

Parametrization

In order to configure the integrated motor drive, please use the PC software Motolab Starter:

https://www.nilab.at/download/motolab_starter_ver0-0-1-0/?wpdmdl=6631&refresh=635638e9ee1601666595049

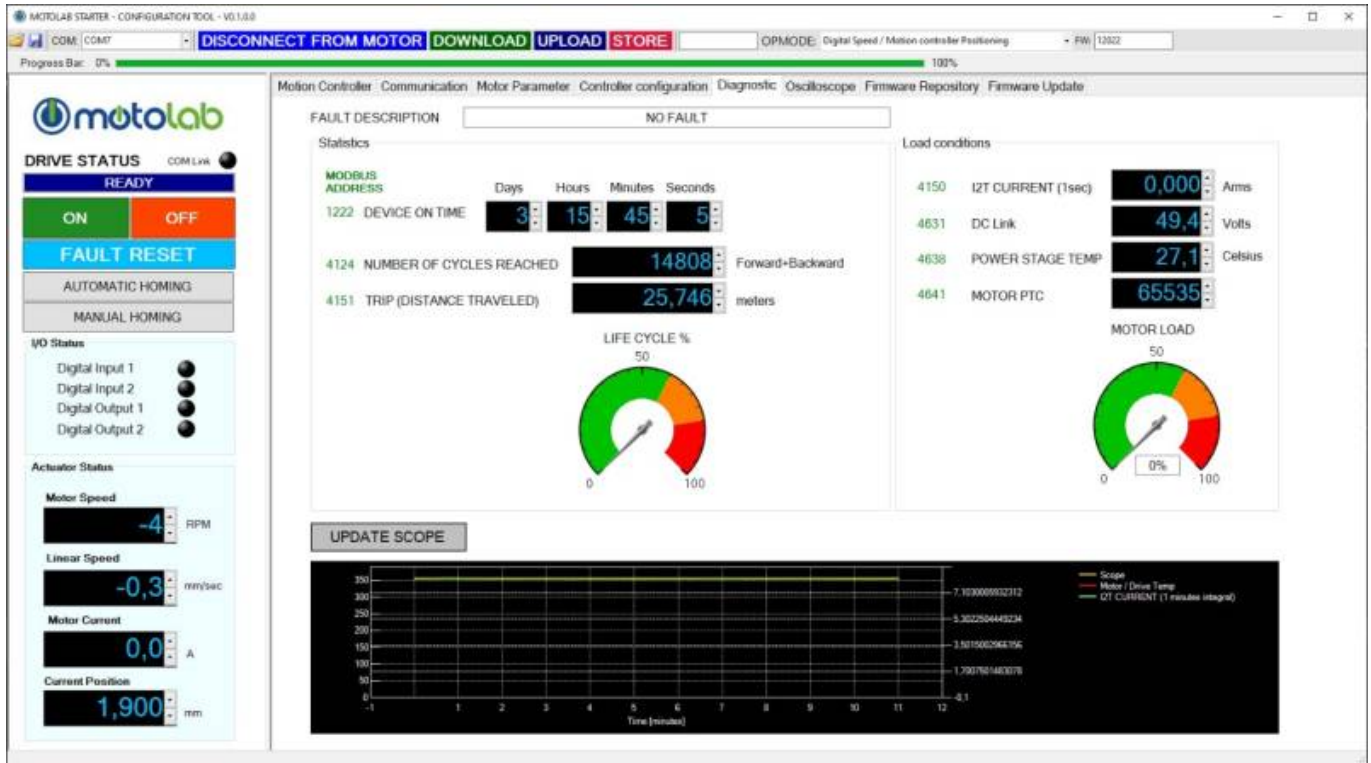
The screenshot shows the Motolab Starter configuration tool. On the left, the 'DRIVE STATUS' is 'READY' with 'ON' and 'OFF' buttons. Below are 'FAULT RESET', 'AUTOMATIC HOMING', and 'MANUAL HOMING' buttons. The 'I/O Status' section shows digital inputs and outputs. The 'Actuator Status' section displays: Motor Speed (-1 RPM), Linear Speed (-0,1 mm/sec), Motor Current (0,0 A), and Current Position (1,897 mm). The main area is the 'Motion Table' with the following data:

MODBUS ADDRESS	Index	Motion type	Position	A	B	C	Waiting	Trigger mode
793	0	Polynomial	110,000 mm	600 msec	0 msec	300 msec	10 msec	DIG IN rise
804	1	Polynomial	190,000 mm	600 msec	0 msec	300 msec	10 msec	Auto
815	2	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto
826	3	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto
837	4	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto
848	5	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto
859	6	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto
870	7	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto
881	8	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto
892	9	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto

Below the table are 'START MOTION' (4149) and 'STOP MOTION' (0) buttons. The 'Digital Outputs Setup' shows Digital Output 1 Setup (154) set to 'Brake Control' and Digital Output 2 Setup (427) set to 'In Position (active low)'. The 'Motion control' section includes 'Table Mode: 1 Maps - 10 positions pro map' and '121 Enable Control from Input 1'.

The screenshot shows the Motolab Starter configuration tool with the control loop diagram. The diagram illustrates the 'Position Loop', 'Speed Loop', and 'Current Loop'. The 'Position Loop' starts with a position setpoint (4128) and a feedback signal from the motor position (1,898 mm). The 'Speed Loop' includes a speed setpoint (4134) and a feedback signal from the motor speed (1,0 RPM). The 'Current Loop' includes a current setpoint (4128) and a feedback signal from the motor current (0,0 A). The diagram shows the flow of signals through various control blocks, including integrators, gain blocks, and limiters, leading to the motor (M) and sensor (S). Below the diagram is the 'Motion Command' section:

4128	Current setpoint	0,000 A	84	Acceleration time	2 msec
4134	Speed setpoint	0,000 RPM	85	Deceleration time	2 msec



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