

Paramétrage startup wizard

Startup - EPOS4 CAN [Node 1]

Startup Steps

- Safety Instructions
- Drive System
 - Motor
 - Gear
 - Sensors
- Controller
 - Commutation
 - Regulation
 - Units
 - Limits
 - Device Control
 - Windows
 - Touch Probe
- Inputs / Outputs
 - Digital Inputs
 - Digital Outputs
 - Analog Inputs
 - Analog Outputs

Motor

Enter motor type and characteristics (consult maxon catalog).

Motor type	maxon EC motor (BLDC)
Nominal current	3200 mA
Torque constant	<input checked="" type="checkbox"/> Identify during mechanical system identification 0.000 mNm/A
Thermal time constant winding	4.0 s
Max speed	400 rpm
Number of pole pairs	2

Back Next Finish Cancel Help

Startup Steps

- Safety Instructions
- Drive System
 - Motor
 - Gear
 - Sensors
- Controller
 - Commutation
 - Regulation
 - Units
 - Limits
 - Device Control
 - Windows
 - Touch Probe
- Inputs / Outputs
 - Digital Inputs
 - Digital Outputs
 - Analog Inputs
 - Analog Outputs

Gear

Enter gear data.

☐ System with gear

Absolute reduction	1	:	1
Direction of rotation, drive to output	<input checked="" type="radio"/> Same <input type="radio"/> Inverted		
Max continuous input speed	100000 rpm		

Back Next Finish Cancel Help

Setup Steps

- Safety Instructions
- Drive System
 - Motor
 - Gear
 - Sensors
- Controller
 - Commutation
 - Regulation
 - Units
 - Limits
 - Device Control
 - Windows
 - Touch Probe
 - Inputs / Outputs
 - Digital Inputs
 - Digital Outputs
 - Analog Inputs
 - Analog Outputs

Sensors

Enter sensor data for connected sensors.

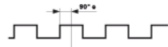
Connector	Type	Mounting Position
X4 - Hall sensor	Digital Hall sensors	-
X5 - Encoder	Digital incremental encoder 1	On motor shaft
X6 - Sensor	Analog incremental encoder (sin/cos)	On motor shaft


X5 - Digital incremental encoder 1

Number of pulses

Type

Direction
☒ maxon
☐ Inverted

Channel A 

Channel B 

← CW CCW →

Commutation

Enter commutation type and sensors.

Type

Sensors

Sinusoidal commutation

X4 - Digital Hall sensors & X6 - Analog incremental encoder (sin/cos)

Regulation

Select control loop structures.

Current

Velocity

Position

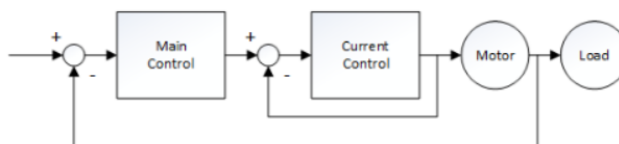
Main sensor

PI current controller

PI velocity controller (low-pass filter)

PID position controller

X6 - Analog incremental encoder (sin/cos)



Units

Select controller units.

Position Unit

Velocity Unit

Acceleration Unit

Current Unit

Torque Unit

1 inc

1 rpm

1 rpm/s

1 mA

0.001 mNm

Limits

Enter the drive system operating limits (consider the component with the lowest limit value).

Max continuous current	<input type="text" value="3200 mA"/>	
Max output current	<input type="text" value="3200 mA"/>	
Max acceleration	<input type="text" value="30000 rpm/s"/>	
Max profile velocity	<input type="text" value="300 rpm"/>	
Following error window	<input type="text" value="2000 inc"/>	
<input checked="" type="checkbox"/> Use software position limit.		
Min position limit	<input type="text" value="0 inc"/>	
Max position limit	<input type="text" value="10000 inc"/>	
Max temperature power stage	<input type="text" value="95.0 °C"/>	
Power supply undervoltage limit	<input type="text" value="8.000 V"/>	
Power supply overvoltage limit	<input type="text" value="58.000 V"/>	

Digital Inputs

Enter digital input functionalities and characteristics.

Input	Functionality	Polarity
Digital input 1	None	High active
Digital input 2	Negative limit switch	High active
Digital input 3	Positive limit switch	High active
Digital input 4	None	High active
High-speed digital input 1	None	High active
High-speed digital input 2	None	High active
High-speed digital input 3	None	High active
High-speed digital input 4	None	High active

High-speed digital inputs are configured for the sensor on connector X6.

Digital Outputs

Enter digital output functionalities and characteristics.

Output	Functionality	Polarity
Digital output 1	General purpose A	High active
Digital output 2	None	High active
High-speed digital output 1	None	High active

High-speed digital output 1 is configured for the sensor on connector X6.