

# 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.

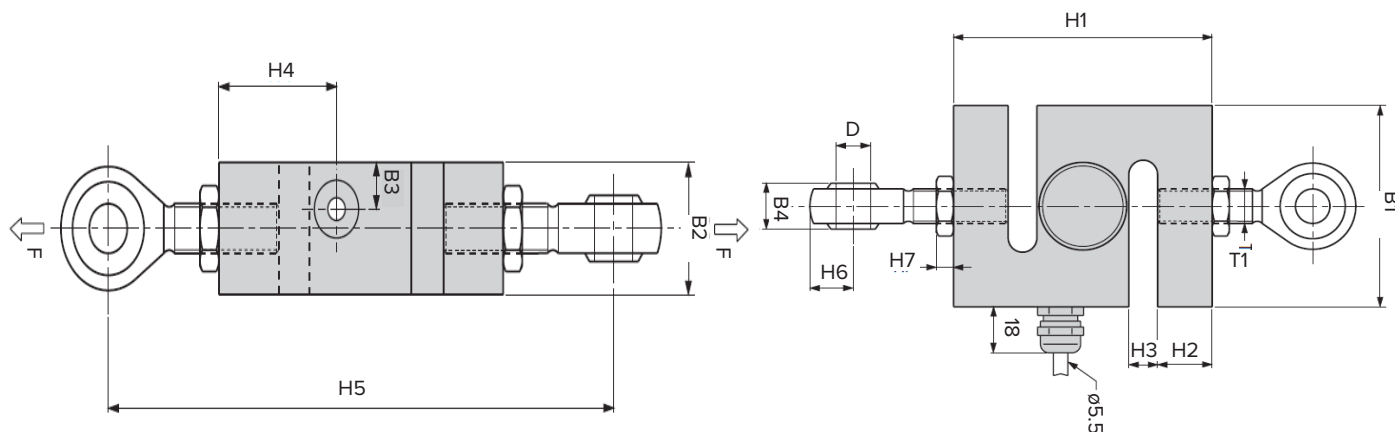


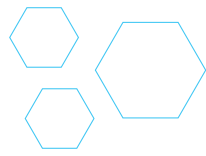


## TECHNICAL SPECIFICATIONS AND DIMENSIONS

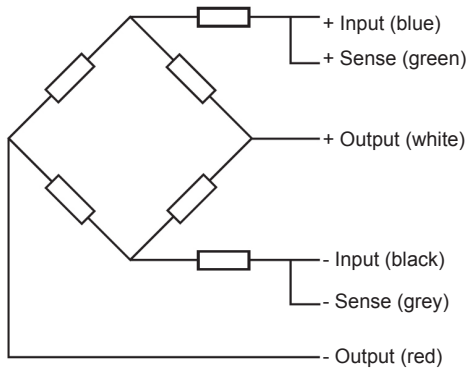
|                                       | Symbol       | TB5                                     |
|---------------------------------------|--------------|---|
| Accuracy class                        |              | C3                                      |
| Nominal load                          | $E_{max}$    | 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  | $TK_o$       | $<\pm 0,023\%$                          |
| Temp. coefficient of sensitivity /10K | $TK_c$       | $<\pm 0,012\%$                          |
| 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...+40°C                             |
| Temperature range                     | $B_{tu}$     | -30...+80°C                             |
| Deflection of nominal load            | $h_n$        | $<0,4\ mm$                              |
| 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.





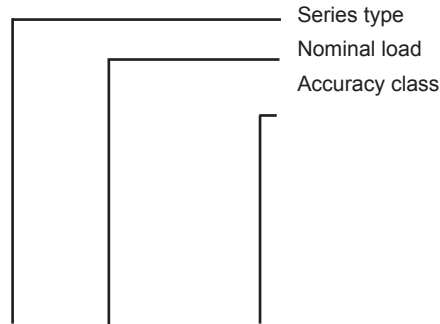
## WIRING SCHEMATIC DIAGRAM



Length of cable 5 m.

Above wiring gives a positive signal with compression load.

## MARKING



**TB5 - 2000 kg - C3**

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<br>TB5       | 500 kg   | 1000 kg<br>2000 kg | 5000 kg |
|------------------------|----------|--------------------|---------|
| Knuckle joints<br>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 |

All rights for product development reserved.

