SMART COMPONENT: RFCID

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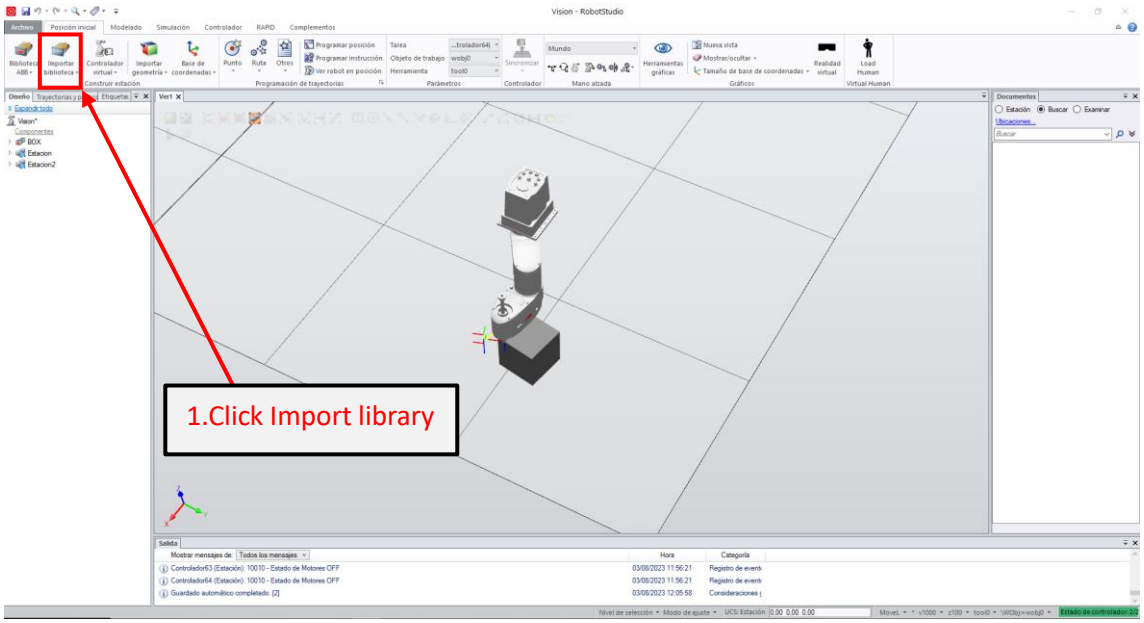
Introduction:

This smart component works as a RFCID sensor, adding a new functionality to search for a service to perform depending on one excel file were all the data will be written. The first idea of use for this component was to check the type of product, in which cell it is, and which service the robot must perform.

Steps:

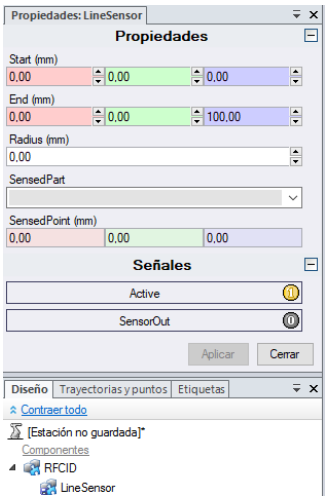
1. Import the SmartComponent.



First Click import library in Robot Studio Initial position menu, then a file manager will be opened, go to the directory were it the file was saved and add the smart component.

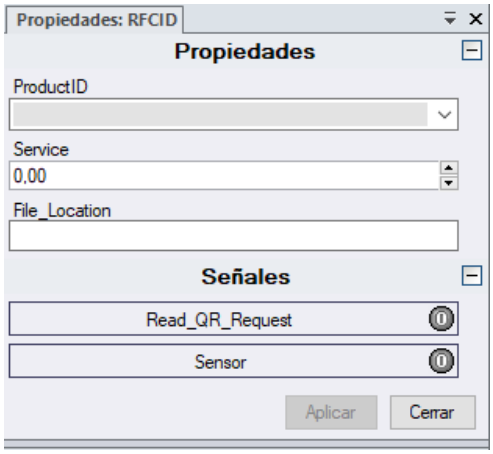
2. Set the sensor.

After adding the smart component, inside it a line sensor will appear, by double clicking on it the next option will appear where the position and length can be set.



3. RFCID settings

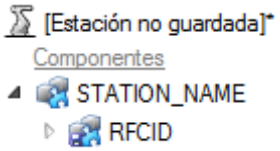
By double clicking on the RFCID smart component in RobotStudio, the next menu will appear:



- ProductID: The name of the product type that will be searched in the excel.
- Service: The service that is given back from the excel that the robot must perform for that product and that cell.
- File_Location: Here the entire file path has to be copied so the smart component knows which excel file is the one that is going to be read.
- Read_QR_Request: A digital input to allow the controller to decide when to read star reading the object name.
- Sensor: A digital output that will be active when the sensor is sensing any object.

4. Sensor ubication

The sensor must be in the station smart component first layer like the next imagen:



The station name is the one that is going to be searched into the excel file. It cannot have blank space!

5. Excel format

Here an example of how to format the excel file:

	MODULE	PRODUCT TYPE	MODULE SERVICE	DESCRIPTION (ALSO USED AS COMMENT IN THE RAPID CODE)
2	Painting	10	4	
3	Painting	20	3	
4	Painting	30	1	
5	Painting	40	2	
6				
7	PickAndPlace	10	2	
8	PickAndPlace	20	1	
9	PickAndPlace	30	3	
10	PickAndPlace	40	4	
11				
12	PickAndPlace	10	2	
13	PickAndPlace	20	1	
14	PickAndPlace	30	3	
15	PickAndPlace	40	4	
16				
17	Welding	10	4	
18	Welding	20	3	
19	Welding	30	1	
20	Welding	40	2	

The code behind the smart component will look the first column for the name of the station, once it find it, will check the second column for the correct product type, and finally when it found it, it will read the third column to get back the module service to perform.