



Development Tool “Evaluation-Kit2”

Stepper motors are very flexible and low cost actuators found in numerous devices and appliances. Due to the wide variety of applications and drive requirements, there is a need for a variety of control circuits, drive modes and software.

The development, test and optimisation of any new stepper drive system is normally a time consuming and costly procedure.

For this reason we have designed “EvalKit2”, a PCB incorporating all important driver circuits and drive modes.



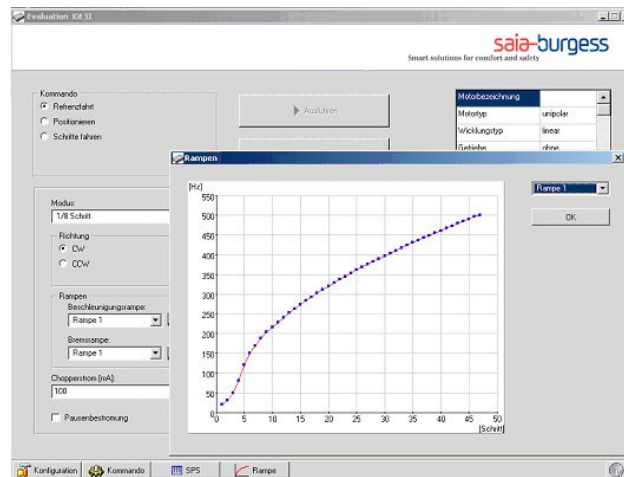
In addition, software tools were developed to perform miscellaneous drive sequences and functions. They can be commanded, evaluated, visualised and documented by a windows-based computer. Our PCB and software enables the design engineer to test, modify and optimise any stepper motor drive application within a short time and at low development cost.

Quick parameter setup with PC software

All commands are windows-based. In the Configuration Window you can basically choose between computer command control or stand-alone modes (for instance 0 to 10VDC input control for achieving a defined motion angle).

Using the computer, you can easily set motion angles and speeds or create different ramp curves. For linear stepper motors input in mm is possible, for gearmotors the speed can be set in rpm of the output shaft.

All settings can be uploaded again to the computer.



Easy running and parameter optimisation

After setting motion parameters you can run motors in the Command Window. A selector tool is provided for many step modes like full step, half step, wave and microstep mode. You can test special start or stop procedures in your application by using ramp tables. For generation of ramps you find a helpful tool by clicking “Ramps”. The chopper driver for bipolar motors has a special feature: Current threshold adjustment is possible. Current level can be modified in accordance with the torque demand at any given moment.

If you have enough experience you can now use your own ramp tables and optimised phase currents in your application.



Test the motor in your system

Now you can test your new drive in your application.

Do you have to manage reference switches, start-stop-buttons or other control inputs? A few clicks in the PLC-Window will achieve this. Create a sequence table with several commands accepted by the EvalKit2. Up to 65535 loops can be defined and commanded. The PLC-sequence can be downloaded to the hardware and after a new power up the Kit is working in "standalone mode".

Technical Data

Supply voltage:	3 ... 48VDC/24VAC
Driver units:	unipolar and bipolar constant voltage mode / constant current mode (chopper controlled)
Max. phase current:	2,25A
Step modes:	11 (full,half,wave ... microstep)
Max. step frequency:	10kHz
Input/Output:	4 open collector outputs 1 relais contact output 3 digital inputs 1 analog input 0 ... 10VDC
MCU:	32kB Flash-ROM, 512Byte RAM
PLC:	max. 256 steps, 65536 loops
Interface:	RS232, USB-Adapter
PCB-Dimensions:	Euro-PCB 160x100x30mm
Case-Dimensions:	metal case 164x130x45mm
Software:	Freeware <i>StepControl 8</i> Version 8.1



Test the Freeware without hardware after search, download, install stepcon_81.zip by using a special demo mode (www.saia-burgess.com/evaluationkit2).

For further information please contact your Saia-Burgess sales company or see our website www.saia-burgess.com .
