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>245g</td>
</tr>
<tr>
<td><strong>Fx</strong></td>
<td><strong>Fz</strong></td>
</tr>
<tr>
<td>Nominal Capacity (N.C)</td>
<td>200 N</td>
</tr>
<tr>
<td>Single axis deformation at N.C (typical)</td>
<td>± 0.6 mm</td>
</tr>
<tr>
<td>Single axis overload</td>
<td>500 %</td>
</tr>
<tr>
<td>Signal noise² (typical)</td>
<td>0.1 N</td>
</tr>
<tr>
<td>Noise-free resolution (typical)</td>
<td>0.5 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>
</tbody>
</table>

¹ It needs protection when working in corrosive liquid environments
² Signal noise is defined as the standard deviation (1σ) 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)

Adapter “B2”
Mounting screws:
M5x8 BN20146 (x7)

Adapter “C2”
Mounting screws:
M6x8 BN20146 (x4)

Universal Robots UR3, UR5, UR10
KUKA KR 3 R540
KUKA KR 6

KUKA KR 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

INTERFACE TYPES

<table>
<thead>
<tr>
<th>USB</th>
<th>CAN</th>
<th>Ethernet - TCP/UDP</th>
<th>EtherCAT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Maximum sampling frequency 500 Hz</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supported systems Windows; Linux; ROS; UR</td>
<td></td>
</tr>
</tbody>
</table>

CONNECTOR PINOUT

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