

S2

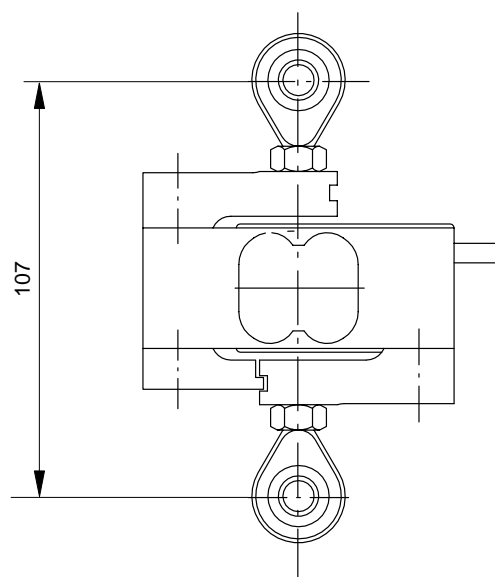
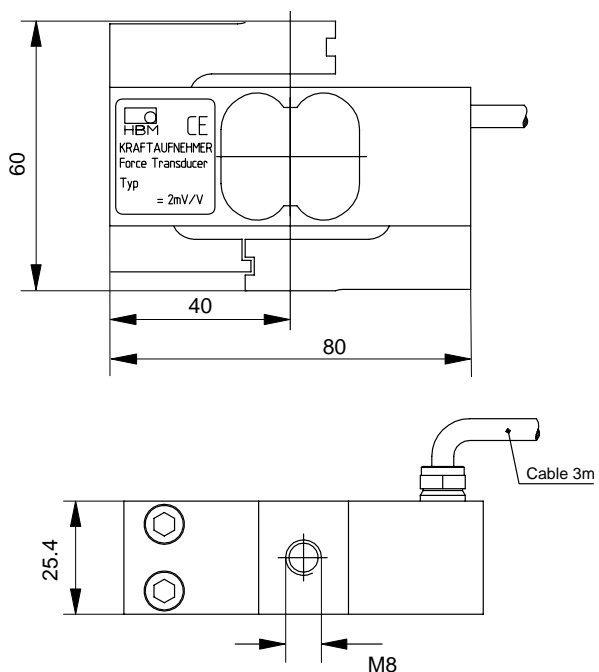
Force Transducers



Special features

- Tensile force / compressive
- Nominal forces 20 N ... 1 kN
- Accuracy class 0.05
- High transverse force stability
- Overload protection
- Low overall height

Dimensions (in mm; 1 mm= 0.03937 inches)



Specifications under VDI 2638

Force transducer type		S2							
Nominal force	F _{nom}	N	20	50	100	200	500	1000	
Accuracy class			0.05						
Nominal sensitivity	C _{nom}	mV/V	2						
relative sensitivity deviation tensile/compressive force	d _c	%	± 0.25						
relative tensile/compressive sensitivity difference	d _{zd}	%	< ± 0.1						
relative deviation from zero	d _{s,0}	%	< 8	< 6				< 5	
Relative range of inversion (0.2F _{nom} to F _{nom})	u	%	0.1						
Linearity deviation	d _{lin}	%	0.05						
Temperature effect per 10 K by reference to nominal sensitivity to sensitivity to zero signal	TK _C	%	0.05						
	TK _c	%	0.05						
Effect of transverse forces (transverse force 10 % F _{nom}) ^{*)}	d _Q	%	± 0.1						
Effect of eccentricity at 1 mm	d _E	%	± 0.1						
Creep over 30 min	d _{crF+E}	%	< ± 0.05						
Input resistance	R _e	Ω	> 345						
Output resistance	R _a	Ω	300 – 500						
Isolation resistance	R _{is}	GΩ	> 2x10 ⁹						
Reference excitation voltage	t _{ref}	V	5						
Operating range of the excitation voltage	B _{U,G,T}	V	0.5...12						
Nominal temperature range	B _{t,nom}	°C [°F]	+10...+70 [50...158]						
Operating temperature range	B _{t,G}	°C [°F]	-10...+70 [14...158]						
Storage temperature range	B _{t,S}	°C [°F]	-30...+85 [-22...185]						
Reference temperature	t _{ref}	°C [°F]	+23 [73.4]						
Maximum operating force	(F _G)	%	120	120	150				
Limit force	(F _L)	%	< 900			< 600		< 300	
Breaking force	(F _B)	%	> 1000			> 700		> 400	
Limit torque	(M _d)	Nm	0.6	1.5	3	6	15	15	
Static lateral limit force [*]	(F _Q)	%	50	100				50	
Nominal displacement	S _{nom}	mm	< 0.4						
Fundamental resonance frequency	f _G	kHz	0.29	0.49	0.76	1.09	1.81	2.45	
Relative permissible vibrational stress	F _{rb}	%	± 70						
Weight		kg	approx. 0.4						
Degree of protection to DIN EN 60529			IP65						
Cable length, 6-wire connection		m	3						

^{*)} by reference to a force introduction point on the force-introduction surface

Accessories(option):

<p>Knuckle eye U1/200 kg/ZGW: Dimensions (in mm)</p>		<p>Weight: 50 g Material: tempering steel, galvanised; rolled steel and PTFE/bronze fabric foil</p>
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Hottinger Baldwin Messtechnik GmbH

Postfach 10 01 51, D-64201 Darmstadt
Im Tiefen See 45, D-64293 Darmstadt
Tel.: +49/61 51/ 8 03-0; Fax: +49/61 51/ 8039100
E-mail: support@hbm.com www.hbm.com



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