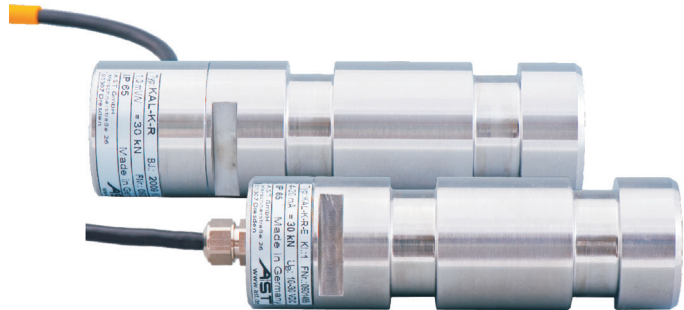


Load Pin with Standard Dimensions

Applications

- Overload protection
- Cranes and hoisting devices
- Elevators and wire rope winches
- Direct load measurements such as pins, axle or shafts



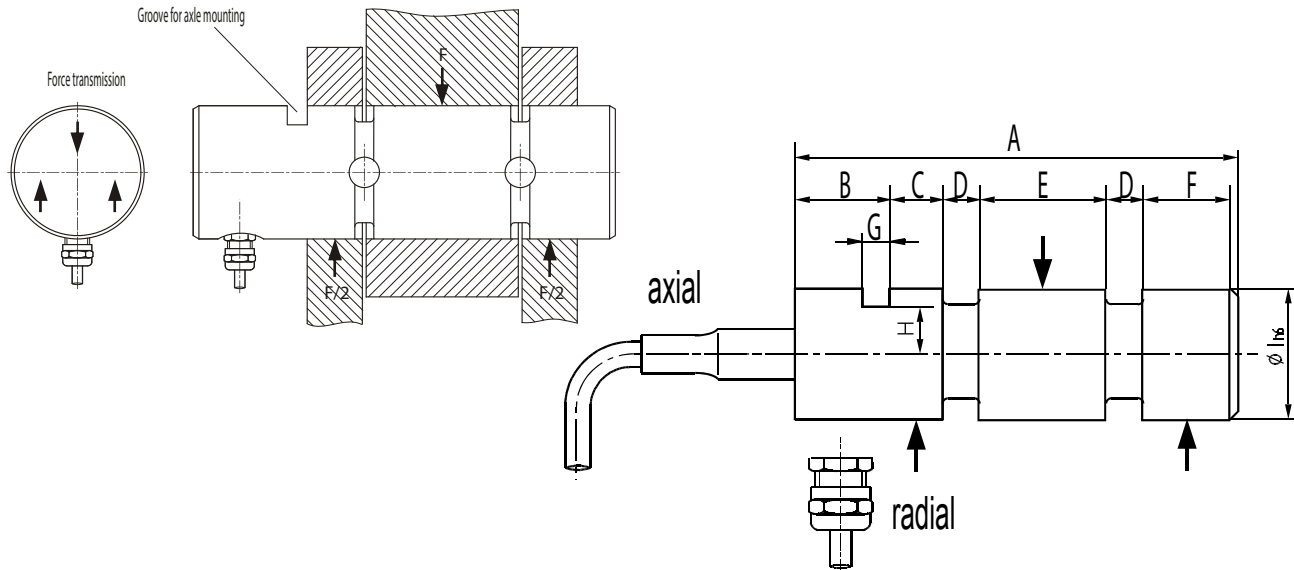
Features

- Application as pin or axle
- Made of stainless steel
- Ultimate overload 500% F_{nom}
- With standard dimensions
- Hermetically sealed (IP 67)

Options

- Redundant system with two measuring bridges and two amplifiers
- Amplifier options for standard signal output 0/4 ... 20mA, -10 ... 0 ... +10V
- CANopen interface

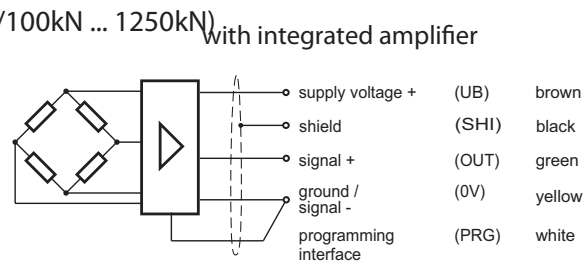
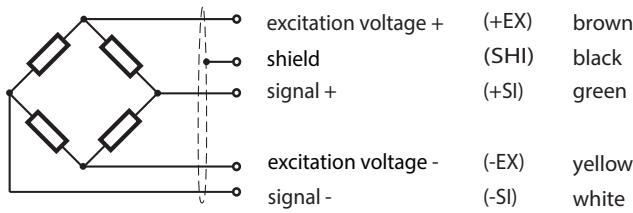
Dimensions/ Installation Example



Rated Load	Cable Output	$\varnothing I h6$ (mm)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	H (mm)	Weight
5kN ... 20kN	axial	25	84	18	10	7	24	16	5.2	9	0.2kg
50kN	radial or axial	35	112	25	12	12	35	14	6.3	11.5	0.7kg
100kN	radial or axial	50	161	32	18	18	48	24	10.5	20	2.0kg
200kN	radial or axial	65	196	32	20	25	65	26	10.5	22.5	4.5kg
500kN	radial or axial	85	258	34	35	28	89	39	10.5	28	10.5kg
1000kN	radial or axial	100	347	36	55	35	120	61	10.5	36	19.5kg
1250kN	radial or axial	120	347	36	55	35	120	61	12.5	40	28.5kg

Wiring Code

Cable length 1.5 m (KAL-K/5kN ... 50kN) / 6.0 m (KAL-K/100kN ... 1250kN)



0V and PRG to be connected by customer.

Specifications

Accuracy Class	% F _{nom}	1	1 (with Integrated Amplifier)	
Rated (nominal) force (F _{nom})	kN	5 ... 1250	50 ... 1250	
Maximum operating force (F _G)	% F _{nom}	150	150	
Breaking force (F _B)	% F _{nom}	> 500	> 500	
Lateral force limit (F _Q)	% F _{nom}	10	10	
Rated characteristic value (C _{nom})	mV/V	1.00 ± 0.01		
Zero signal tolerance	%	≤ 3		
Reference excitation voltage (U _{ref})	VDC	5		
Operating range of excitation voltage (B _{UG})	VDC	0.5 ... 12		
Input resistance (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})	%	≤ 1	≤ 1	
Relative reversibility error (v)	%	≤ 1	≤ 1	
Temperature effect on zero signal (TK ₀)	% / 10K	≤ 0.5	≤ 0.5	
Temp. effect on characteristic value (TK _c)	% / 10K	≤ 0.5	≤ 0.5	
Relative creep over 30 minutes (d _{cr, F+E})	%	≤ 0.5	≤ 0.5	
Supply voltage	VDC		19 ... 28	11 ... 15
Input current	mA		35 (at 24V)	20 (at 12V)
Current output signal	mA		4 ... 20	4 ... 20
Voltage output signal (max. load 5mA)	V		0 ... 10 / -10 ... +10	0 ... 5 / -5 ... +5
Maximum resistance	Ω		300	100
Reference temperature (T _{ref})	°C		+23	
Rated temperature range (B _{T, nom})	°C		-20 ... +60	
Operating temperature range (B _{T, G})	°C		-30 ... +70	
Storage temperature range (B _{T, S})	°C		-40 ... +70	
Environmental protection (EN 60529)			IP 67	

All data according to VDI/VDE/DKD 2638

*) Accuracy depends on mounting conditions

Order Example

Type Code	Description
KAL-K-A-E/200kN/1/2x4...20mA	Load pin 200kN with 1% accuracy
	Two amplifiers (redundant) with 4 ... 20 mA
	Accuracy class
	Nominal force
	E = Integrated amplifier
	A = Axial / R = Radial connector
	K = Catalogue product with standard dimensions
	Model