KEY FEATURES

✓ No programming skills are needed
✓ Functions like center pointing, insertion, hand guiding or path recording
✓ Precise presence detection
✓ Keep constant force while moving
✓ Adds the sense of touch to your robot
✓ Dust and water resistant (IP67)

TECHNICAL SPECIFICATIONS

<table>
<thead>
<tr>
<th>Sensor Type</th>
<th>6-Axis Force/Torque Sensor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions (Height x Diameter)</td>
<td>37.5 x 70 mm</td>
</tr>
<tr>
<td>Weight (with built-in adapter plates)</td>
<td>245 g</td>
</tr>
<tr>
<td>Nominal Capacity (N.C)</td>
<td>Fxy</td>
</tr>
<tr>
<td></td>
<td>200 N</td>
</tr>
<tr>
<td>Single axis deformation at N.C (typical)</td>
<td>± 1.7 mm</td>
</tr>
<tr>
<td>Single axis overload</td>
<td>500 %</td>
</tr>
<tr>
<td>Signal noise² (typical)</td>
<td>0.035 N</td>
</tr>
<tr>
<td>Noise-free resolution (typical)</td>
<td>0.2 N</td>
</tr>
<tr>
<td>Full scale nonlinearity</td>
<td>&lt; 2%</td>
</tr>
<tr>
<td>Hysteresis (measured on Fz axis , typical)</td>
<td>&lt; 2 %</td>
</tr>
<tr>
<td>Crosstalk (typical)</td>
<td>&lt; 5 %</td>
</tr>
<tr>
<td>Working temperature range</td>
<td>0 °C / +55 °C</td>
</tr>
<tr>
<td>Power requirement</td>
<td>DC input range 7-24V</td>
</tr>
<tr>
<td>Mounting screws</td>
<td>5 x M4 x 6 mm</td>
</tr>
<tr>
<td></td>
<td>1 x M4 x 12 mm (for the Cable Holder)</td>
</tr>
</tbody>
</table>

¹ It needs protection when working in corrosive liquid environments
² Signal noise is defined as the standard deviation (σ) of a typical one second no-load signal.
**COMPLEX LOADING**

During single-axis loading, the sensor can be operated up to its nominal capacity. Above the nominal capacity the reading is inaccurate and invalid.

During complex loading *(when more than one axis is loaded)* the nominal capacities are reduced. The following diagrams show the complex loading scenarios.

The sensor **cannot be operated** outside of the Normal Operating Area.
ADAPTER OPTIONS

- Adapter "A2"
  - Mounting screws: M6x8 BN20146 (x4)
  - Universal Robots UR3, UR5, UR10
  - KUKA KR 3 R540
  - KUKA 16 L6
  - ABB 140, 1410 *
  - KUKA KR 8 R2010
  - KUKA KR 8 R1620, KR 8 R1620 HP
  - ABB 1600 *
  - KUKA KR 12 R1810
  - ABB 120, 1200 *
  - KUKA KR 22 R1610
  - KUKA LBR iiwa 7 R800, LBR iiwa 14 R820
  - * Only mechanical compatibility

- Adapter "B2"
  - Mounting screws: M5x8 BN20146 (x7)
  - Interface types: USB, CAN, Ethernet - TCP/UDP, EtherCAT
  - Maximum sampling frequency 500 Hz
  - Supported systems Windows; Linux; ROS; UR

- Adapter "C2"
  - Mounting screws: M6x8 BN20146 (x4)

INTERFACE TYPES

CONNECTOR PINOUT

1: V+
2: CAN High
3: V-
4: CAN Low