

Force sensor CL 16

- High accuracy and reliability
- Tensile / compressive forces
- Thin shape
- Insensitive against out of alignment forces
- Three year warranty and after market service
- CE compatible



Force sensor CL 16 is assigned for building precise measuring systems for static and slow-changing forces. The sensor offers a wide range of applications in industrial automatics and other professional force measurement areas.

Measured load is converted into signal due to metal spring element with strain full bridge. The bridge is balanced and thermal compensated. CL 16 in configuration R1, R2 has the strain gauge bridge 700 Ohm with sensitivity 1 mV/V or 2 mV/V.

For electrical protection IP40 the sensor has attached a connector.

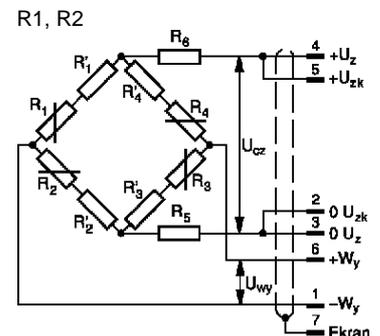
For electrical protection IP68 the sensor is equipped with stuffing on connection cable.

Specifications:

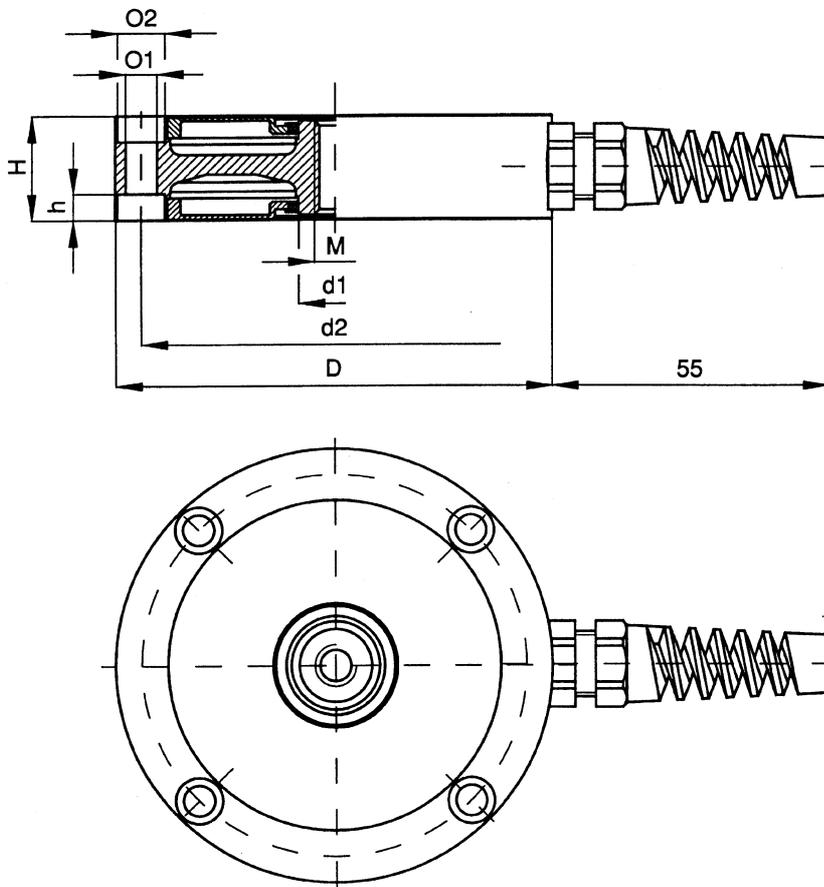
Range	[kN]	1; 2; 5; 10; 20; 50; 100; 200; 500
Configuration		R1, R2
Output signal	[mV/V]	1 - R1, 2 - R2
Accuracy		0,5 or 1,0 – related to measurement in range above 10% of sensor full range
Nominal supply voltage	[V]	10
Strain gauge resistance	[Ω]	350
Input resistance	[Ω]	730 ±25
Output resistance	[Ω]	700 ±5
Zero point deviation	[%/30 min]	≤ 0,03
Signal of unbalance from zero after nominal load take away	[%]	≤ 0,03
Operating temperature	[°C]	-20 ÷ 100
Temperature effect on the sensitivity	[%/10K]	≤ 0,05
Temperature effect on the zero point	[%/10K]	≤ 0,05
Compensation temperature	[°C]	0 ÷ 90
Maximal displacement	[mm]	0,3
Connectors		LUMBERG (Z1) or O-Ring gland (01)
Protection degree		IP40, IP68
Dimensions		as in table
Material		steel
Cable length		0,5 m (standard) or on request

Designations and cable outlets:

1 brown	-W _y
2 pink	0 U _{zk}
3 white	0 U _z
4 yellow	+U _z
5 grey	+U _{zk}
6 green	+W _y
7 black	shield



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Quality assurance

Each sensor is detailed examined after manufacturing process. The producer offers 36 month warranty for the sensor and after that time also repair and calibration services.

Dimensions:

Range	D	H	M	d1	d2	O1	O2	h
kN	mm							
1	84	20	M8	14	74	6,2	8	5
2	84	20	M8	14	74	6,2	8	5
5	84	20	M8	14	74	6,2	8	5
10	130	25	M12	21	110	8,2	12	6
20	130	25	M24x2	42	110	10,2	17	12
50	130	35	M36x3	39	110	10,2	17	10
100	174	35	M36x3	54	145	12,2	20	18
200	186	60	M39x3	60	155	16,5	24	18
500	270	100	M72x4	126	235	20,5	30	40

Options:



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

Accuracy class: 0,5; 1

Configuration: R1 – bridge 700Ω, 1 mV/V, R2 – 700 Ω, 2 mV/V

Supply voltage: 10 V

Connectors: Z1 – Lumberg DIN 45329; O1 – stuffing with stay wire

Cable length: standard 0,5 m or other optional

Example of options for ordering

CL 16 – 10 kN – 0,5 – R1 – 10- O1 – 1: sensor with dimensions as in table, range 10 kN; accuracy class 0,5; strain gauge bridge 700 Ω, sensitivity 1 mV/V; connector as stuffing on cable; cable length 1m.

Manufacturer:

Zakład Elektroniki Pomiarowej Wielkości nieelektrycznych, 05-270 Marki, ul. Kołłątaja 8

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