

KAK-S Tension Load Cell

Applications

- Direct load measuring in wire ropes
- Assembly technology
- Anchoring



Photo: KAK-S/6t

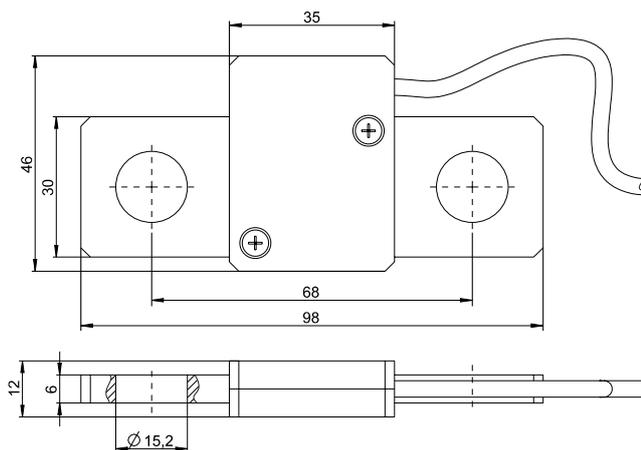
Features

- Rated load 2t to 50t
- Made of stainless steel
- Environmental protection IP 65

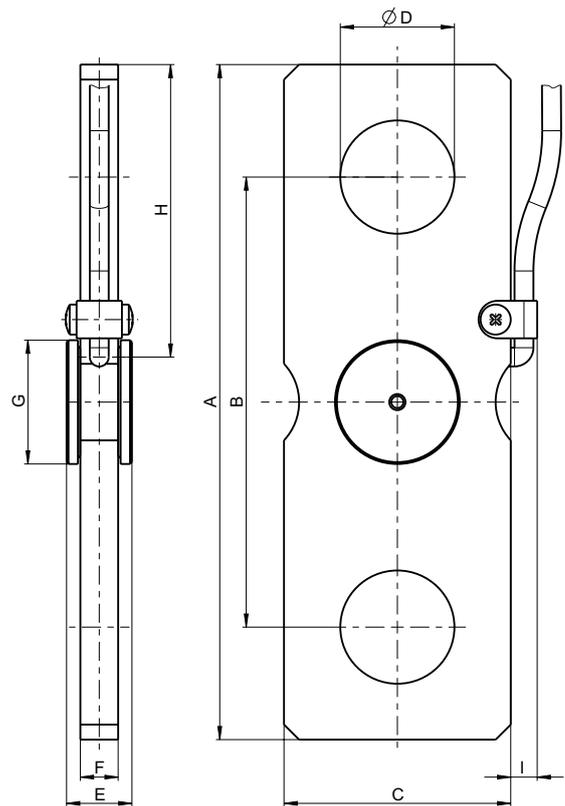
Options

- Integrated amplifier (>10t)
- External amplifier
- CANopen-interface (>10t)
- Redundant system
- ATEX-Certificate

Dimensions (mm)



Drawing KAK-S/2t



Drawing KAK-S/6t

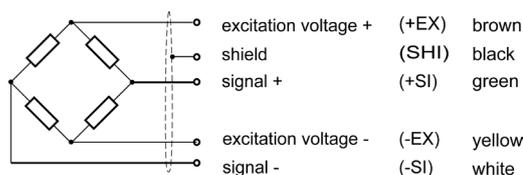
Rated Load	A	B	C	D	E	F	G	H	I	Weight
2t										approx. 0,3kg
3t	125	85	40	20,1	16,5	8	26	53	7	approx. 0,5kg
6t	180	120	60	30,2	18,5	10	33	78	7	approx. 2,3kg
10t ¹⁾	290	200	80	40,3	22	20	47	123,5	-	approx. 3,3kg
15t ²⁾	350	240	100	50,3	23	23	47	152	-	approx. 5,0kg
20t ²⁾	400	250	120	60,3	41	25	70	176	-	approx. 8,0kg
50t ²⁾	450	290	150	70,3	44	28	70	201	-	approx. 9,5kg

1) Cover recessed and cable gland

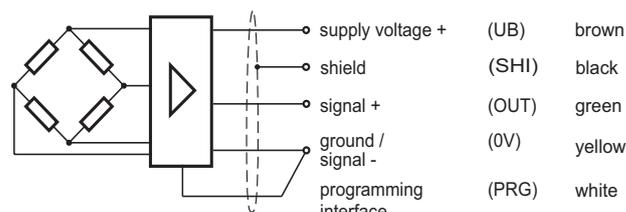
2) Cable gland

Wiring Code

Cable length 3m



Tensile load is positive signal.



(0V und PRG to be connected by customer with integrated amplifier)

Specifications

Accuracy Class	% F _{nom}	1	1 with Integrated Amplifier
Rated (nominal) force (F _{nom})	t	2/3/6/10/15/20/50	2/3/6/10/15/20/50
Maximum operating force (F _G)	% F _{nom}	150	150
Breaking force (F _B)	% F _{nom}	>300	>300
Rated characteristic value (C _{nom})	mV/V	1,5 ± 0,2	
Zero signal tolerance	%	≤ 1	
Reference excitation voltage (U _{ref})	VDC	10	
Operating range of excitation voltage (BUG)	VDC	0,5 ... 12	
Input resistance (typ.) (R _e)	Ω	380 ± 30	
Output resistance (R _a)	Ω	352 ± 1.5	
Insulation resistance (R _{is})	Ω	> 5 x 10 ⁹	
Relative linearity error (d _{lin})	%	≤ 0.5	≤ 0.5
Relative reversibility error (v)	%	≤ 0.5	≤ 0.5
Temperature effect on zero signal (TK ₀)	% / 10K	≤ 0.5	≤ 0.5
Temperature effect on characteristic value (TK _c)	% / 10K	≤ 0.2	≤ 0.2
Relative creep over 30 minutes (d _{cr,F+E})	%	≤ 0.5	≤ 0.5
Supply voltage	VDC		19 ... 28
Input current	mA		35 (bei 24V)
Output signal optional:			
Voltage output signal (maximum load 5mA)	V		0 ... 10
Current output signal	mA		0/4 ... 20
Maximum resistance	Ω		300
Reference temperature (T _{ref})	°C	+23	+23
Rated temperature range (B _{T, nom})	°C	-25 ... +60	-25 ... +60
Operating temperature range (B _{T, G})	°C	-30 ... +70	-30 ... +70
Storage temperature range (B _{T, S})	°C	-40 ... +70	-40 ... +70
Environmental protection (EN 60529)		IP 65	IP 65

All data according to VDI/VDE/DKD 2638

Order Example

Type Code	Description
KAK-S-E/10t/1/4...20mV/V	Force transducer 10t with 1% accuracy and integrated amplifier
	Output signal
	Accuracy class
	Nominal force
	E = Integrated amplifier
	Model

Accessoires/ Options

	Type code	Description	
Plug and cable	XKC 041	6 pin plug instead of free cable ends	for connecting the display unit AE 703 (IP 68) instead of free cable ends
	XKC 044.01	5-pin flange plug mounted to sensor body	
	XKC 046.03	Connecting cable 5m for XKC 044.01	for connection to TEDS display systems
	XKC 071	6 pin plug connected to sensor cable (TEDS)	
ATEX-Certificate	KAK-S-EX	For 10t ... 50t. Please note ATES data sheet!	
CANopen-interface	KAK-S-DI	For 2t ... 50t. Please note data sheet „Force Transducer with CANopen Interface“!	