

CLASSIFIED FORCE SENSOR CL 16

- compressive and tensile forces sensor
- static force measurement with high precision
- low overall height
- sensor measures only the axial component of loading force
- two year warranty and after sales service

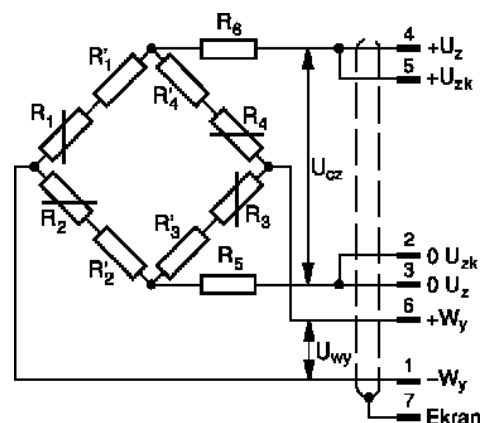


Specifications:

Range	[kN]	1; 2; 5; 10; 20; 50; 100; 200; 500
Configuration		R1, R2
Output signal (nominal sensitivity)	mV/V	1 - R1, 2 - R2
Accuracy class		1 (referred to measurement in range 10% up to 100% of nominal range)
Nominal supply voltage	[V]	10
Strain gauge resistance	[Ω]	350
Input resistance	[Ω]	aluminium: 410; steel: 380
Output resistance	[Ω]	≥ 350
Zero drift	[%/30 min]	≤ 0,03
Return to zero after unloading from nominal load	[%]	≤ 0,03
Operating temperature range	[°C]	+25 ± 10
Temperature effect on the sensitivity	[%/10K]	≤ 0,05
Temperature effect on the zero point	[%/10K]	≤ 0,05
Compensated temperature range	[°C]	0 ÷ 90
Maximal strain	[mm]	0,3
Connectors		LUMBERG (Z1) or gland with strain relief (01)
Protection to DIN EN 60529		IP40 by LUMBERG, IP68 by gland
Dimensions		see drawing and table below
Material		aluminium (only 10 kN and 20 kN) or steel
Cable length		3 m (standard) or other optional

Cable wiring assignment for R1/R2:

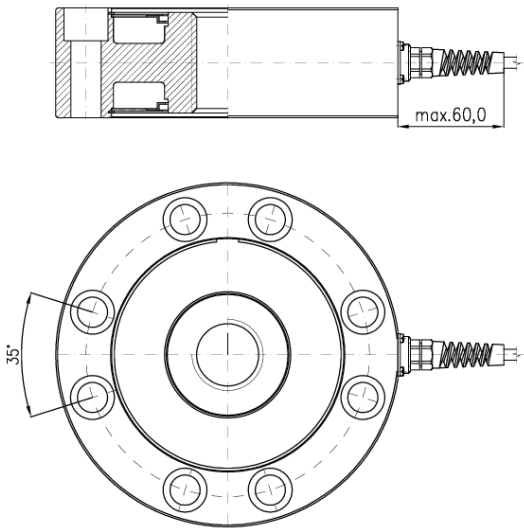
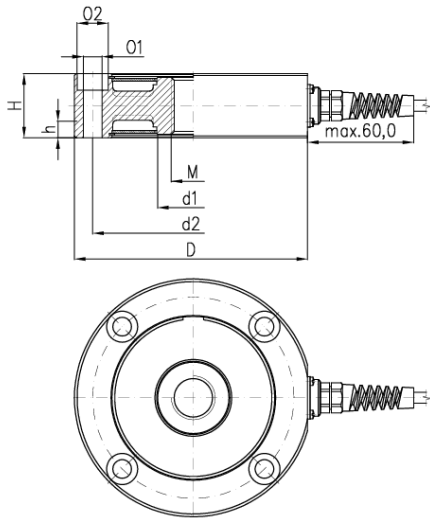
1 brown	Measuring signal (-)	-W _y
2 pink	Sensor lead (-)	0 U _{zk}
3 white	Excitation voltage (-)	0 U _z
4 yellow	Excitation voltage (+)	+U _z
5 grey	Sensor lead (+)	+U _{zk}
6 green	Measuring signal (+)	+W _y
7 black	Cable shielding	shield



High-precision force sensor CL 16

Standard version

Version for compressive and tensile forces in ranges 100 kN, 200 kN and 500 kN.



Dimensions for standard versions.

Range kN	D	H	M	d1	d2	O1	O2	h	Weight kg
	mm								
1	85	20	M8	13	74	6,4	10,4	6,2	0,35
2	85	20	M8	13	74	6,4	10,4	6,2	0,48
5	85	20	M8	13	74	6,4	10,4	6,2	0,50
10	125	28	M12	23	110	8,4	13	8,3	0,51
20	128	35	M24x2	40	110	10,5	15,5	10,3	0,77
50	128	35	M24x2	40	110	10,5	15,5	10,3	2,29
100	174	40	M36x3	57	145	13	19	15	4,60
200	180	60	M39x3	65	155	17	25	19	8,15
500	290	100	M72x4	113	235	21	31	23	26,00

Dimensions for compressive and tensile forces in ranges 100 kN, 200 kN and 500 kN.

Range kN	d1	d2	O1	O2	h
	mm				
100	57	145	10,5	15,5	10,3
200	65	155	13	19	15
500	113	235	21	31	23

Force sensors in ranges 100 kN, 200 kN and 500 kN in standard version are working only in compressive mode.

Options:



Range [kN]: 1, 2, 5, 10, 20, 50, 100, 200, 500

Accuracy class: 1

Configuration: R1 – 1 mV/V, R2 – 2 mV/V

Supply voltage: 10 V

Connectors: Z1 – Lumberg DIN 45329; O1 – gland with strain relief

Cable length: standard 3 m or other optional

Example of options for ordering: CL 16 – 10 kN – 1 – R1 – 10- O1 – 1

High-precision force sensor, range 10 kN; accuracy class 1; sensitivity 1 mV/V; gland with strain relief; cable length 1m.

Manufacturer:

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