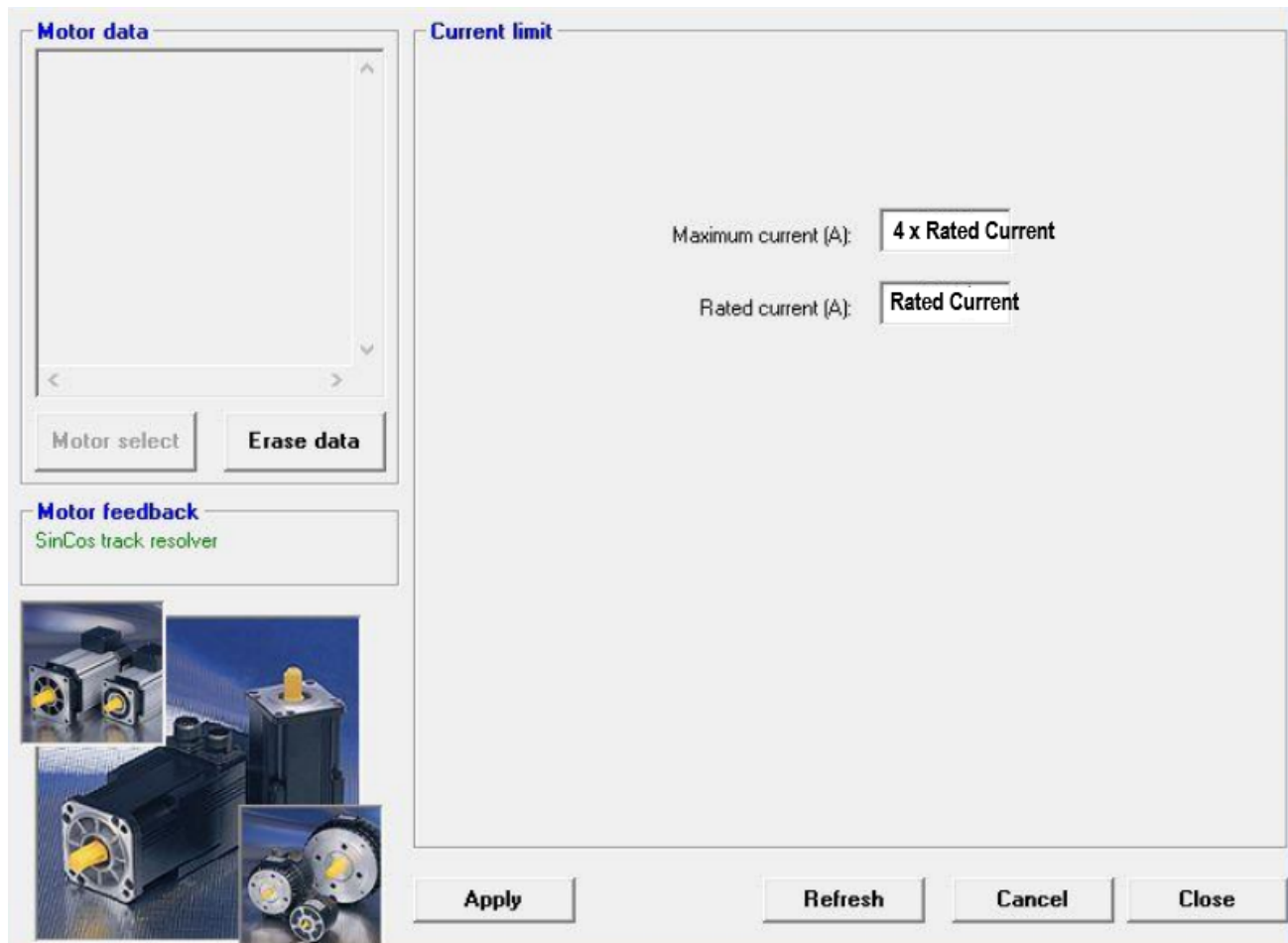


Xtrapulspack Servo drive SIN/COS 1Vpp

for the configuration of the Xtrapulspack Gem Drive Studio software is used.

Please use our [Datasheet engine](#) to see the motor parameters.

Step 1) ⇒ Motor config ⇒ Current limit



The screenshot displays the 'Current limit' configuration window in the Xtrapulspack Gem Drive Studio software. The window is divided into two main sections: 'Motor data' on the left and 'Current limit' on the right.

Motor data section:

- A large empty text area for motor data.
- Buttons: 'Motor select' and 'Erase data'.
- Motor feedback:** SinCos track resolver.
- A collage of images showing various servo motors.

Current limit section:

- Maximum current (A): 4 x Rated Current
- Rated current (A): Rated Current

At the bottom of the window, there are four buttons: 'Apply', 'Refresh', 'Cancel', and 'Close'.

Step 2) => Motor config => Current Loop

Motor data

Motor select Erase data

Motor feedback
SinCos track resolver

Current loop

Phase-to-phase inductance (mH): Inductance value

Bandwidth
☐ Low ☒ High

Calculate current loop gains

ID loop proportional gain:

ID loop integral gain:

IQ loop proportional gain:

IQ loop integral gain:

Low pass filter (Hz):

Apply Refresh Cancel Close

Step 3) Position sensors

Position sensors

Resolver input
SinCos tracks
Not reversed
Resolver parameters

Encoder 1 input
Disabled
Encoder 1 parameters

Encoder 2 input
Encoder 2 parameters

Analog sensor input
Analog sensor parameters

Sensorless control
Sensorless parameters

Motor Feedback: Resolver
Servo loop: Resolver
Feedback selection

User position scaling:
60.00 mm per motor revolution
User position scaling

Refresh

Cancel

Close

Note that if you use NL80Q or NL080X you need to use scaling set to 30mm and if you use NL040Q or NL040X you need to set the scaling to 18mm.

Step 4) Position sensors ⇒ User position scaling

User position scaling

Position unit

☐ Revolution

☐ Increment

☒ Millimeter

☐ Meter

☐ Degree

☐ Other unit:

Display factor

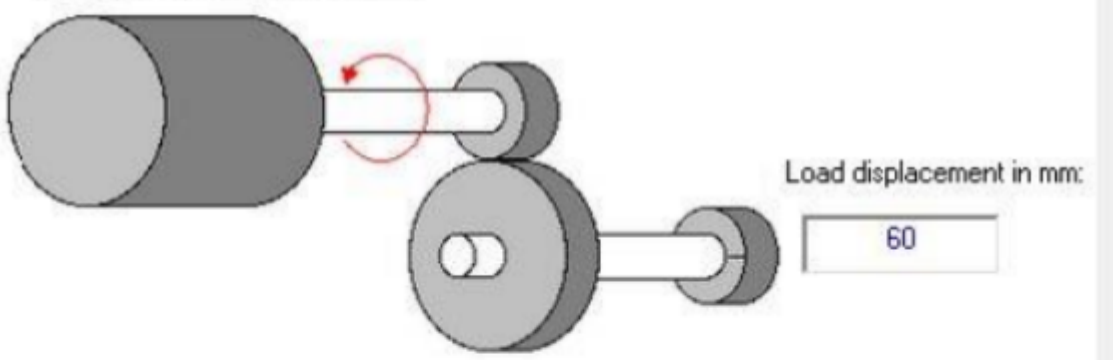
☐ 1

☐ 0.1

☒ 0.01

☐ 0.001

Motor displacement: 1 revolution



Load displacement in mm:

Apply

Refresh

Cancel

Close

Step 5) Motor config ⇒ Autophasing

The screenshot shows the 'Autophasing' configuration window. Under 'Motor type', 'Rotative' and 'Brushless' are selected. The 'Start Autophasing procedure' button is highlighted with a green arrow. Below it, 'Poles pairs' is set to 1, 'Phase order' is set to 120° (with 240° as an option), and 'Position sensor offset' is empty. At the bottom are 'Apply', 'Refresh', 'Cancel', and 'Close' buttons. On the left, the 'Motor data' tab is visible with 'Motor select' and 'Erase data' buttons, and a 'Motor feedback' section showing 'SinCos track resolver' with an image of the motor.

Step 6) Specify the motion profile requirements

Use Profile modes to specified using **Position profile mode** the speed and acceleration requirements for your application.

Step 7) Perform an Autotune

Use Controller ⇒ Autotuning to tune the motor following the position profile mode specifications.

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Knowledgebase

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