JACO²
Spherical 7 DOF
Technical specifications

Kinova Robotics
kinovarobotics.com
# JACO² Spherical 7 DOF

## General Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Weight</td>
<td>4.4 Kg</td>
</tr>
<tr>
<td>Materials</td>
<td>Carbon fiber (links), Aluminum (actuators)</td>
</tr>
<tr>
<td>Payload</td>
<td>2.4 Kg (mid-range continuous payload capabilities)</td>
</tr>
<tr>
<td></td>
<td>2.1 Kg (full-reach peak/temporary payload capabilities)</td>
</tr>
<tr>
<td>Reach</td>
<td>98.5 cm</td>
</tr>
<tr>
<td>Joint Range After Start-Up (Software Limitation)</td>
<td>±27.7 turns</td>
</tr>
<tr>
<td>Maximum Linear Arm Speed</td>
<td>20 cm/s</td>
</tr>
<tr>
<td>Power Supply Voltage</td>
<td>18 to 29 VDC</td>
</tr>
<tr>
<td>Average Power</td>
<td>25 W (5W in STANDBY)</td>
</tr>
<tr>
<td>Peak Power</td>
<td>100 W</td>
</tr>
<tr>
<td>Communication Protocol</td>
<td>RS485</td>
</tr>
<tr>
<td>Communication Cables</td>
<td>20 pins flat flex cable</td>
</tr>
<tr>
<td>2 Expansion Pins on Communication Bus</td>
<td></td>
</tr>
<tr>
<td>Water Resistance</td>
<td>IPX2</td>
</tr>
</tbody>
</table>
OPERATING TEMPERATURE
-10 °C to 40 °C expected

CONTROLLER

<table>
<thead>
<tr>
<th>PORTS</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Joystick</td>
<td>1 Mbps CANBUS</td>
</tr>
<tr>
<td>Power supply</td>
<td>18 to 29 VDC</td>
</tr>
<tr>
<td>USB 2.0 (API)</td>
<td>12 Mbps</td>
</tr>
<tr>
<td>Ethernet</td>
<td>100 Mbps</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTROL SYSTEM FREQUENCY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>100 Hz (High Level API)</td>
<td></td>
</tr>
<tr>
<td>500 Hz (Low Level API)</td>
<td></td>
</tr>
</tbody>
</table>

CPU
360 MHz

SDK

<table>
<thead>
<tr>
<th>APIs</th>
<th>High and low level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compatibility</td>
<td>Windows, Linux Ubuntu &amp; ROS</td>
</tr>
<tr>
<td>Port</td>
<td>USB 2.0</td>
</tr>
<tr>
<td>Programming languages</td>
<td>C++</td>
</tr>
</tbody>
</table>

FORCE, CARTESIAN & ANGULAR CONTROL

DETAILED SPECIFICATIONS

<table>
<thead>
<tr>
<th>ACTUATORS #1, #2, #3, #4</th>
<th>K-75+</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACTUATORS #5, #6 &amp; #7</td>
<td>K-58</td>
</tr>
</tbody>
</table>

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