

# How to configure Deviator application using NiLAB Starter

## Parallel Motion window overview

Deviator application require that the pick and place push the product in the linear direction, then go vertical after pushing and then go back for successive deviation.

The positions can be programming using NiLAB Starter software in the Parallel motion window.

First step is activate the Dual axis mode (1) to have the online position of the 2 axis. The two axis must have subsequently nod id numbers, for example Motor 1 (Node ID = 1) and Motor 2 (Node ID = 2). When the Dual axis mode is active in the number field (2) and (3) are present the current positions of the two axis.

In order to load the current configuration you need to press the LOAD TARGET POS button (8) and to store the current configuration permanently you have to press the button STORE TARGET POS (9). The number fields (4) and (7) will be used to set the deviator rate in motion per minutes and the number of motion task (typically 4). In order to update the rate press the UPDATE RATE button (5).

**Parallel Motion Configuration**

(1) ☒ **ACTIVATE DUAL AXIS MODE**

**MOTOR 1 POS** (2)  mm **MOTOR 2 POS** (3)  mm

**Sequence rate** (4)  pro minutes (5) **UPDATE RATE**

**Single movement** (6)  msec **n. steps** (7)

(8) **LOAD TARGET POS** (9) **STORE TARGET POS**

**ACTIVE STEP**

ACTIVE STEP	TARGET M1 P	TARGET M2 P	(10)
SET STEP 1	60,000 mm	30,000 mm	ACQUIRE STEP 1
SET STEP 2	160,000 mm	130,000 mm	ACQUIRE STEP 2
SET STEP 3	130,000 mm	160,000 mm	ACQUIRE STEP 3
SET STEP 4	30,000 mm	60,000 mm	ACQUIRE STEP 4
SET STEP 5	180,000 mm	180,000 mm	ACQUIRE STEP 5
SET STEP 6	0,000 mm	0,000 mm	ACQUIRE STEP 6
SET STEP 7	0,000 mm	0,000 mm	ACQUIRE STEP 7
SET STEP 8	0,000 mm	0,000 mm	ACQUIRE STEP 8
SET STEP 9	0,000 mm	0,000 mm	ACQUIRE STEP 9
SET STEP 10	0,000 mm	0,000 mm	ACQUIRE STEP 10

**Warnings:**

- This modes works only when the two axis are with subsequently nodeid
- Update rate time and store are only possible when the two motors are disabled

## How to acquire and store the motion points

Move the robot in the start position



Press button Acquire Step to capture the position of the two axis. If the number are with digits you can correct using the number field and press the SET STEP 1 to store.

Motion controller | Controller configuration | Scope | Motor parameter | Communication | Diagnostic | Expert | Parallel Motion | Surveillance

Parallel Motion Configuration

☒ ACTIVATE DUAL AXIS MODE

SET STEP 1

SET STEP 2

SET STEP 3

SET STEP 4

MOTOR 1 POS

-57,940 mm

MOTOR 2 POS

-33,619 mm

Sequence rate

50 pro minutes

UPDATE RATE

ACTIVE STEP

TARGET M1 P1

60,000 mm

TARGET M2 P1

30,000 mm

ACQUIRE STEP 1

TARGET M1 P2

160,000 mm

TARGET M2 P2

130,000 mm

ACQUIRE STEP 2

TARGET M1 P3

130,000 mm

TARGET M2 P3

160,000 mm

ACQUIRE STEP 3

TARGET M1 P4

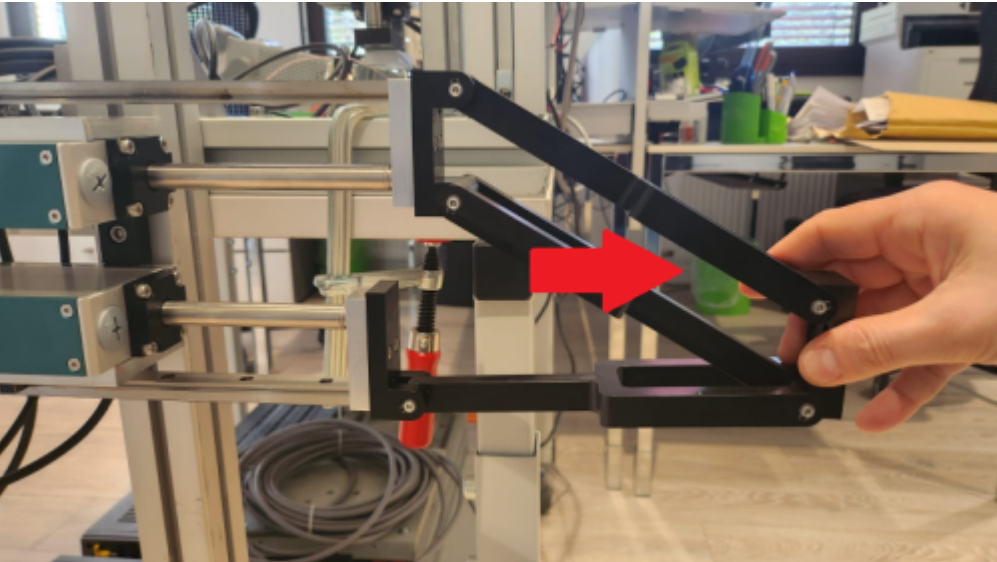
30,000 mm

TARGET M2 P4

60,000 mm

ACQUIRE STEP 4

Move the robot in the push position and store the second positions using ACQUIRE STEP 2 button.



Motion controller | Controller configuration | Scope | Motor parameter | Communication | Diagnostic | Expert | Parallel Motion | Surveillance

Parallel Motion Configuration

☒ ACTIVATE DUAL AXIS MODE

SET STEP 1

SET STEP 2

SET STEP 3

SET STEP 4

MOTOR 1 POS

-57,940 mm

MOTOR 2 POS

-33,619 mm

Sequence rate

50 pro minutes

UPDATE RATE

ACTIVE STEP

TARGET M1 P1

60,000 mm

TARGET M2 P1

30,000 mm

ACQUIRE STEP 1

TARGET M1 P2

160,000 mm

TARGET M2 P2

130,000 mm

ACQUIRE STEP 2

TARGET M1 P3

130,000 mm

TARGET M2 P3

160,000 mm

ACQUIRE STEP 3

TARGET M1 P4

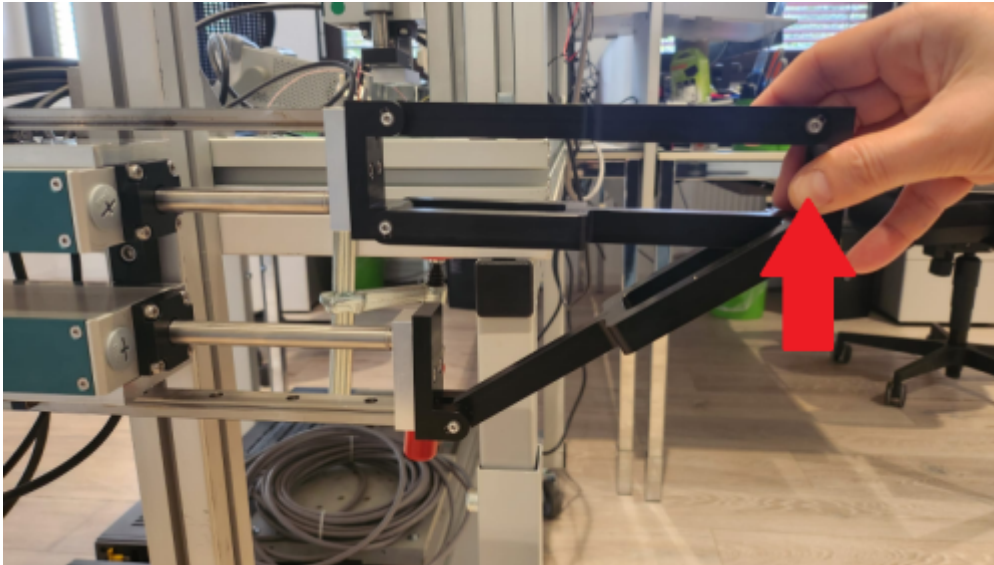
30,000 mm

TARGET M2 P4

60,000 mm

ACQUIRE STEP 4

Move the robot in the upper position and store the third positions using ACQUIRE STEP 3 button.



Motion controller Controller configuration Scope Motor parameter Communication Diagnostic Expert Parallel Motion Surveillance

Parallel Motion Configuration

☒ ACTIVATE DUAL AXIS MODE

MOTOR 1 POS: -57,940 mm

MOTOR 2 POS: -33,619 mm

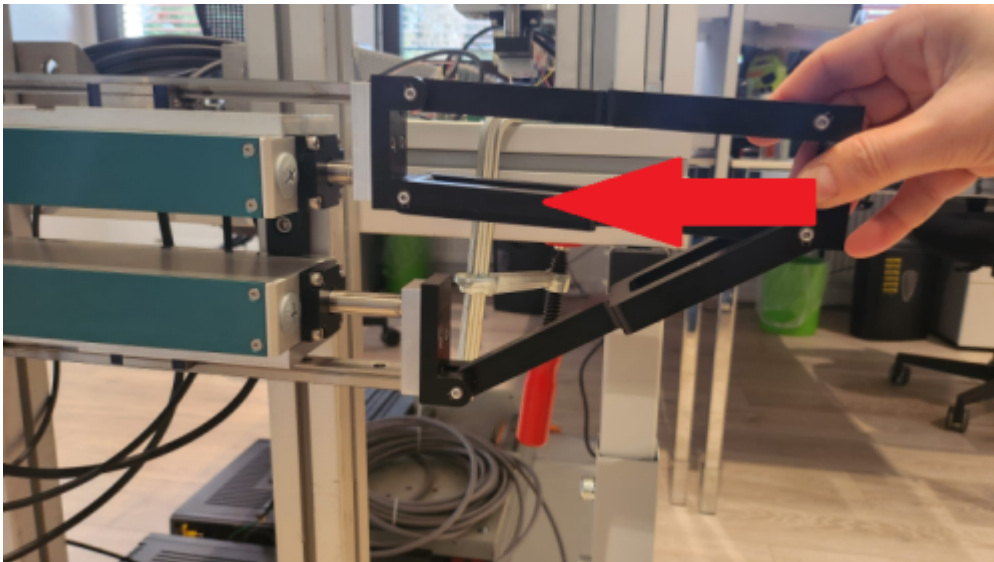
Sequence rate: 50 pro minutes

UPDATE RATE

ACTIVE STEP	TARGET M1 P1	TARGET M2 P1	ACQUIRE STEP 1
<input type="checkbox"/>	60,000 mm	30,000 mm	ACQUIRE STEP 1
<input type="checkbox"/>	160,000 mm	130,000 mm	ACQUIRE STEP 2
<input type="checkbox"/>	130,000 mm	160,000 mm	ACQUIRE STEP 3
<input type="checkbox"/>	30,000 mm	60,000 mm	ACQUIRE STEP 4

SET STEP 1 SET STEP 2 SET STEP 3 SET STEP 4

Move the robot in the starting position and store the forth positions using ACQUIRE STEP 4 button.





Motion controllerController configurationScopeMotor parameterCommunicationDiagnosticExpertParallel MotionSurveillance

Parallel Motion Configuration

ACTIVATE DUAL AXIS MODE

MOTOR 1 POS

-57,940 mm

MOTOR 2 POS

-33,619 mm

Sequence rate

50 pro minutes

UPDATE RATE

Single movement

n steps

SET STEP 1

SET STEP 2

SET STEP 3

SET STEP 4

ACTIVE STEP

TARGET M1 P1

60,000 mm

TARGET M1 P2

160,000 mm

TARGET M1 P3

130,000 mm

TARGET M1 P4

30,000 mm

TARGET M1 P5

TARGET M2 P1

30,000 mm

TARGET M2 P2

130,000 mm

TARGET M2 P3

160,000 mm

TARGET M2 P4

60,000 mm

TARGET M2 P5

ACQUIRE STEP 1

ACQUIRE STEP 2

ACQUIRE STEP 3

ACQUIRE STEP 4

From:  
<https://dokuwiki.nilab.at/> - NiLAB GmbH  
Knowledgebase

Permanent link:  
[https://dokuwiki.nilab.at/doku.php?id=integrated\\_pick\\_and\\_place:deviator\\_application](https://dokuwiki.nilab.at/doku.php?id=integrated_pick_and_place:deviator_application)

Last update: 2024/02/15 10:31

https://dokuwiki.nilab.at/

Printed on 2025/12/19 11:52