THANK YOU FOR CHOOSING ROBOTIQ

This step-by-step guide will allow you to **install** and **use your Robotiq SF-300 Screw Feeder**.

1.WHAT IS SUPPLIED?

Standard upon delivery:

SF-300 Screw Feeder Basic Kit (SOL-SDS-SF300):

- Robotiq SF-300 Screw Feeder
- Screw Feeder mounting brackets
- Power supply
- International power adapter kit
- USB A-Male to B-Male cable
- Protective earth cable
- I/O signals and ground cable
- Hardware and tool

2.TOOLS YOU NEED



2.5 mm slotted screwdriver (not included)



Key to mount the Screw Feeder on your work surface (not included)



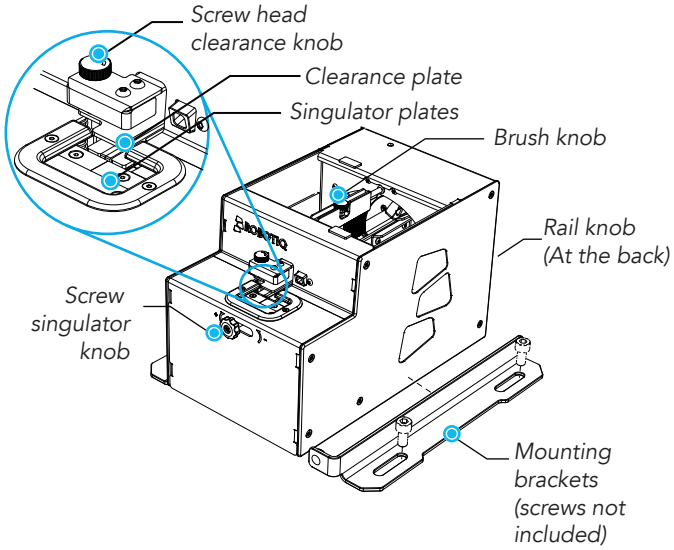
10 mm wrench (for setup on UR, not included)

PLEASE READ THE INSTRUCTION MANUAL BEFORE OPERATING THE SCREW FEEDER.

3.MOUNTING

1. Place the Screw Feeder on a flat work surface.
2. Make the mounting brackets close in on both sides of the device.
3. Make sure the device stands on its four shoes and is level, horizontally.

PREFERABLY USE 5/16 OR M8-DIAMETER FASTENERS (NOT INCLUDED) TO SECURE THE FEEDER ONTO THE WORK SURFACE. WASHERS ARE OPTIONAL.



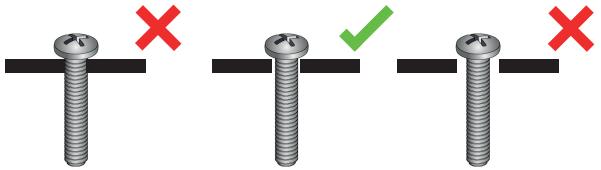
4.ADJUSTMENT

Follow these steps using screws that corresponds to your application.

Singulator plates adjustment

The singulator plates deliver a single screw to be picked by the Screwdriver.

1. Set the screw singulator knob to leave just enough space between the singulator plates to insert and remove the threaded part of a screw easily.



Example of proper singulator plates or rail adjustment.

Rail adjustment

The rails align the screws and guide their course.

1. Place the threaded part of a screw between the rails.
2. Using the rail knob, set the gap to allow just enough play for the screw to travel freely along the rail.

Brush adjustment

The brush discards incorrectly positioned screws from the rails.

1. Place a screw between the rails.
2. Set the brush knob so that the bristles barely come into contact with the top of the screw head.

Screw head clearance plate adjustment

The plate prevents screw heads from overlapping.

1. Raise the plate using the screw head clearance knob.
2. Place one or several screws between the rails.
3. Lower the clearance plate enough so that no screw can go through.

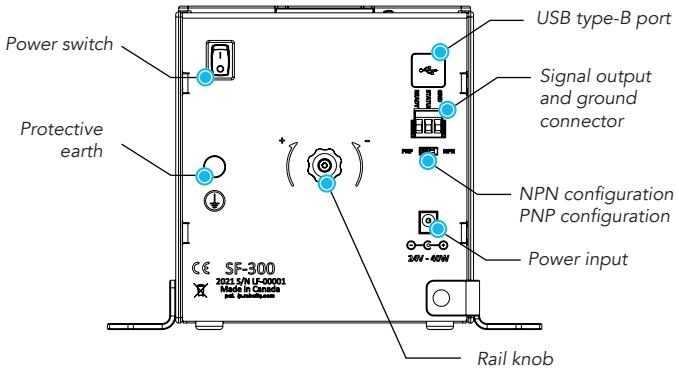
5. WIRING

1. Connect the Screw Feeder to an electrical outlet (100V-240V) using the provided power supply cable.
2. Set the switch to PNP or NPN.

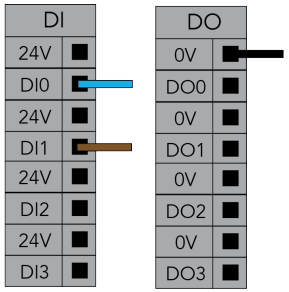
REFER TO YOUR ROBOT CONTROLLER MANUAL TO SELECT THE CORRECT CONFIGURATION (NPN OR PNP). UNIVERSAL ROBOTS USES PNP.

3. Use the provided protective earth cable to connect the protective earth screw at the back of the Screw Feeder to a "Protective earth for application" terminal inside the robot controller's enclosure.

FOR UNIVERSAL ROBOTS: USE A 10 MM WRENCH AND THE PROVIDED NUT TO SECURE THE RING CONNECTOR AT THE CONTROLLER END.



4. Connect the I/O terminal block to the Screw Feeder
5. Connect the I/O signals cable to available digital I/O terminal blocks in the robot controller:
   - Black wire (ground) : 0V Digital Output
   - Brown wire (status signal): Digital Input 0, 1, 2 or 3
   - Blue wire (ready signal): Digital Input 0, 1, 2 or 3 (different from brown wire)



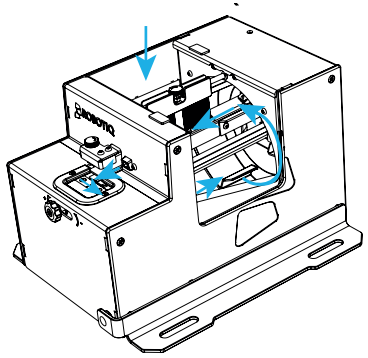
TAKE NOTE OF THE CHOSEN DIGITAL INPUT NUMBERS. DEPENDING ON YOUR ROBOT, THEY MAY BE USEFUL FOR THE SCREW FEEDER CONFIGURATION.

6. TESTING

1. Add screws to the screw chamber (observe the max. fill line).
2. Turn on the Screw Feeder.
3. Use the screw head clearance knob to slowly lift the clearance plate until screws can travel freely underneath it with minimal play.

3. Make sure that :
   - ✓ No screws get stuck.
   - ✓ No screws slow down due to excessive friction.
   - ✓ Incorrectly positioned screws on the rails are pushed back in the screw chamber.
   - ✓ Only one screw is delivered at a time.
4. Make adjustments where needed.

REMOVE SCREWS FROM THE SINGULATOR PLATES AS THEY REACH THE END POSITION. REPEAT UNTIL THE RAIL IS FILLED WITH SCREWS.



Screw path (blue arrows)

7.SOFTWARE CONFIGURATION

THE ROBOTIQ SCREW FEEDER CAN BE USED WITH DIFFERENT COMBINATIONS OF SCREWDRIVERS AND ROBOT MODELS. PLEASE REFER TO THEIR RESPECTIVE INSTRUCTION MANUALS FOR PROPER SOFTWARE CONFIGURATION.

ROBOTIQ eLearning
elearning.robotiq.com

This product is under a 1-year warranty.
Refer to your product instruction manual for details.

support.robotiq.com

support@robotiq.com
T: 1.418.380.2788 ext. 3

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ROBOTIQ

SF-300 Screw Feeder

QUICK START GUIDE



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