

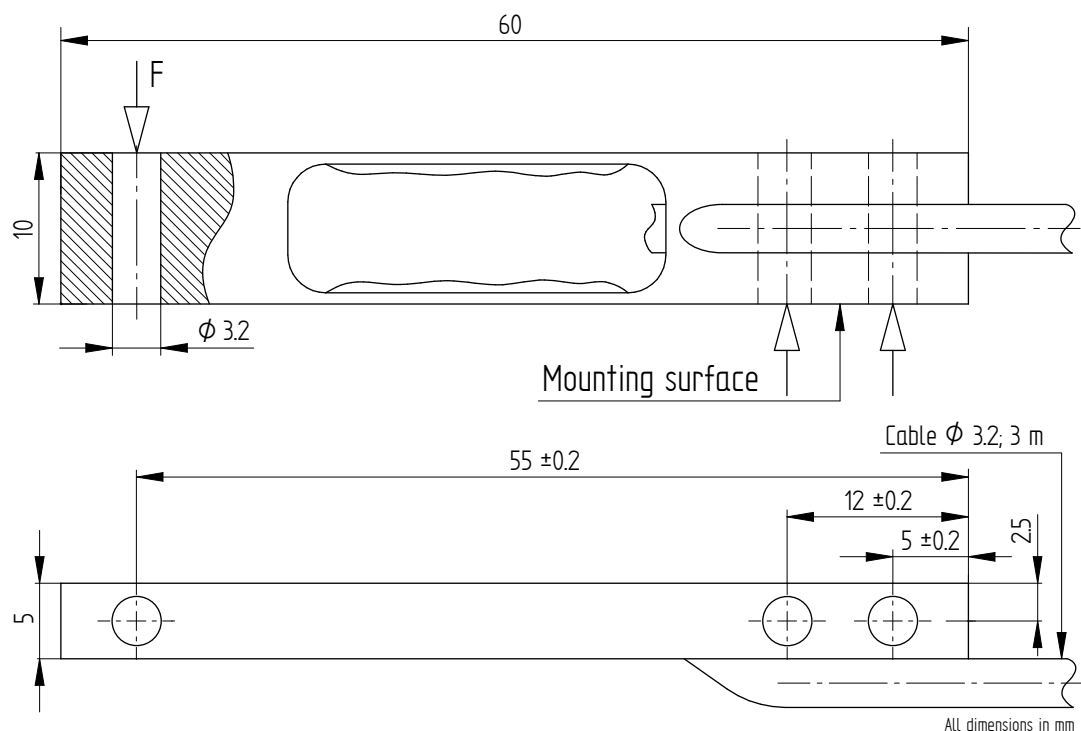
Beam Force Sensor K-1509 with Rated Force from 2 ... 20 N**Performance Features**

- Force sensor for tension and compression force measurement
- TEDS (Transducer Electronic Data Sheet) Standard IEEE 1451.4 (optional)
- Simple handling and assembly
- Reliable and durable
- Long-term stability
- Special versions on request

Application

- Equipment engineering
- Fully automated machining centers
- Measuring and control devices
- Materials testing machines
- Special mechanical engineering

Dimensions in mm



Article-No.	Rated Load [N]	Weight [kg]
100535	2	0.2
100536	3	
100537	4	
100538	5	
100539	10	
100540	20	

Connection Assignment

Electrical connection

Excitation (-)	Green	●
Excitation (+)	Brown	●
Signal (+)	Yellow	●
Signal (-)	White	○
Control signal or TEDS (option)	Gray	●
Shielding	Shield	⊕

Technical Data acc. to VDI/VDE/DKD 2638

Beam Force Sensor K-1509

Rated force F_{nom}	N	2	3	4	5	10	20
Accuracy class	% F _{nom}	0.2					
Rel. repeatability error in unchanged mounting position b_{rg}	% F _{nom}	0.1					
Relative creep	% F _{nom} /30 min	<±0.1					
Rated characteristic value C_{nom}	mV/V	1.00 ±20 %					
Input / output resistance R_e/R_a	Ω	350					
Insulation resistance R_{is}	Ω	>2*10 ⁹					
Rated range of excitation voltage B_{U, nom}	V	2 ... 6					
Electrical connection		Cable, PURS, 3 m with free strands					
Reference temperature T_{ref}	°C	23					
Rated temperature range B_{T, nom}	°C	0 ... 60					
Operating temperature range B_{T, G}	°C	-10 ... 70					
Storage temperature range B_{T, S}	°C	-30 ... 95					
Temperature effect on zero signal TK₀	% F _{nom} /10 K	±0.1					
Temperature effect on characteristic value TK_C	% F _{nom} /10 K	±0.1					
Maximum operating force F_G	% F _{nom}	130					
Force limit F_L	% F _{nom}	150					
Breaking force F_B	% F _{nom}	>300					
Permissible oscillation stress F_{rb}	% F _{nom}	70					
Rated displacement S_{nom}	mm	<0.2					
Level of protection		IP50					
Material		Aluminum					

Options

Article-No	Description	
103954	Calibration in kg or t	
100218	Control signal	100 % M _{nom}
100739	Control signal	80 % M _{nom}
106154	Control signal	50 % M _{nom}
113134	TEDS-standard IEEE 1451.4	
107592	6-wire connection	

Calibrations

Article-No	Description	
400628	Linearity diagram in accordance to factory standard	25 % steps
400170	Linearity diagram in accordance to factory standard	10 % steps
400960	Proprietary calibration acc. to DIN EN ISO 376 and DAkkS-DKD-R 3-3	3 steps
400652	Proprietary calibration acc. to DIN EN ISO 376 and DAkkS-DKD-R 3-3	5 steps
400640	Proprietary calibration acc. to DIN EN ISO 376 and DAkkS-DKD-R 3-3	8 steps
	DAkkS-Calibration / Standard on request	

Accessories

Cable and input connector

Article-No	Description
10323	Male cable connector (6-pin series 581) incl. sensor mounting
10320	Male cable connector (15-pin D-Sub) incl. sensor mounting
43418	Input connector ZA9612FS (ALMEMO) incl. sensor mounting and connector calibration
49205	Input connector ZKD712FS (ALMEMO 202) incl. sensor mounting and connector calibration

Amplifiers

Examples of suitable amplifiers for the beam force sensor K-1509:

LCV	SI-USB3	GM 40	GM 80
			

Further suitable amplifiers you can find on our homepage under www.lorenz-messtechnik.de