SBD Servo Drive

SDSetup software is used to configure SBD drive: :green_drive_motors:sdsetup.zip

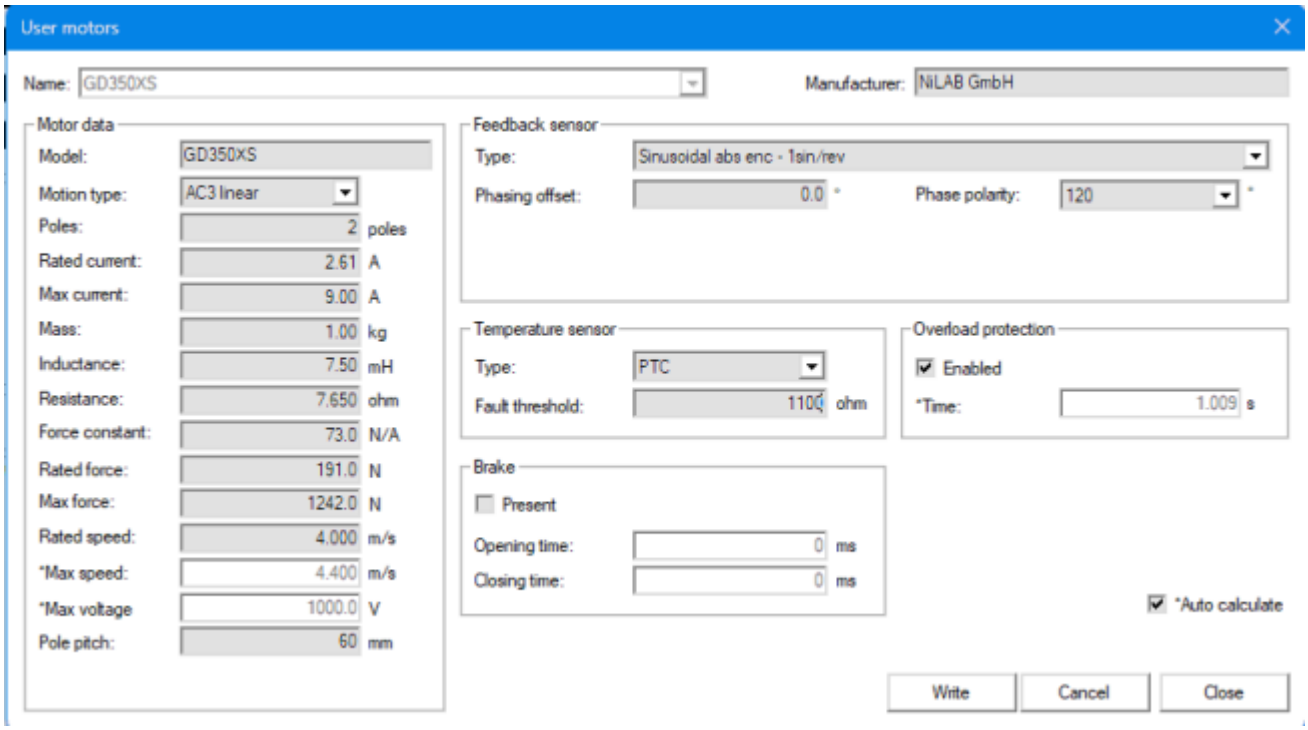
EtherCAT version ESI file: :green_drive_motors:cmz_sbd_etc.zip
TwinCAT application note: :green_drive_motors:sdsetup-twincat_cmz_en.pdf

CANopen version EDS file: :green_drive_motors:sbdcan.zip

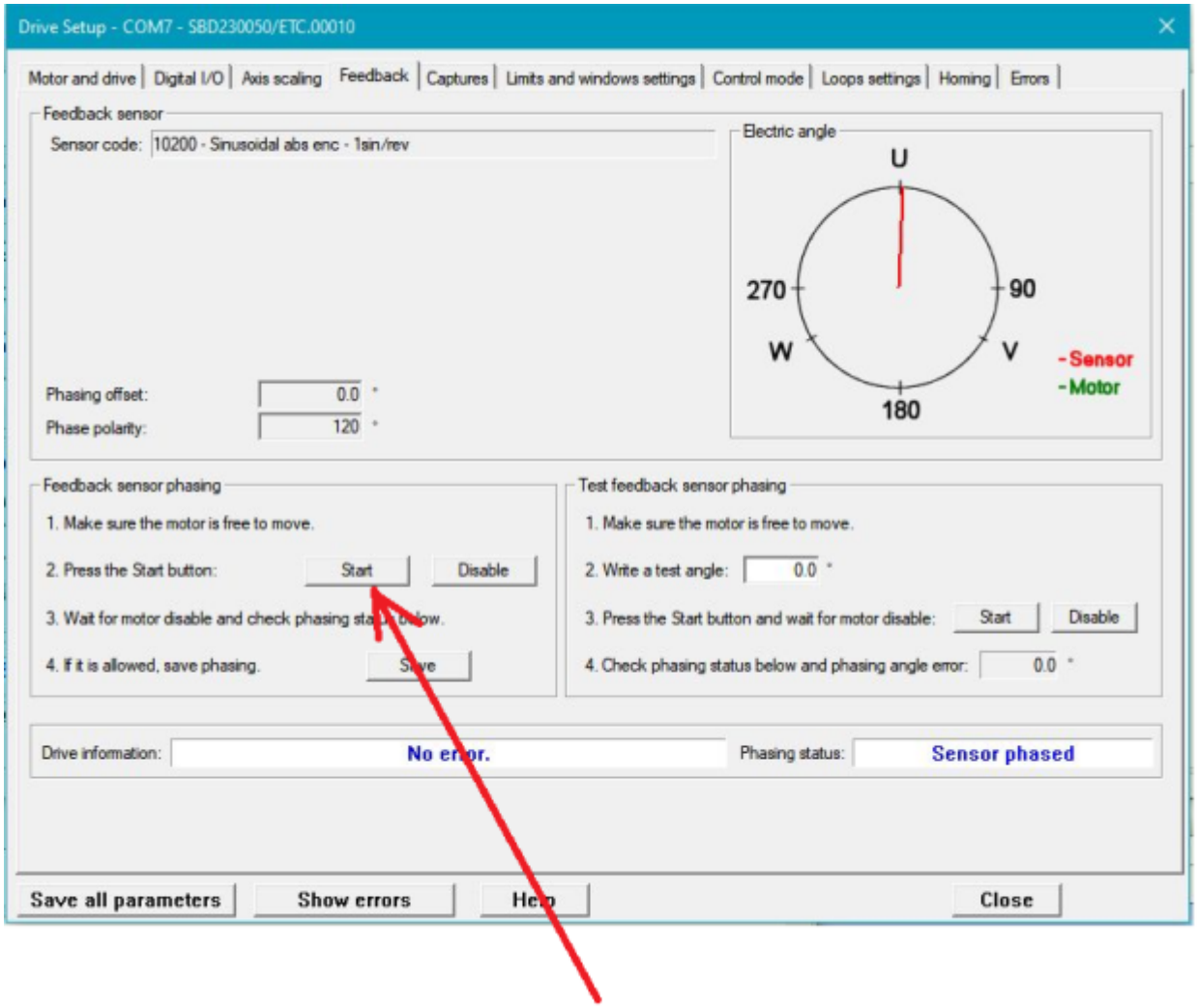
ProfiNET version GSDML file: :green_drive_motors:gsdml_sbd_ssd.zip
TiA Portal application note: :green_drive_motors:cmzdrivespnt_tiaportal.zip

1) Specify a new motor using

A new motor can be added using File ⇒ User motors ⇒ Manage. UseDatasheet Engine to view the motor parameters.
Here below, for example the GD350XS motor parameters.

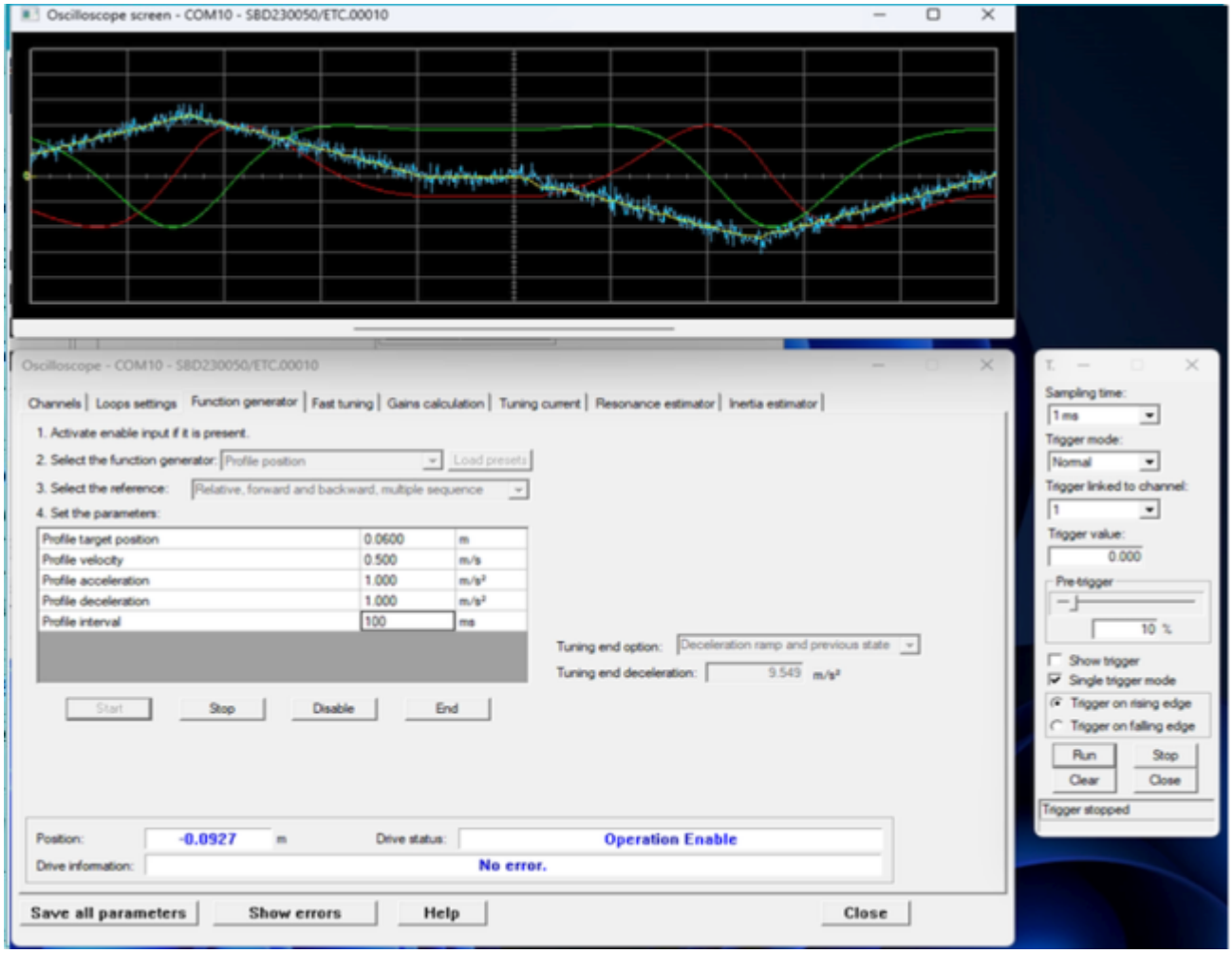


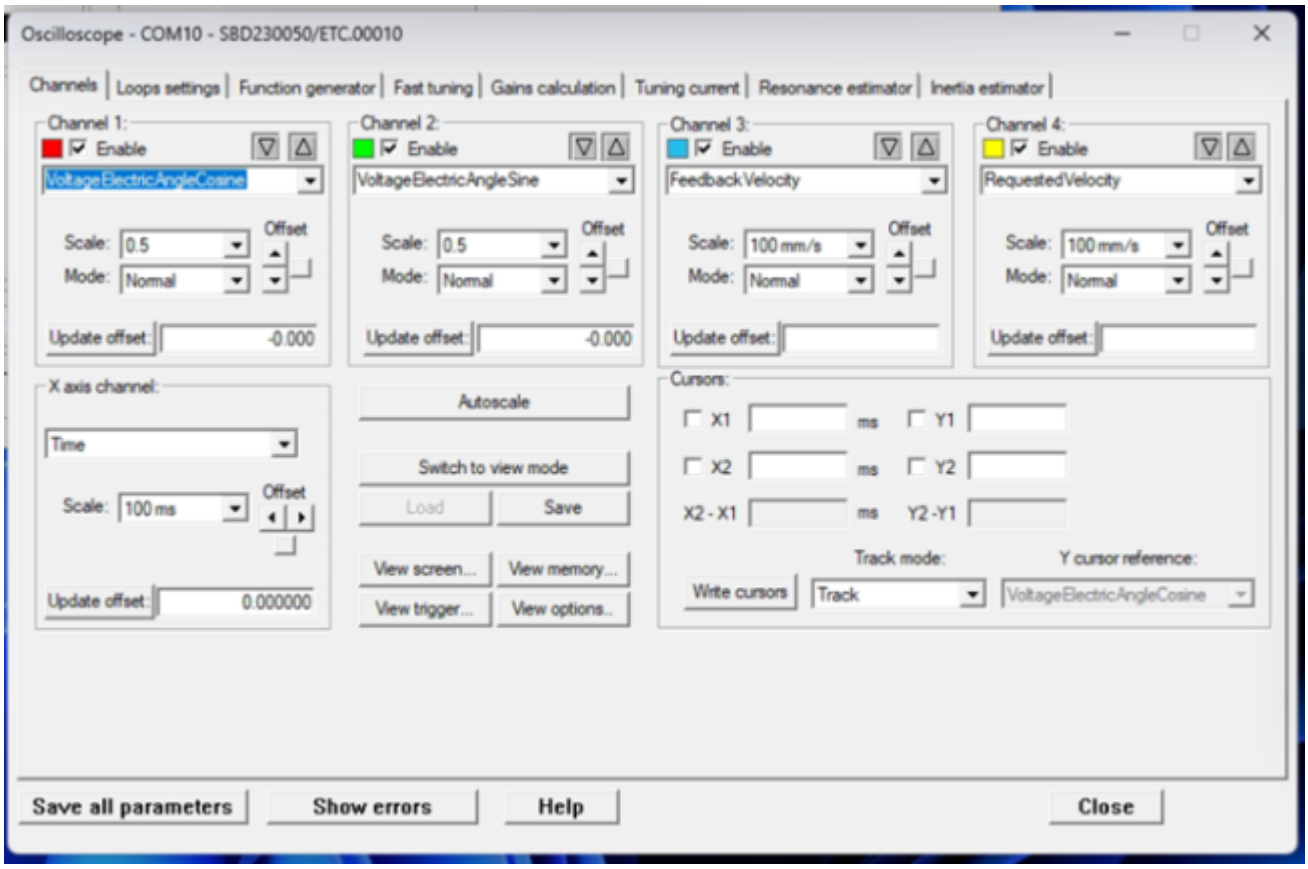
2) Phasing the motor



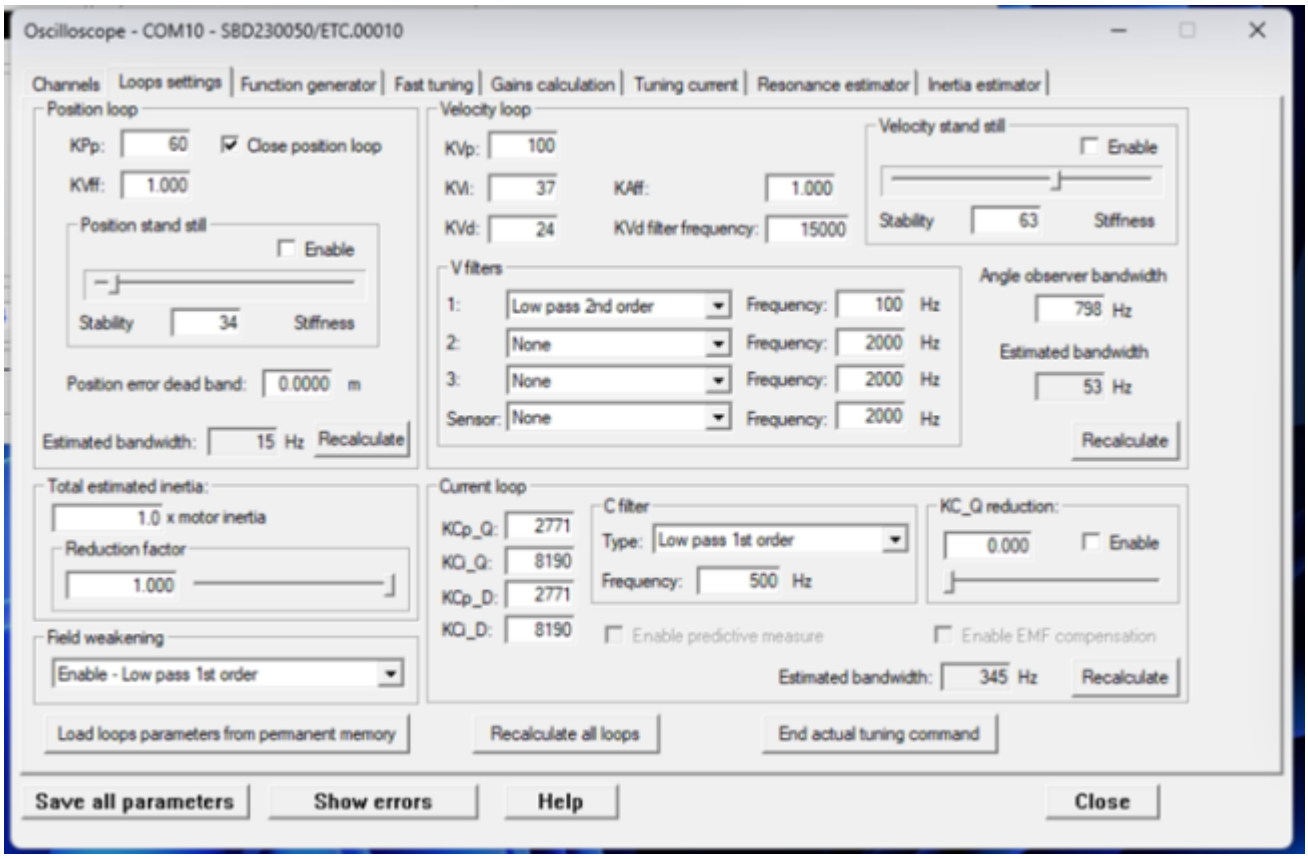
3) Tuning the motor

Using function generator, specify a motion profile


Oscilloscope screen - COM10 - SBD230050/ETC.00010
Oscilloscope - COM10 - SBD230050/ETC.00010
Channels | Loops settings | Function generator | Fast tuning | Gains calculation | Tuning current | Resonance estimator | Inertia estimator
1. Activate enable input if it is present.
2. Select the function generator: Profile position
3. Select the reference: Relative, forward and backward, multiple sequence
4. Set the parameters:
Profile target position 0.0600 m
Profile velocity 0.500 m/s
Profile acceleration 1.000 m/s²
Profile deceleration 1.000 m/s²
Profile interval 100 ms
Tuning end option: Deceleration ramp and previous state
Tuning end deceleration: 9.549 m/s²
Start
Stop
Disable
End
Position: -0.0927 m
Drive status: Operation Enable
Drive information: No error.
Save all parameters
Show errors
Help
Close
Sampling time: 1 ms
Trigger mode: Normal
Trigger linked to channel: 1
Trigger value: 0.000
Pre-trigger
10 %
Show trigger
Single trigger mode
Trigger on rising edge
Trigger on falling edge
Run
Stop
Clear
Close
Trigger stopped


Oscilloscope - COM10 - SBD230050/ETC.00010
Channels | Loops settings | Function generator | Fast tuning | Gains calculation | Tuning current | Resonance estimator | Inertia estimator
Channel 1: Enable VoltageElectricAngleCosine Scale: 0.5 Mode: Normal Offset Update offset: -0.000
Channel 2: Enable VoltageElectricAngleSine Scale: 0.5 Mode: Normal Offset Update offset: -0.000
Channel 3: Enable Feedback Velocity Scale: 100 mm/s Mode: Normal Offset Update offset:
Channel 4: Enable RequestedVelocity Scale: 100 mm/s Mode: Normal Offset Update offset:
X axis channel: Time Scale: 100 ms Offset Update offset: 0.000000
Autoscale
Switch to view mode
Load
Save
View screen...
View memory...
View trigger...
View options...
Cursors:
X1 ms Y1
X2 ms Y2
X2 - X1 ms Y2 - Y1
Track mode:
Y cursor reference:
Write cursors
Track
VoltageElectricAngleCosine
Save all parameters
Show errors
Help
Close

4) Example of loop settings



From:
https://www.nilab.at/dokuwiki/ - **NiLAB GmbH Knowledgebase**

Permanent link:
https://www.nilab.at/dokuwiki/doku.php?id=en:green_drive_motors:sbd_servo

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