

P-TSS-007 - Smartshift Tool Changer & Robotiq grippers compatibility - V1.0

Procedure description

In order to ensure the compatibility between Smartshift tool Changer and Robotiq grippers, the following script must be inserted in your current program.

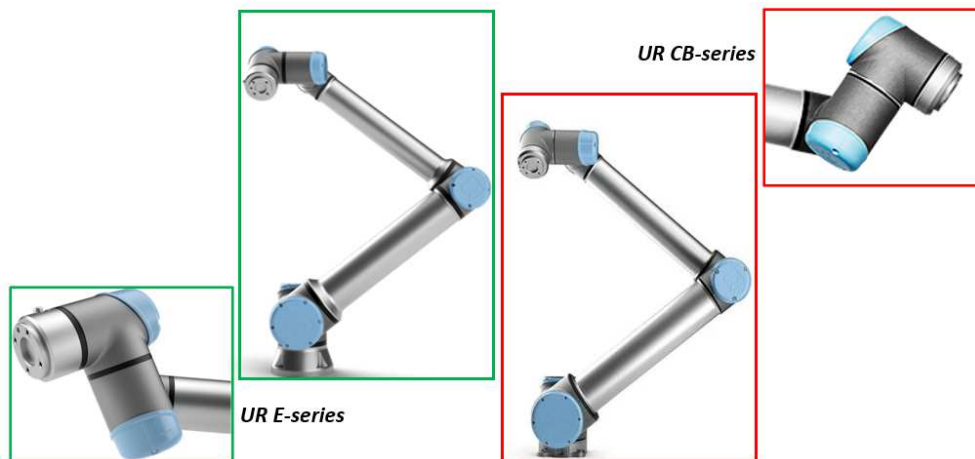
The following procedure has been designed to determine when you will have to use this script and how to install it.

1. Requirements

1.1. Hardware requirements

1.1.1. UR Robot

The following procedure must be used when you would like to combine the tool changer of Smartshift and a robotiq gripper on URe robot (E-series Range) only.



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1.1.2. Robotiq Grippers concerned

Range of Grippers	Grippers concerned
Mechanical Gripper	2F & Hand-E
Vacuum Gripper	Epick

1.1.3. Smartshift tool Changer

Range of Smartshift clutch	Tool changer concerned
Electrical connection	RME & THE Connectors

1.2. Software requirements

1.2.1. Polyscope and URCaps

We recommend to download and install the latest version of Polyscope, Smartshift and Robotiq URCap available on their respective websites :

UR Polyscope system - Eseries section : [UR Polyscope system download](#)

Smartshift URCap : [Smartshift download center](#)

Robotiq URCap : [Robotiq support center](#)

1.2.2. Robotiq Script

To ensure the compatibility between the tool changer and Robotiq grippers, the following script must be installed on the root of an USB key.

Script Name : "*rq_cycle_tool_voltage_until_connection*"

Provider : Smartshift

Developer : Robotiq

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2. Script installation

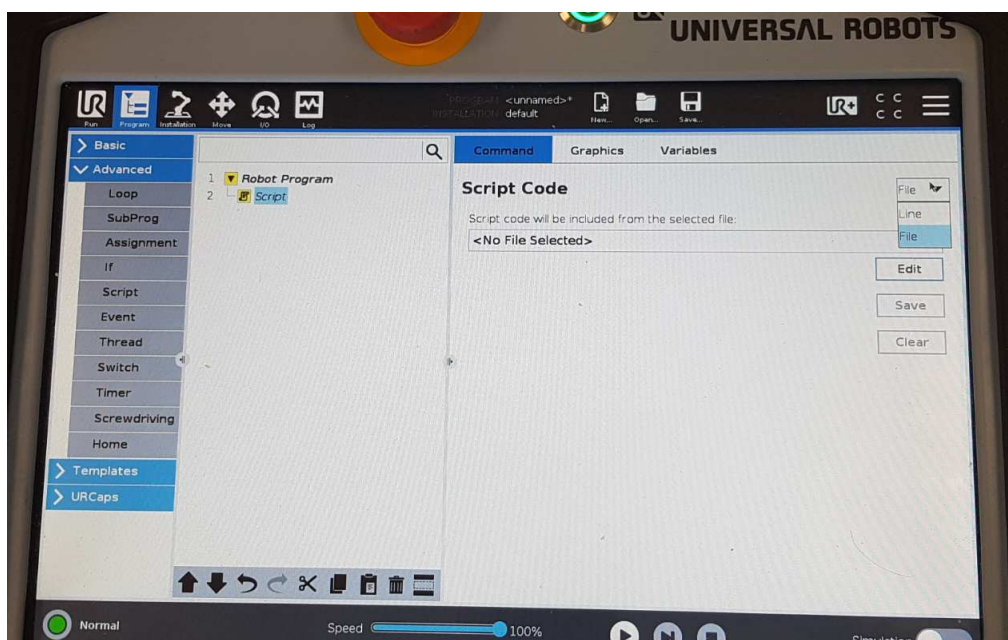
2.1. Description

The aim of this script is to ensure the communication between Robotiq grippers and URe through Smartshift tool changer. It has to be inserted and called before each activation request of a Robotiq Gripper.

2.2. Insertion & Calling

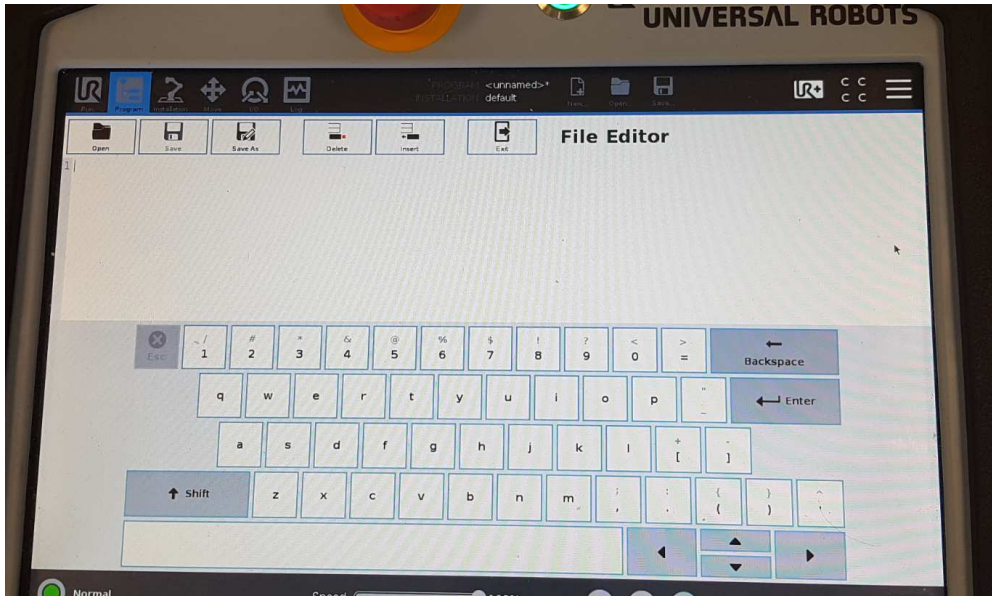
To insert the related script, please find below steps to follow :

- Go to **Program tab > Advanced > Script > File** :

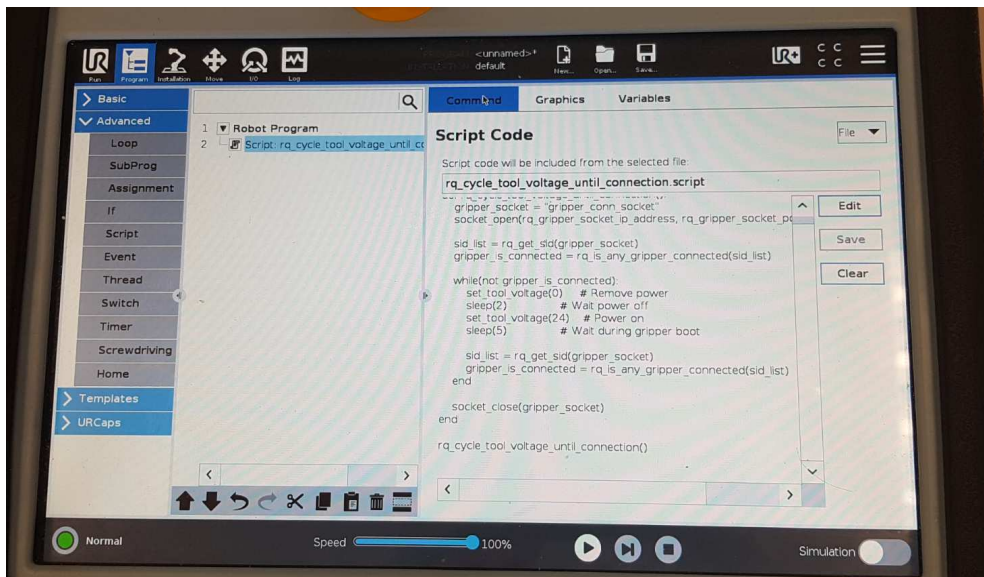


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- Click on **Edit** the following information will be displayed :



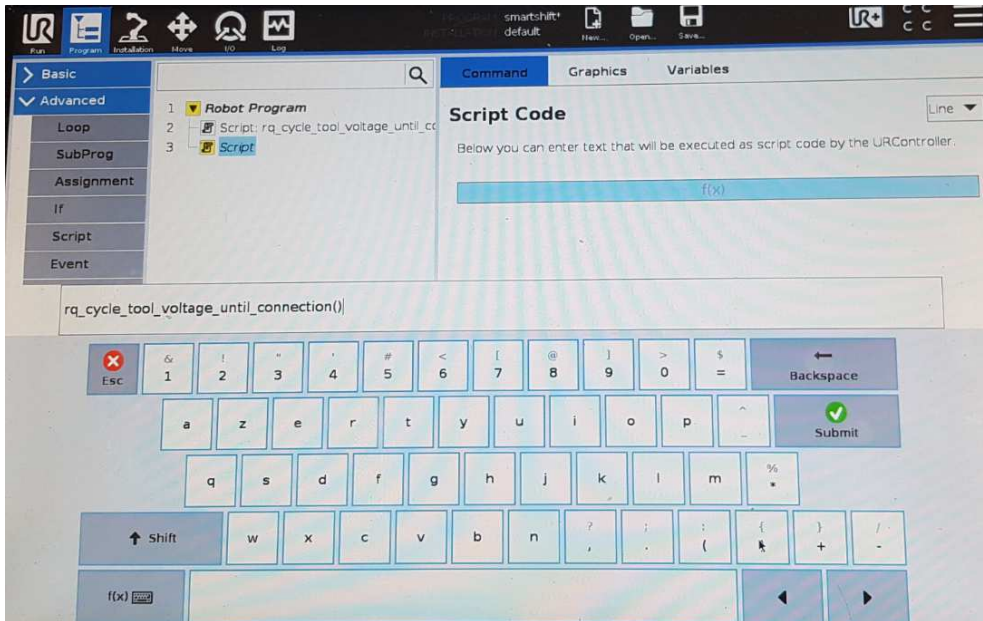
- Click on **Open** to download the script : “*rq_cycle_tool_voltage_until_connection*”. Once downloaded, click on the **Exit** button.



You will be redirected to the Polyscope program interface.

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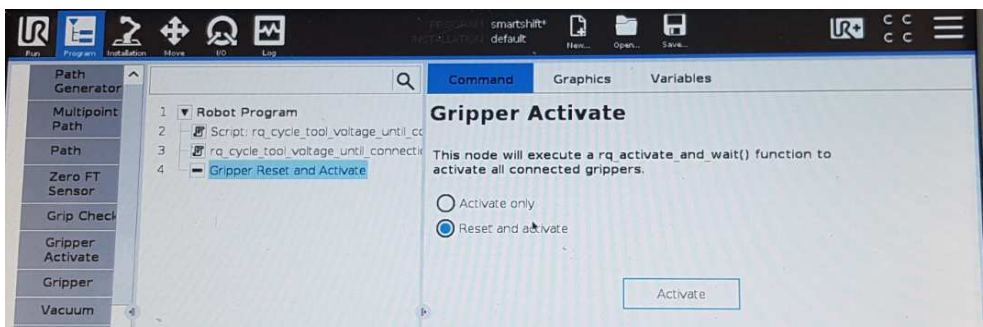
- Add a new script and called the function as illustrated below then click on **Submit** :



- The script has been successfully implemented

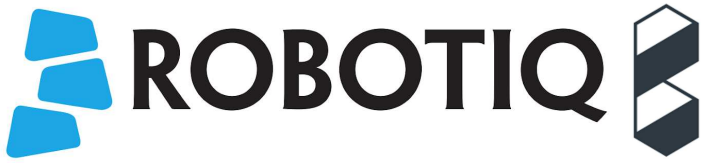
2.3. Program integration

In order to use it properly, integrate the script and calling function before a **“reset and activate”** node as shown below :



By applying this procedure you will be able to combine on E-series, smartshift tool changer and Robotiq Grippers.

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3. Issue management

In case of issue, if you weren't able to install correctly the script or you are facing issues with grippers communication such as solid red LED or blinking LED, please contact first your distributor and smartshift team in order to support you.

However if the problem persists or can't be solved by them, this issue will have to be escalated to Robotiq support crew by your distributor or smartshift team through support@robotiq.com.

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