

Using the Adaptive Gripper with Universal Robots

This document contains some additional information related to the communication between the gripper and the UR-5 and UR-10 robots using the Modbus TCP protocol. For the rest of the documentation of the Adaptive Gripper, please refer to our website at (<http://support.robotiq.com>).

Modbus TCP works with 16-bits registers, whereas the Adaptive Gripper is configured using 8-bit bytes. Therefore, it is required to compute the value of each 16-bits registers using two bytes. Also, the endianness is different for the Gripper than for the UR-5 robot. This means that the first register is built using the following formula:

REGISTER0 = BYTE1 + 256 * BYTE0

One thing to try first is to send the value 256 to the REGISTER0. This command (1 on the activate bit) will trigger the initialization routine and therefore you should see the gripper open and close to reach its mechanical stops.

Writing and reading other registers will be based on similar computations. Also, please note that the read/write registers are not the same. As an example, writing to REGISTER0 will send a command to the gripper whereas reading REGISTER0 will give you the status of the gripper.

If you have any question related to the control of the Gripper, please do not hesitate to contact us (support@robotiq.com).

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