

U9B

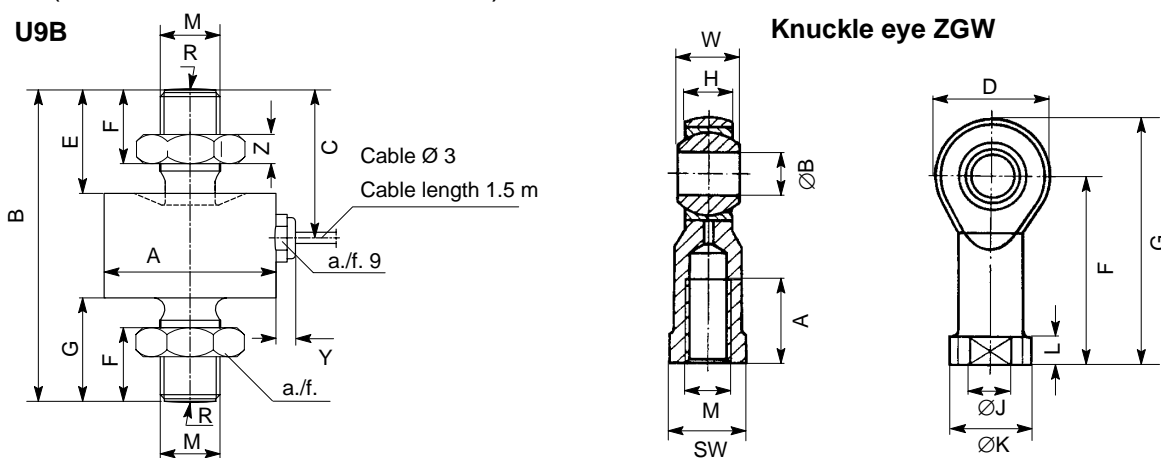
Force Transducers



Special features

- Tensile / compressive force transducers in non-rusting material
- Nominal forces 500 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)



Nominal force U9B	A _{-0,1}	B	C	E	F	G	M	R	SW	Y	Z
0.5...1 kN	26	44.5	20.5	13	9.5	13.5	M5	20	8	ca. 5.5	2.5
2...20 kN	26	60	28.5	21	16	21	M10	40	17	ca. 5.5	5
50 kN	46	84	40	28	21.5	28	M16x1.5	80	24	ca. 5.5	8

Knuckle eye:

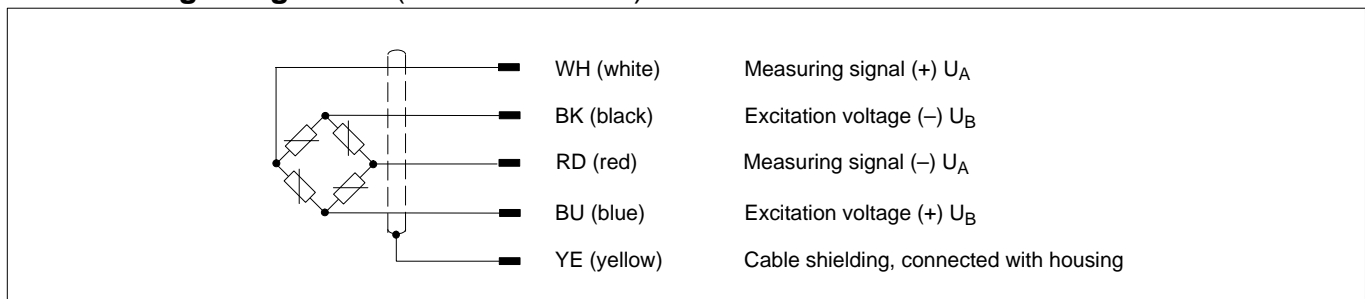
Nominal force ZGW	A	B	D	F	G	H	J	K	L	M	SW	W
0.5...1 kN	10	5 ^{H7}	18	27	36	6	9	11	4	M5	9	8
2...20 kN	20	10 ^{H7}	28	43	57	10.5	15	19	6.5	M10	17	14
50 kN	28	16 ^{H7}	42	64	85	15	22	27	8	M16x1.5	22	21

Specifications

Type			U9B							
Nominal force		kN	0.5	1	2	5	10	20	50	
Accuracy class			0.5						1	
Nominal sensitivity	C_{nom}	mV/V	1							
Rel. sensitivity deviation	d_c	%	$\leq \pm 1$ tension / $\leq \pm 2$ compression							
Effect of temperature per 10 K on sensitivity in nominal temperature range in service temperature range	TK_C	%	$\leq \pm 0.5$							
		%	$\leq \pm 0.8$							
Effect of temperature per 10 K on zero signal in nominal temperature range in service temperature range	TK_0	%	$\leq \pm 0.5$							
		%	$\leq \pm 0.8$							
Linearity	d_{lin}	%	$\leq \pm 0.5$							
Hysteresis related to measuring range limit	U	%	$\leq \pm 0.5$							
Span in fixed mounting orientation	brg	%	$\leq \pm 0.5$							
Creep at nominal load and reference temperature over 30 min	d_{crF+E}	%	$\leq \pm 0.2$							
Input resistance bk-bl at reference temperature	R_e	Ω	> 345							
Output resistance rd-wh at reference temperature	R_a	Ω	300–400							
Insulation resistance	R_{Is}	G Ω	> 1							
Service 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 temperature range	$B_{t,nom}$	$^{\circ}C$ [$^{\circ}F$]	-10...+70 [-15...+158]							
Service 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 [-22...+185]							
Protection to DIN EN 60 529			IP 67							
Nominal measuring displacement ± 15 %	S_{nom}	mm	< 0.1							
Natural frequency ± 15 %			15. 5	23. 7	18. 7	20	23	27.8	20	
Service load	(F_G)	%	120							
Breaking load	(F_B)	%	> 200							
Relative static side -load limit ¹⁾	(F_Q)	%	40							20
Permissible vibration amplitude to DIN 50 100	Frb	%	70						40	
Weight, approx.			65	100				400		
Cable length			1.5							

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

Cable wiring assignment (Four wire-circuit)



Accessories (to order):

Knuckle eye	0.5 kN...1 kN	1-Z8/100kg/ZGW
Knuckle eye	2 kN...20 kN	1-U9/20KN/ZGWR
Knuckle eye	50 kN	1-U9A/50KN/ZGW

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