

Radial Force Sensor K-2148 with Nominal Force from 1 ... 2 kN



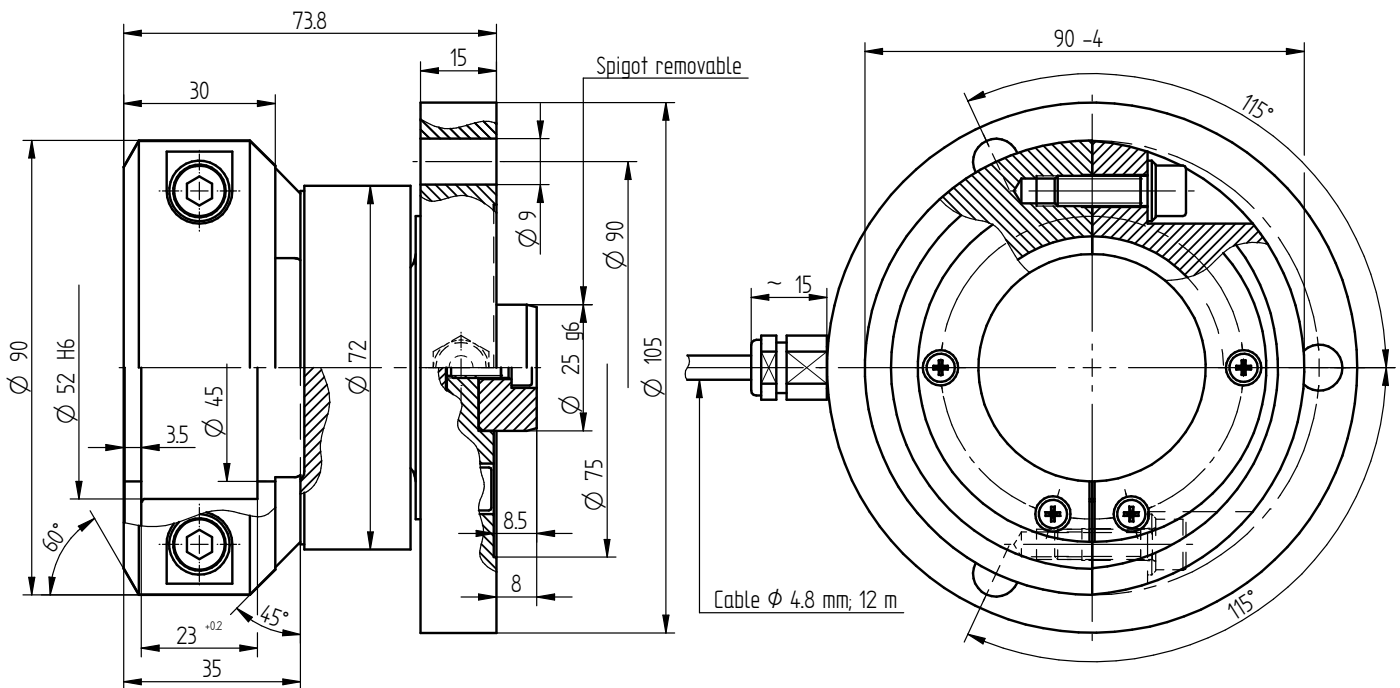
Performance Features

- Radial force sensor for web tension measurement
- Simple handling and assembly
- Easy to change idler pulley
- With integrated bearing fit
- Reliable and durable
- Long-term stability
- Level of protection IP63
- Special versions on request

Application

- Mechanical engineering
- Production and processing plants
- Measuring and control devices
- Winding technique
- Packaging engineering
- Special mechanical engineering

Dimensions of K-2148 in mm



Article-No.	Nominal Force [kN]	Weight [kg]
102001	1	2.7
102225	2	

Pin Connection

Electrical connection

Excitation (-)	green	●
Excitation (+)	brown	●
Signal (+)	yellow	●
Signal (-)	white	○
Control signal (option)	grey	●
Shield	shield	⊕

Technical Data acc. to VDI/VDE/DKD 2638

Radial Force Sensor K-2148

Nominal force F_{nom}	kN	1	2
Accuracy class	% F_{nom}	0.5	
Rel. repeatability error in unchanged mounting position b_{rg}	% F_{nom}	0.2	
Relative creep	% $F_{nom}/30 \text{ min}$	< ± 0.15	
Rated characteristic value C_{nom}	mV/V	0.50 $\pm 0.5\%$	1.00 $\pm 0.5\%$
Input/output resistance R_o/R_a	Ω	350	
Insulation resistance R_{iS}	Ω	> $2 \cdot 10^9$	
Rated range of excitation voltage $B_{U, nom}$	V	2 ... 12	
Electrical connection		Cable, PVC, 12 m with free strands	
Reference temperature T_{ref}	$^{\circ}\text{C}$	23	
Rated temperature range $B_{T, nom}$	$^{\circ}\text{C}$	-10 ... 70	
Operating temperature range $B_{T, G}$	$^{\circ}\text{C}$	-30 ... 80	
Storage temperature range $B_{T, S}$	$^{\circ}\text{C}$	-50 ... 95	
Temperature effect on zero signal TK_0	% $F_{nom}/10 \text{ K}$	± 0.05	
Temperature effect on characteristic value TK_C	% $F_{nom}/10 \text{ K}$	± 0.15	
Maximum operating force F_G	% F_{nom}	130	
Force limit F_L	% F_{nom}	250	150
Breaking force F_B	% F_{nom}	>500	>300
Permissible oscillation stress F_{rb}	% F_{nom}	70	
Lateral forces resistance	% F_{nom}	60	
Rated displacement S_{nom}	mm	<0.2	
Material		Stainless steel	
Level of protection		IP63	

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	

Accessories

Cable and input connector

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 radial force sensor K-2148:



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