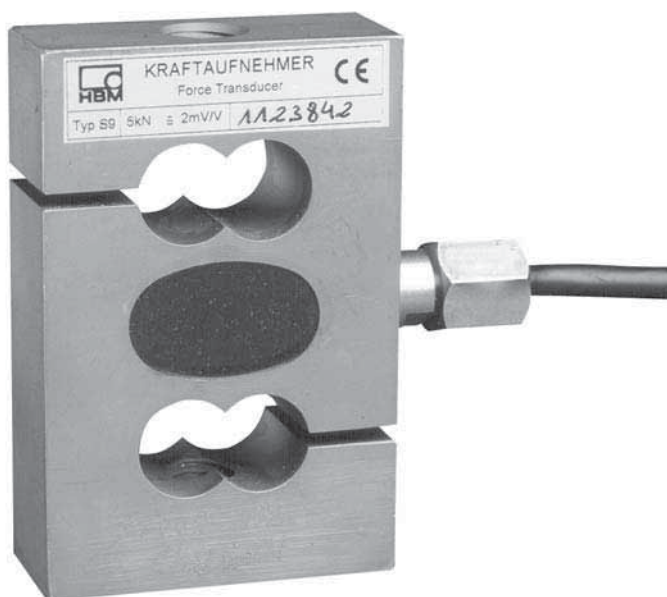


# S9

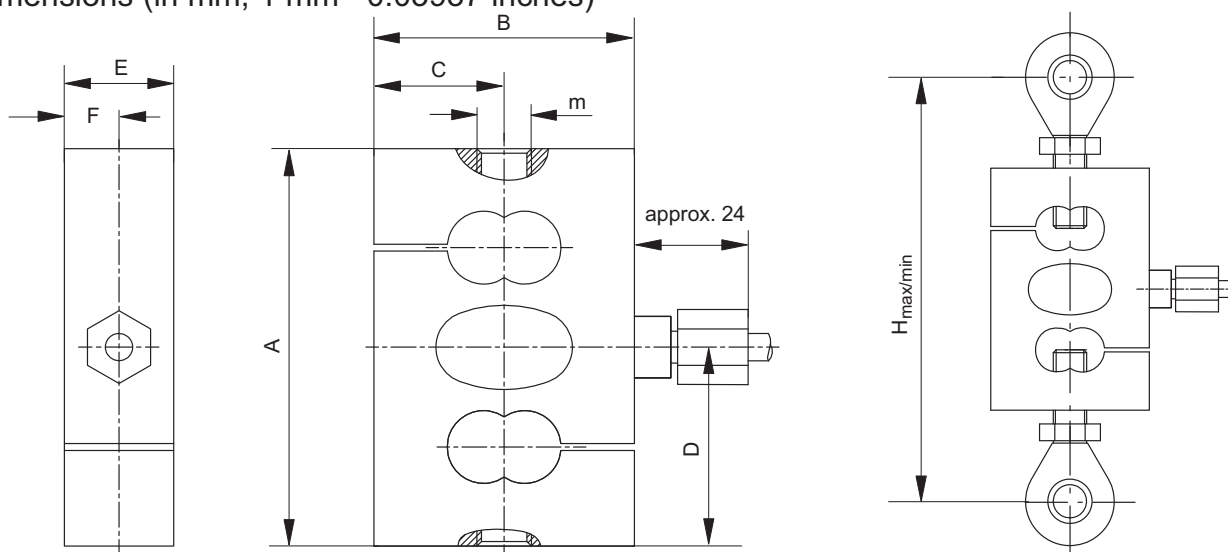
## Force Transducer



### Special features

- Tensile force / compressive force transducer
- Nominal forces 2 kN ... 50 kN
- Accuracy class 0.05
- High transverse force stability

Dimensions (in mm; 1 mm= 0.03937 inches)



Nominal force (kN)	A	B	C	D	E	F	m	H <sub>max</sub>	H <sub>min</sub>
2-10	87.3	57.2	28.6	43.7	24	12	M12	172	153
20	100	69.8	34.9	50	30.2	15.1	M24x2	220	206
50	100	76.2	38.1	50	36.6	18.3	M24x2	260	256

# Specifications under VDI 2638

Force transducer type		S9					
Nominal force	F <sub>nom</sub>	kN	2	5	10	20	50
Accuracy class			0.05				
Nominal sensitivity relative sensitivity deviation tensile/compressive force relative tensile/compressive sensitivity difference relative deviation from zero	C <sub>nom</sub>	mV/V	2				
	d <sub>c</sub>	%	< 0.25				
	d <sub>zd</sub>	%	< ±0.1				
	d <sub>s,o</sub>	%	< 5				
	Relative range of inversion (0.2F <sub>nom</sub> to F <sub>nom</sub> )	u	%	0.1			
Linearity deviation		d <sub>lin</sub>	0.05				
Temperature effect per 10 K by reference to sensitivity to sensitivity to zero signal	TK <sub>C</sub>	%	0.05				
	TK <sub>0</sub>	%	0.05				
Effect of transverse forces (transverse force 10 % F <sub>nom</sub> ) <sup>*)</sup>	d <sub>Q</sub>	%	± 1				
Creep over 30 min.		d <sub>crF+E</sub>	< ±0.05				
Input resistance	R <sub>e</sub>	Ω	> 345				
Output resistance	R <sub>a</sub>	Ω	300 - 400				
Isolation resistance	R <sub>is</sub>	GΩ	> 1				
Reference excitation voltage	U <sub>ref</sub>	V	5				
Operating range of the excitation voltage	B <sub>U,G T</sub>	V	0.5...12				
Nominal temperature range	B <sub>t, nom</sub>	°C [ °F]	-10...+70[ 14...158]				
Operating temperature range	B <sub>t, G</sub>	°C [ °F]	-30...+85[-22...185]				
Storage temperature range	B <sub>t, S</sub>	°C [ °F]	-30...+85[-22...185]				
Reference temperature	t <sub>ref</sub>	°C [ °F]	+22[ 71.6]				
Maximum operating force	(F <sub>G</sub> )	%	150				
Limit force	(F <sub>L</sub> )	%	150				
Breaking force	(F <sub>B</sub> )	%	> 300				
Limit torque	(M <sub>d</sub> )	Nm	6	15	30	60	150
Static lateral limit force <sup>*</sup>	(F <sub>Q</sub> )	%	10				
Nominal displacement	S <sub>nom</sub>	mm	< 0.4				
Fundamental resonance frequency	f <sub>G</sub>	kHz	1.6	2.2	2.7	2.4	2.6
Relative permissible vibrational stress	F <sub>rb</sub>	%	70				
Weight		kg	0.77			1.6	1.8
Degree of protection to DIN EN 60529			IP65				
Cable length, 6-wire connection		m	6				

<sup>\*)</sup> by reference to a force introduction point on the force-introduction surface

## Accessories (option):

**Knuckle eye: ZGUW**

Dimensions in mm

Material: tempering steel, galvanised; rolled steel and PTFE/bronze fabric foil

Nominal force (kN)	Weight [kg]	A	∅B <sup>H7</sup>	D	F	g	H	m	X	W	SW
0.5...10	0.1	33.5	12	32	54.5	70.5	12	M12	7	16	19
20...50	0.4	57.5	25	60	94.5	124.5	22	M24x2	10	31	36

### Regional Distributor



803, Riqqa Palace Building  
Al-Maktum Ave.  
P.O.Box 181802 Dubai, UAE  
Tel: +9714 - 2270081  
Fax: +9714 - 2239962  
E-mail: rcsco@eim.ae  
www.rcs-co.com

### Hottinger Baldwin Messtechnik GmbH

Im Tiefen See 45, D-64293 Darmstadt, Germany  
Tel.: +49 6151 8030; Fax: +49 6151 803 9100  
E-mail: support@hbm.com www.hbm.com



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