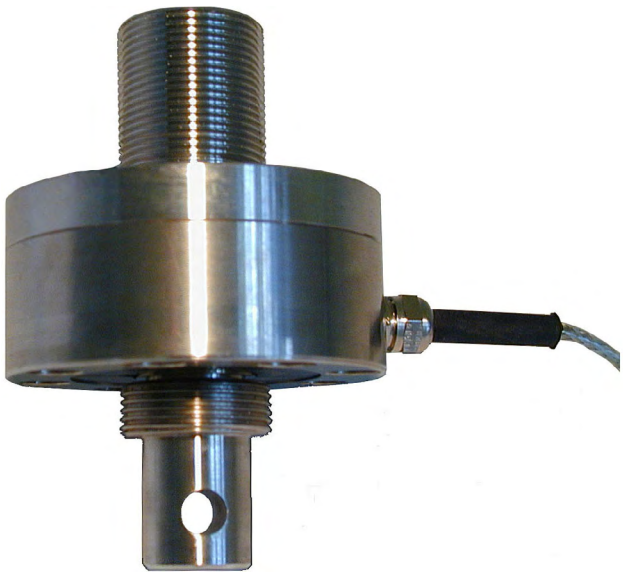
AST Gruppe
Angewandte System Technik

KAF-W
Force Transducer

Applications

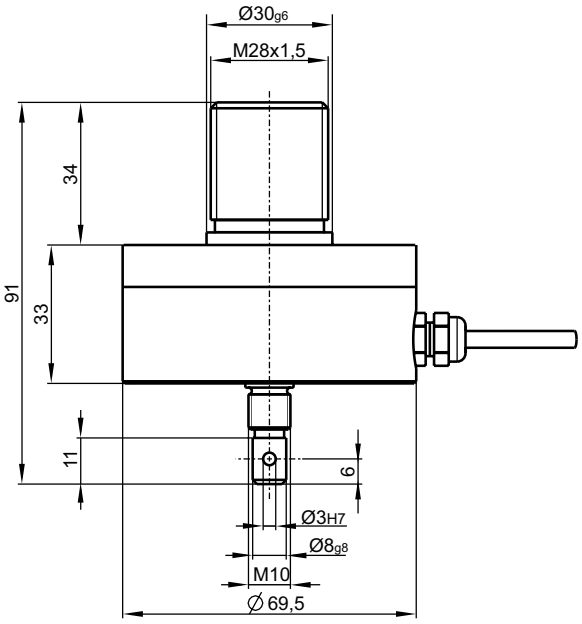
- Measuring of tension and compression forces in units and systems
- Ideal for material testing machines



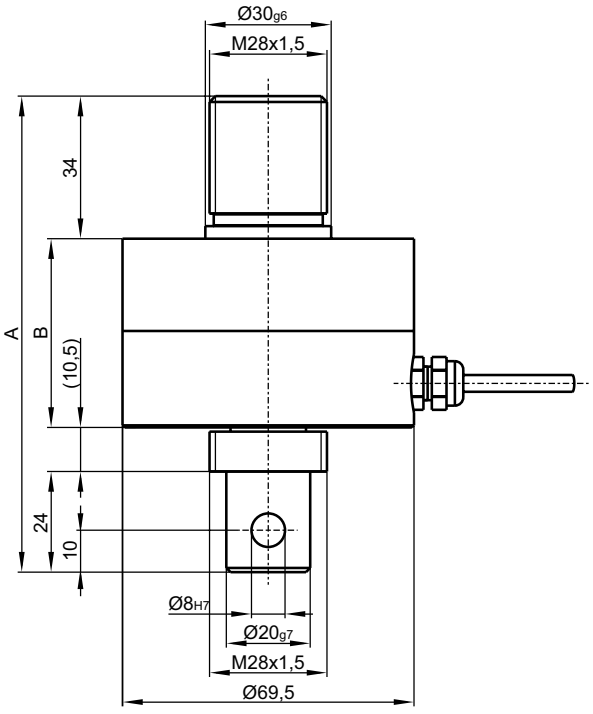
Features

- 200N to 10kN
- Insensitive to bending moments and lateral force
- Made of stainless steel and aluminium (<1kN)
- Environmental protection IP 53

Dimensions



KAF-W 200N to 1kN (Aluminium)

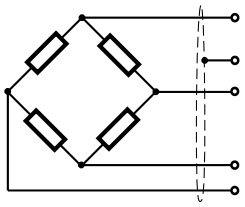


KAF-W 2.5kN to10kN (Stainless steel)

Rated Load	A (mm)	B (mm)
2.5kN	101.5	33
5kN	101.5	33
10kN	113.5	45

Rated Load	Measured displacement (mm)
200N	0.05
500N	0.11
1kN	0.10
2.5kN	0.19
5kN	0.33
10kN	0.40

Wiring Code
Cable length 3m



excitation voltage +	(+EX)	brown
shield	(SHI)	black
signal +	(+SI)	green
excitation voltage -	(-EX)	yellow
signal -	(-SI)	white

Compressive load is a positive change of signal.

Specifications

Accuracy Class	**% F_{nom}**	**0.05**
Rated (nominal) force (F_{nom})	kN	0.2 / 0.5 / 1 / 2.5 / 5 / 10
Maximum operating force (F_G)	% F_{nom}	150
Breaking force (F_B)	% F_{nom}	> 300
Lateral force limit (F_Q)	% F_{nom}	100
Lateral force effect (d_Q)		0.02
Rated characteristic value (C_{nom})	mV/V	2.00 ± 0.04
Zero signal tolerance	%	≤ 1
Reference excitation voltage (U_{ref})	VDC	20
Operating range of excitation voltage (B_{UG})	VDC	
Input resistance (R_e)	Ω	780 ± 40
Output resistance (R_a)	Ω	702 ± 2
Insulation resistance (R_{is})	Ω	> 5 x 10^9
Relative linearity error (d_{lin})	%	
Relative reversibility error (v)	%	≤ 0.05
Temperature effect on zero signal (TK_0)	%/ 10K	≤ 0.025
Temp. effect on characteristic value (TK_c)	%/ 10K	≤ 0.04
Relative creep over 30 minutes ($d_{cr, F+E}$)	%	≤ 0.025
Reference temperature (T_{ref})	°C	+23
Rated temperature range ($B_{T, nom}$)	°C	-20 ... +60
Operating temperature range ($B_{T, G}$)	°C	-20 ... +60
Storage temperature range ($B_{T, S}$)	°C	-30 ... +70
Environmental protection (EN 60529)		IP 53
Minimum capacity for testing machines according to ISO 7500-1:		
Class 1	% F_{nom}	0.2
Class 0.5	% F_{nom}	1

All data according to VDI/VDE/DKD 2638

Order Example

Type Code	**Description**
KAF-W/1kN/0.05	Force transducer 1kN with 0.05% accuracy
	Accuracy class
	Rated load
	Model