
ZD Series Load Cells

NOTE: Not available in U.S.

FEATURES

- 0.5 t to 5 t (5 kN to 50 kN)
- Accuracy class C1, C2, C3 (0.1/0.05)
- Robust construction
- Hermetically sealed case (IP 67)
- Made of special steel
- 6-wire configuration



DESCRIPTION

The load cells of the **ZD** series have been designed for use in especially flat platform scales with industrial applications. The sensing element is executed as a pliable pole. The metal foil strain gauges used as transformer elements are located in an hermetically sealed chamber, which is filled with dry nitrogen. Compensation and adjustment elements in a second sealed chamber guarantee that the technical parameters are set exactly.

The load cell is for measuring tensile or pressure forces. The assembly appliances, which can be ordered separately, enable the user to integrate the load cell in its weighing system without any problem or safety risk. As a standard, the load cells are equipped with a 3 m connection cable. It is a matter of course that these load cells, after calibration in N, can also be supplied as force transducers in the accuracy classes 0.1% and 0.05%.

FORCE TRANSDUCERS / LOAD CELLS

Accuracy class		0.1	0.05	C1	C2	C3
Nominal force (=F _N)	kN	5/10/20/50				
Nominal load (=F _N)	t				0.5/1/2/5	
Max. permissible force/load	%F _N			150		
Ultimate overload	%F _N			>500		
Max. transverse force/load	%F _N			100		
Minimum application range	%F _N				25	
Reference temperature	°C			+23		
Nominal temperature range	°C	-20 to +60			-10 to +40	
Operating temperature range	°C			-30 to +70		
Storage temperature range	°C			-40 to +70		
Enclosure protection (DIN 40050)				IP 67		
Nominal sensitivity (=S)	mV/V			2.000 ±0.002		
Zero tolerance band	%S			≤1		
Max. supply voltage	V			10		
Input resistance	Ω			380 ±30		
Output resistance	Ω			352 ±1.5		
Insulation resistance	Ω			>5 × 10 ⁹		
Combined error *	%S			≤0.030	≤0.023	≤0.021
Variability **	%S			≤0.030	≤0.010	≤0.010
Linearity error **	%S	≤0.1	≤0.05			
Width of backlash *	%S	≤0.1	≤0.05			
TC of zero per 10 K	%S	≤0.05	≤0.025	≤0.025	≤0.012	≤0.008
TC of sensitivity per 10 K	%S	≤0.10	≤0.05	≤0.017	≤0.010	≤0.008
Zero recovery error (30 min)	%S	≤0.10	≤0.05	≤0.050	≤0.025	≤0.017
Creepage error (30 min)	%S			≤0.049	≤0.024	≤0.024

* According to VDE / VDI 2637

** According to VDE / VDI 2638

PIN CONNECTIONS

Pin	To DIN
Supply voltage (+)	brown
Supply voltage (-)	green
Measuring voltage (+)	red
Measuring voltage (-)	white
Sensing line (+)	grey
Sensing line (-)	blue
Shield	black
Cable length	3 m

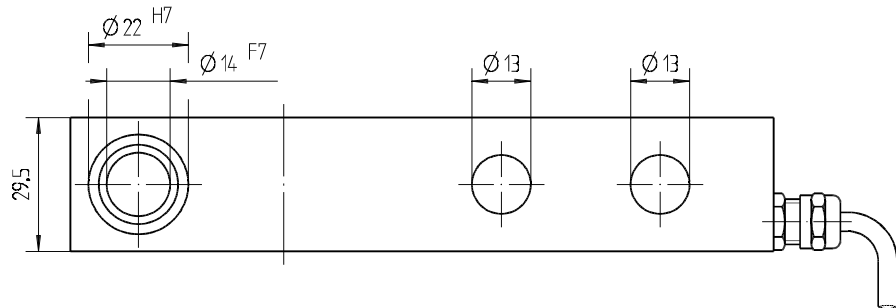
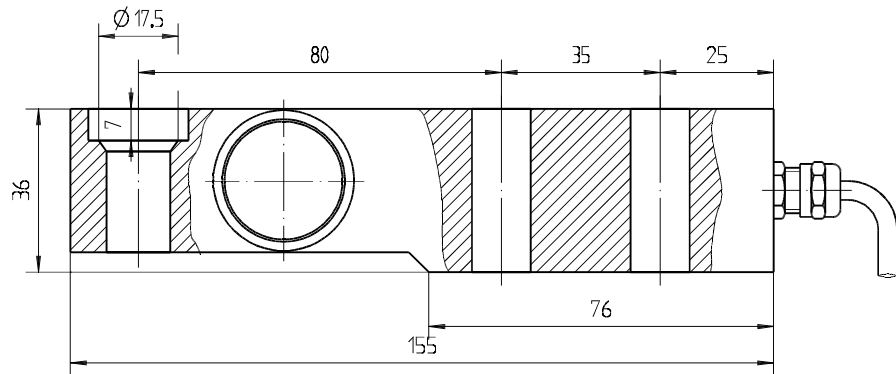
MOUNTING INSTRUCTIONS

When being loaded, the load cells and force transducers of the ZD type series are slightly deflected in the measuring direction at the end where load or force is introduced. This is why these transducers must be so mounted that this deflection will not any case be limited or inhibited within their range of operation.

ZD 0.5 t to 2 t (5 kN to 20 kN)

MODELS
Nominal load / force
 0.5 t / 50 kN
 1 t / 10 kN
 2 t / 20 kN

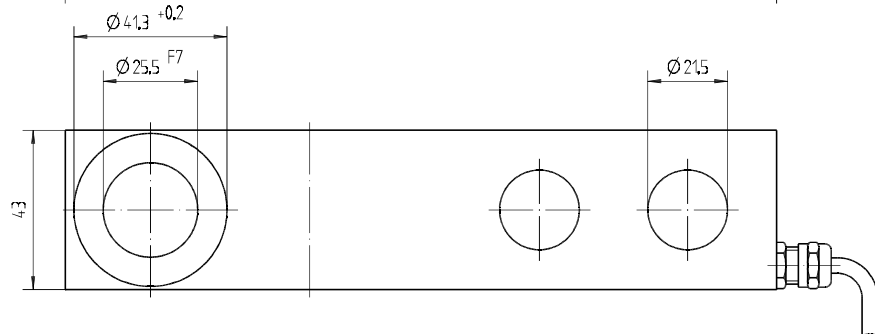
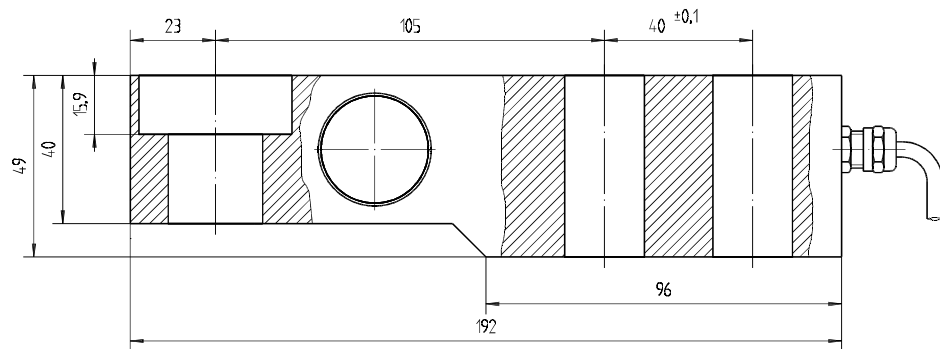
Weight: 1 kg



ZD 5 t (50 kN)

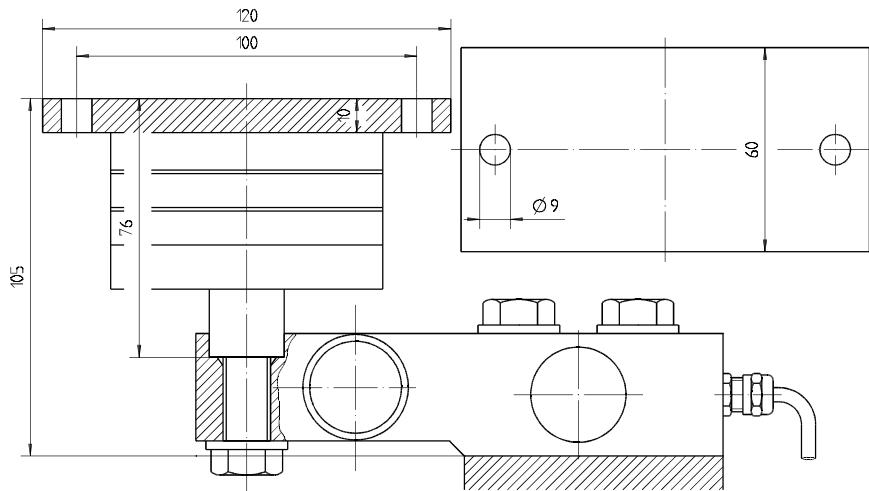
MODELS
Nominal load / force
 5 t / 50 kN

Weight: 2 kg



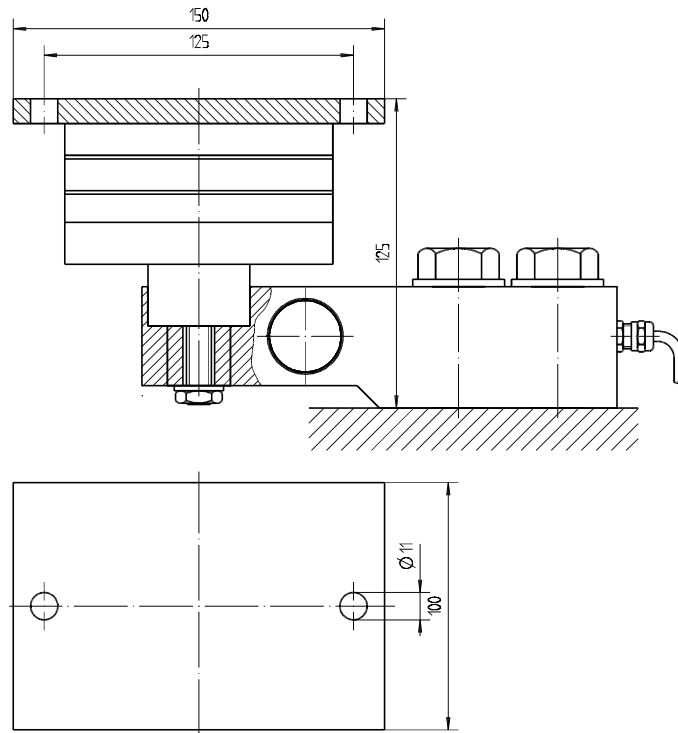
AM 050

Elastomer bearing for ZD 5 kN to 20 kN (0.5 t to 2 t)



AM 054

Elastomer bearing for ZD 5 t (50 kN)



ORDERING INFORMATION FOR MECHANICAL ACCESSORIES

ZD 0.5 t (5 kN) to 2 t (20 kN)

- AM 047 Force introduction calotte A 14-50
- AM 050 Elastomer bearing
- AM 050.01 for ZD 0.5 t (5 kN) transverse stiffness 1200 N/mm
- AM 050.02 for ZD 1 t (10 kN) and ZD 2 t (20 kN) transverse stiffness 3000 N/mm

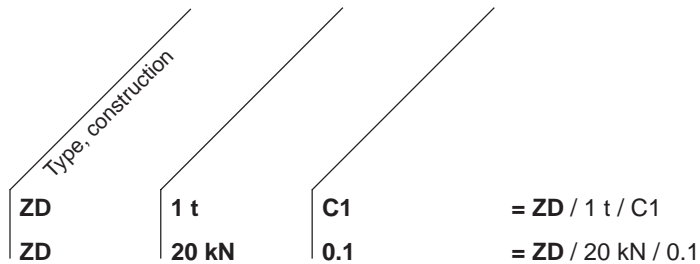
ZD 5 t (50 kN)

- AM 039 Force introduction calotte A 25-50
- AM 054 Elastomer bearing

ORDERING INFORMATION
**Explanation of Type Code
(Ordering Example)**

for Load Cells

for Force Transducers


SYSTEM OPTIONS

Model No.	Product Description	Ordering Number
LMU 112	Load monitoring unit containing 2 level detectors, 1 current and 1 voltage O/Ps	224-112-000-XXX
LMU 116	Load monitoring unit containing 4 level detectors, taring and 4 summer functions	224-116-000-XXX
LMU 117	Dual channel load monitoring unit (2 x LMU 112)	224-117-000-XXX
AN 2000 C	Digital process monitor for strain gauge transducers	AN 2000 C /X/X/XX/XX/X

Due to the continual development of our products, we reserve the right to modify specifications without forewarning.


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