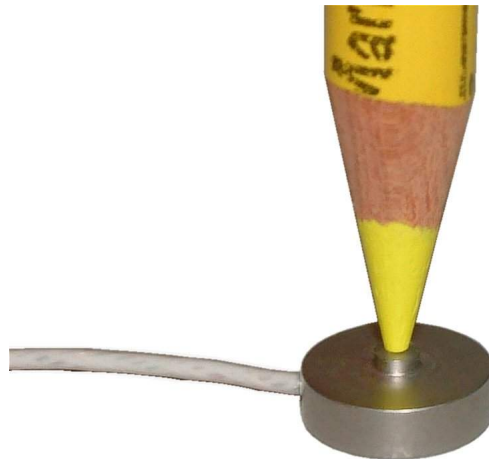


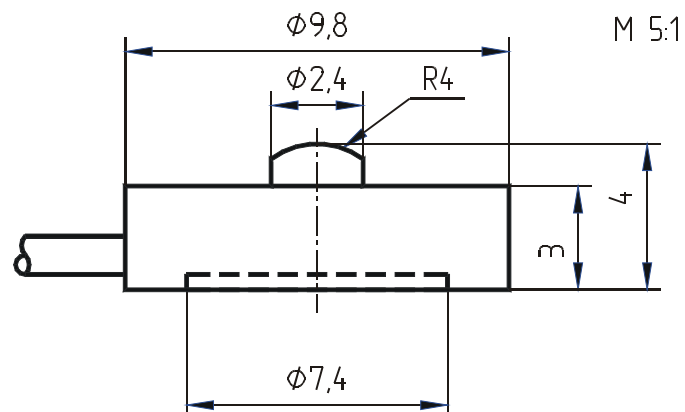
## Force Sensor KM10

Nominal force ranges 25N, 100N, 500N

The KM 10 is a membrane force sensor in ultra miniature design.



## Dimensions





## Force Sensor KM10

Nominal force ranges 25N, 100N, 500N

### Technical Data

|  |                              |            |
|--|------------------------------|------------|
| Force sensor                             | compression                  |            |
| Construction                             | membrane                     |            |
| Diameter × height                        | 9,8 x 4                      | mm × mm    |
| Force transmission                       | spherical cap Ø2.4, radius 4 | mm         |
| Fastening                                |                              | mm         |
| Material                                 | stainless steel              |            |
| Accuracy class                           | 1                            |            |
| <hr/>                                    |                              |            |
| Nominal force $F_N$                      | 25, 100, 500                 | N          |
| Operating force                          | 150                          | % $F_N$    |
| Breaking force                           | 300                          | % $F_N$    |
| Limiting lateral force                   | 20                           | % $F_N$    |
| <hr/>                                    |                              |            |
| Nominal temperature range                | -20...+60                    | °C         |
| Operating temperature range              | -20...+70                    | °C         |
| Storage temperature range                | -20...+70                    | °C         |
| <hr/>                                    |                              |            |
| Nominal output ( $S_N$ )                 | 1 ±0.5 <sup>1)</sup>         | mV/V       |
| Zero signal tolerance                    | ±5                           | % $F_N$    |
| Max. supply voltage                      | 10                           | V          |
| Input resistance                         | 350 ±2.5                     | Ohm        |
| Output resistance                        | 350 ±2.5                     | Ohm        |
| Insulation resistance                    | > 5 · 10 <sup>9</sup>        | Ohm        |
| Connection, 4-conductor open             | 3.0                          | m          |
| <hr/>                                    |                              |            |
| Linearity error                          | ≤ 1                          | % $S_N$    |
| Reversal error                           | ≤ 0.5                        | % $S_N$    |
| Temperature coeff. of the zero signal    | ≤ ±0.05                      | % $F_N$ /K |
| Temperature coeff. of the nominal output | ≤ ±0.05                      | % $S_N$ /K |
| Creep error (30 min)                     | ≤ 0.5                        | % $S_N$    |

1) the nominal output is given in the printout;

### Pin Configuration

|                 |                        |       |  |                     |
|-----------------|------------------------|-------|--|---------------------|
| +Us             | positive bridge supply | red   |  |                     |
| -Us             | negative bridge supply | black |  | shield: transparent |
| +U <sub>D</sub> | positive bridge output | green |  |                     |
| -U <sub>D</sub> | negative bridge output | white |  |                     |