KINOVA TACTILE SENSORS – RESEARCH EDITION

Mechanical Installation Guide

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1. About this document

This document indicates how to install the Haptic Sensors on the JACO Arm. Parts are included in the package but not the tools.

⚠️   Always wear electrostatic discharge bracelet while handling electronics.

⚠️   Do not remove or modify the sensors

Optional additional information

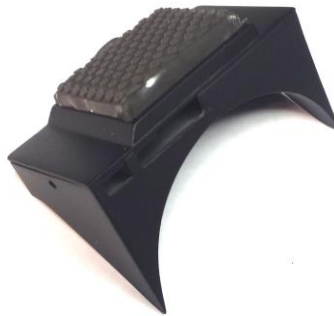   ✓   Jaco Maintenance Guide - 1.1.0

2. Instructions

2.1   Parts and tools needed

- Distal Sensors
- Proximal Sensors
- Palm Sensor
- 12 M2.5x4mm screws
- 1.3mm and 1.5mm Allen Key
- Loctite™ 242 (if available)

Distal Sensor   Palm Sensor   Proximal Sensor

Figure 2-1: Sensors Type

2.2 Installation steps

1) You may remove the JACO Hand from the Arm, or position the JACO Arm in a way that the JACO Hand is facing up.

⚠ For help on the removal of the JACO Hand, please refer to : Jaco Maintenance Guide 1.1.0 - Section 4

2) Clean the hand where the Palm Sensor will be positioned, with a soft cleaner. Peel off the protective sheet of the double faced tape under the Palm Sensor.

3) Carefully stick the Palm Sensor on the hand and apply pressure with the fingers for 30 seconds.

4) Using the 1.3mm Allen Key, remove the screws of the Fingernails and remove the Fingernails. Keep them in a safe place to be re-installed later.

5) Locate the position of the Sensors on the JACO Hand in the picture below. Each Sensor has specific address and length of cable, they must be installed on the appropriate finger. There is a label on each Sensor to identify them.

Distal #1:
Address #1

Proximal #1:
Address #2

Proximal #2:
Address #4

Distal #2:
Address #3

Distal #3:
Address #5

Proximal #3:
Address #6

Palm:
Address #7

Figure 2-2 Sensors Position Identification

6) Carefully insert Proximal Sensor #1, #2 and #3. Insert them from the top of the finger. Do not try to snap them in place, this could damage the Plastic Fingers.

Figure 2-3: Insertion of Proximal Sensor

7) Align the holes and screw the Proximal Sensors. Since the holes in the JACO Fingers are not threaded, you will have to push on the screws while screwing. To prevent the threads from tearing off, do not apply too much torque. You will have to move the Fingers #1 and #3 alternately to access the lower screws between them.

Figure 2-4 - Securing the Proximal Sensors

8) Insert the Distal Sensor #1, #2 and #3.

9) Put back the Finger Nails and the original screws with a small amount of Loctite 242 (If available).

10) Insert the Proximal Sensor's wires in the latch of the Proximal Sensor. The key is to have the Distal Sensor's wire positioned under the Proximal Sensor's wire. Refer to the picture for wire positioning.

⚠ Place the wires in a way that when the Jaco Hand is completely closed, the wires do not stretch and break.

Figure 2-5 - Positioning of the Sensor's wires

11) Connect the wires of the sensors in the power supply connectors. Be careful not to insert the connector upside down. Refer to the picture below for the position of the connectors.
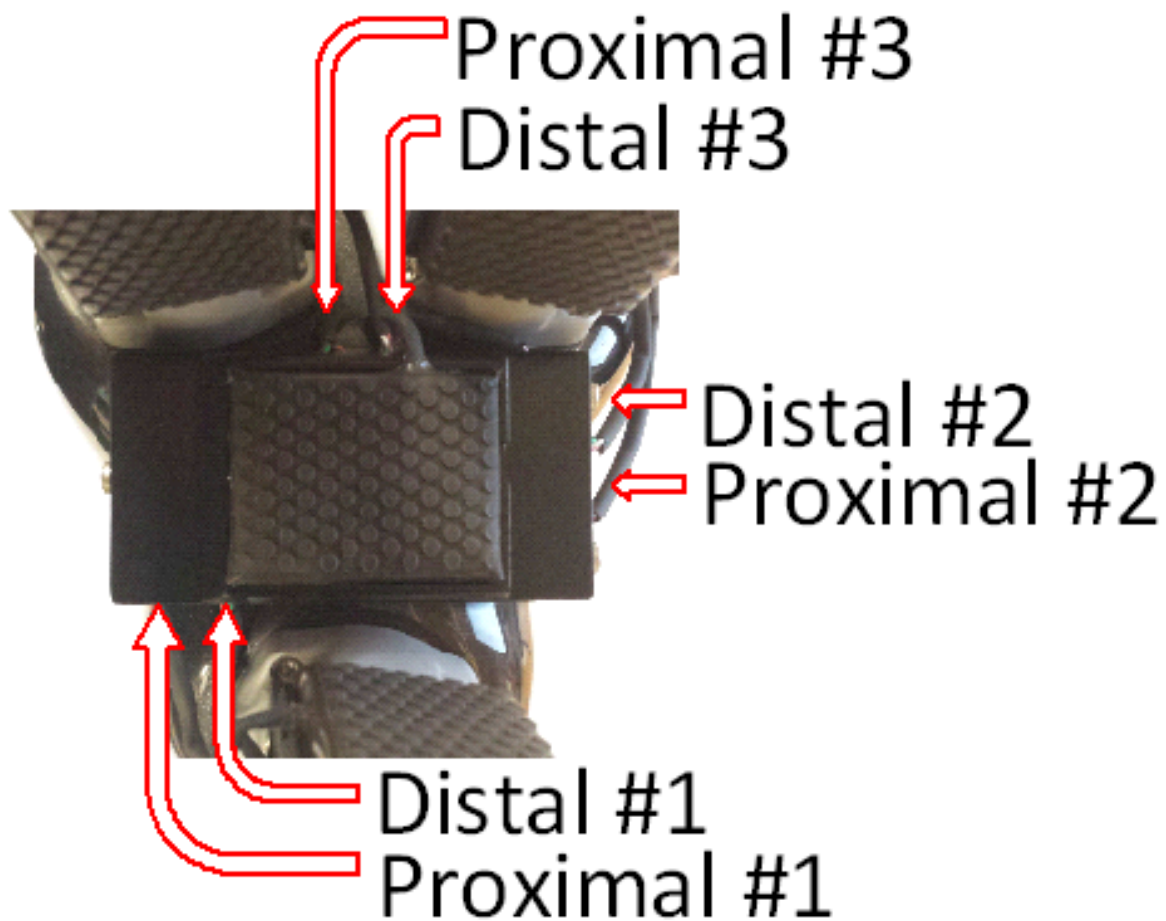

Figure 2-6 - Connection of the sensors

12) Secure the wire on the JACO arm with the Velcro ™ bands

13) The Haptic Sensors are now completely installed on the Jaco Hand.

3. Contact support

If you need help or have any questions about this product, this guide or the information detailed in it, please contact a Kinova representative at

Support@KinovaRobotics.com

We value your feedback!

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