



Lahti Precision Load Cells

TB5 tension load cell 500 kg ... 5000 kg

- Rated capacities 500, 1000, 2000 and 5000 kg
- All purpose
- Stainless steel
- Tested according to OIML R60 (n= 3000)
- Hermetically sealed construction (IP68)
- Also available as Ex-approved
- Guarantee two years

The TB5 tension load cells are widely used in weighing applications, where the load is put in hanging position. The load cells can also be used for compression load as well as for tensile/compression load e.g. for force measurement.

In tensile load situations, the use of the RNS knuckle joints is recommended. The load cell is made of stainless steel and it is hermetically sealed by welding.

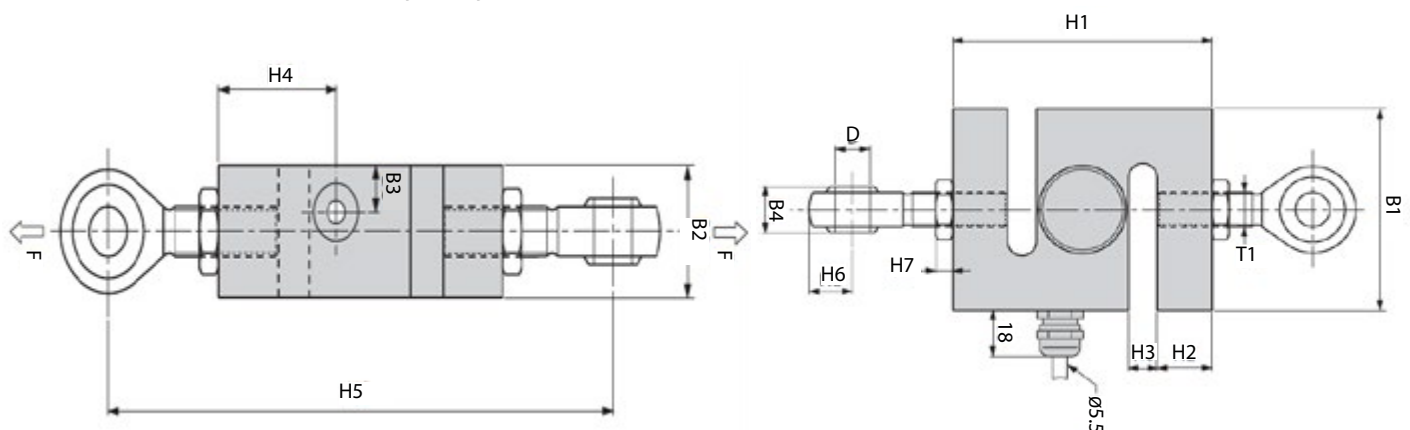
The TB5 tension load cell is tested according to OIML R60 and it is also appropriate as a component in verifiable scales.

TB5

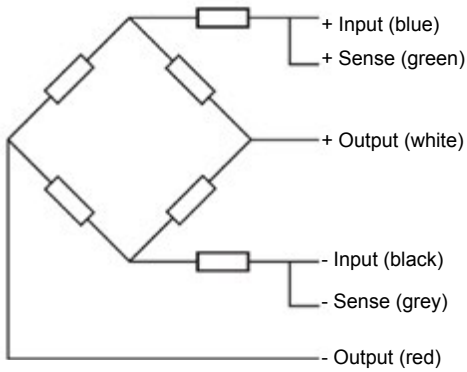
Technical specifications and dimensions

	Symbol	TB5
Accuracy class		C3
Nominal load	E_{max}	500, 1000, 2000, 5000 kg
Combined error*	F_{comb}	$<\pm 0,020\%$
Nominal sensitivity	C_n	2 mV/V
Sensitivity tolerance	D_c	$<\pm 0,1\%$
Minimum service range	$B_{a min}$	48 %
Minimum verification interval	V_{min}	$E_{max}/6250$
Repeatability	F_v	$<\pm 0,010\%$
Creep 30 min	F_{cr}	$<\pm 0,017\%$
Temp. coefficient of zero point /10K	T_{Ko}	$<\pm 0,023\%$
Temp. coefficient of sensitivity /10K	T_{Kc}	$<\pm 0,012\%$
Setting tolerance of zero point	D_0	$<\pm 2,0\%$
Input resistance in reference temp.	R_e	$400\pm 20\ \Omega$
Output resistance in reference temp.	R_a	$350\pm 3\ \Omega$
Insulation resistance	R_{is}	$>1000\ M\Omega$
Reference input voltage	U_{sr}	10 V
Maximum input voltage	$U_{s max}$	15 V
Nominal temperature range	B_{tn}	$-10\dots+40^\circ\text{C}$
Temperature range	B_{tu}	$-30\dots+80^\circ\text{C}$
Deflection of nominal load	h_n	$<0,4\ \text{mm}$
Safe overload (% of nominal load)		150 %
Ultimate overload (% of nominal load)		300 %
Protection class		IP68
Weight		0,9 kg (500...2000 kg) 1,9 kg (5000 kg)

* Combined error includes non linearity and hysteresis.



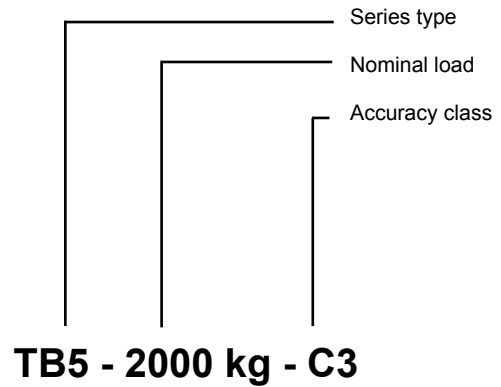
Wiring schematic diagram



Length of cable 5 m.

Above wiring gives a positive signal with compression load.

Marking



Marking of the knuckle joint: RNS5-2000 kg

Above overloads and weights apply only to the load cell. The ultimate overload of the knuckle joints is $>2.3 \times$ nominal load. Knuckle joints (1 or 2/load cell) are optional items.

Installation dimensions (mm) of the TB5 load cell and the RNS5 knuckle joints (mm)

Load cell TB5	500 kg	1000 kg 2000 kg	5000 kg
Knuckle joints RNS5	500 kg	2000 kg	5000 kg
B1	70	70	100
B2	32	32	45
B3	10,4	10,4	13,8
B4	16	21	31
ØD	12	16	25
H1	90	90	120
H2	19	19	26
H3	10	10	17
H4	36,5	36,5	60
H5	160	184	256
H6	15	19	28
H7	7	8	10
T1	M12x1,75	M16x2,0	M24x2,0

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