Press Load Cell
for hand and automatic operated presses

MODEL **8552**

Flexible mechanical adaption

Highlights
- Measuring ranges from 0 ... 100 N up to 0 ... 25 kN
- Small, compact design
- Pin/hole diameter from 8 mm to 16 mm
- Different diameter for pin and hole can be combined
- Mechanical overload protection for all measurement ranges

Applications
- Forces in component joining
- Press-fitting
- Bending forces during material deformation
- Cutting forces when severing material
- Forces during stamping processes
- Punching forces for blanks
- Break-out forces used in destructive testing

Simple adapter mounting

Flexible configuration of hole and pin

Mounting potentiometric displacement sensors of the 871x model series

Product description
The load cell measures the compression forces between the circular contact surfaces of plunger and tool. The pin on its top side and hole on its lower face are simply provided for mechanical fixing and centering the components correctly. To provide as large a range of mechanical compatibility as possible, the pins/holes are available in different diameters. Attachments are available which clamp onto the press sensors to enable easy mounting of displacement sensors according to the circumstances of use.

Technical Data

8552	–	5100	5250	5500	6001	6002	6005	6010	6025
Measuring range calibrated in N and kN from 0 ...		100 N	250 N	500 N	1 kN	2,5 kN	5 kN	10 kN	25 kN
		22.4 lbs	56.2 lbs	112.4 lbs	224.8 lbs	562.0 lbs	1.1 klbs	2.2 klbs	5.62 klbs
Accuracy									
Relative non-linearity*		≤ ±0.75 % F.S.						≤ ±1.00 % F.S.	≤ ±1.50 % F.S.
Characteristic curve deviation*		≤ ±1.00 % F.S.						≤ ±1.50 % F.S.	≤ ±2.00 % F.S.
Relative hysteresis		≤ 0.75 % F.S.					≤ 1.00 % F.S.		≤ 2.00 % F.S.
Temperature effect on zero output		≤ ±0.03 % F.S./K							
Temperature effect on nominal sensitivity		≤ ±0.03 % F.S./K							
Electrical value									
Sensitivity nominal		1.0 mV/V							
Measurement direction		Compression direction							
Standardization		option 0.8 mV/V (±0.5 %)							
Bridge resistance		350 Ω nominal (deviations are possible)							
Excitation		5 V DC (max. 10 V DC)							
Insulation resistance		> 30 MOhm at 45 V							
Environmental conditions									
Nominal temperature range		0 °C ... +70 °C							
Operating temperature range		0 °C ... +70 °C							
Mechanical values									
Deflection full scale	[µm]	< 100							
Maximum operating force		120 % of nominal load (after that overload protection takes effect)							
Max. static load capacity of the overload protection		1 kN	2.5 kN	5 kN	10 kN	25 kN	30 kN		
Dynamic performance		recommended: 70 %							
Material		Sensor body made of highgrade anodized aluminum				Sensor body made of stainless steel 1.4542			
Protection class (EN 60529)		IP40 (in installed state)							
Geometry									
General tolerance of dimension		ISO 2768f							
Mounting									
Mounting fixing pin diameter		Diameter dimension A (8 f9/10 f9/12 f9/15 f9/16 f9)							
Mounting receiving hole diameter		Diameter dimension B (8 H7/10 H7/12 H7/15 H7/16 H7)							
Clamping screws for tool pin		M6							
Mounting instructions		(see dimensional drawing) Force transmission between the circular contact surfaces (press ram/press tool). The pin and hole are used only for mechanical fastening and centric alignment							
Other		5100	5250	5500	6001	6002	6005	6010	6025
Natural frequency	[Hz]	90	170	225	255	290	330	370	410
Mass	[g]	300							

* The data in the area 20 % - 100 % of rated load

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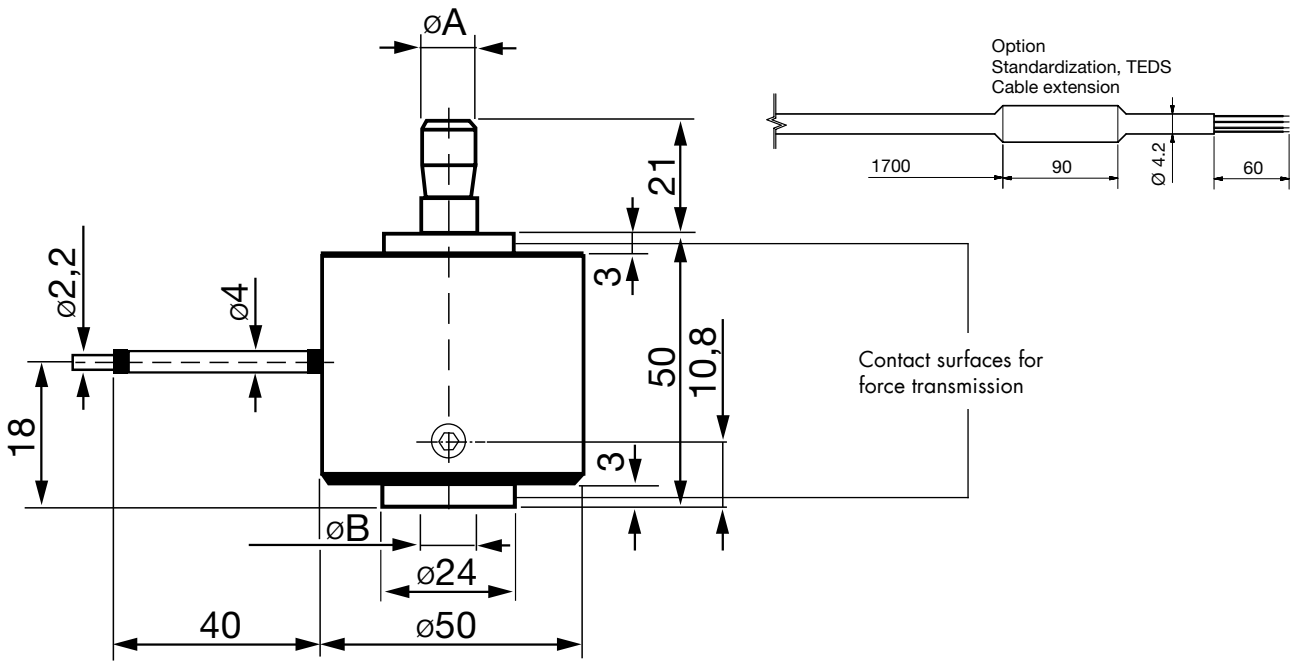
Dimensional drawing



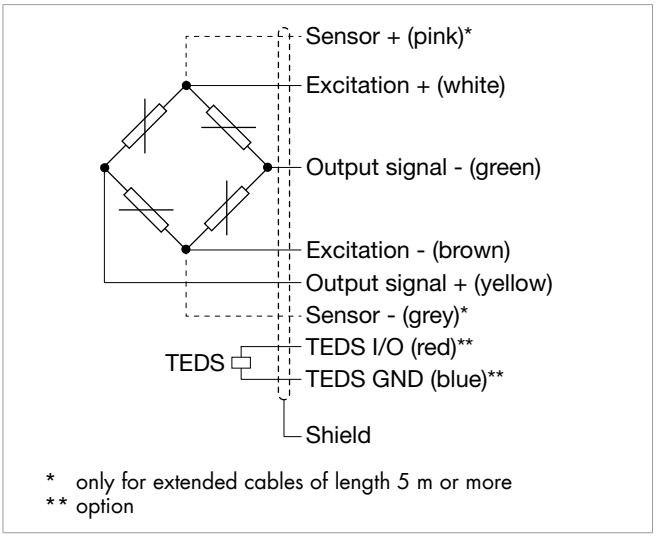
Electrical termination

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.

burster TEDS

The "**burster T**ransducer **E**lectronic **D**ata **S**heet" (TEDS) is a memory in which identification data of the sensor, calibration data and other sensor parameters are saved. In conjunction with your own suitable burster device, there is the option of performing a simple adjustment in order to achieve the maximum accuracy of the measuring chain. A simple sensor exchange is thus possible in just a few steps without losing precision.



* only for extended cables of length 5 m or more
** option

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Measuring range from 0 ...		100 N	250 N	500 N	1 kN	2,5 kN	5 kN	10 kN	25 kN
Electrical termination									
Specifications		1.7 m, shielded, highly flexible, flame retardant, Bending radius > 30mm with fixed cable, 7,7 x d with moving cable							
Cable model		PVC, 4 x 0.22, Ø = 2.2							

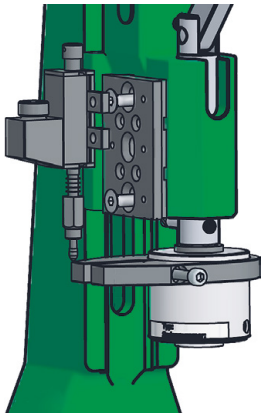
Accessories

Connectors and units

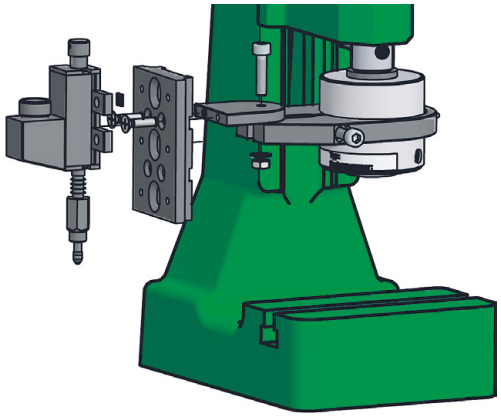
Order code		
Connectors		
9941		Connectors 12 pin, suitable to all burster desktop units
9900-V209		Connectors 9 pin, suitable to SENSORMASTER, DIGIFORCE® and TRANS CAL
9900-V229		Connectors 9 pin with TEDS
9900-V245		Connectors 8 pin, suitable to ForceMaster
Displacement transducer		
8712-.../8713-...		Potentiometric displacement transducers
5501-Z004		Mounting potentiometric displacement sensors of the 871x model series
Units		
9110		ForceMaster 9110 - Monitoring for hand presses
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

Examples

Example showing use of mounting parts to fit displacement sensor Model 5501-Z004



The displacement sensor is mounted on the press head. Its push rod rests on the bracket that is clamped onto the load cell.

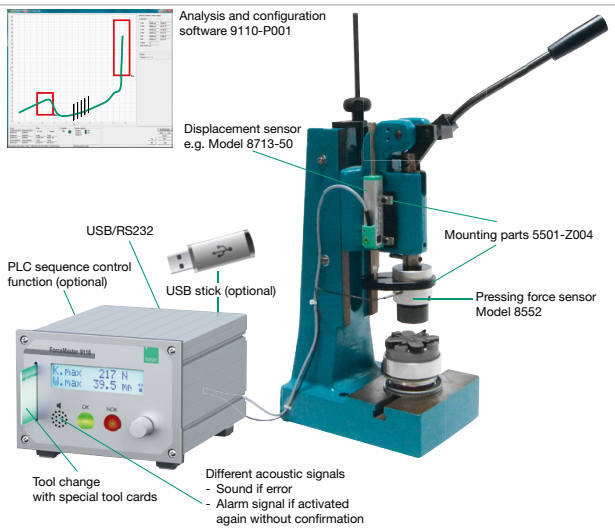


The displacement sensor is flange-mounted to the bracket and requires its own external reference from which to measure the displacement.

Example of a measuring chain

Load cell	8552-6005-N0H0SBB0
Displacement sensor	8713-50
Connector plug	9900-V221
Fitting of plug	99005
Mounting parts	5501-Z004
ForceMaster	9110-V0000

Mounting parts 5501-Z004



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Calibration

Test and calibration certificate	
Supplied with the 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 is performed in 5 force steps (20% steps) starting from zero until the reaching the nominal force, for increasing and decreasing compression load under the same installation position.
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.
Calibration certificate with accreditation symbol for product group load cell 8552	
Optionally available	Calibration certificate with accreditation symbol for load cells 8552. Calibration is performed on the basis of the accreditation of the calibration laboratory D-K-15141-01-00, for the scope of accreditation listed in the annex to the certificate. The traceability to national standards as well as a wide international recognition (DAkkS as signatory of the Multilateral Agreements of EA, ILAC and IAF) are thus guaranteed. Calibration is performed according to ISO 376 in 10 force steps (10% steps) vstarting from zero until the reaching the nominal force, for increasing and decreasing load under various installation positions.

Note

- **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**

- **CAD data**
  Download via **www.burster.com** or directly at **www.traceparts.com**

Order Code

Measuring range	Code				Measuring range
0 ... 100 N	5	1	0	0	0 ... 22.4 lbs
0 ... 250 N	5	2	5	0	0 ... 56.2 lbs
0 ... 500 N	5	5	0	0	0 ... 112.4 lbs
0 ... 1 kN	6	0	0	1	0 ... 224.8 lbs
0 ... 2.5 kN	6	0	0	2	0 ... 562.0 lbs
0 ... 5 kN	6	0	0	5	0 ... 1.1 klbs
0 ... 10 kN	6	0	1	0	0 ... 2.2 klbs
0 ... 25 kN	6	0	2	5	0 ... 5.62 klbs

										Delivery ex stock at short notice				
										N	0	0	0	S	B	B	0
8	**5**	**5**	**2**	**-**					**-**				**0**	**S**			**0**

■ Nominal sensitivity/not standardized	N
■ Standardization at 0.8 mV/V	B

■ Connection cable 1.7 m (with standardization in the cable 2 m)	0
■ Connection cable 1 m	C
■ Connection cable 3 m	F
■ Connection cable 5 m	G
■ Connection cable 3 m extended *	L
■ Connection cable 5 m extended * (with sens line)	M

* shortened delivery time compared with cable length 3 m and 5 m in one piece

■ Open cable ends + 6 cm single wires	0
■ 9 pins Sub-D connector model 9900-V209	B
■ 9 pins Sub-D connector model 9900-V209 for 9163-V3xxxx	E
■ 12 pins round connector model 9941 for burster desktop devices	F
■ 8 pins coupling connector model 9900-V245 with sensor datas for 9110-Vxxxx	H
■ 9 pins Sub-D connector with burster TEDS model 9900-V229	T

■ Non-linearity ≤ ±0.25 % F.S. up to ≤ ±0.75 % F.S. **	S

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

■ Fixing pin 8 mm	A
■ Fixing pin 10 mm	B
■ Fixing pin 12 mm	C
■ Fixing pin 15 mm	D
■ Fixing pin 16 mm	E

■ Receiving hole 8 mm	A
■ Receiving hole 10 mm	B
■ Receiving hole 12 mm	C
■ Receiving hole 15 mm	D
■ Receiving hole 16 mm	E

■ Nominal temperature range 0 °C ... +70 °C	0

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