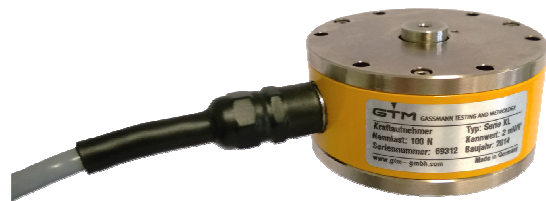


Data sheet

Force transducer

Series KL

(5 N – 100 N)



Benefits/Application

- Insensitive against parasitic forces and moments
- Easy mounting from one side, many adaption options
- Very small force application effect
- Protector against overload

Options/Accessories

- Mounting parts for tension and compression

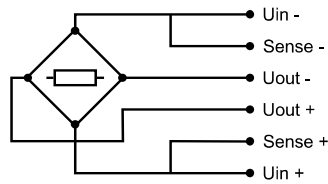
Technical data

	Nominal force compression/tension	$\pm F_{nom}$	N	5	10	20	50	100
Metrological Data	Accuracy class					0,03		
	Linearity error	d_{lin}	%			0,03		
	Hysteresis	h	%			0,02		
	Reproducibility		%			0,005		
	Creep		%			0,025		
	Temperature effect on characteristic value per 10 K	TK_C	%/10 K			0,04		
	Temperature effect on zero signal per 10 K	TK_0	%/10 K			0,025		
	Eccentricity effect		%/mm			0,015		
	Bending moment effect		%/(0,1·N·m)	0,2	0,1	0,05	0,02	0,01
	Lateral force effect		%/(0,1·F _{nom})			0,02		
	Characteristic value difference, tension/compression force	d_{zd}	%			0,1		
Electrical Data	Rated characteristic value	C_{nom}	mV/V			2		
	Characteristic value tolerance	d_c	%			0,2		
	Zero signal deviation	$d_{s,0}$	%			0,5		
	Input resistance	R_e	Ω			770		
	Output resistance	R_a	Ω			700		
	Insulation resistance	R_{is}	Ω			$> 10^9$		
	Operating range of excitation voltage	$B_{U,G}$	V			5 - 12		
	Protection (DIN EN 60529)					50		

Technical data

Mechanical Data	Nominal force compression/tension	$\pm F_{nom}$	N	5	10	20	50	100
	Rated Displacement	s_{nom}	mm	0,54	0,45	0,31	0,22	0,18
	Spring rigidity	c_{ax}	N/mm	9	22	63	231	549
	Mass	m	kg	0,3				
	Proportionate moving mass	m_{mess}	kg	0,04				
	Fundamental resonant frequency	f_G	Hz	80	120	200	380	600
Limits	Force limit		%	150				
	Breaking force		%	300		275		250
	Lateral force limit		%	1900	1200	800	500	300
	Permissible eccentricity	e_G	mm	100	70	50	40	30
	Bending moment limit	$M_{b,zul}$	N·m	0,5	0,7	1,1	1,9	2,8
	Rated temperature range	$B_{T,nom}$	°C	10 – 40				
Operating temperature range	$B_{T,G}$	°C	- 10 – +50					

Cable connection



Permanent connection
end not connected

Grey cable
Ø 6,5 mm
6 x 0,25 mm²
Temperature range: -35 °C bis +90 °C

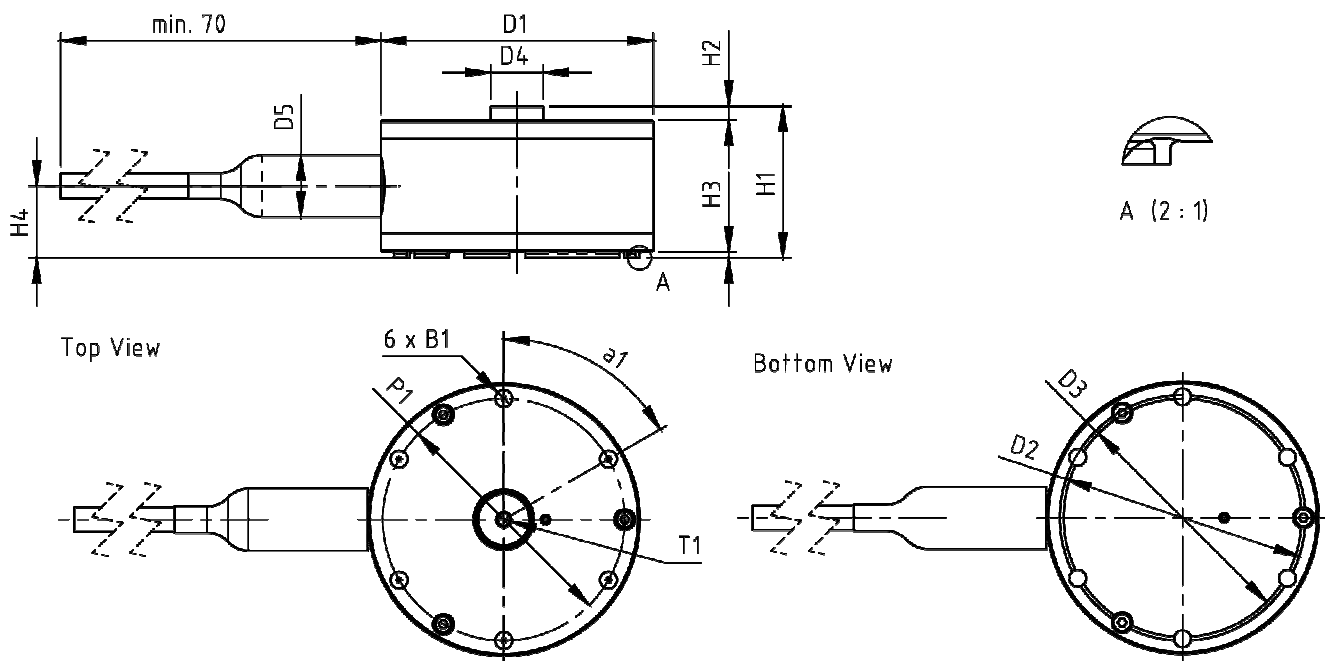
Connection		Wire colour
Supply voltage (+)	U _{in+}	blue
Supply voltage (-)	U _{in-}	black
Measurement signal (+)	U _{out+}	white
Measurement signal (-)	U _{out-}	red
Sense (+)	Sense+	green
Sense (-)	Sense-	grey
Shielding		yellow



*Permanent Connection
end not connected*

- Cable length 5 m. More cable types and lengths on request
- Connector types on cable end: D-Sub 9; D-Sub 15; M-S 7pol

Mating dimensions



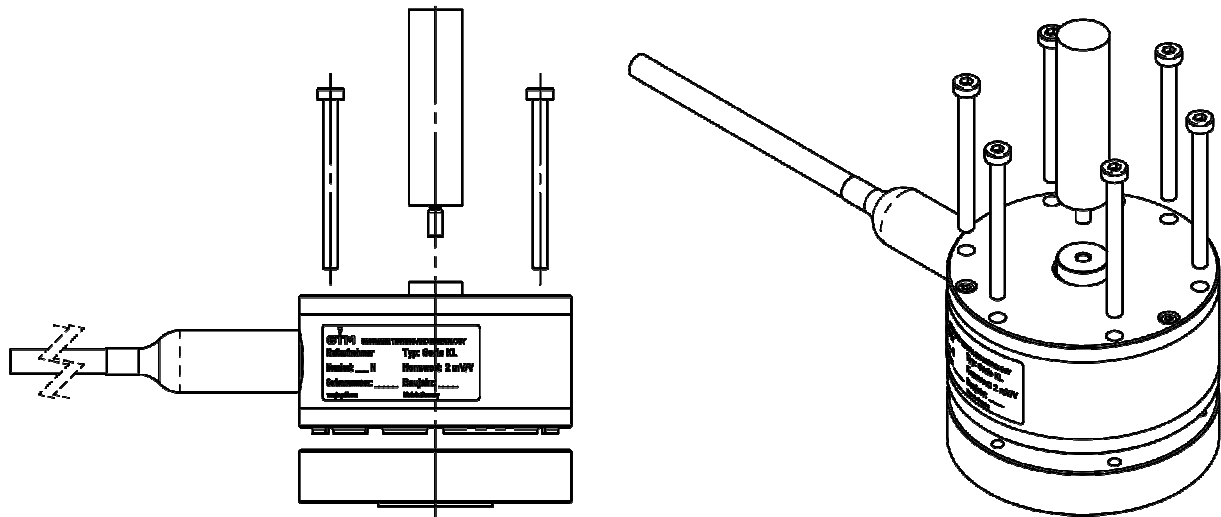
Nominal force compression/tension	$\pm F_{nom}$	kN	
Bore	$\varnothing B_1$	mm	6 x 4,5
Diameter	$\varnothing D_1$	mm	72
Diameter	$\varnothing D_2$	mm	65
Diameter	$\varnothing D_3$	mm	63
Diameter	$\varnothing D_4$	mm	14
Diameter	$\varnothing D_5$	mm	17
Pitch circle diameter	$\varnothing P_1$	mm	64
Thread	T_1		M4, 8 mm
Height	H_1	mm	40,1
Height	H_2	mm	3,6
Height	H_3	mm	1,5
Height	H_4	mm	19
Angle	a_1		6 x 60°

Screw mounting

Connection	Nominal force	Screw size	Screw quality	Fastening torque	Surface pressure ¹⁾
-	N	-	-	N·m	N/mm ²
Thread	5 - 100	M4	A2-70	3	20
Flange	5 - 100	M4	A2-70	3	100

1) Surface pressure on the contact area as a result of the max. Fastening torque

Unidirectional mounting



Änderungen vorbehalten. Alle Angaben beschreiben unsere Produkte in allgemeiner Form. Sie stellen keine vereinbarte Beschaffenheit im Sinne des § 434 Abs. 1 BGB dar.



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