

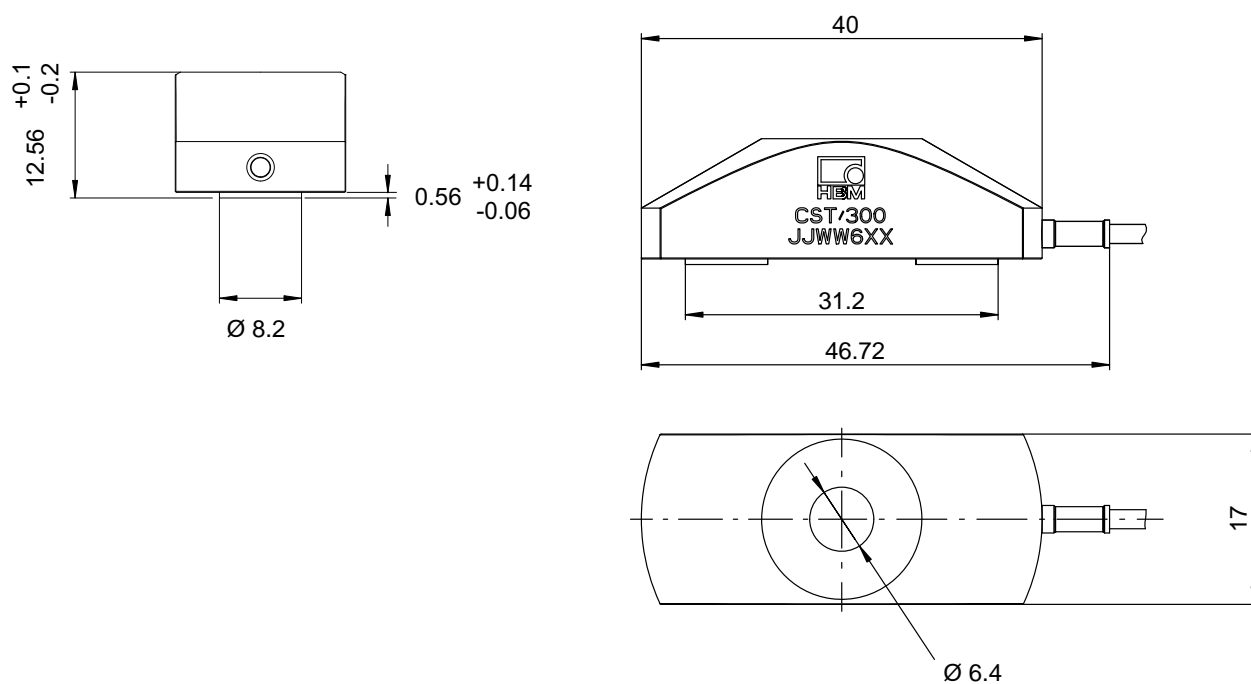
CST/300

Piezoelectric Strain Transducer



Special features

- High sensitivity $>50 \text{ pC}/\mu\text{m}/\text{m}$
- Can be mounted with a bolt
- Integrated cable
- Insensitive to sharp accelerations
- Compact dimensions



Specifications

Piezoelectric strain transducer	CST/300		
Nominal (rated) strain	ϵ_n	$\mu\text{m/m}$	300
Accuracy			
Linearity (rel. to the calibration value)	d_{lin}	% of	2
Relative reversibility error	v	% of	3
Acceleration sensitivity in the direction of measurement	$d_{a, s}$	$(\mu\text{m/m})/(\text{m/s}^2)$	0.003
Acceleration sensitivity in the direction of measurement	$d_{a, q}$	$(\mu\text{m/m})/(\text{m/s}^2)$	0.0025
Electrical characteristics			
Sensitivity	S	$\text{pC}/\mu\text{m/m}$	approx. -50
Insulation resistance	R_{iso}	$\text{G}\Omega$	$> 10^{12}$
Temperature			
Nominal (rated) temperature range	$B_{t, nom}$	$^{\circ}\text{C}$	-10 to +70 $^{\circ}\text{C}$
Operating temperature range	$B_{t, G}$	$^{\circ}\text{C}$	-40 to +120 $^{\circ}\text{C}$
Storage temperature range	$B_{t, S}$	$^{\circ}\text{C}$	-40 to +120 $^{\circ}\text{C}$
Characteristic mechanical quantities			
Oscillation width	ϵ_{rb}	% of ϵ_n	160
Maximum operating strain	ϵ_G	% von ϵ_{rB}	150
Breaking strain	ϵ_B	% von ϵ_{rB}	200
Restoring force	F_d	$\text{N}/\mu\text{m/m}$	0.3
Natural frequency	f_g	kHz	12
General information			
Degree of protection per EN 60529 (with connected cable)			IP 65
Weight	m	g	50
Cable	coaxial cable, FPM sheathed (fixed); length 1 m; plug 10-32UNF		
Scope of supply	1-CST/300 (piezoelectric strain sensor with M6 x 20 fastening bolt)		

Accessories (to be ordered separately)

Cables/plugs	Ordering number
Coupling for piezoelectric charge cables. For connecting two coaxial cables with 10-32UNF plugs. This allows all the cables listed below to be connected to, and thus lengthen, the integrated CST/300 connection cable	1-CCO
Coaxial cable for piezoelectric sensors, 2 m long, 10-32UNF connector at both ends	1-KAB143-2
Coaxial cable for piezoelectric sensors, 3 m long, 10-32UNF connector at both ends	1-KAB143-3
Coaxial cable for piezoelectric sensors, 7 m long, 10-32UNF connector at both ends	1-KAB143-7
Coaxial cable for piezoelectric sensors, 2 m long, 10-32UNF connector at one end, BNC at the other	1-KAB176-2
Coaxial cable for piezoelectric sensors, 2 m long, 10-32UNF connector at one end, BNC at the other	1-KAB176-3
CSB4/1 summing box for connecting up to four piezoelectric sensors in parallel. Plug: 10-32UNF	1-CSB4/1

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