

U9B

Force Transducers

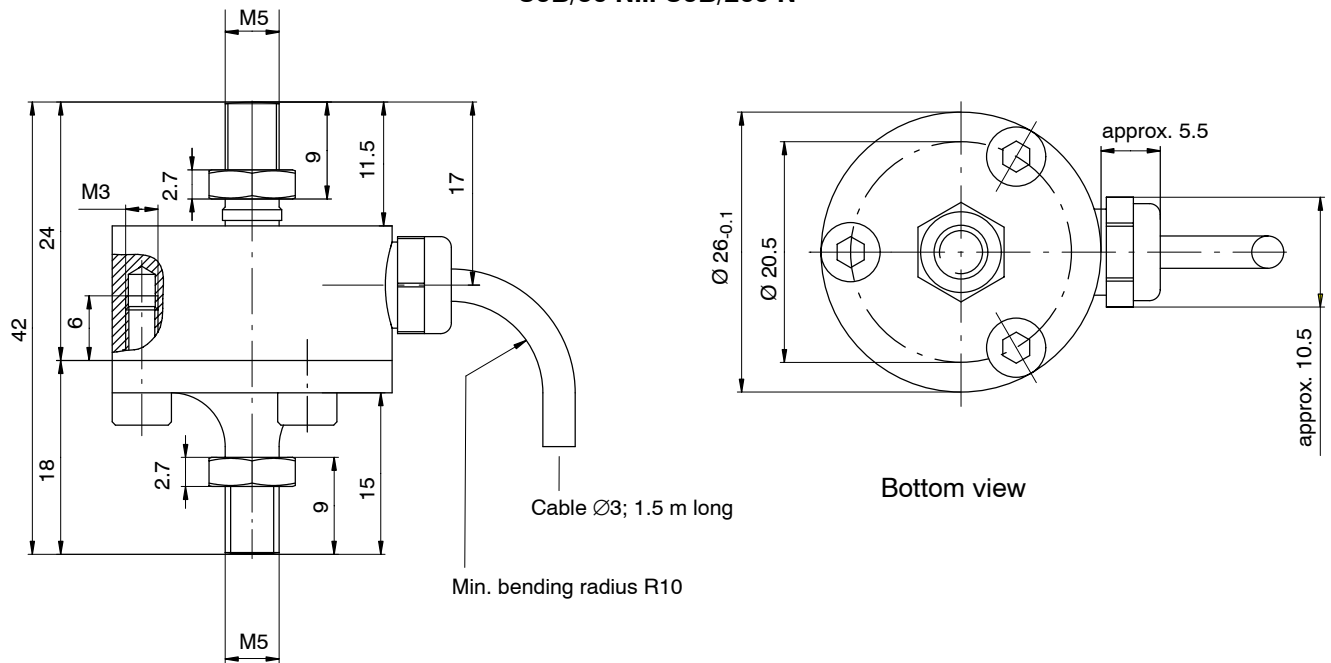


Special features

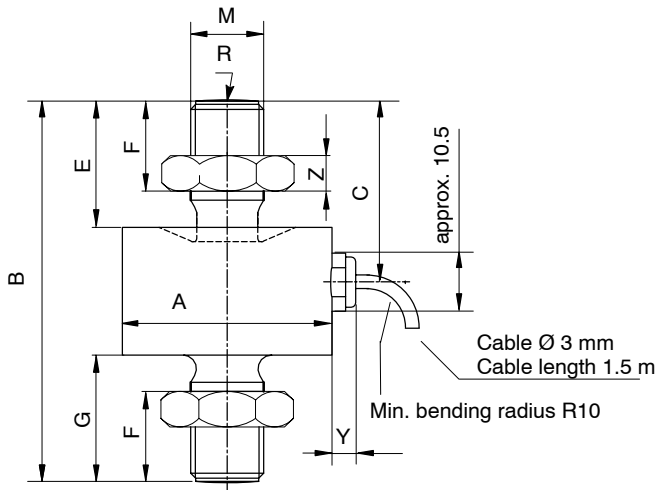
- Tensile / compressive force transducer in non-rusting material
- Nominal (rated) forces 50 N ... 50 kN
- Small size
- Accuracy class 0.5
- Maintenance-free knuckle eye as force-introduction aid

Dimensions (in mm; 1 mm= 0.03937 inches)

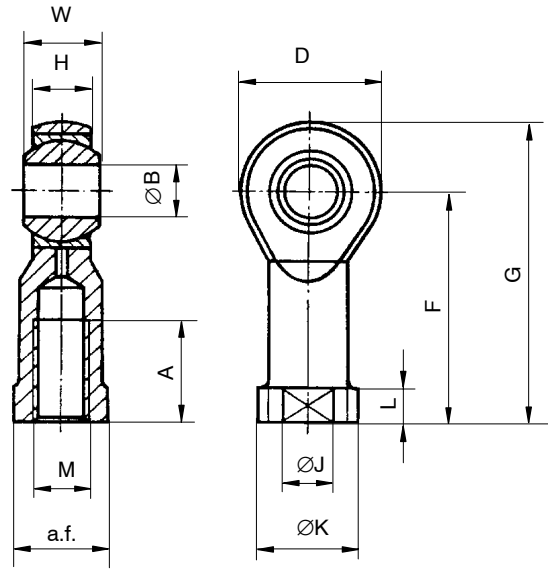
U9B/50 N... U9B/200 N



U9B/0.5 kN ... U9B/50 kN



Knuckle eye ZGW



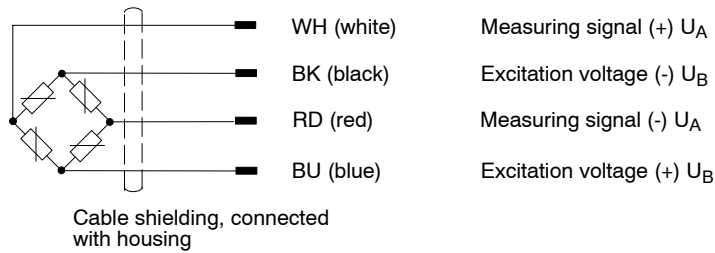
All dimensions in mm

Nominal (rated) force U9B	A _{0.1}	B	C	E	F	G	M	R	Y	Z
0.5...1 kN	26	44.5	20.5	13	9.5	13.5	M5	20	approx. 5.5	2.7
2...20 kN	26	60	28.5	21	16	21	M10	40	approx. 5.5	5
50 kN	46	84	40	28	21.5	28	M16x1.5	80	approx. 5.5	8

Knuckle eye:

Nominal (rated) force ZGW	A	B	D	F	G	H	J	K	L	M	a.f.	W
50 N...1 kN	10	5 ^{H7}	18	27	36	6	9	11	4	M5	9	8
2...20 kN	20	10 ^{H7}	28	43	57	10.5	15	19	6.5	M10	17	14
50 kN	28	16 ^{H7}	42	64	85	15	22	27	8	M16x1.5	22	21

Cable assignment (Four wire-circuit)



Specifications

Type			U9B										
Nominal (rated) force	F_{nom}	N	50	100	200								
		kN				0.5	1	2	5	10	20	50	
Accuracy class			0.5										
Nominal (rated) sensitivity	C_{nom}	mV/V	1										
Rel. sensitivity deviation	d_c	%	$\leq \pm 1$ tension / $\leq \pm 2$ compression										
Temperature effect on the sensitivity per 10 K in the nominal (rated) temperature range in the operating temperature range	TK_C												
		%	$\leq \pm 0.5$										
		%	$\leq \pm 0.8$										
Temperature effect on the zero signal per 10 K in the nominal (rated) temperature range in the operating temperature range	TK_0												
		%	$\leq \pm 0.5$										
		%	$\leq \pm 0.8$										
Linearity	d_{lin}	%	$\leq \pm 0.5$										
Rel. reversibility error	U	%	$\leq \pm 0.5$										
Rel. repeatability error without rotation	brg	%	$\leq \pm 0.5$										
Creep over 30 min	d_{crF+E}	%	$\leq \pm 0.2$										
Input resistance	R_e	Ω	> 345										
Output resistance	R_a	Ω	300-400										
Insulation resistance	R_{Is}	$G\Omega$	$> 1 \times 10^9$										
Operating range of supply voltage	$B_{U,G}$	V	0.5...12										
Reference supply voltage	U_{ref}	V	5										
Reference temperature	t_{ref}	$^{\circ}C [^{\circ}F]$	+ 23 [+73.4]										
Nominal (rated) temperature range	$B_{t,nom}$	$^{\circ}C [^{\circ}F]$	-10...+70 [+14...+158]										
Operating temperature range	$B_{t,G}$	$^{\circ}C [^{\circ}F]$	-30...+85 [-22...+185]										
Storage temperature range	$B_{t,S}$	$^{\circ}C [^{\circ}F]$	-30...+85 [-58...+185]										
Protection to DIN EN 60 529			IP 67										
Nominal (rated) measuring displacement $\pm 15\%$	S_{nom}	mm	< 0.1										
Natural frequency $\pm 15\%$			kHz	6.3	9.2	14.5	15.5	23.7	18.7	20	23	27.8	20
Working force	(F_G)	%	300				120						
Breaking force	(F_B)	%	> 500				> 200						
Relative static lateral limit force ¹⁾	(F_Q)	%	100				40		20				
Permissible vibration amplitude to DIN 50 100	F_{rb}	%	70										40
Weight, approx.		g	75			65		100				400	
Cable length			1.5										

¹⁾ referred to the 2 mm force introduction point above diaphragm

Order numbers:

Force transducer

Order code	Nominal (rated) force											Unit
	1-U9B/ ...	50	100	200								
				0,5	1	2	5	10	20	50		kN

Ordering numbers: 1-U9B/2kN

Accessories (to be ordered separately)

1-Z8/100kg/ZGW	Knuckle eye 50 N ... 1 kN
1-U9/20kN/ZGWR	Knuckle eye 2 kN ... 20 kN
1-U9A/50kN/ZGW	Knuckle eye 50 kN
D-15D/MONT	15pin D-connector, mounted to transducer cable
D-MS/MONT	MS3106PEMV-connector, mounted to transducer cable

Modifications reserved.

All details describe our products in general form only. They are not to be understood as express warranty and do not constitute any liability whatsoever.

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