

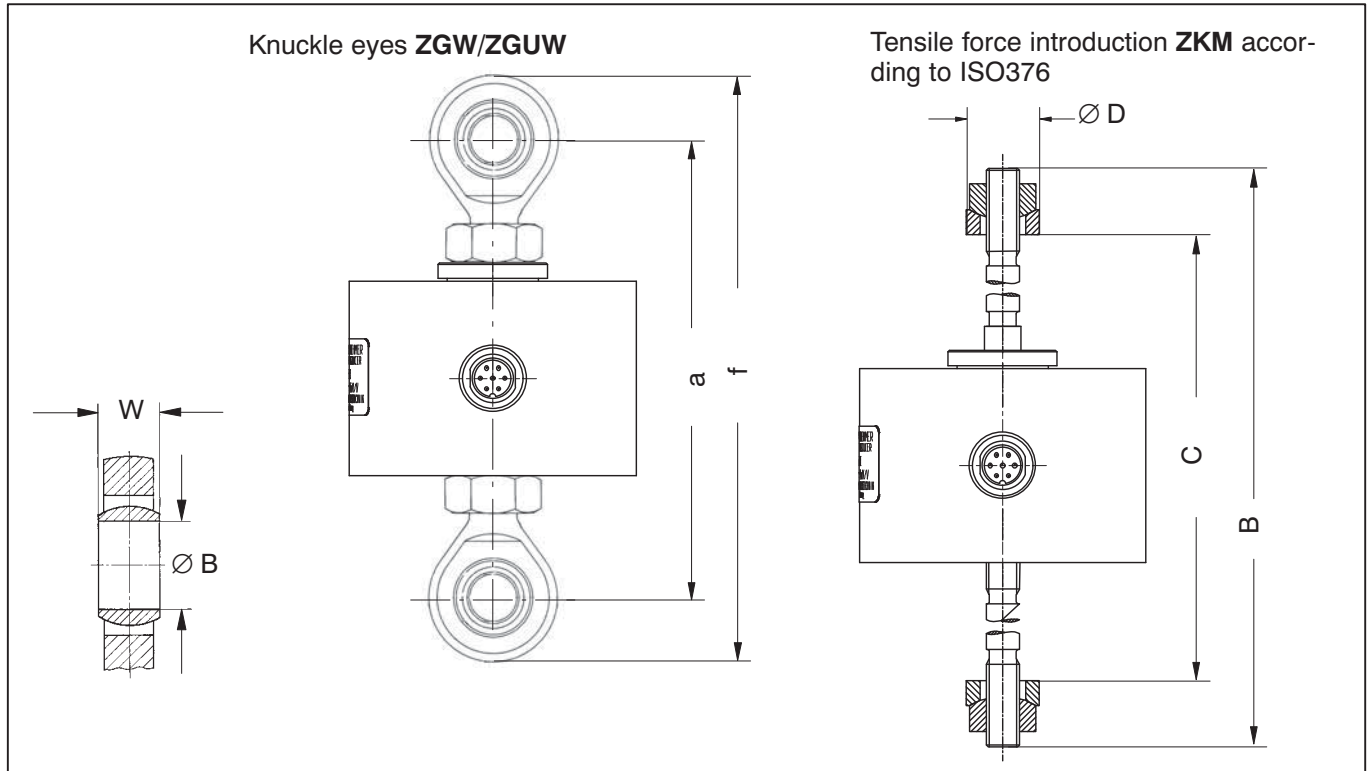
Specifications

Type	Z30										
Data according to VDI standards 2638 and ISO376											
Nominal (rated) force	F _{nom}	N	50	100	200	500	1000	2 k	5 k	10 k	
Class	00 ¹⁾										
Nominal sensitivity	C _{nom}	mV/V								2	
rel. sensitivity deviation (compression)	d _c	%								0.1	
rel. tensile/compressive force sensitivity difference	d _{zd}	%								0.1	
rel. zero signal deviation	d _{s,0}	mV/V	0.2						0.1		
rel. zero point compensation	f ₀	%								0.008	
Rel. range (0.2F_{nom} to F_{nom}) at:											
unchanged mounting position	b _i	%								0.02	
different mounting positions	b	%								0.04	
Rel. range of inversion (0.2F_{nom} to F_{nom})	u	%								0.06	
Linearity deviation	d _{lin}	%								0.03	
Effect of temperature on sensitivity/10 K by reference to nominal sensitivity	TK _c	%								0.02	
Effect of temperature on zero signal/10 K by reference to nominal sensitivity	TK ₀	%								0.02	
Effect of transverse forces (transverse forces 10 % F_{nom})	d _Q	%								0.1	
Effect of eccentricity per mm	d _E	%								0.03	
Rel. creep over 30 min	d _{crF+E}	%								0.03	
Input resistance	R _e	Ω					>345			>690	
Output resistance	R _a	Ω					300-500			600-800	
Isolation resistance	R _{is}	Ω								>5·10 ⁹	
Reference excitation voltage	U _{ref}	V								5	
Operating range of the excitation voltage	B _{U,G}	V								0.5 ... 12	
Nominal temperature range	B _{t,nom}	°C								+10...+40	
Operating temperature range	B _{t,G}	°C								-10...+70	
Storage temperature range	B _{t,S}	°C								-25...+85	
Reference temperature	t _{ref}	°C								+22	
Max. operational force	(F _G)	%					120			150	
Limit force	(F _L)	%								150	
Breaking force	(F _B)	%								250	
Static lateral limit force	(F _Q)	%								60	
Permissible torque	(M _G)	Nm	1.5	3	5	5	5	80			
Nominal displacement	S _{nom}	mm	< 0.4							approx. 0.2	
Fundamental resonance frequency	f _G	kHz	0.2	0.3	0.5	0.9	1.1	1.1	1.1	1.25	
Weight			approx. 0.9					approx. 2.3			
Rel. permissible vibrational stress	F _{rb}	%								70	
Connector, six-wire connection	radial and axial male connector										
Degree of protection to DIN EN 60529	IP50										

¹⁾ Accuracy class 00 according to ISO376 only guaranteed in conjunction with a DKD-calibration certificate

Accessories

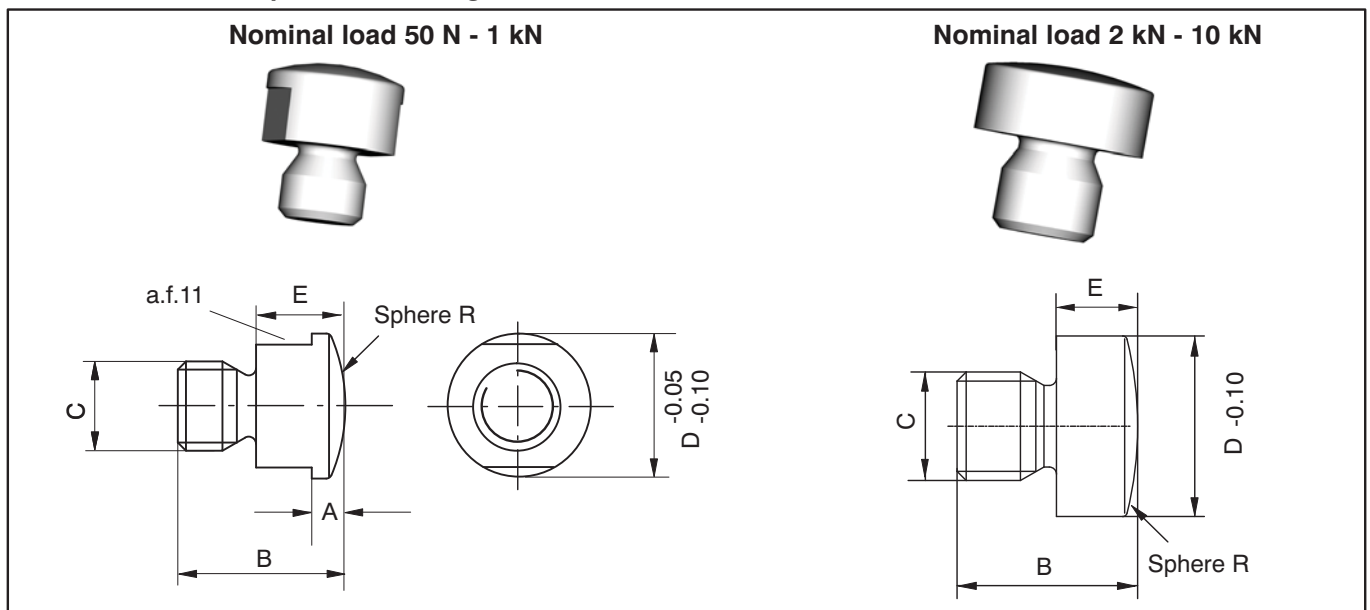
Force introduction parts for tensile loading



Type	Knuckle eye upper/lower Order number	a	f	W	ØB
Z30/50 N - 1000 N	1-U1R/200 kg/ZGW	147.5	170	12	8 ^{H7}
Z30/2 kN - 10 kN	1-U2A/1 t/ZGUW	169	201	16	12 ^{H7}

Type	ZKM Order number	B	C		ØD
			min	max	
Z30/2kN-10 kN	1-Z30/10 kN/ZKM	229	250	312	35 -0.120 -0.280

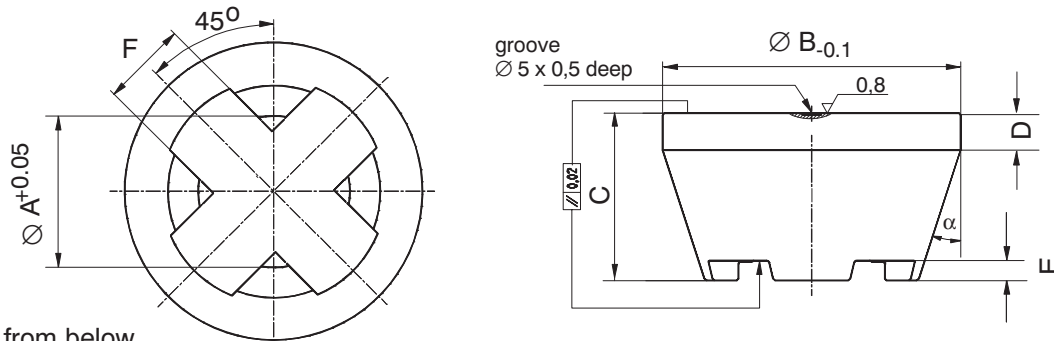
Load button for compressive loading



Type	Load button	A	B	C	D	E	R
Z30/50N - 1000 N	1-U1R/200kg/ZL	3	15	M8	13	8	16
Z30/2kN - 10 kN	3-9202.0140	11	20	M12	20	9	40

Thrust piece EDO4/EDO3 for precision measurements

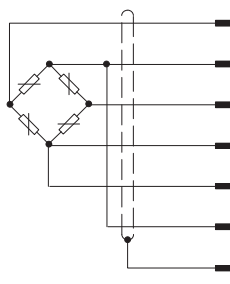
(must always be used in combination with the load button, when under compressive loading)



View from below

Type	Thrust piece	Weight (kg)	Ø A	Ø B	C	D	E	F	α
Z30/ 50 N - 1000 N	EDO3/1 kN	approx. 0.2	13.2	37	22	6	3	8	18°
Z30/ 2 kN - 10 kN	EDO4/50 kN	0.34	20.2	48	29	8	5	12	18°

Pin assignment of the Z30 (for KAB139A-6 connection cable)

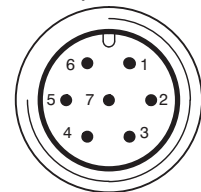


WH (white)	Measurement signal (+) U_A
BK (black)	Excitation voltage (-) U_B
RD (red)	Measurement signal (-) U_A
BU (blue)	Excitation voltage (+) U_B
GN (green)	Sensor circuit (+)
GY (grey)	Sensor circuit (-)
shielding	Cable shielding, connected to housing

Pin on male connector

1
2
4
3
6
7
5 (no function)

Top view



Transport case for 4 force transducers Z30 and accessories,
Order number: 1-Z30/BOX

Dimensions: 440 x 320 x 147 mm

Accessories (not included in the scope of supply):

Connection cable

Cable socket and unterminated (6 m)

Order number: 1-KAB139A-6

Regional Distributor

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