

Configuring Modbus RTU

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Version: 1.0.0

Requirements

To switch the motor into Modbus RTU you will need the following

1. CM1 motor with RT3.13 firmware (Send "?85" to query the version if you are not sure)
2. [Control Room](#) (which can be found [here](#))
3. Communication to the motor from the PC running Control Room. This can be achieved with a number of cables and/or interfaces.
 - a. If you are unsure of how to communicate with the motor please see the quick start guide.

Set to Modbus RTU

Once the motor is connected and communicating with Control Room it can be switched from standard ascii communication to Modbus RTU. The following parameters are used to make the change. Read through the descriptions of them and then follow the step-by-step instructions

K20 - COM1 Communication Baud Rate

K20 sets the communication baud rate between the Modbus master and the motor. Using the standard baud rate setting +10 will switch it to Modbus mode with that baud rate

K20 Value	Baudrate (bps)
K20=10	38400
K20=11	9600
K20=12	19200
K20=13	57600

The motor default baudrate is 38400.

K62 - Modbus station ID

K62 sets the Modbus station ID. This ID is also used for the RS485 protocol. If the motor starts streaming { with the ID that has been set then it is in RS485 (the software protocol) mode. See this [Application Note](#) to switch out of RS485 mode.

K65 - COM2 Communication Baud Rate

COM2 on the motor can be used for Modbus communication. This is not typically used and requires a special cable. If you need to use COM1 for standard communication and COM2 for Modbus communication please contact a Myostat engineer for assistance.

FFFFFFFF - 9 x Fs function

"FFFFFFFF" (9xF) is used to temporarily switch the motor out of Modbus mode. This will allow you, until a power cycle, to communicate with the motor using standard ASCII and regular CML. To switch back into Modbus the motor will need to be power cycled or K20 set to normal ASCII and then back to Modbus.

Step-By-Step Guide

Use the following steps to set a motor into Modbus mode. In this example we are setting the motor to ID=1 with a baud rate of 38400bps.

1. Set the motor into modbus mode with a baud rate = 38400

K20=10

2. Send 9 x F to get out of Modbus mode

FFFFFFFF

3. Set the station ID to 1

K62=1

4. Cycle power on the motor.

The motor is now in Modbus RTU mode and can be communicated with a Modbus master.