For more efficiency.

PROMESS
Assembly and Sensor Technology

KAF
Force Transducer

Applications

- Material testing
- For testing machines and systems
- For monitoring of forces at hydraulic cylinders

Features

- 1kN to 500kN
- High accuracy
- For measuring of tensile and compressive forces
- Made of stainless steel
- Environmental protection IP 67

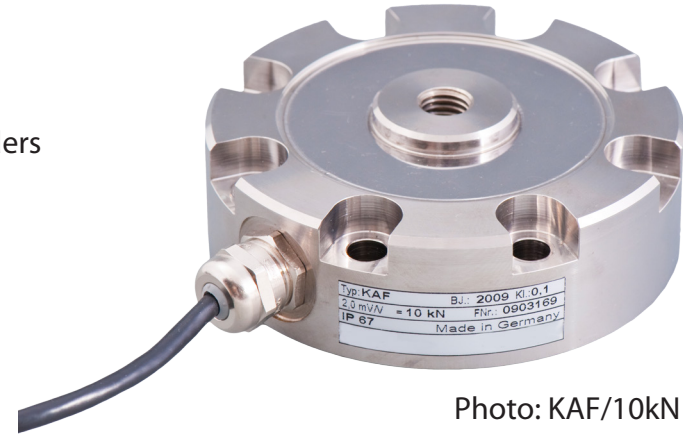
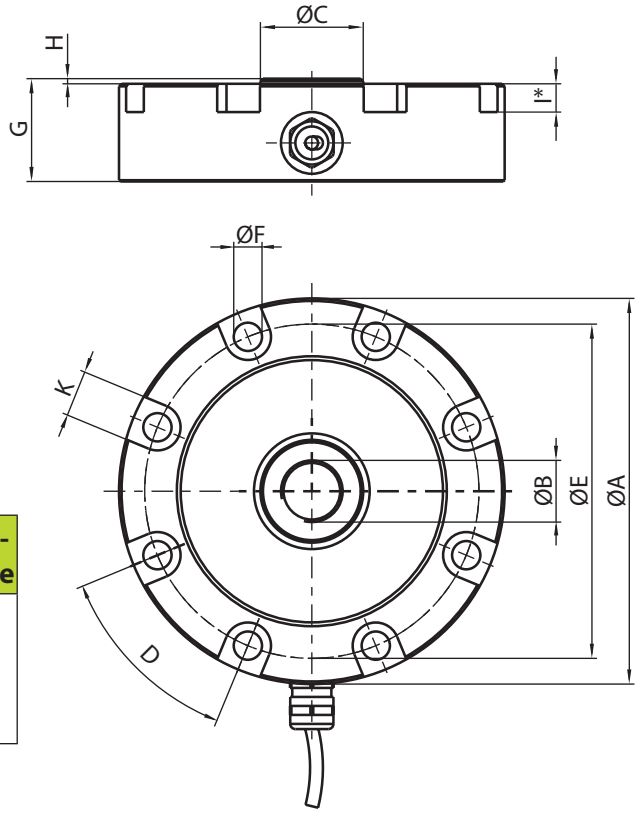


Photo: KAF/10kN

Option

ATEX-Certificate

Dimensions (mm)



Thightening Torque of Fixing Screws

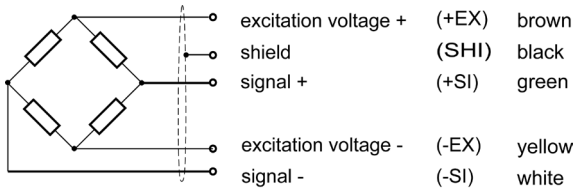
Rated Load (kN)	Size	Thighten-ing Torque
1/ 2/ 5/ 10	8 x M8x35-10.9 (DIN 912)	30 Nm
20/ 50	8 x M10x40-10.9 (DIN 912)	60 Nm
100/ 200	8 x M12x40-10.9 (DIN 912)	100 Nm
250/ 500	16 x M12x80-10.9(DIN 912)	85 Nm

Rated Load (kN)	A	B	C	D	E	F	G	H	I	K	Weight
1/ 2/ 5/ 10	105	M12	31,5	8 x 45°	89	8,4	35	3	9	15	1,3 kg
20/ 50	150	M24x2	40	8 x 45°	130	11	40	2	11	18	3,7 kg
100/ 200	165	M36x3	50	8 x 45°	145	13	42	2	13	20	4,9 kg
250/ 500*	203	M45X3	94	16 x 22,5°	165	13	64	6,5	-	-	11,4 kg

* without milled slots for screw heads

Wiring Code

Cable length 3m



Compressive load is positive change of signal.

Specifications

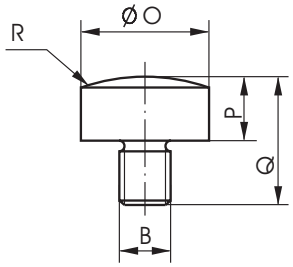
Accuracy Class	**% F_{nom}**	**0.1**	**0.2**	**0.5**
Rated force (F_{nom})	kN MN	1/ 2/ 5/ 10/ 20/ 50/ 100	200/ 250	500
Maximum operating force (F_G)	% F_{nom}		150	
Breaking force (F_B)	% F_{nom}		>300	
Lateral force limit (F_Q)	% F_{nom}		10	
Rated characteristic value (C_{nom})	mV/V		2.000 ± 0.005	
Relative deviation of zero signal	%		≤ 3	
Reference excitation voltage (U_{ref})	VDC		20	
Input resistance (R_e)	Ω		770 ± 40	
Output resistance (R_a)	Ω		700 ± 10	
Insulation resistance (R_{is})	Ω		> 5 x 10^9	
Relative linearity error (d_{lin})	%	0.1	0.2	0.5
Relative reversibility error (v)	%	0.1	0.2	0.5
Temperature effect on zero signal (TK_0)	%/10K	0.1	0.1	0.1
Temp. effect on characteristic value (TK_C)	%/10K	0.1	0.1	0.1
Relative creep over 30 minutes ($d_{cr.\ F+E}$)	%	0.1	0.1	0.1
Reference temperature (T_{ref})	°C		+23	
Rated temperature range ($B_{T,\ nom}$)	°C		-20 ... +50	
Operating temperature range ($B_{T,\ G}$)	°C		-30 ... +70	
Storage temperature range ($B_{T,\ S}$)	°C		-30 ... +70	
Environmental protection (EN 60529)			IP 67	

All data according to VDI/VDE/DKD 2638

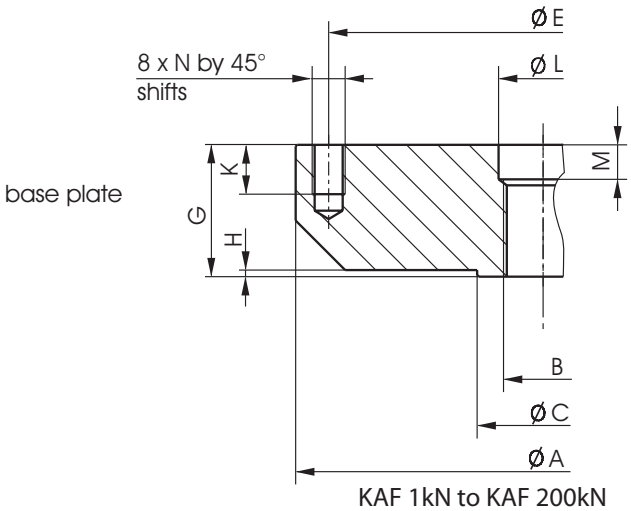
Appliances for Installation and Mounting

Dimensions (mm)

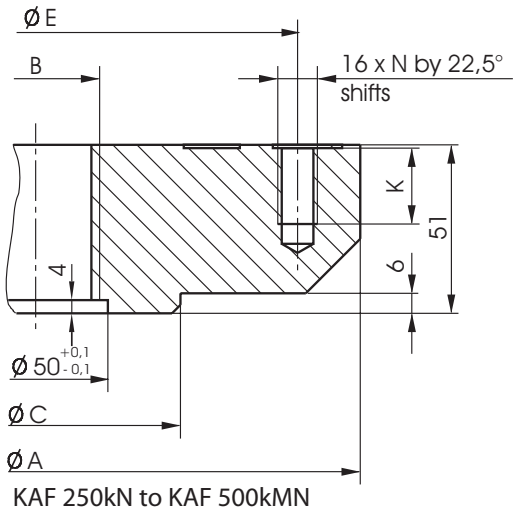
load button



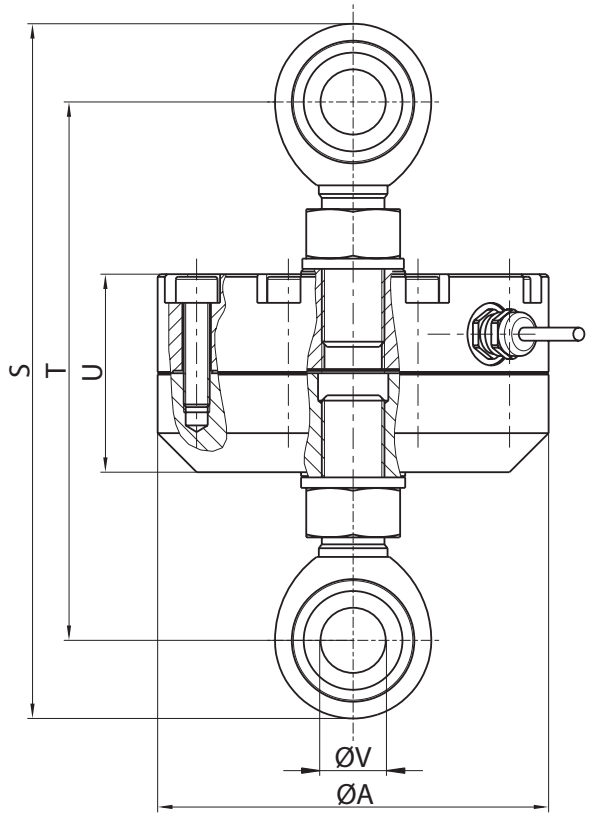
base plate



KAF 1kN to KAF 200kN



KAF 250kN to KAF 500kMN



KAF 1kN to KAF 500kN with base plate
(rod end bearings only to KAF 100kN, 250kN))

Rated Load	K	L	M	N	O	P	Q	R	S	T	U	V
1/ 2/ 5/ 10 kN	14	14	10.5	M8	30	15	29	R50	approx. 175	approx. 143	64	12 +0.018
20/ 50 kN	15	27	10.5	M10	30	22	42	R50	approx. 266	approx. 206	76	25 +0.021
100/ 200 kN	15	-	-	M12	50	35	72	R120	approx. 380	approx. 298	80	35 -0.012
250/ 500 kN	24	-	-	M12	70	40	70	R120	approx. 513	approx. 401	102.5	50 -0.012

Order Example

Type Code	Description
KAF/10kN/0.1 Model Rated load Accuracy class	Force transducer 10kN with 0.1% accuracy

Accessoires/ Options

	Type Code	Description
Load button	XKM 019 XKM 044 XKM 045 XKM 046	K12-50 for KAF 1kN to 10 kN K24-50 for KAF 20kN and 50kN K36-120 for KAF 100kN and 200kN K45-120 for KAF 250kN and 500kN
Base plate	XKM 037 XKM 038 XKM 035 XKM 031	For KAF 1kN to 10kN For KAF 20kN and 50kN For KAF 100kN and 200kN For KAF 250kN and 500kN
Rod end bearing	GKA 12 GKA 25 GKA 35 GKA 50	With locknut for KAF 1kN to 10kN With locknut for KAF 20kN and 50kN With locknut for KAF 100kN (not for 200kN) With locknut for KAF 250kN
Connector male and cable	XKC 041 XKC 044.01 XKC 046.03 XKC 046.04 XKC 071	Connector male instead of open cable ends, 6-pin Connector male, mounted to sensor body, 5-pin Connecting cable 5m for XKC 044.01, 5-pin Connecting cable 10m for XKC 044.01, 5-pin Plug connected to force transducer (TEDS), 6-pin
ATEX-Certificate	KAF-EX	for KAF 1kN ... 500kN. Please note ATEX data sheet!