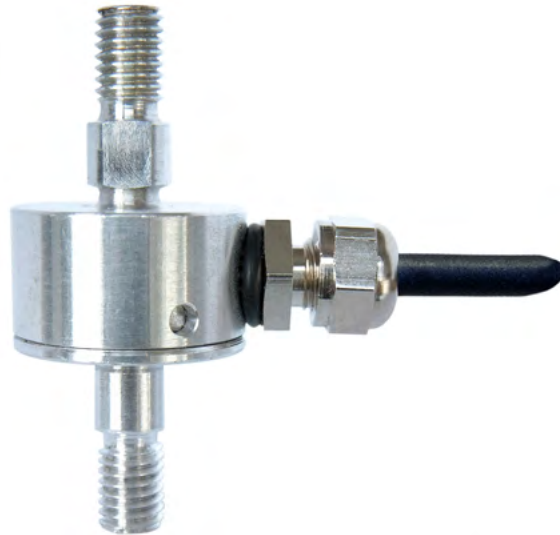


## Miniature Tension Force Sensor K-1107 with Nominal Force from 10 ... 200 N



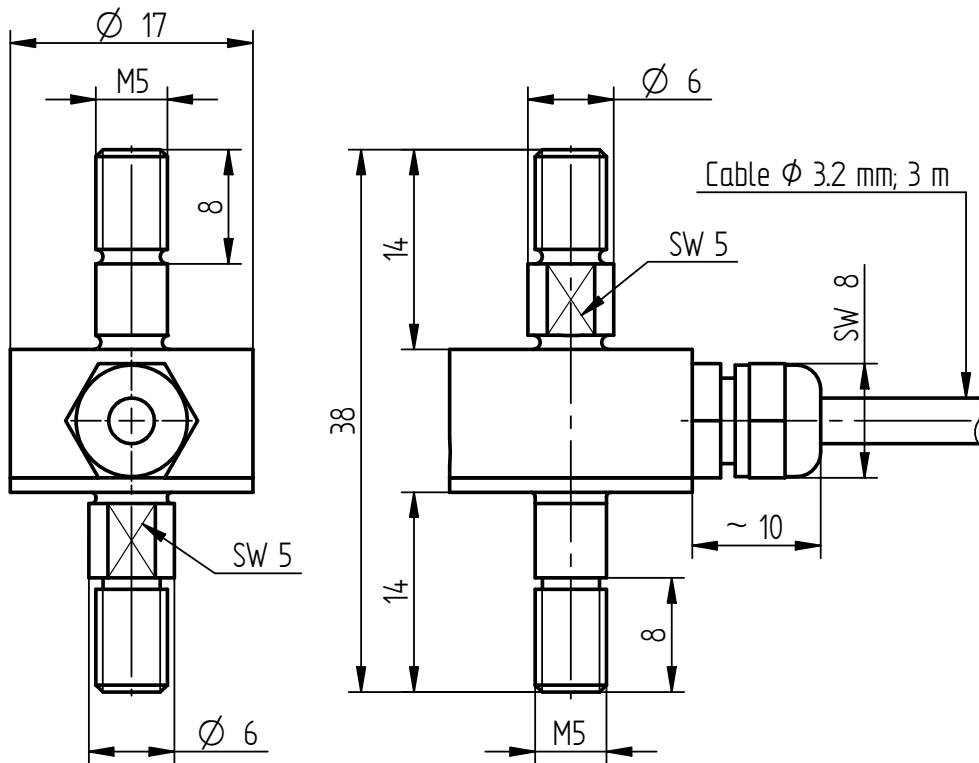
### Performance Features

- Miniature sensor for tension force
- Simple handling and assembly
- Reliable and durable
- Long-term stability
- Level of protection IP63
- Special versions on request

### Application

- Equipment engineering
- Fully automated machining centres
- Measuring and control devices
- Rope force measurement
- Tool engineering
- Special mechanical engineering

## Dimensions of K-1107 in mm



Article-No.	Nominal Force [N]	Weight [kg]
104894	10	0.2
104108	20	
101534	50	
105488	100	
102554	200	

## 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

### Miniature Tension Force Sensor K-1107

Nominal force $F_{nom}$	N	10	20	50	100	200
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	< $\pm$ 0.1				
Rated characteristic value $C_{nom}$	mV/V	0.50 $\pm$ 15%				
Input/output resistance $R_e/R_a$	$\Omega$	350				
Insulation resistance $R_{is}$	$\Omega$	>2*10 <sup>9</sup>				
Rated range of excitation voltage $B_{U, nom}$	V	2 ... 6				
Electrical connection		Cable, PURS, 3 m with free strands				
Reference temperature $T_{ref}$	$^{\circ}$ C	23				
Rated temperature range $B_{T, nom}$	$^{\circ}$ C	0 ... 60		-10 ... 70		
Operating temperature range $B_{T, G}$	$^{\circ}$ C	-10 ... 70		-30 ... 80		
Storage temperature range $B_{T, S}$	$^{\circ}$ C	-30 ... 95		-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 $F_G$	% $F_{nom}$	130				
Force limit $F_L$	% $F_{nom}$	150				
Breaking force $F_B$	% $F_{nom}$	>200				
Permissible oscillation stress $F_{rb}$	% $F_{nom}$	70				
Rated displacement $S_{nom}$	mm	<0.1				
Material		Aluminum			Stainless steel	
Level of protection		IP63				

## Options

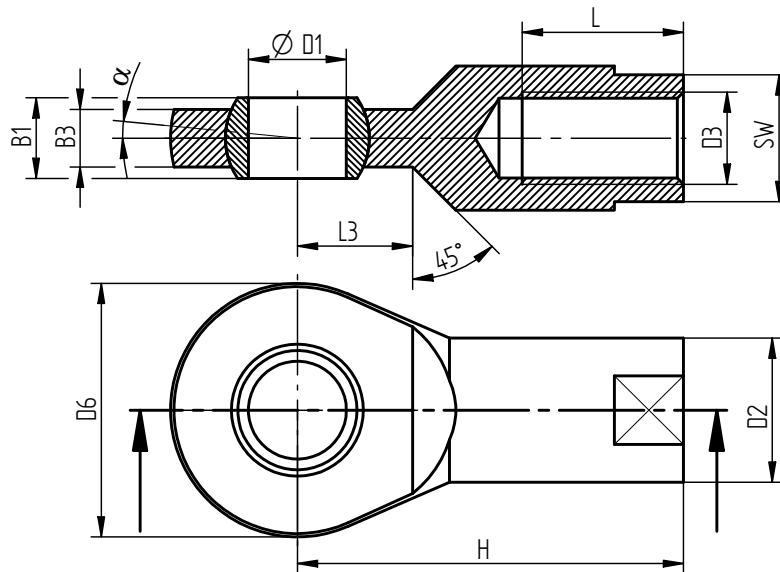
Article-No.	Description	
100218	Control signal	100 % $F_{nom}$
100896	Nominal sensitivity adjustment	
42828	Extended temperature range	-30 $^{\circ}$ C ... 100 $^{\circ}$ C
103954	Calibration in kg or t	
107592	6-wire connection	

## 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

### Dimensions of Joint Eye Type EF in mm



Article-No.	Type - EF	Dimensions [mm]											Weight [kg]	Load rating stat. C <sub>0</sub> [N]
		B1	B3	ØD1	D2	D3	D6	H	L	L3	α	SW		
43805	EF 5	8	6	5	11	M5	18	27	10	10	6.5°	9	0.02	11900

### Tolerances for Type EF

ØD1		ΔD1		ΔB1		ΔH	
>	≤	Tolerance		Tolerance		Tolerance	
-	5	+0.012	0	0	-0.12	+1.2	-1.2

### 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 miniature tension force sensor K-1107:

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