



# ESA Messtechnik GmbH

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## Force Transducer Model CL18U

### DESCRIPTION:

Mod. CL18U incorporates a compression spring element with a balanced strain gauge full bridge, temperature compensated for the temperature range specified below. The transducer is designed for use with compression forces only, and it comes with either 1 mV/V or 2 mV/V sensitivity.

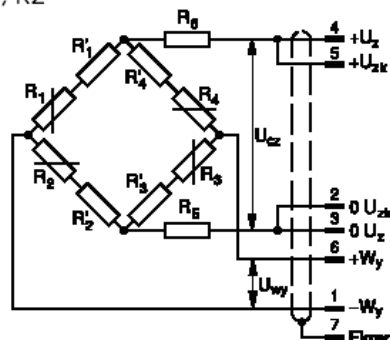


### TECHNICAL SPECIFICATIONS:

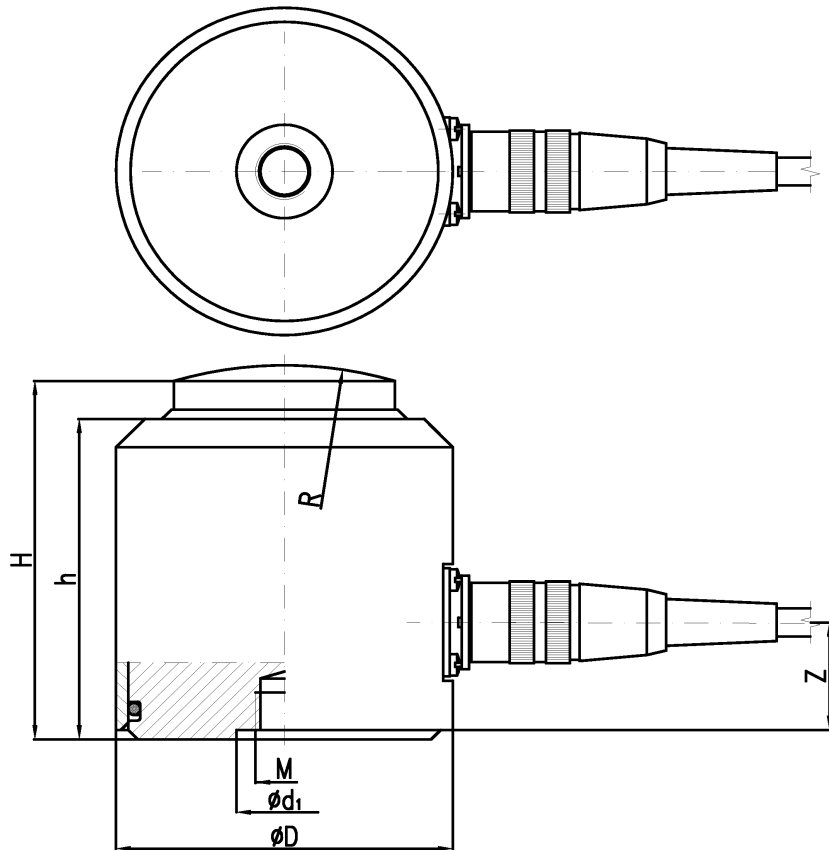
Range	[kN]	10; 20; 50; 100; 200; 500; 1000; 2000; 3000 *
Accuracy	%	0,05 or 0,1 (referred to full scale)
Sensitivity	[mV/V]	1 - R1, 2 - R2
Nominal supply voltage	[VDC]	10
Input resistance	[Ω]	730 Ω ± 25
Output resistance	[Ω]	700 Ω + 5
Operating temperature range	[°C]	-20 bis +100
Compensated temperature range	[°C]	+20 bis +90
Zero drift	[%/30 min]	≤ 0,03
Hysteresis after unloading from nominal load	[%]	≤ 0,03
Temperature effect on sensitivity	[%/10K]	≤ 0,05
Temperature effect on zero	[%/10K]	≤ 0,05
Maximum strain	[mm]	0,15
Overload	[%]	50
Isolation resistance	GΩ	≥ 40
Connectors		LUMBERG (Z1) or O-Ring gland (O1)
Protection system		IP40 or IP67
Dimensions		See drawing and table below
Spring element material		Steel
Cable length		3 m (standard) or other optional

\* on customer request up to 10 000 kN

Circuit diagram for the Force Transducer CL 18U: R1, R2



**DIMENSIONS:**



Range kN	H	D	d	d1	h	m	Z	Weight kg
	mm							
10	65	70	20	20	49,5	M12x1.5*	25	0,72
20	65	70	20	20	49,5	M12x1.5*	25	0,8
50	65	70	20	20	49,5	M12x1.5*	25	0,82
100	80	70	46	20	68,5	M12x1.5*	25	0,89
200	80	70	46	20	68,5	M12x1.5*	25	0,91
500/R2	80	70	46	20	68,5	M12x1.5*	25	1,0
500/R1	170	134	117	-	158,5	-	25	1,4
1000	170	134	117	-	158,5	-	25	1,4
2000*	* Dimensions following the example of the customer.							
3000*								

**ORDER INFORMATION:**

**CL18U-10 kN-0,1-R2-10-Z1-1**

Measuring Range \_\_\_\_\_

Accuracy Class \_\_\_\_\_

Configuration / Sensitivity (R1 or R2) \_\_\_\_\_

Excitation \_\_\_\_\_

Connectors (Z1 or O1) \_\_\_\_\_

Wire Length in m \_\_\_\_\_