

SBD Servo Drive

SDSetup software is used to configure SBD drive: [:green_drive_motors:sdsetup.zip](#)

EtherCAT version ESI file: [:green_drive_motors:cmz_sbd_etc.zip](#)

TwinCAT application note: [:green_drive_motors:sdsetup-twincat_cmz_en.pdf](#)

CANopen version EDS file: [:green_drive_motors:sbdcan.zip](#)

ProfiNET version GSDML file: [:green_drive_motors:gsdml_sbd_ssd.zip](#)

TiA Portal application note: [:green_drive_motors:cmzdrivespnt_tiaportal.zip](#)

1) Specify a new motor using

A new motor can be added using File ⇒ User motors ⇒ Manage. Use [Datasheet Engine](#) to view the motor parameters.

Here below, for example the GD350XS motor parameters.

User motors

Name: Manufacturer:

Motor data

Model:	GD350XS
Motion type:	AC3 linear
Poles:	2 poles
Rated current:	2.61 A
Max current:	9.00 A
Mass:	1.00 kg
Inductance:	7.50 mH
Resistance:	7.650 ohm
Force constant:	73.0 N/A
Rated force:	191.0 N
Max force:	1242.0 N
Rated speed:	4.000 m/s
*Max speed:	4.400 m/s
*Max voltage:	1000.0 V
Pole pitch:	60 mm

Feedback sensor

Type:

Phasing offset: ° Phase polarity: °

Temperature sensor

Type:

Fault threshold: ohm

Overload protection

☒ Enabled

*Time: s

Brake

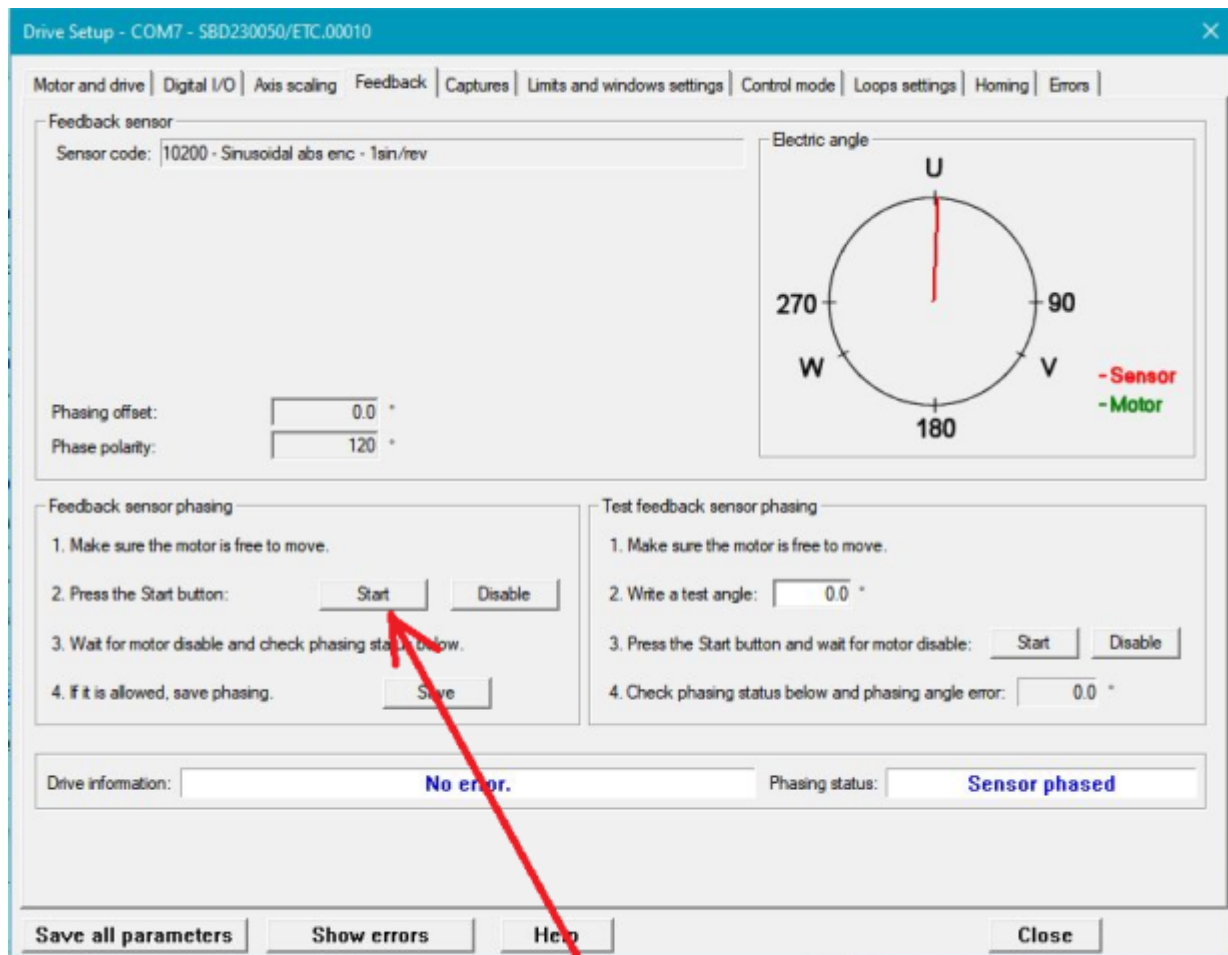
☐ Present

Opening time: ms

Closing time: ms

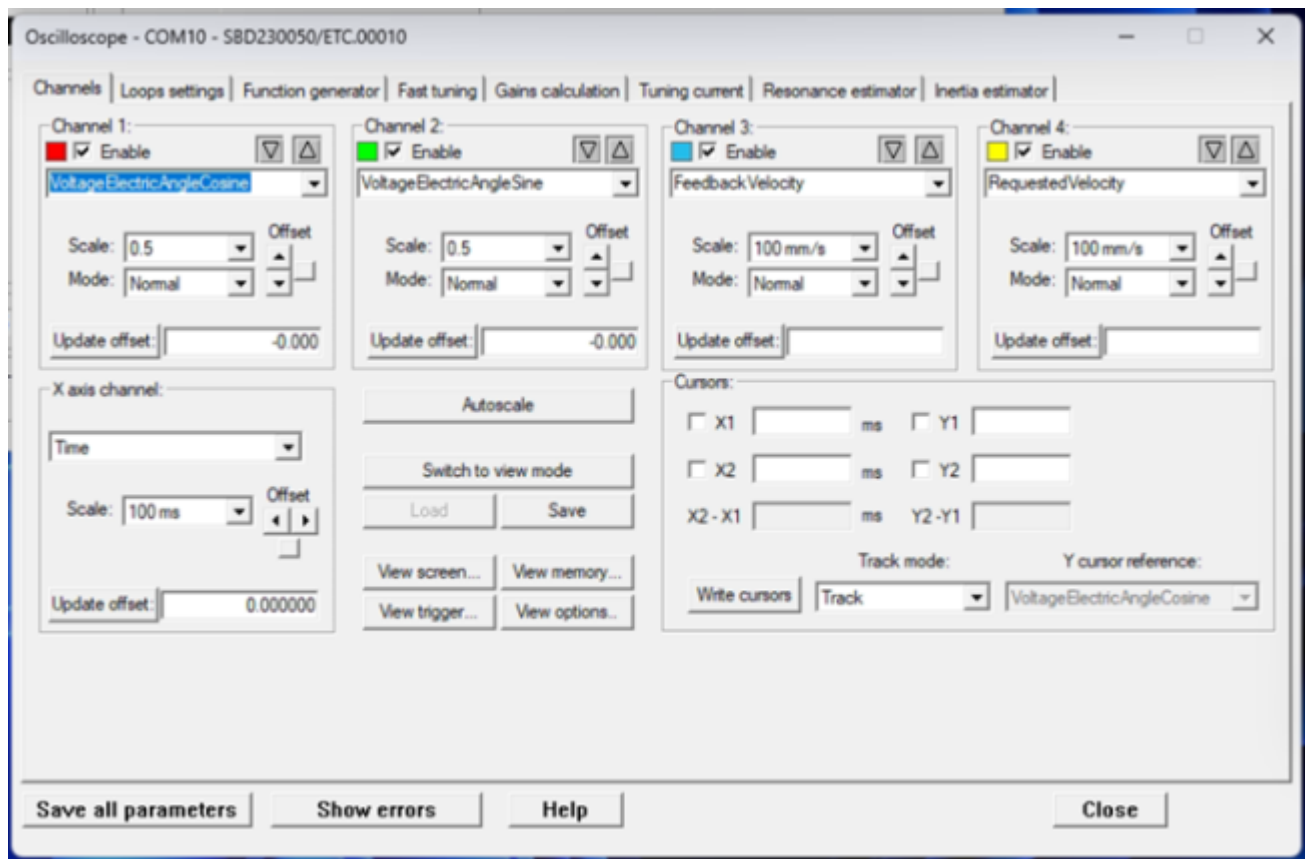
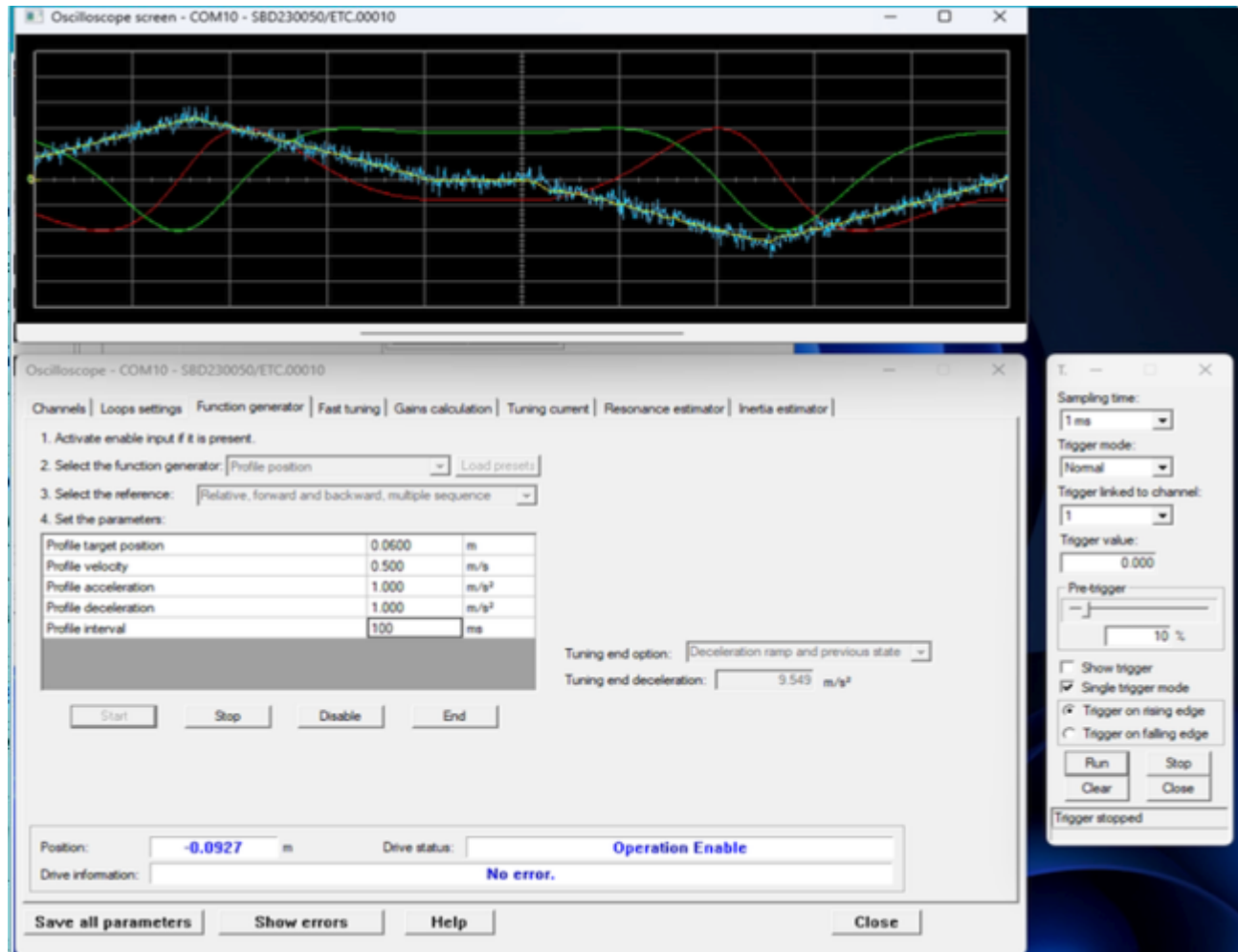
☒ *Auto calculate

2) Phasing the motor



3) Tuning the motor

Using function generator, specify a motion profile



4) Example of loop settings

The screenshot displays the 'Oscilloscope - COM10 - SBD230050/ETC.00010' software window. The 'Channels' tab is selected, showing various control loop settings. The 'Position loop' section includes 'KPp: 60', 'KVf: 1.000', and a 'Close position loop' checkbox. The 'Velocity loop' section includes 'KVp: 100', 'KVi: 37', 'KAd: 1.000', 'KVd: 24', 'KVd filter frequency: 15000', and a 'Velocity stand still' checkbox. The 'V filters' section includes three filter settings: 1: Low pass 2nd order, Frequency: 100 Hz; 2: None, Frequency: 2000 Hz; 3: None, Frequency: 2000 Hz. The 'Current loop' section includes 'KCp_Q: 2771', 'KQ_Q: 8190', 'KCp_D: 2771', 'KQ_D: 8190', and a 'C filter' section with 'Type: Low pass 1st order' and 'Frequency: 500 Hz'. The 'Field weakening' section includes a dropdown menu set to 'Enable - Low pass 1st order'. The 'Total estimated inertia' section includes '1.0 x motor inertia' and a 'Reduction factor' of 1.000. The 'Estimated bandwidth' is 15 Hz. The 'Angle observer bandwidth' is 798 Hz. The 'Estimated bandwidth' for the current loop is 345 Hz. The 'Load loops parameters from permanent memory' button is visible. The 'Recalculate all loops' and 'End actual tuning command' buttons are also present. The 'Save all parameters', 'Show errors', 'Help', and 'Close' buttons are at the bottom.

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Knowledgebase

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