

Dual Range Compression and Tension Force Sensor K-1882 with Nominal Force from 1/10 ... 15/150 kN



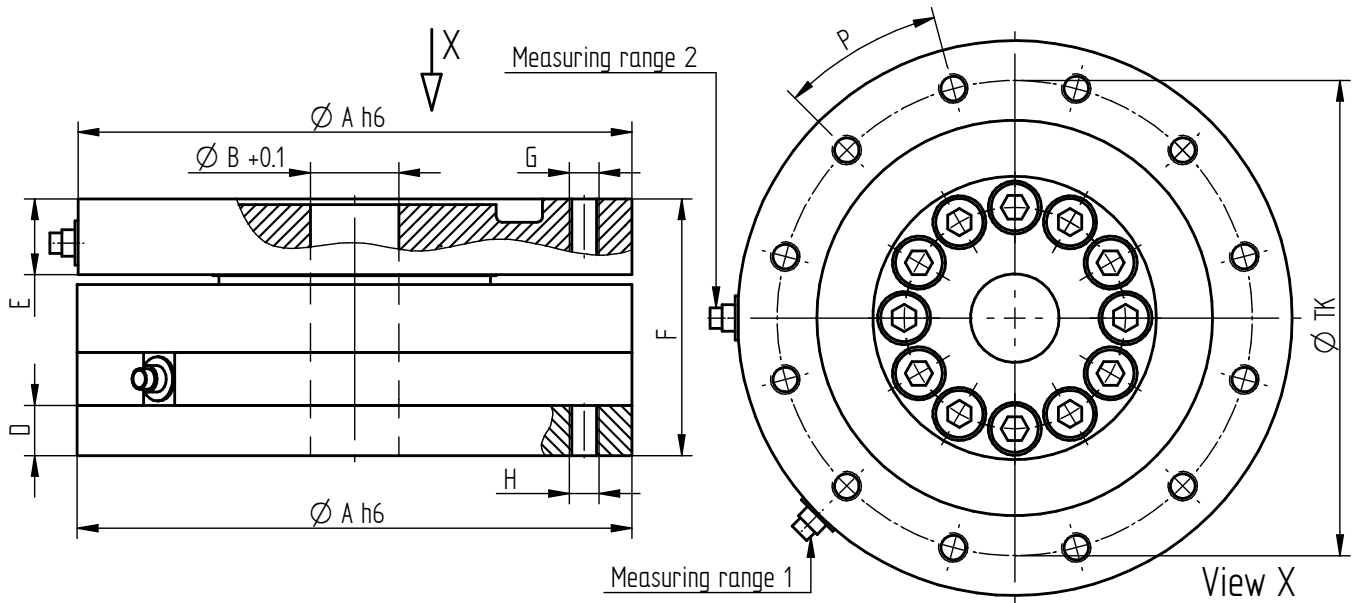
Performance Features

- Dual Range Sensor for compression and tension force measurement
- Simple handling and assembly
- Reliable and durable
- Long-term stability
- Level of protection IP60
- Special versions on request

Application

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

Dimensions of K-1882 in mm



Article-No.	Nominal Force [kN]	Dimensions [mm]									Weight [kg]
		$\varnothing A$	$\varnothing B$	D	E	F	P	G	H	$\varnothing TK$	
104877	1/10	130	30	10	14	52	60°	6xM6, 10 depth	6 x M6, 8 depth	114	3.9
100494	15/150	188	30	17	26	87	30°	12xM10, 18 depth	12xM10, 16 depth	161	16.0

Connection Assignment

7-pin	K-1882	Series 712
Pin 1	Excitation (-)	
Pin 2	Excitation (+)	
Pin 3	Shield	
Pin 4	Signal (+)	
Pin 5	Signal (-)	
Pin 6	Control signal (option)	
Pin 7	NC	

Technical Data acc. to VDI/VDE/DKD 2638

Dual Range Compression and Tension Force Sensor K-1882

Nominal force F_{nom}	kN	1/10	15/150
Measuring range 1	kN	0 ... 1	0 ... 15
Measuring range 2	kN	1 ... 10	15 ... 150
Accuracy class compression force or tension force	% F_{nom}	0.2	
Accuracy class compression force and tension force	% F_{nom}	0.4	
Rel. repeatability error in unchanged mounting position b_{rg}	% F_{nom}	0.1	
Relative creep	% $F_{nom}/30$ min	< \pm 0.1	
Rated characteristic value C_{nom}	mV/V	1.00 \pm 0.5%	
Input/output resistance R_e/R_a	Ω	350	
Insulation resistance R_{is}	Ω	>2*10 ⁹	
Rated range of excitation voltage $B_{U, nom}$	VDC	2 ... 12	
Electrical connection		7-pin series 712 ¹	
Reference temperature T_{ref}	$^{\circ}$ C	23	
Rated temperature range $B_{T, nom}$	$^{\circ}$ C	-10 ... 70	
Operating temperature range $B_{T, G}$	$^{\circ}$ C	-30 ... 80	
Storage temperature range $B_{T, S}$	$^{\circ}$ C	-50 ... 95	
Temperature effect on zero signal TK_0	% $F_{nom}/10$ K	\pm 0.2	
Temperature effect on characteristic value TK_C	% $F_{nom}/10$ K	\pm 0.2	
Maximum operating force F_G	kN	10	150
Force limit F_L	kN	15	170
Breaking force F_B	kN	>18	>250
Permissible oscillation stress F_{rb}	% F_{nom}	70	
Rated displacement S_{nom}	mm	<0.4	
Preferential direction		Compression direction	
Material		Stainless steel	
Level of protection		IP60	

Options

Article-No.	Description	
100218	Control signal	100 % F_{nom}
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	

¹ Female cable connector in scope of delivery at first delivery

Accessories

Electrical Connection

Article-No.	Description
10294	Female cable connector 7-pin series 712
10367	Female angled connector 7-pin series 712
10316	Connection cable, 3 m, with 7-pin female cable connector series 712 and free strands
103348	Connection cable angled, 3 m, with 7-pin female angled connector series 712 and free strands

Amplifiers

Examples of suitable amplifiers for the dual range compression and tension force sensor K-1882:

LCV	SI-USB	GM 40	GM 80	GM 80-PA
				

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