

Parametrization

This page describes how to **parametrize** the Epulse50 servo drive. The drive is configured with the PC software, which sets the motor parameters, the control loop, and the application behaviour.

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 interface. On the left, the 'DRIVE STATUS' section shows 'READY' and 'ON' buttons. Below it, 'I/O Status' shows digital inputs and outputs. 'Actuator Status' 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 columns for Index, Motion type, Position, A, B, C, Waiting, and Trigger mode. It lists 10 motion profiles (Index 0-9). Below the table, 'Motion control' has 'START MOTION' and 'STOP MOTION' buttons. 'Digital Outputs Setup' shows 'Digital Output 1 Setup' (154) and 'Digital Output 2 Setup' (427).

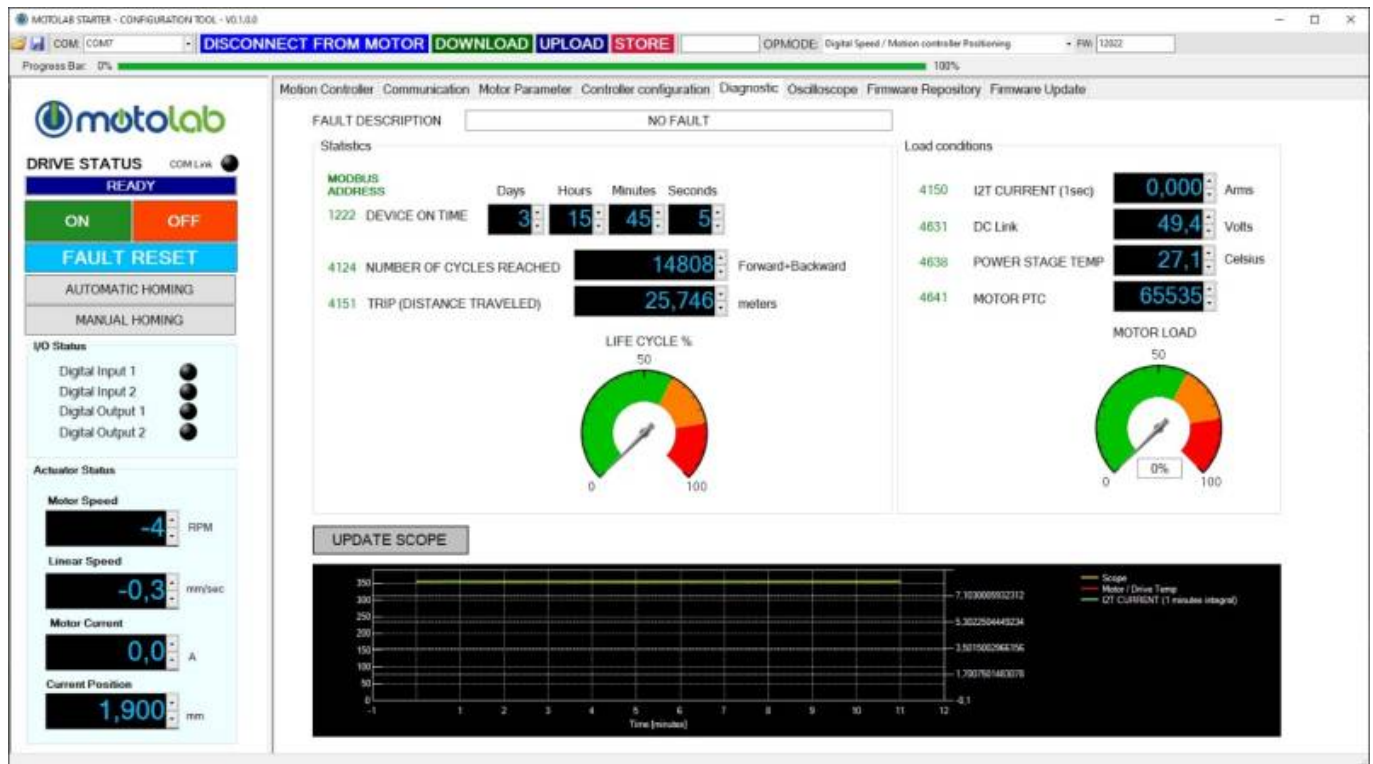
Index	Motion type	Position	A	B	C	Waiting	Trigger mode	
793	0	Polynomial	110,000 mm	800 msec	0 msec	300 msec	10 msec	DIG IN rise
804	1	Polynomial	190,000 mm	800 msec	0 msec	300 msec	10 msec	Auto
815	2	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto
826	3	None	0,000 mm	0 msec	0 msec	0 msec	0 msec	Auto
837	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

The screenshot shows the Motolab Starter Configuration Tool interface with the 'Diagnostic' tab selected. It displays a detailed control loop diagram with three main sections: 'Position Loop', 'Speed Loop', and 'Current Loop'. The 'Position Loop' shows a feedback system with a position error input. The 'Speed Loop' shows a speed feedback system with a speed error input. The 'Current Loop' shows a current feedback system with a current error input. The diagram includes various gain blocks, integrators, and limiters. Below the diagram, the 'Motion Command' section shows parameters for current and speed setpoints, acceleration, and deceleration times.

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

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Configuration steps

- Connect the drive to the PC with the USB programming cable.
- Start Motolab Starter and select the drive and the connected motor.
- Set the motor parameters (feedback type, pole count, current limits) according to the datasheet.
- Configure the control loop, the motion profile, and the fieldbus settings.
- Save the configuration to the drive and verify the motor operation.

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Last update: 2026/09/11 07:54

