the same installation conditions.											
Special factory calibration certificate for load cells or measurement chains (WKS)												
On request	We are happy to calibrate sensors and measurement chains to the customer's specification.											
German-accredited DAk	ckS calibration certificate for sensors and measurement chains (DKD)											
Optionally available	Our DAkkS-certified calibration laboratory provides calibration certificates to DIN EN ISO 376. The calibration certificate includes 21 measurement points, starting at zero, spread evenly in 10% steps over the measuring range, for increasing and decreasing load under various installation conditions. DAkkS calibrations can be performed in the compression and/or tension direction depending on the sensor type.											

Order Code

Measuring range		Co	de		Meas	uring I	ranae						
0 0.1 kN	5	1	0	0		22.4							
0 0.2 kN	5		0	0	0	44.9	lbs						
0 0.5 kN	5	5	0	0	0	112.4	lbs	_					
0 1 kN	6	0	0	1	0	224.8	lbs						
0 2 kN	6	0	0	2	0	449.6	lbs						
0 5 kN	6	0	0	5	0	1.1	klbs						
0 10 kN	klbs												
0 20 kN	klbs												
0 50 kN													
0 100 kN	0 100 kN 6 1 0 0 0 22.5 klb												
0 200 kN	6	2	0	0	0	45.0	klbs						
								Delivery	ex stoc	k at sho	rt notice	.	
				1	OX 0100	1							
						Ν	0	0	0	S	0	0	0
8 5 2 6 -					-				0		0	0	0
■ Nominal sensitivity/not standardize	d					N							
■ Standardization at 1.0 mV/V ***						S							
*** temperature range limited to 0 +60 °C													
■ Connection cable 1.7 m (Standardi	zation 2	m)					0						
■ Connection cable 3 m							F						
■ Connection cable 5 m							G						
Connection cable 3 m extended *							L						
Connection cable 5 m extended * (with sen	s line)					М						
* shortened delivery time compared with cable let			one piece										
■ Open cable ends + 6 cm single wir	es							0					
9 pins Sub-D connector model 990								В					
9 pins Sub-D connector model 990		for 916	3-V3xx	ΚΧ				E					
12 pins round connector model 994								F					
9 pins Sub-D connector with burster								T					
8 pins coupling connector model 99								Н					
*** temperature range limited to 0 +60 °C													
Non-linearity 0.25 % F.S. **										S			
Non-linearity 0.1 % F.S. **										L			
** The data in the area 20 % - 100 % of rated loa	d F _{nom}												:
■ Nominal temperature range +15 °C	+70	°C											0

Measuring range Code											uring i	range						
	0	5	500	kΝ		6	5	0	0	0	112.4	klbs						
0 1 MN						7	0	0	1	0	224.8	klbs						
8	5		2	6	-					-	N	Х		0		0	0	0
burs	■ burster TEDS in the sensor connector ***																	
■ Witl	hout TE	DS											R					
*** temp	oerature r	ange	e limited	d to 0	+60 °C										i			
■ Nor	n-lineari	ity (0.25	% F.S. *	*										S			
Non-linearity 0.1 % F.S. **																		
** The d	ata in the	are	a 20 %	- 100 % d	of rated loc	ıd F _{nom}												
■ Nor	ninal te	mp	■ Nominal temperature range +15 °C +70 °C														0	

Brochure

Our brochure "Load cells for production, automation, R&D and quality assurance" is available for download on our website. It conatains numerous applications, detailed product specifications and overviews.

Product videos

Watch our How-to-do video at: www.youtube.com/bursterVideo



You Tube



CAD data

Download via www.burster.com or directly at www.traceparts.com