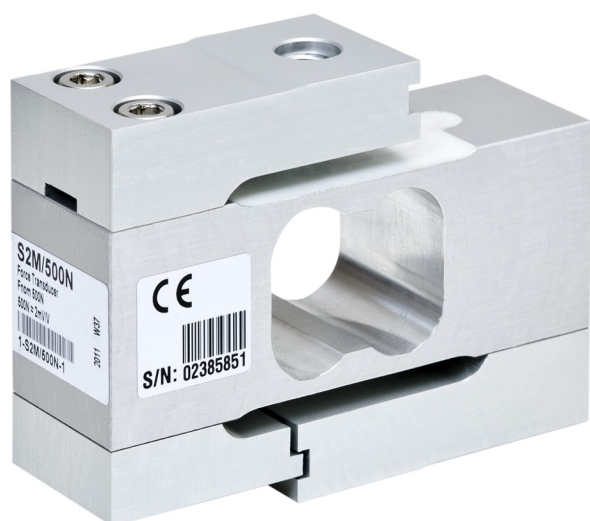


S2M

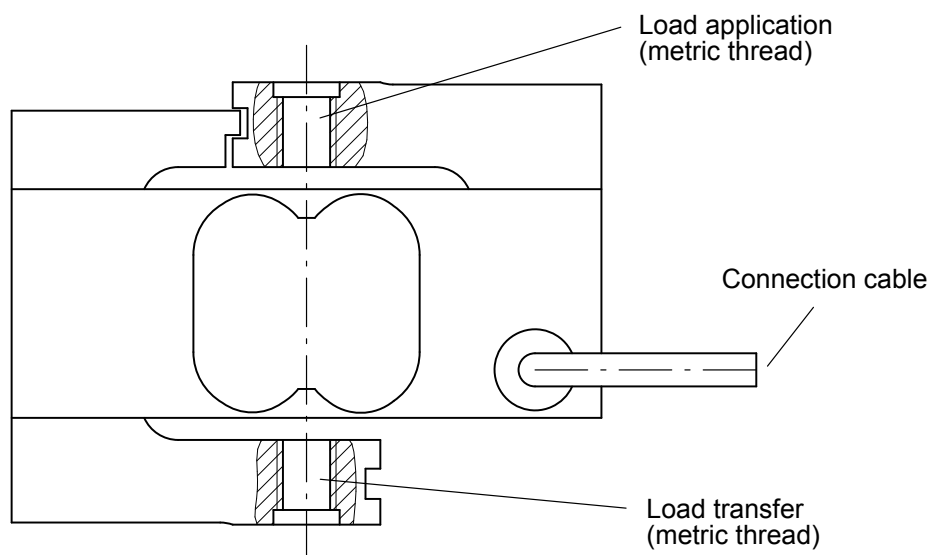
Force Transducer



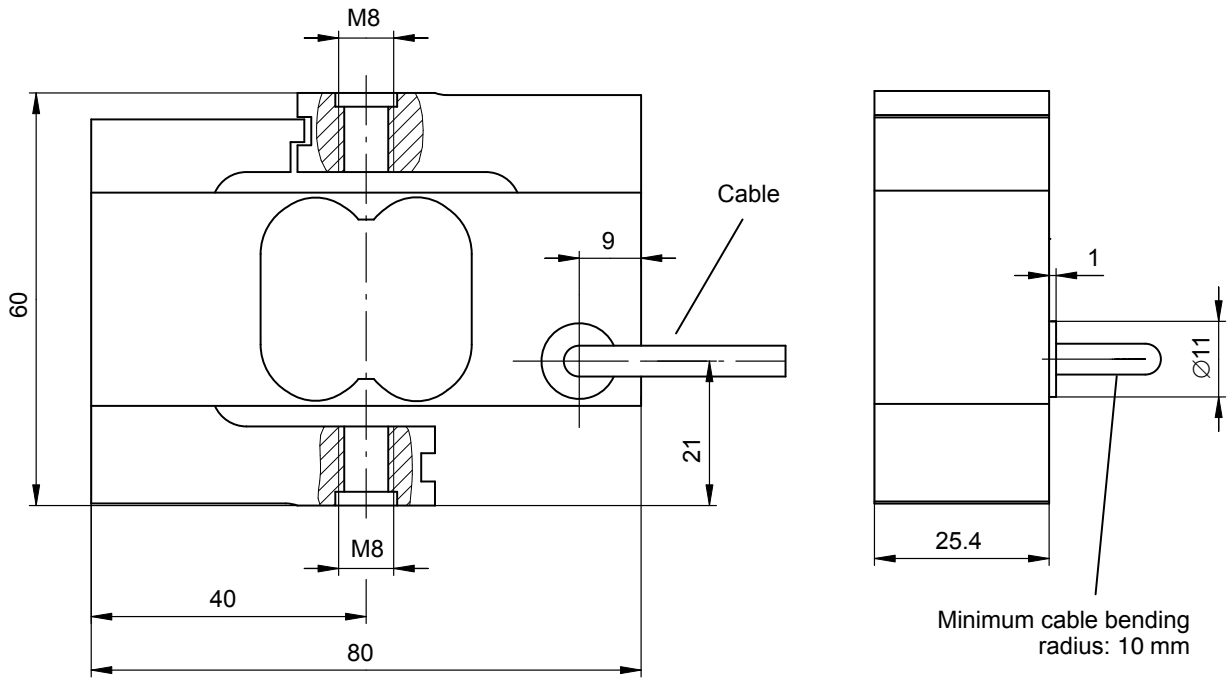
Special features

- Tensile/compressive force transducer
- Accuracy class 0.02
- Nominal (rated) forces: 10 N ... 1000 N
- High protection class (IP67)
- High lateral force stability
- Six-wire circuit

Principle of the S2M force transducer

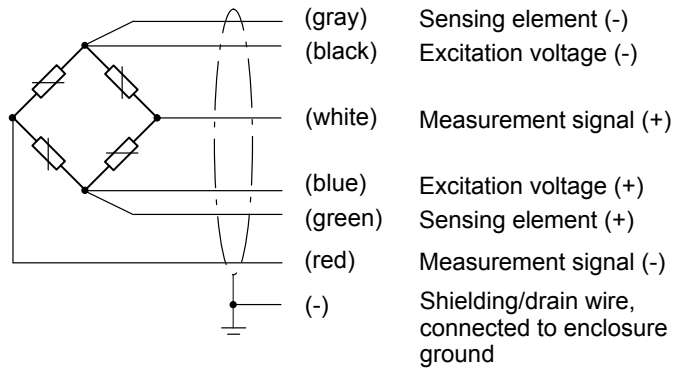


Dimensions (in mm; 1 mm = 0.03937 inches)



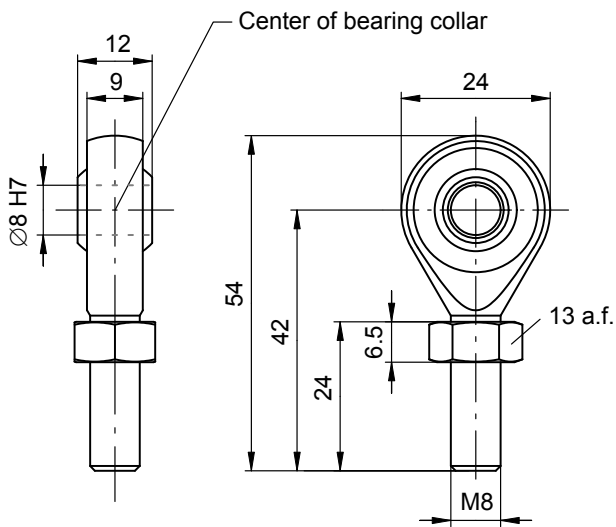
**Cable assignment
(six-wire configuration)**

With this cable assignment, the output voltage at the measuring amplifier is positive in the pressure direction when the transducer is loaded.



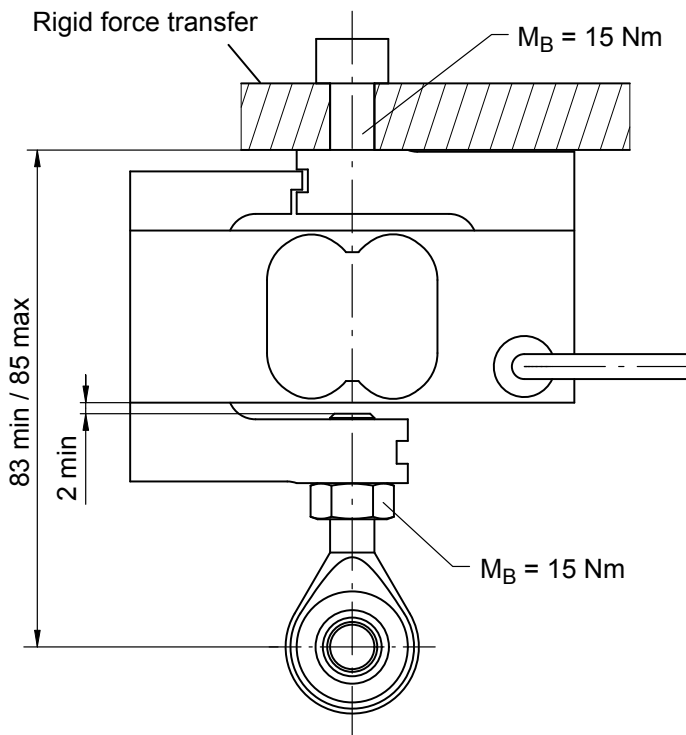
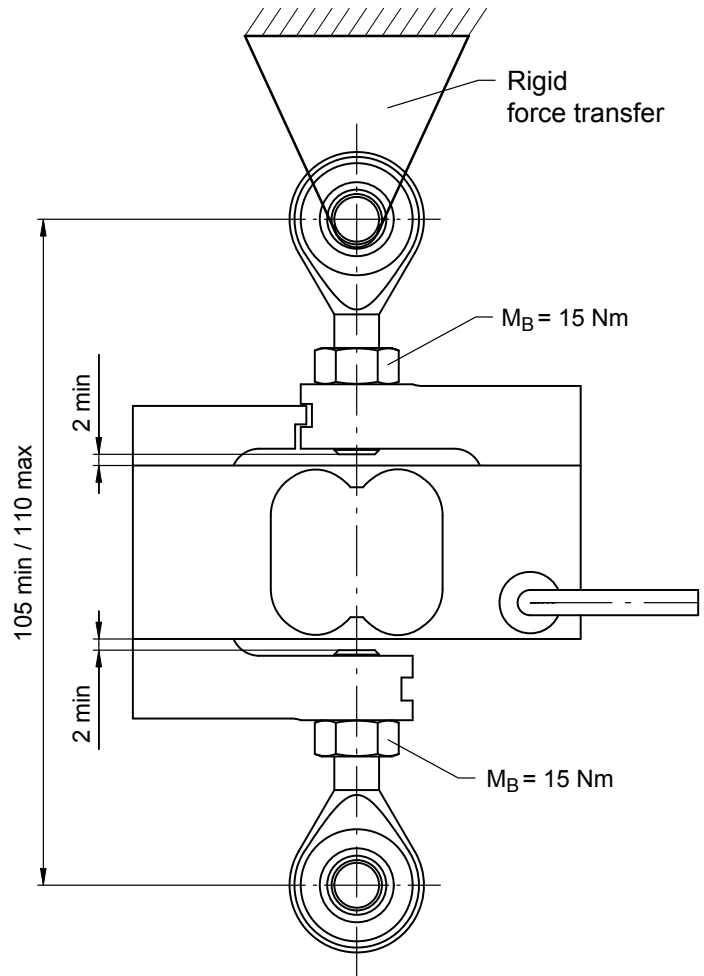
Mounting accessories (to be ordered separately)

Dimensions (in mm; 1 mm = 0.03937 inches)



ZGW knuckle eye
Order no. 1-U1R/200KG/ZGW

Material: Tempered steel, galvanized
roller bearing steel
PTFE/bronze corrugated foil



Specifications (data per VDI/VDE/DKD 2638 standards)

Type			S2M							
Nominal (rated) force	F_{nom}	N	10	20	50	100	200	500	1000	
Accuracy										
Accuracy class			0.02							
Relative reproducibility and repeatability errors without rotation	b_{rg}	%	0.02							
Relative reversibility error	v		0.02							
Non-linearity	d_{lin}		0.02							
Relative creep over 30 min.	$d_{cr, F+E}$		0.02							
Effect of the bending moment at 10% F_{nom} * 10 mm	d_{Mb}		0.02							
Effect of lateral forces (lateral force = 10% F_{nom})	d_Q		0.02							
Effect of temperature on sensitivity	TK_C	% / 10 K	0.02							
Effect of temperature on zero signal	TK_0		0.02							
Electrical characteristic values										
Nominal (rated) sensitivity	C_{nom}	mV/V	2							
Relative zero signal error	$d_{S, 0}$	%	5							
Relative sensitivity error	d_c		0.25							
Rel. tensile/compression sensitivity variation	d_{ZD}		0.1							
Input resistance	R_i	Ω	> 345							
Output resistance	R_o		350 ± 50							
Insulation resistance	R_{is}	G Ω	> 2							
Operating range of the excitation voltage	$B_{U, G}$	V	0.5 ... 12							
Reference excitation voltage	U_{ref}		5							
Connection			Six-wire circuit							
Temperature										
Nominal (rated) temperature range	$B_{T, nom}$	°C	-10 ... +45							
Operating temperature range	$B_{T, G}$		-10 ... +70							
Storage temperature range	$B_{T, S}$		-10 ... +85							
Mechanical characteristic quantities										
Max. operating force	F_G	%	150							
Limit force	F_L		1000							
Breaking force	F_B		1000							
Limit torque	M_L	Nm	4	8	25	28				
Limit bending moment	M_b perm		6	25	34	50	71	95	125	
Static lateral limit force	F_Q	% of F_{nom}	100							
Nominal (rated) displacement	s_{nom}	mm	0.27	0.21	0.18	0.15	0.13	0.12	0.13	
Fundamental resonance frequency	f_G	Hz	94.4	146	243	358	475	582	618	
Relative permissible oscillatory stress	F_{rb}	% of F_{nom}	140							
General data										
Degree of protection per EN 60529			IP 67							
Measuring body material			Aluminum							
Potting material			Silicone							
Cable			Six-wire circuit, PUR insulation, drag chain							
Cable length			6							
Mass (with cable)	m	kg	0.5							

Modifications reserved.

All product descriptions are for general information only. They are not to be understood as a guarantee of quality or durability and do not constitute any liability whatsoever.

Hottinger Baldwin Messtechnik GmbH

Im Tiefen See 45 · 64293 Darmstadt · Germany
 Tel. +49 6151 803-0 · Fax: +49 6151 803-9100
 E-mail: info@hbm.com · www.hbm.com

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