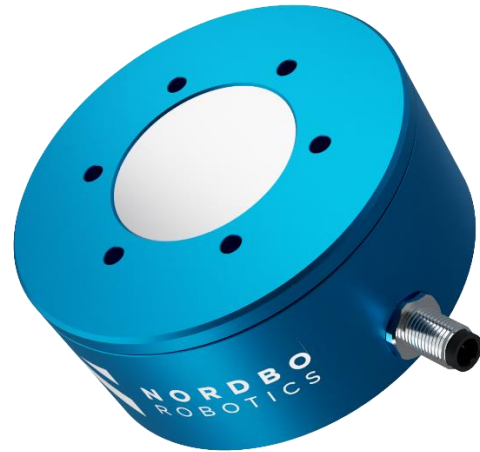


### Key Features

Nordbo Robotics 50 kg 6-axis force torque sensor is rigid, robust, and ideal for mounting on robots for precise force control. The sensor will only compress  $2.3\mu\text{m}$  in z-axis given a 10kg load. This minimal deformation when being exposed to forces makes the NRS-6 ideal for applications such as grinding, polishing, buffing, and deburring where high tool precision is required.

- High stiffness
- High resolution
- No programming needed
- Compact design
- Optional signal filtering
- Dust- & waterproof (IP67)



### Applications



Pick and Place

Assembly

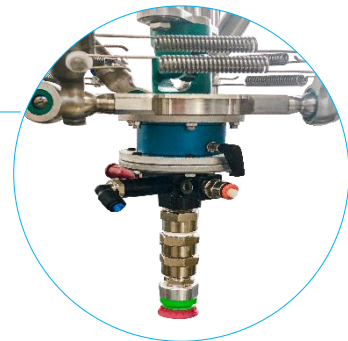
Quality Testing & Control

Part picking

Deburring

Machine Tending

Grinding & Polishing



### Technical Specifications

|                                |                    |           |                          |                          |
|--------------------------------|--------------------|-----------|--------------------------|--------------------------|
| Dimensions (Diameter x Height) | 50 x 22 mm         |           |                          |                          |
| Weight                         | 100 g              |           |                          |                          |
| Software                       | UR, AUBO & Codesys |           |                          |                          |
| Hysteresis                     | < 0,2 %            |           |                          |                          |
| Crosstalk                      | < 5 %              |           |                          |                          |
| Maximum sampling frequency     | 1000 Hz            |           |                          |                          |
| Operating temperature          | 0° to 50°          |           |                          |                          |
| Operating humidity             | < 85%              |           |                          |                          |
| Power requirement (CAN)        | 5 VDC @ 250 mA     |           |                          |                          |
| Power requirement (Ethernet)   | 6-40 VDC @ 1000 mA |           |                          |                          |
|                                | <b>Fx, Fy</b>      | <b>Fz</b> | <b>Tx, Ty</b>            | <b>Tz</b>                |
| Max force/torque               | ± 500 N            | ± 500 N   | ± 10 Nm                  | ± 5 Nm                   |
| Resolution*                    | 0,015 N            | 0,015 N   | 0,32*10 <sup>-3</sup> Nm | 0,25*10 <sup>-3</sup> Nm |
| Overload**                     | ± 700 N            | ± 1200 N  | ± 15 Nm                  | ± 15 Nm                  |
| Signal noise**                 | 0,025 N            | 0,032 N   | 0,35*10 <sup>-3</sup> Nm | 0,4*10 <sup>-3</sup> Nm  |
| Noise-free resolution          | 0,1 N              | 0,15 N    | 1,5*10 <sup>-3</sup> Nm  | 0,002 Nm                 |
| Full scale non-linearity       | < 4%               | < 4%      | < 4%                     | < 4%                     |
| Axis deformation               | 30 µm              | 27 µm     | 0,2°                     | 0,05°                    |

\* Signal noise is defined as the standard deviation of a typical one second no-load signal

\*\* The sensor is not overload protected and may break if forces are not kept below the overload values for each axis.

### Mechanical Dimensions

