

U1A

Force Transducers

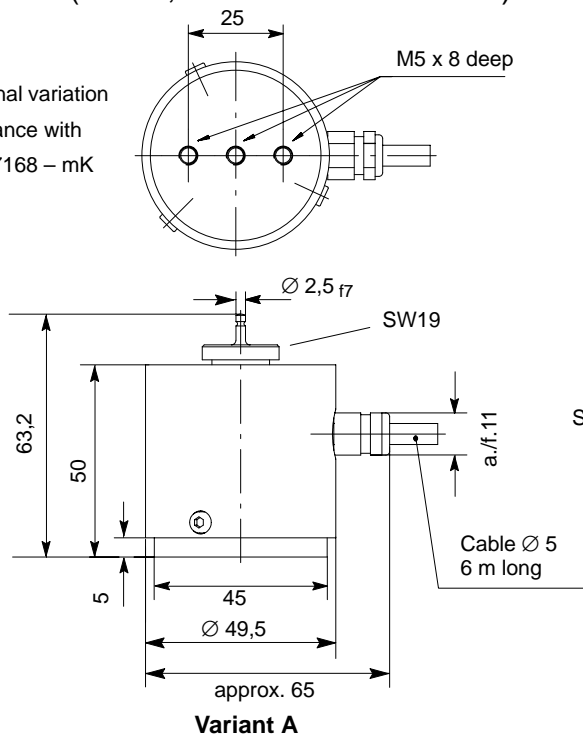


Special features

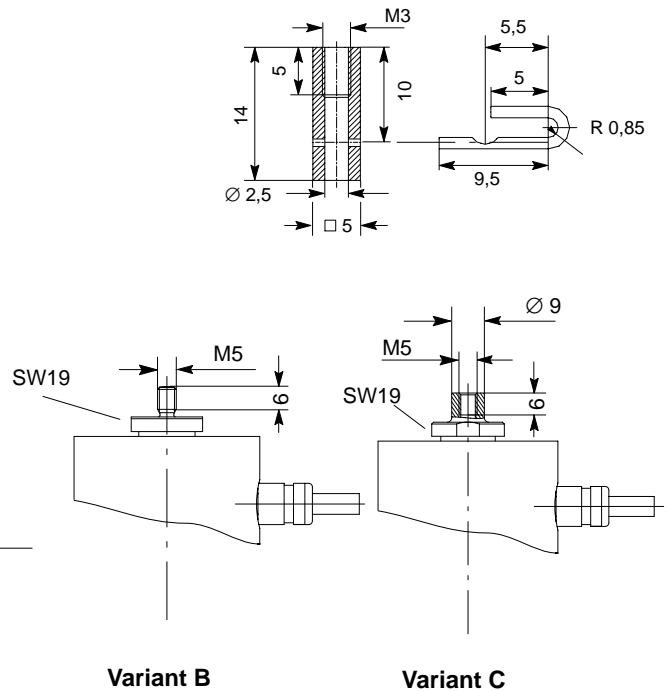
- Tensile force / compressive force transducers
- Nominal forces 10 N ... 50 N
- Integrated overload protection
- Side-force support
- Variable force introduction

Dimensions (in mm; 1 mm=0.03937 inches)

Dimensional variation
in accordance with
DIN ISO 7168 – mK



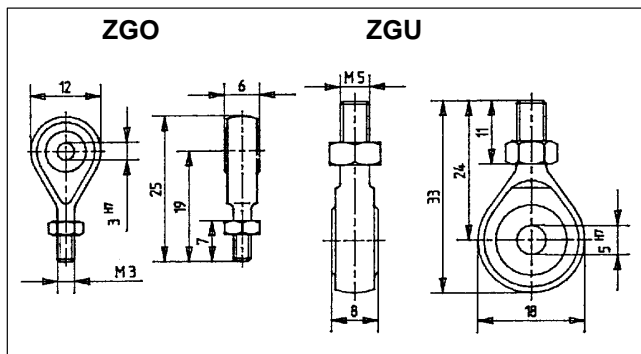
Coupling for knuckle eye (variant A)



Specifications

Type			U1A		
Accuracy class			0.1		
Nominal force		N	10	20	50
Nominal sensitivity		C_{nom}	2		
rel. sensitivity deviation		d_c	0.2		
rel. tensile-compressive sensitivity difference		d_{zd}	0.4		
rel. deviation from zero		$d_{s,0}$	1		
Rel. range of inversion (0.2F _{nom} to F _{nom})		u	0.15		
Linearity deviation		d_{lin}	0.1		
Temperature effect on the sensitivity/10 K by reference to nominal sensitivity		TK _C	%		
Temperature effect on the zero signal/10 K by reference to nominal sensitivity		TK ₀	%		
Effect of eccentricity / mm		d_E	%		
Rel. creep over 30 min		d_{crF+E}	%		
Input resistance		R _e	Ω		
Output resistance		R _a	Ω		
Isolation resistance		R _{is}	Ω		
Reference excitation voltage		U _{ref}	V		
Operating range of the excitation voltage		B _{U,G}	V		
Nominal temperature range		B _{t,nom}	°C		
Operating temperature range		B _{t,G}	°C		
Storage temperature range		B _{t,S}	°C		
Reference temperature		t _{ref}	°C		
Max. operational force		(F _G)	%		
Limit force		(F _L)	1000	500	200
Breaking force		(F _B)	2000	1000	400
Static lateral limit force		(F _Q)	200	100	40
Nominal displacement		S _{nom}	0.28	0.21	0.2
Fundamental resonance frequency		f _G	300	450	700
Weight			kg		
Rel. permissible vibrational stress		F _{rb}	%		
Degree of protection to DIN EN 60529			IP 40		

Knuckle eyes



Options

Code	Option 1: Measuring range	Code	Option 2: Force introduction
010N	10N	A	with pin
020N	20N	B	with M5 external thread
050N	50N	C	with M5 internal thread

Code	Option 3: Cable type
K	with cable, 6m, free ends
M	with cable, 6m, MS connector
D	with cable, 6m, D15 connector

Bestell-Beispiel
K-U1A-010N-A-K

Scope of supply: transducer and corresponding force introduction piece, coupling for knuckle eye for Code A

Accessories (not included in the scope of supply):

U1/5N/ZGO upper knuckle eye
U1/5N/ZGU lower knuckle eye

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.

Hottinger Baldwin Messtechnik GmbH

Postfach 10 01 51, D-64201 Darmstadt
Im Tiefen See 45, D-64293 Darmstadt

TEL:021-51087017 FAX:021-51685107
www.hbm.sh.cn hbm_sh@126.com



measurement with confidence