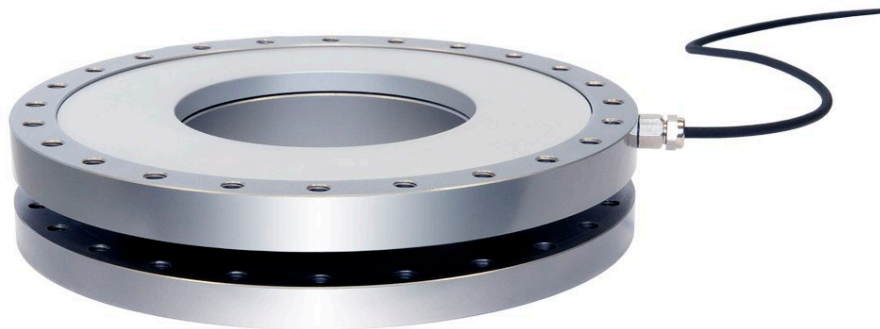


Compression and Tension Force Sensor K-2698 with Rated Force from 100 ... 700 kN



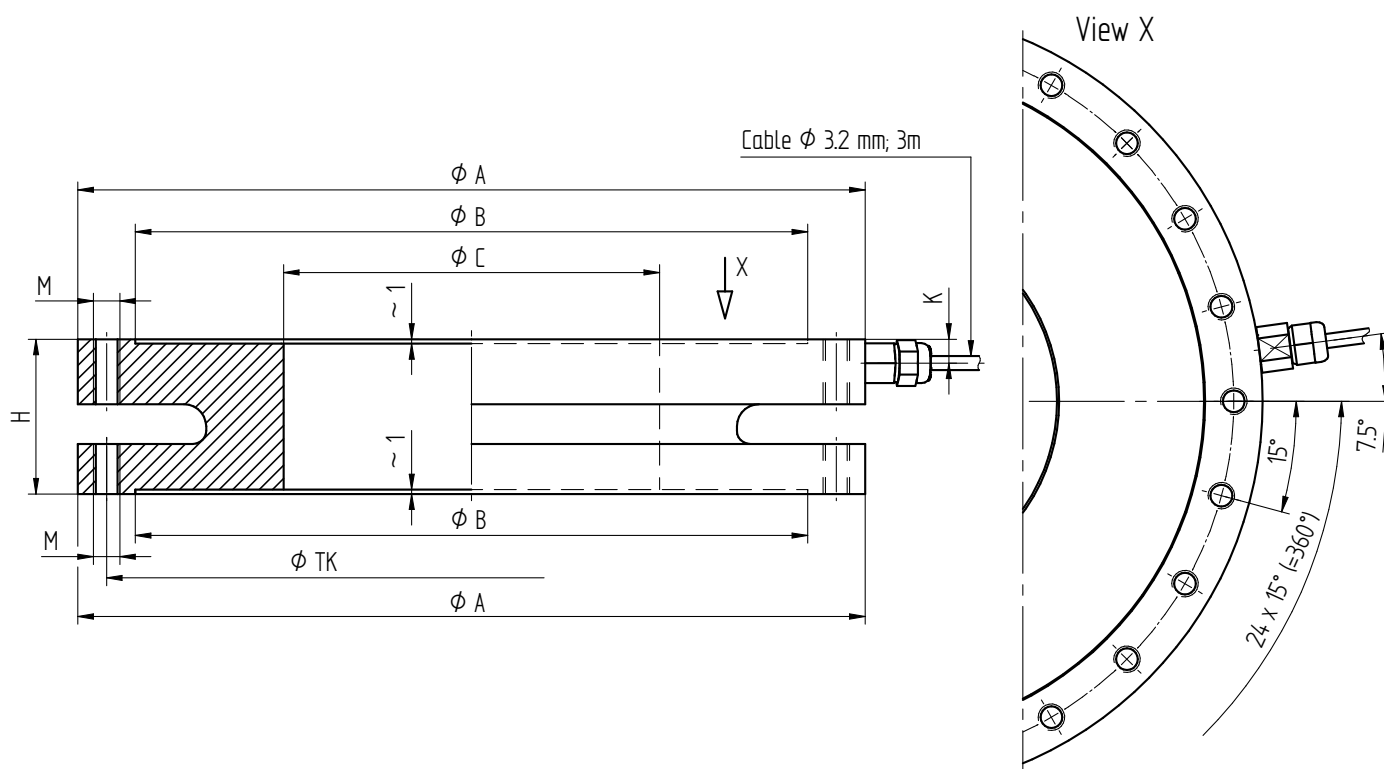
Performance Features

- Measuring of compression and tension force
- TEDS (Transducer Electronic Data Sheet)
Standard IEEE 1451.4 (optional)
- Stainless steel
- Level of protection IP60
- Long-term stability
- Simple handling and assembly
- Special versions on request

Application

- Equipment engineering
- Automotive industry
- Measuring and control devices
- Fully automated machining centres
- Tool engineering
- Special mechanical engineering

Dimensions in mm



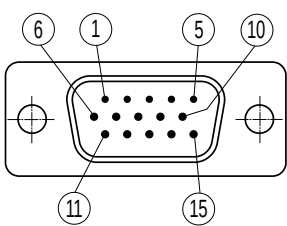
Article-No.	Rated Force [kN]	Dimensions [mm]							Screws		Weight [kg]
		Ø A	Ø B	Ø C	H	K	M	Ø TK	Tightening Torque [N·m]	Property Class	
111308	100	178	152	85	35	5.4	M6	165	16.4	12.9	3.6
111591	200	196	170	120	35	7	M8	182	39.7		3.6
112102	300	258	226	180	35	8	M10	242	80		4.8
113833	400	258	226	170	45	8	M12	242	137		7.4
113030	600	320	266	205	60	12.5	M16	290	333		15.1
119165	700	320	266	190	60	12.5	M16	290	333		17

Connection Assignment

Electrical Connection

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

Connection Assignment (continued)

Electrical Connection only for Version with TEDS (option)		View on connector side
Excitation (-)	Pin 2	
Excitation (+)	Pin 3	
Signal (+)	Pin 5	
Signal (-)	Pin 10	
TEDS (GND)	Pin 6	
TEDS (Data+)	Pin 1	
Sensing (+)	Pin 8 bridged with Pin 3	
Sensing (-)	Pin 7 bridged with Pin 2	
-	Pin 4 bridged with Pin 9	
Shielding	Housing	
NC	Pin 11 - 15	

Technical Data acc. to VDI/VDE/DKD 2638

Compression and Tension Force Sensor K-2698 with Through Hole							
Rated force F_{nom}	kN	100	200	300	400	600	700
Accuracy class compression force or tension force	% F _{nom}	0.5					
Accuracy class compression force and tension force	% F _{nom}	1.0					
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	700					
Insulation resistance R_{is}	Ω	>2*10 ⁹					
Rated range of excitation voltage B_{U, nom}	VDC	2 ... 12					
Electrical connection		Cable, PURS, 3 m with free strands					
Reference temperature T_{ref}	°C	23					
Rated temperature range B_{T, nom}	°C	-10 ... 70					
Operating temperature range B_{T, G}	°C	-30 ... 80					
Storage temperature range B_{T, S}	°C	-50 ... 95					
Temperature effect on zero signal TK₀	% F _{nom} /10 K	±0.2					
Temperature effect on characteristic value TK_C	% F _{nom} /10 K	±0.2					
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	<0.15					
Preferential direction		Compression direction					
Material housing body		Stainless steel					
Material cover plate		Aluminum					
Level of protection		IP60					

Options

Article-No.	Description	
100218	Control signal	100 % F _{nom}
100739	Control signal	80 % M _{nom}
106154	Control signal	50 % M _{nom}
10464	XS-KSSH15/HBM, QuantumX + TEDS-Standard IEEE 1451.4	
100896	Rated sensitivity adjustment	
42828	Extended temperature range	-30 °C ... 100 °C
42829	Extended temperature range	-30 °C ... 120 °C
42830	Extended temperature range	-40 °C ... 150 °C
103954	Calibration in kg or t	
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

Electrical Connection

Article-No.	Description
10323	Cable connector KS6 (6-pin series 581) incl. sensor mounting
10320	Cable connector KSSH15 (15-pin) 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 compression and tension force sensor K-2698:

LCV	GM 78	GM 40	GM 80	SI
				

Further suitable amplifiers you can find on our homepage under <https://www.lorenz-messtechnik.de/english/products/>