



AC Servo Drive

E-DHASxxP-F series (Pulse type)

Quick Start Guide

V 0.1

Contents

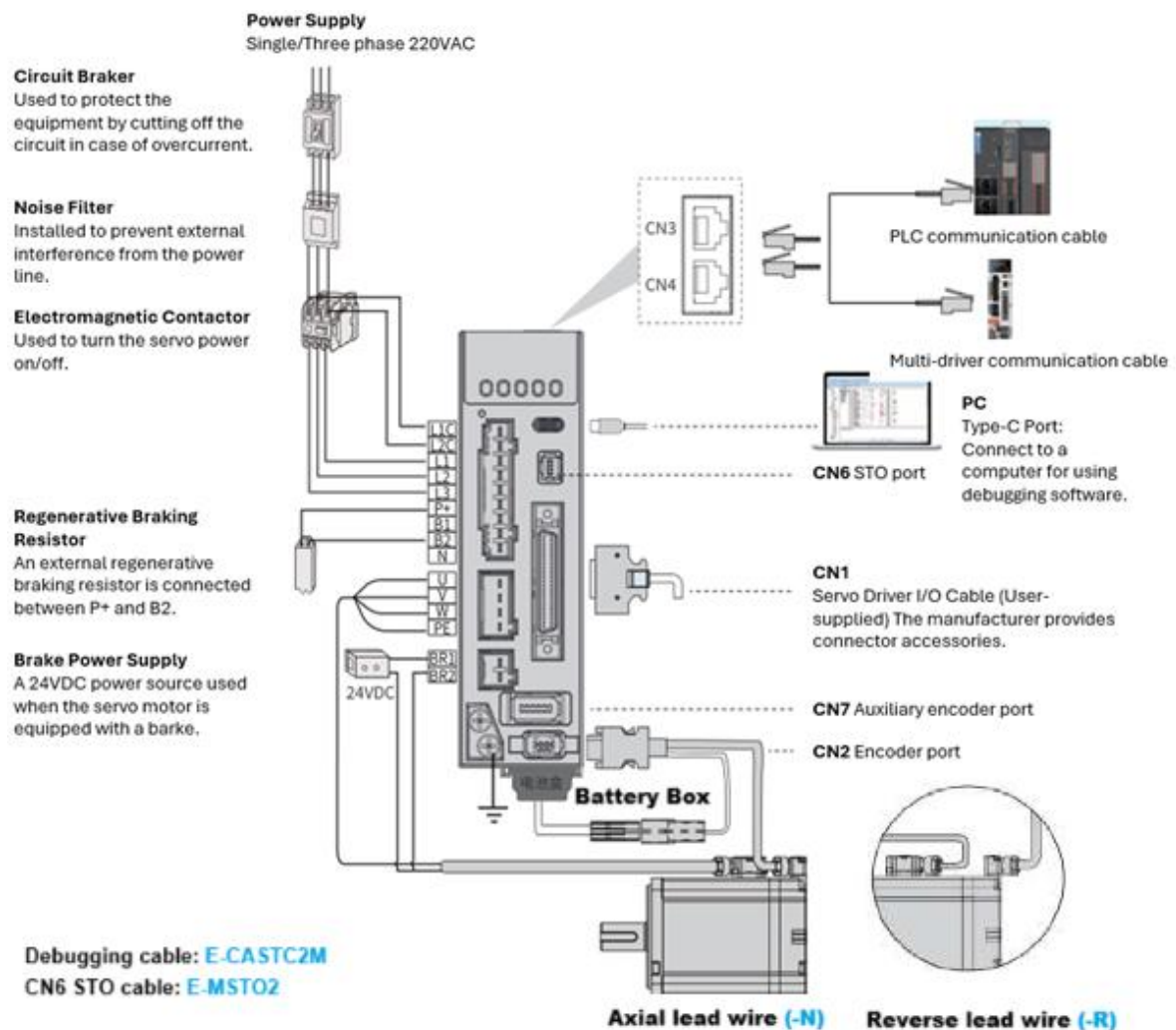
1. Wiring	3
Main Circuit Wiring Diagram	3
Control Signal Connector - CN1 Pin Assignment	4
2. Precautions Before Operation	10
3. EDrive Configuration Software	11
Download EDrive Configuration Software.....	11
Installation	11
Open Software	11
Connect to PC	12
Trial Run	12
Auto Tuning	13
Parameter Backup and Download	15
4. Change Pulse Signal Type.....	17
5. Change Motion Direction	18
6. Change Electronic Gear Ratio	20
7. Parameter Setting	24
8. PLC RS-485 Communication Example	25

Version Update Record

Version	Update date	Update content
V1.0	2025-07	First release

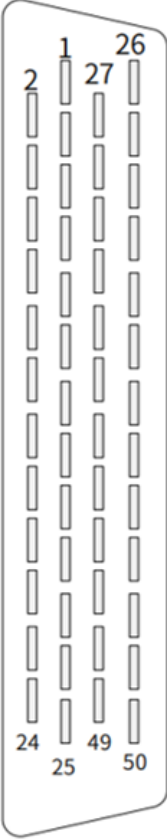
1. Wiring

Main Circuit Wiring Diagram



Control Signal Connector - CN1 Pin Assignment

To ensure I/O signal to not be affected by electromagnetic interference, a **shielded twisted pair cable** is recommended for this application.

Port	Diagram (soldering side of the connector)	Pin	Label	Signal	Description (default function)
CN1		1	PUL+24	Pulse input	Low-frequency pulse train direction signal: PUL+ and PUL-: 5V differential input (500KHz) DIR+ and DIR-: 5V differential input (500KHz) PUL+24 and PUL-: 24V single end (200KHz) DIR+24 and DIR-: 24V single end (200KHz)
		3	PUL+	Pulse input	
		4	PUL-	Pulse input	
		2	DIR+24	Direction input	
		5	DIR+	Direction input	
		6	DIR-	Direction input	
		44	PULSH+	High frequency pulse input	4MHz High-frequency pulse train, 5V differential input
		45	PULSH-	High frequency pulse input	
		46	SIGNH+	High frequency direction input	4MHz High-frequency pulse train, 5V differential input
		47	SIGNH-	High frequency direction input	
		13	GND	GND	Ground
		7	DI-COM	Input	Common digital input
		8	DI1	NOT	Positive limit switch
		9	DI2	POT	Negative limit switch
		26	DI3	Null	-
		27	DI4	GAIN	Gain switching
		28	DI5	DIV1	Command multiplier switching
		29	DI6	SRV-ON	Servo on
		30	DI7	CL	Set deviation counter to zero
		31	DI8	A-CLR	Clear alarm(s)
		32	DI9	C-MODE	Control mode switching
		33	DI10	INH	Signal inhibit
		11	DO1+	BRK-OFF+	Release external brake
		10	DO1-	BRK-OFF-	
		35	DO2+	SRDY+	Servo ready signal output
		34	DO2-	SRDY-	
		37	DO3+	ALM+	Alarm output
		36	DO3-	ALM-	
		39	DO4+	INP1+	Position reached feedback signal
		38	DO4-	INP1-	
		41	DOCOM	Output	Common digital output (Max. current:50mA, Max. voltage 30V)
		12	DO5	ZSP	Velocity zero
		40	DO6	TLC	Limited torque
		14	Analog input 1	AI1	Velocity/Velocity limit(0 ~ ±10 V)
		15	GND	GND	Analog ground
		16	Analog input 2	AI2	Torque/Torque limit in clockwise direction (0 ~ +10 V)
		17	GND	GND	Analog ground
		18	Analog input 3	AI3	Torque/Torque limit in counterclockwise direction (0 ~ +10 V)

E-DHASxxP-F series (Pulse type) Quick Start Guide

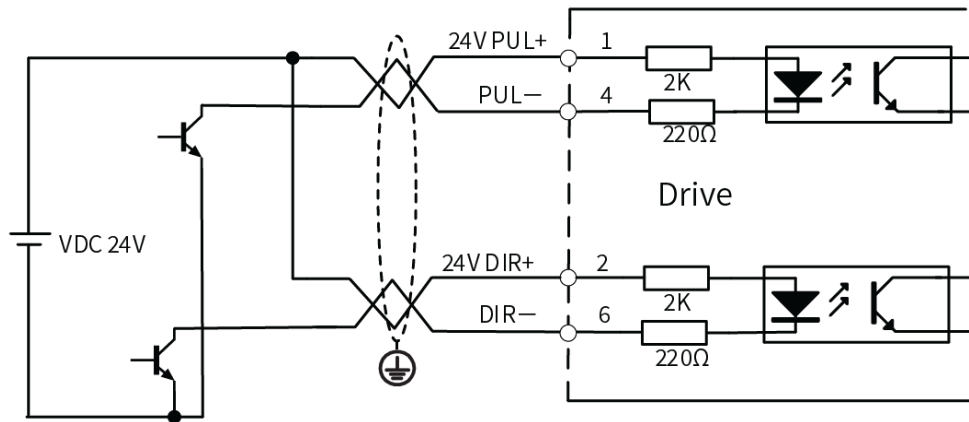
		42	AO1	IM	Analog output signal monitoring 1 (Configurable)
		43	AO2	SP	Analog output signal monitoring 1 (Configurable)
		21	A+	Differential output	Phase A frequency divider output
		22	A-	Differential output	
		48	B+	Differential output	Phase B frequency divider output
		49	B-	Differential output	
		23	Z+	Differential output	Phase Z frequency divider output
		24	Z-	Differential output	
		25	GND	GND	Internal ground
		19	OCZ	Channel Z output	Channel Z output (Open collector)
		20	GND	GND	Internal ground
		50	FG Shield ground	FG	-
		FG	-	FG	Frame ground

1. Single-end pulse input

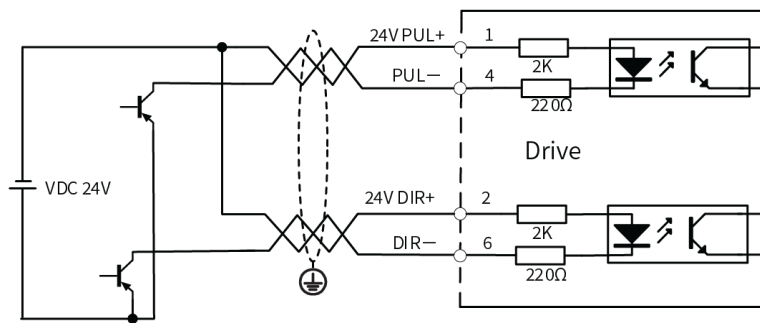
Max allowed frequency: 200kHz

Required input voltage: 12~24V

NPN connection:



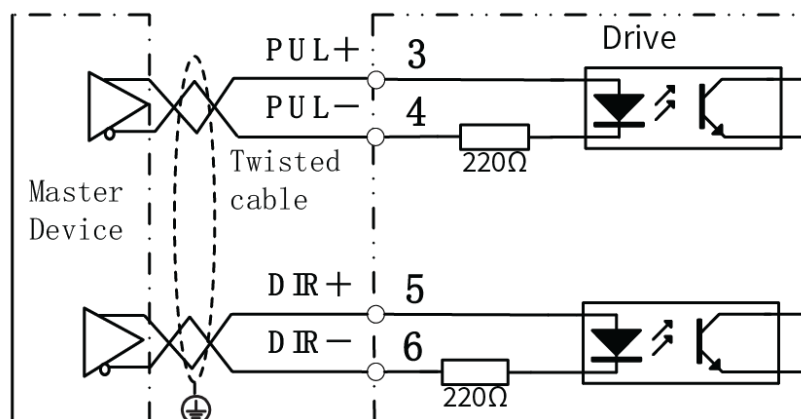
PNP connection:



2. 5V differential pulse input (low speed)

Max allowed frequency: 500kHz

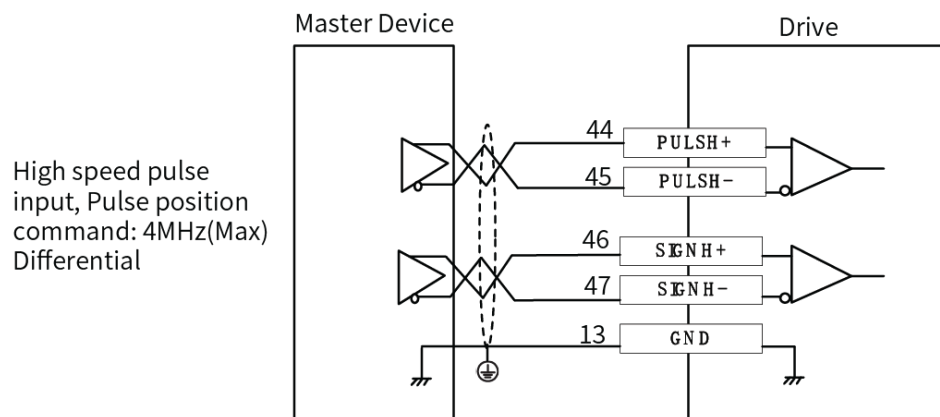
Required input voltage: ±3~6V



3. 5V differential pulse input (high speed)

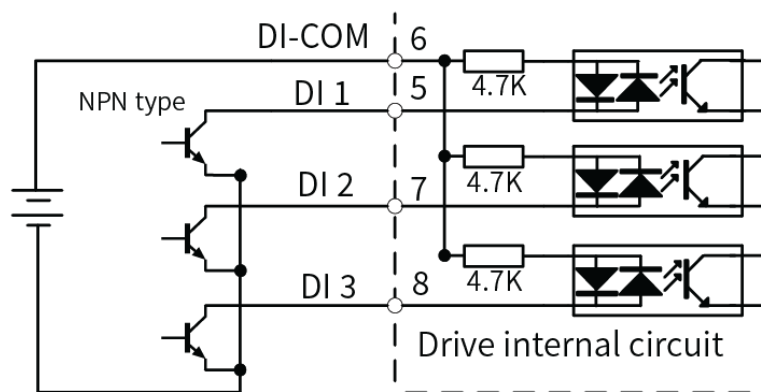
Max allowed frequency: 4MHz

Required input voltage: ±5V

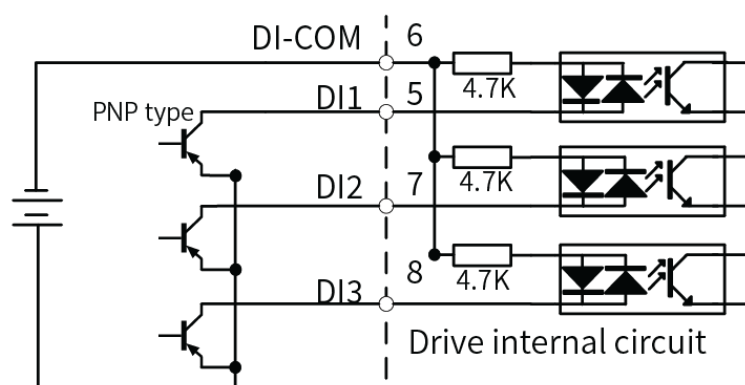


4. General digital input connection

NPN connection:

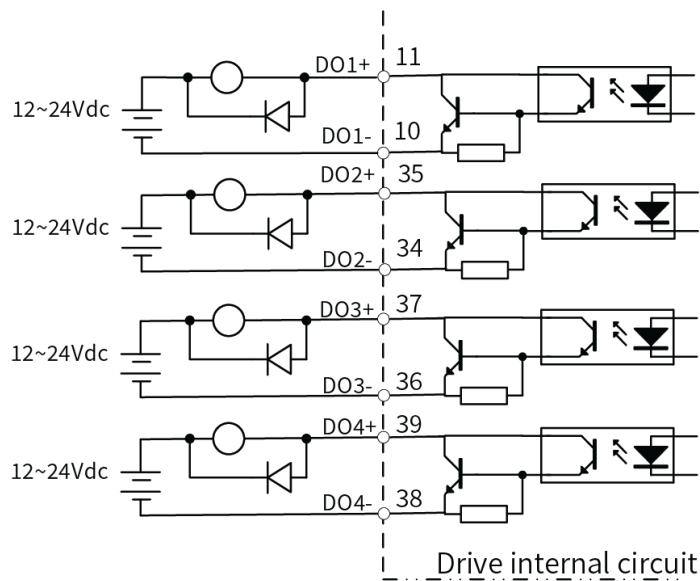


PNP connection:



5. General digital output circuit

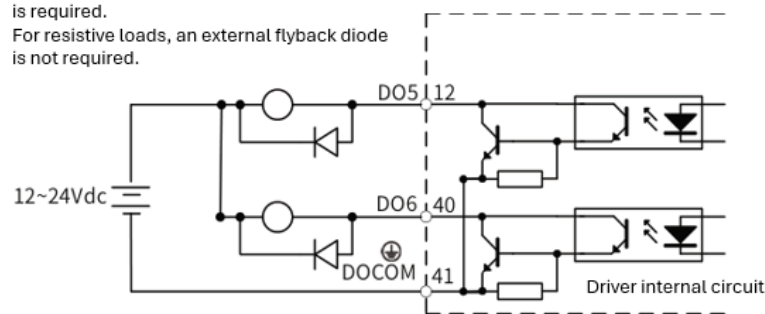
Double-ended DO1~DO4



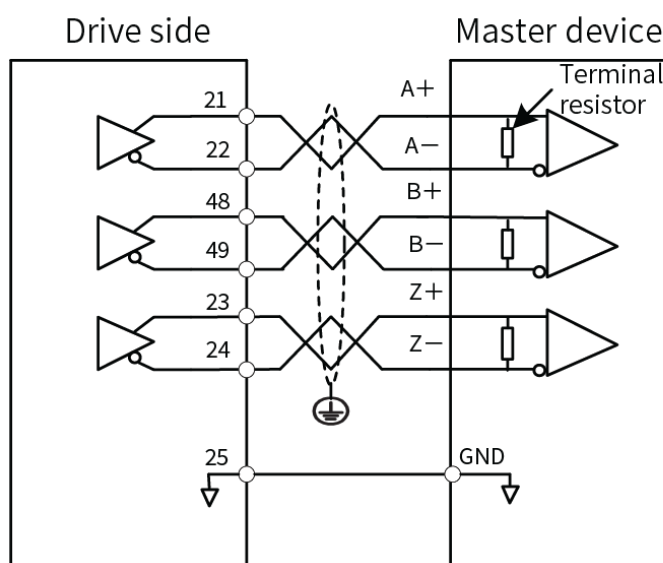
Single-ended DO5~DO6

For inductive loads, an external flyback diode is required.
For resistive loads, an external flyback diode is not required.

Max rated voltage: 24V
Max rated current: 50mA



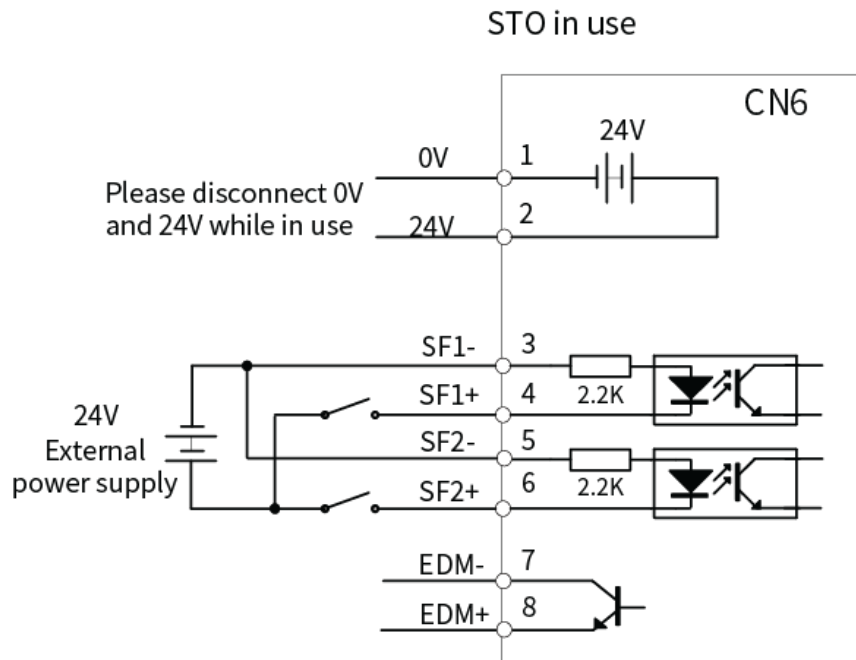
6. Drive frequency divider 5V output



7. STO wiring diagram

STO (Safe Torque Off) function: Cut off motor current supply physically (through mechanical means). The driver comes with an STO terminal pre-installed with short-circuit wiring. If the STO function is not used, do not remove the STO terminal.

STO wiring diagram when in use:



2. Precautions Before Operation

The driver and servo motor must be reliably grounded. The PE terminal of the driver must be securely connected to the equipment ground.

Ensure all wiring is correct before powering on.

An emergency stop circuit must be integrated to ensure the power supply immediately stops in case of a fault.

After a driver fault alarm, verify that the issue has been resolved before restarting, and ensure the SRV-ON signal is inactive.

Do not touch the driver within at least 5 minutes after power is turned off to prevent electric shock.

If the driver panel is unresponsive after powering on, check whether the input voltage is within the rated range and ensure there are no phase losses.

3. EDrive Configuration Software

Download EDrive Configuration Software.

Download link:

https://www.misumi.com.cn/linked/archive/me/MISUMI_EDrive_v1_0_0.zip

Installation

Just unzip or pull the 'MISUMI EDrive_v1.0.0' folder to the desktop.

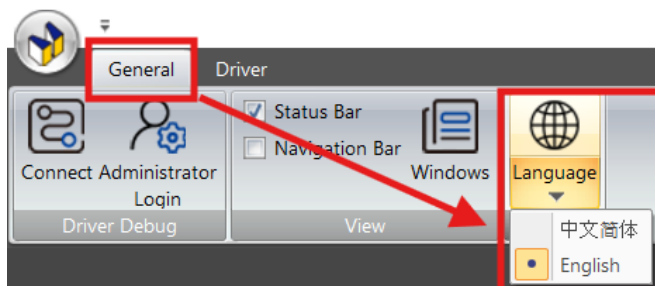
☐ Name	Date modified	Type	Size
 EDriver_v1.1.0_alpha	6/30/2025 10:55 AM	File folder	

Open Software

Double click 'EDrive.exe' to open the software.

☐ Name	Date modified	Type	Size
 Driver	6/30/2025 10:55 AM	File folder	
 DriverDefaultPara	6/30/2025 10:55 AM	File folder	
 Help	6/30/2025 10:55 AM	File folder	
 Init	6/30/2025 10:55 AM	File folder	
 Log	1/3/2025 5:11 PM	File folder	
 Motors	6/30/2025 10:55 AM	File folder	
 Pic	6/30/2025 10:55 AM	File folder	
 Record	10/21/2024 2:26 PM	File folder	
 Remark	6/30/2025 10:55 AM	File folder	
 Script	6/30/2025 10:55 AM	File folder	
 Tools	6/30/2025 10:55 AM	File folder	
 DATA.mdb	2/14/2025 10:37 AM	Microsoft Access ...	19,068 KB
 EDrive.exe	2/7/2025 11:14 AM	Application	7,085 KB
 inp_num.dll	2/7/2025 11:14 AM	Application extens...	8 KB
 Interop.dll	2/7/2025 11:14 AM	Application extens...	78 KB

After software opened, go to 'General' and change language to 'English'.

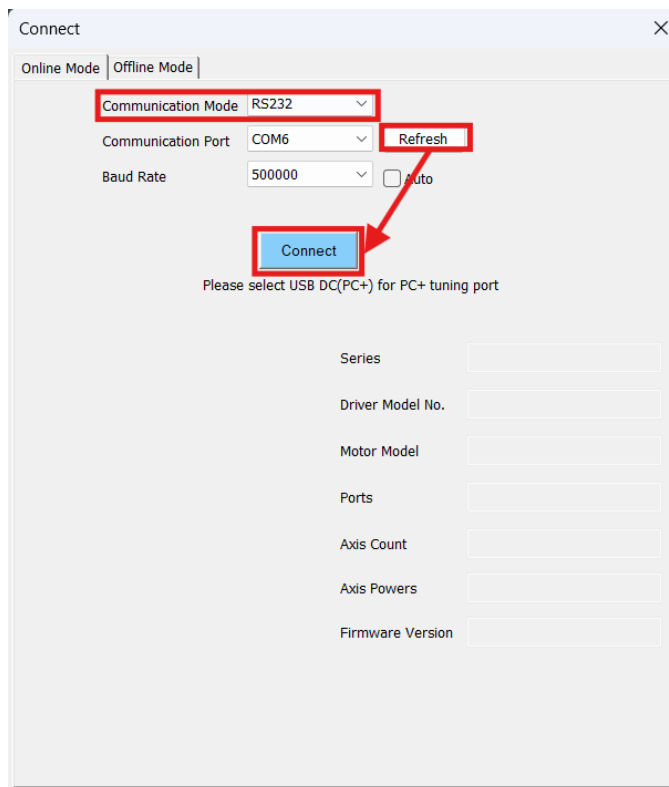


Connect to PC

Please use cable with one side USB type-A and the other side USB type-C.

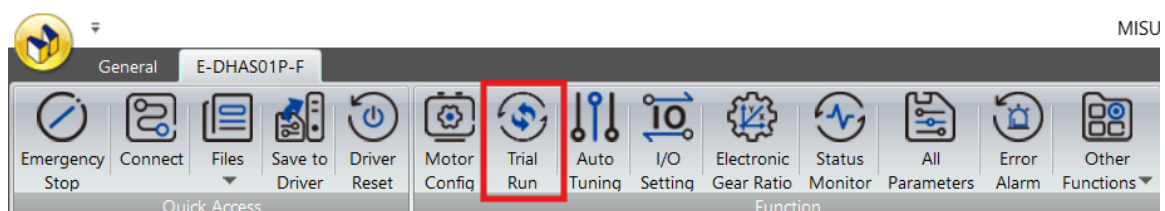


Open EDrive software and start connection. 'Communication Mode' please choose 'RS232', then click 'Refresh', then click 'Connect'.



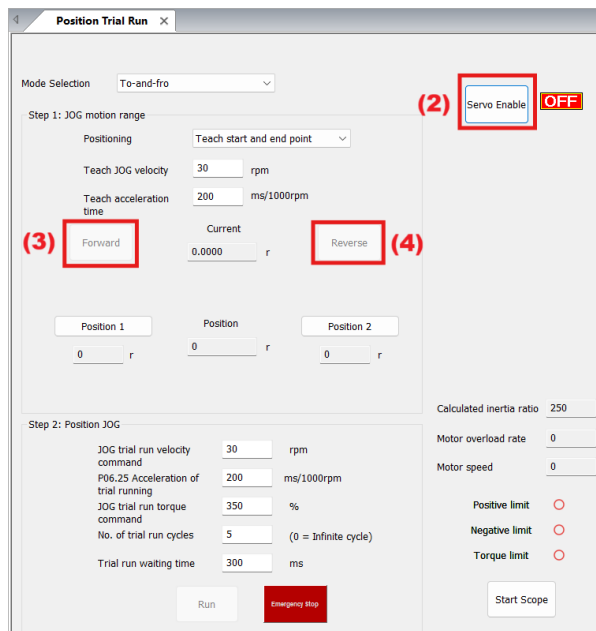
Trial Run

Click 'Trial Run'.



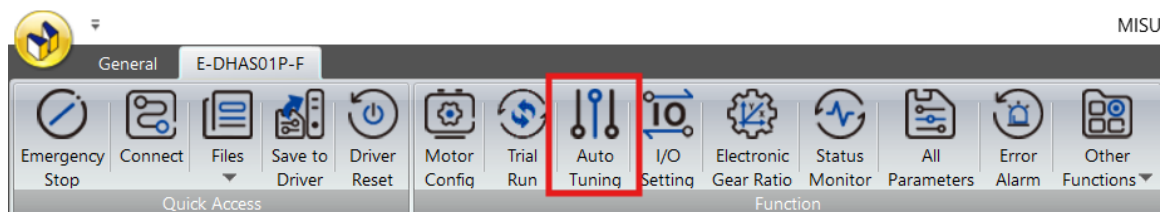
E-DHASxxP-F series (Pulse type) Quick Start Guide

Click (2) 'Servo Enable', then click (3) 'Forward' or (4) 'Reverse', to move the motor.



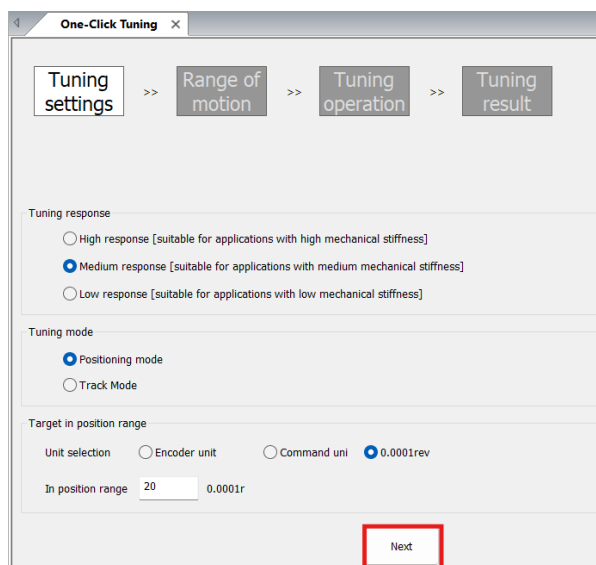
Auto Tuning

Click 'Auto Tuning'.



Click (2) 'Next'.

Note: Other parameters are not necessary, suggest not to change.



E-DHASxxP-F series (Pulse type) Quick Start Guide

Click (3) 'Servo Enable'. (Note: If driver already Servo ON through IO, please tick check box 'External enabling disabled')

Click (4) 'Forward'. After motor reaches starting position, click (5) 'Position 1'. Then click (6) 'Reverse'. After motor reaches ending position, click (7) 'Position 2'. (Note: Please always make sure motor is in between of starting position and ending position) Click (8) 'Next', and follow the instruction to finish Auto Tuning.

One-Click Tuning

Tuning settings >> Range of motion >> Tuning operation >> Tuning result

Motion mode and range

Mode Selection: To-and-fro

Teach JOG velocity: 30 rpm

Teach acceleration: 200 ms/1000rpm

(3) Servo Enable OFF

(4) Forward

Current: 0.0000 r

(6) Reverse

(5) Position 1: 0 r

Position: 0.0000 r

(7) Position 2: 0 r

Note: Before tuning, start and end point must be set through JOG operation and the position

Inertia Ratio

Default Inertia Ratio: 250

☐ Disable inertia ratio identification failure alarm

Tuning speed limit

Speed limit: 1500 rpm

Note: This speed limit is only effective in the tuning process. Default value is 50% of the rated

Previous (8) Next

Warning: The setting distance ranges from 0.5 to 30r

Click (9) 'Done', and follow the instruction to save parameters.

Tuning settings >> Range of motion >> Tuning operation >> Tuning result

Tuning result | Manual fine adjustment | Para comparison

Tuning result : Success, Used time 96 s.

Performance evaluation

In position range(Pluse)	20
Arrival counts	54
Arrival time(ms)	24
Overshoot	17
Jitter counts	1
Maximum current(%)	66
Maximum velocity(mm/s)	398

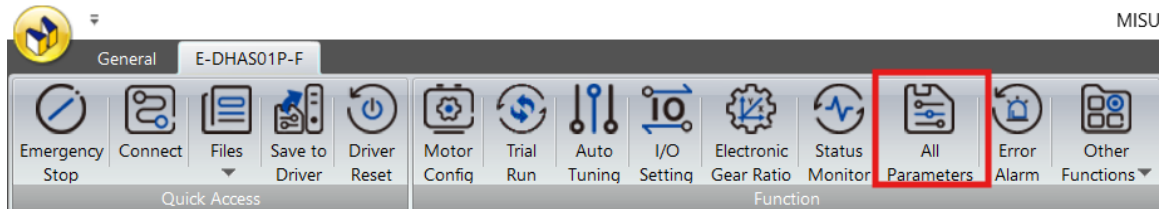
Emergency Stop

Export parameter file Back to Step 1 (9) Done

Parameter Backup and Download

Please refer to following steps to backup parameters.

Click 'All Parameters'.



Click 'Save to PC' and follow the instruction to finish saving.

Parameter List(Offline) x

Read from PC Save to PC Read from drive **Save to drive** Para comparison Initialisation ☐ Disable the combo box Find

	Number	Label	Axis1	Min	Max	Default	Unit	Activation
All parameters	P00.00	Basic settings	1	0	5000	1	0.1Hz	Immediate
P01. Gain adjustment	P00.01	Control Mode Settings	0	0	6	0	model	Restart
P02. Vibration Suppression	P00.02	Real time Auto Gain Adjus...	0x1: Standard + ...	0x0	0xFF	0x1	--	Immediate
P03. Velocity / Torque Contr	P00.03	Real time auto stiffness a...	13	0	31	13	--	Immediate
P04. I/O Monitoring Settings	P00.04	Inertia ratio	250	0	200000	250	%	Immediate
P05. Extension settings	P00.05	Command polarity inversion	0	0	1	0	--	Restart
P06. Special Settings	P00.06	Probe signal polarity setti...	0: The comman...	0	7	0	--	Restart
P07. Motor parameters	P00.07	Command pulse counts p...	3: Pulse + directi...	0	3	3	--	Restart
P08. Pr-Control Parameters	P00.08	1st command pulse count...	10000	0	67108864	10000	--	Immediate
P09. Pr-Control Path Paramet	P00.09	1st command frequency d...	1	1	2147483647	1	--	Immediate
P0C. Position Comparison	P00.10	1st command frequency d...	1	1	2147483647	1	--	Immediate
P0D. Gantry settings	P00.11	Encoder pulse output per r...	2500	0	2097152	2500	P/pitch	Restart
P0E. Precision compensation	P00.12	Pulse output logic inversion	0: No Reversal	0	1	0	--	Restart
P10. Direct drive parameters	P00.13	1st Torque Limit	500	0	750	500	%	Immediate
P11. Drive parameters	P00.14	Excessive Position Deviat...	30	0	310	30	0.1pl...	Immediate
	P00.15	Absolute Encoder settings	0: Disable multi...	0	15	0	--	Restart
	P00.16	Regenerative resistance	100	25	500	100	Q	Immediate
	P00.17	Regenerative resistor pow...	50	20	5000	50	W	Immediate
	P00.19	Friction compensation sett...	0	0	1000	0	--	Immediate
	P00.22	PR and P/S/T switching	0	0	2	0	--	Immediate
	P00.38	Z-signal pulse input source	0x0: The probe ...	0x0	0x3	0x0	--	Immediate
	P00.40	Mapping parameter 1	0	-2147483648	2147483647	0	--	Immediate
	P00.41	Mapping parameter 2	0	-2147483648	2147483647	0	--	Immediate
	P00.42	Mapping parameter 3	0	-2147483648	2147483647	0	--	Immediate
	P00.43	Mapping parameter 4	0	-2147483648	2147483647	0	--	Immediate

配方另存

☒ Manufacturer parameters group

☒ Other parameters (except for P07/P08/I

☒ P07 Motor Parameter

☒ P11 Drive Parameters

OK

When download parameters, click 'Read from PC'.

E-DHASxxP-F series (Pulse type) Quick Start Guide

Parameter List(Offline) x

Read from PC Save to PC Read from drive Save to drive Para comparison Initialisation

Disable the combo box Find

All parameters	Number	Label	Axis1	Min	Max	Default	Unit	Activation
P00. Basic settings	P00.00	Model-following bandwidth	1	0	5000	1	0.1Hz	Immediate
P01. Gain adjustment	P00.01	Control Mode Settings	0	0	6	0	model	Restart
P02. Vibration Suppression	P00.02	Real time Auto Gain Adjus...	0x1: Standard + ...	0x0	0xFFFF	0x1	--	Immediate
P03. Velocity / Torque Contr	P00.03	Real time auto stiffness a...	13	0	31	13	--	Immediate
P04. I/O Monitoring Settings	P00.04	Inertia ratio	250	0	200000	250	%	Immediate
P05. Extension settings	P00.05	Command polarity inversion	0	0	1	0	--	Restart
P06. Special Settings	P00.06	Probe signal polarity settin...	0: The comman...	0	7	0	--	Restart
P07. Motor parameters	P00.07	Command pulse counts p...	3: Pulse + directi...	0	3	3	--	Restart
P08. Pr-Control Parameters	P00.08	1st command pulse count...	10000	0	67108864	10000	--	Immediate
P09. Pr-Control Path Paramet	P00.09	1st command frequency d...	1	1	2147483647	1	--	Immediate
P0C. Position Comparison	P00.10	1st command frequency d...	1	1	2147483647	1	--	Immediate
P0D. Gantry settings	P00.11	Encoder pulse output per r...	2500	0	2097152	2500	P/pitch	Restart
P0E. Precision compensation	P00.12	Pulse output logic inversion	0: No Reversal	0	1	0	--	Restart
P10. Direct drive parameters	P00.13	1st Torque Limit	500	0	750	500	%	Immediate
P11. Drive parameters	P00.14	Excessive Position Deviatio...	30	0	310	30	0.1pi...	Immediate
	P00.15	Absolute Encoder settings	0: Disable multi-t...	0	15	0	--	Restart
	P00.16	Regenerative resistance	100	25	500	100	Ω	Immediate
	P00.17	Regenerative resistor pow...	50	20	5000	50	W	Immediate
	P00.19	Friction compensation setti...	0	0	1000	0	--	Immediate
	P00.22	PR and P/S/T switching	0	0	2	0	--	Immediate
	P00.38	Z-signal pulse input source	0x0: The probe ...	0x0	0x3	0x0	--	Immediate
	P00.40	Mapping parameter 1	0	-2147483648	2147483647	0	--	Immediate
	P00.41	Mapping parameter 2	0	-2147483648	2147483647	0	--	Immediate
	P00.42	Mapping parameter 3	0	-2147483648	2147483647	0	--	Immediate
	P00.43	Mapping parameter 4	0	-2147483648	2147483647	0	--	Immediate

Choose the parameter file you saved, and it will be shown in a new tab (4). Click (5) 'Save to drive', then click (6) 'Driver Reset'. Follow the instruction to finish saving.

MISUMI EDrive

General E-DHAS01P-F (6)

Emergency Stop Connect Files Save to Driver Driver Reset Motor Config Trial Run Auto Tuning I/O Setting Gear Ratio Monitor Parameters Alarm Other Functions

Quick Access Function

Parameter List Par_B.msm x (4)

Read from PC Save to PC Save to drive Para comparison Help

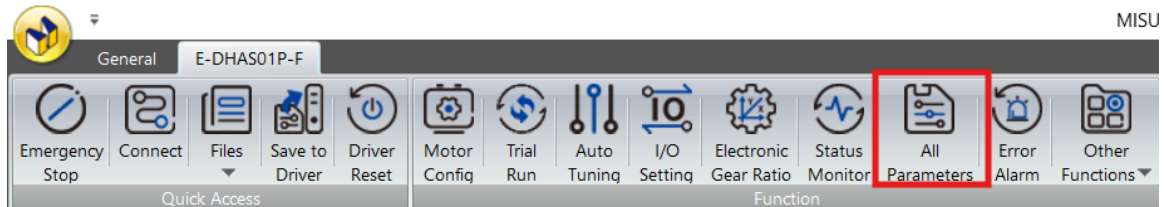
Disable the combo box Find

All parameters	Number	Label	Axis1	Min	Max	Default	Unit	Activation
P00. Basic settings	P00.00	Model-following bandwidth	1	0	5000	1	0.1Hz	Immediate
P01. Gain adjustment	P00.01	Control Mode Settings	9	0	9	9	model	Restart
P02. Vibration Suppression	P00.02	Real time Auto Gain Adjus...	0x1: Standard + ...	0x0	0xFFFF	0x1	--	Immediate
P03. Velocity / Torque Contr	P00.03	Real time auto stiffness a...	13	0	31	13	--	Immediate
P04. I/O Monitoring Settings	P00.04	Inertia ratio	250	0	200000	250	%	Immediate
P05. Extension settings	P00.06	Probe signal polarity settin...	0: The comman...	0	7	0	--	Restart
P06. Special Settings	P00.07	Command pulse counts p...	3: Probe 1 and P...	0	3	3	--	Restart
P07. Motor parameters	P00.08	1st command pulse count...	0	0	67108864	0	--	Re-enable
P08. Pr-Control Parameters	P00.09	1st command frequency d...	1	1	2147483647	1	--	Re-enable
P09. Pr-Control Path Paramet	P00.10	1st command frequency d...	1	1	2147483647	1	--	Re-enable
P0C. Position Comparison	P00.11	Encoder pulse output per r...	2500	0	2097152	2500	P/rev	Restart
P0D. Gantry settings	P00.12	Pulse output logic inversion	0: No Reversal	0	1	0	--	Restart
P0E. Precision compensation	P00.13	1st Torque Limit	350	0	500	350	%	Immediate
P11. Drive parameters	P00.14	Excessive Position Deviatio...	30	0	310	30	0.1rev	Immediate
	P00.15	Absolute Encoder settings	0: Disable multi-t...	0	15	0	--	Restart
	P00.16	Regenerative resistance	100	25	500	100	Ω	Immediate
	P00.17	Regenerative resistor pow...	50	20	5000	50	W	Immediate
	P00.19	Friction compensation setti...	0	0	1000	0	--	Immediate
	P00.23	Slave Alias	2	0	32767	2	--	Restart
	P00.24	Slave Alias Source	0: The master st...	0	1	0	--	Restart
	P00.25	Retain Parameters	10	1	100	10	--	Immediate
	P00.26	Retain Parameters	50	1	2000	50	--	Immediate
	P00.27	Synchronization mode co...	0	0	50	0	--	Restart
	P00.28	CSP mode safe selfrunn...	10000	500	30000	10000	--	Immediate
	P00.30	Encoder feedback mode	2	0	3	2	--	Restart

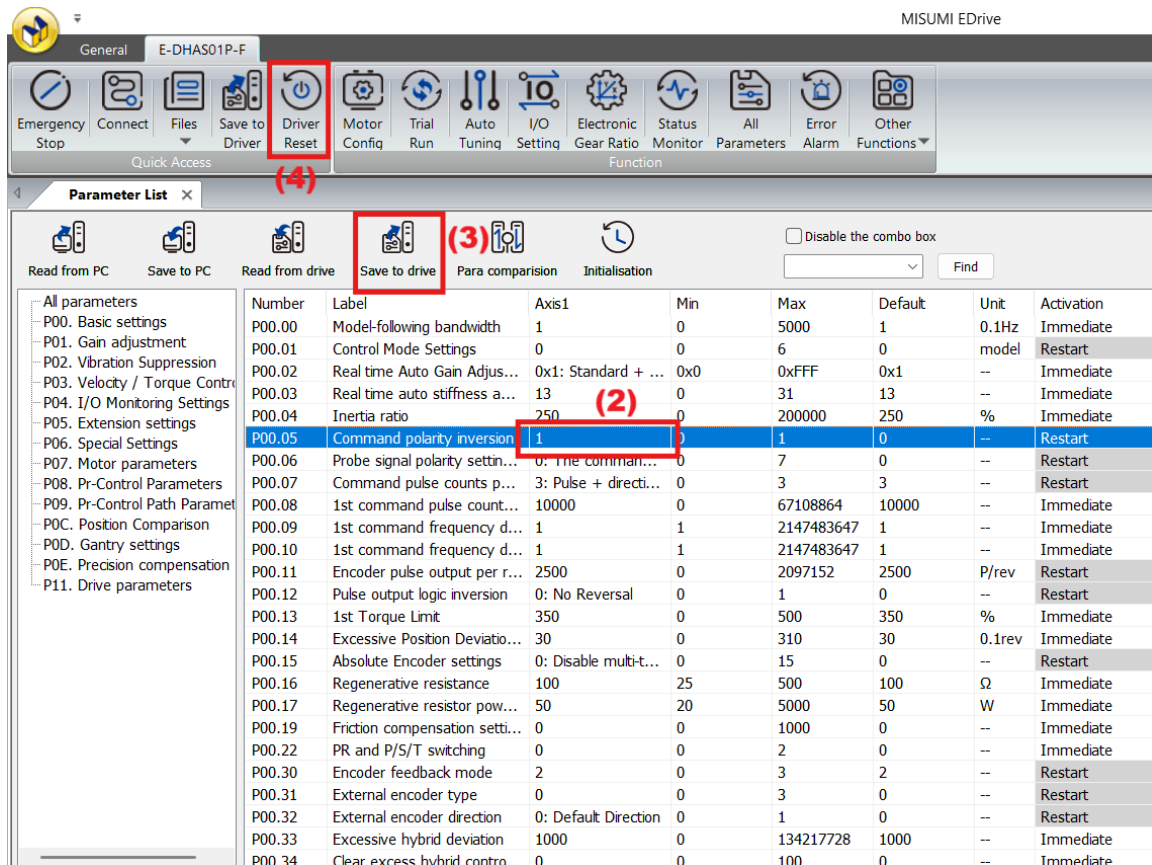
4. Change Pulse Signal Type

Servo Driver support two types of Pulse Signal and the default type is 24V single-end pulse signal (200kHz) or low speed $\pm 5V$ differential pulse signal (500kHz). If want to switch to 5V differential signal, please follow below steps:

Click 'All Parameter'.



Change (2) P00.05 'Command Pulse Input' to 1, then click (3) 'Save to drive'. Click (4) 'Driver Rest' and follow the instructions to finish the saving.



5. Change Motion Direction

If controller pulse train or command is positive direction, but motor moves to negative direction, direction change is needed.

P00.06	Label	Command Pulse Polarity					Valid mode(s)			F
	Range	0~1	Unit	-	Default	0	Activation	Restart	485 address	0x0000
P00.06: Sets the polarity of the command pulse input. It only changes the motor rotation direction; it does not invert the sign of the command. When velocity or torque mode is inverted, parameters P03.03 and P03.20 are disabled.										
	Value	Position Mode		Velocity Mode		Torque Mode				
	0	Not Inverted		Not Inverted		Not Inverted				
	1	Inverted		Not Inverted		Not Inverted				
	2	Not Inverted		Inverted		Not Inverted				
	3	Inverted		Inverted		Not Inverted				
	4	Not Inverted		Not Inverted		Inverted				
	5	Inverted		Not Inverted		Inverted				
	6	Not Inverted		Inverted		Inverted				

Method 1: Set with Front Panel

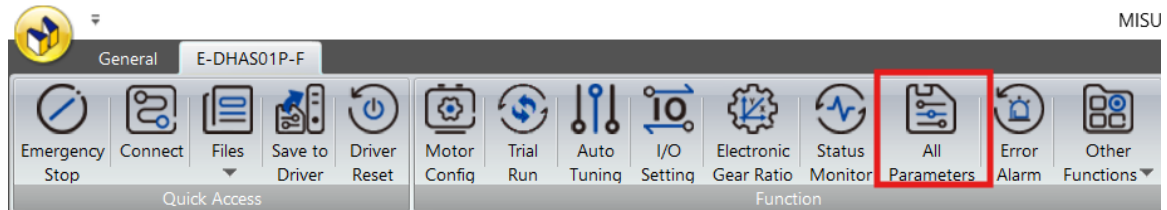
- Press (1) 'S' button, front panel shows 'd345E'. Press (2) 'M' button, front panel shows 'P00.00'. Press (3) ↑ button and change to 'P00.06', then press (1) 'S' button to show the current 'Command Pulse Polarity' setting.



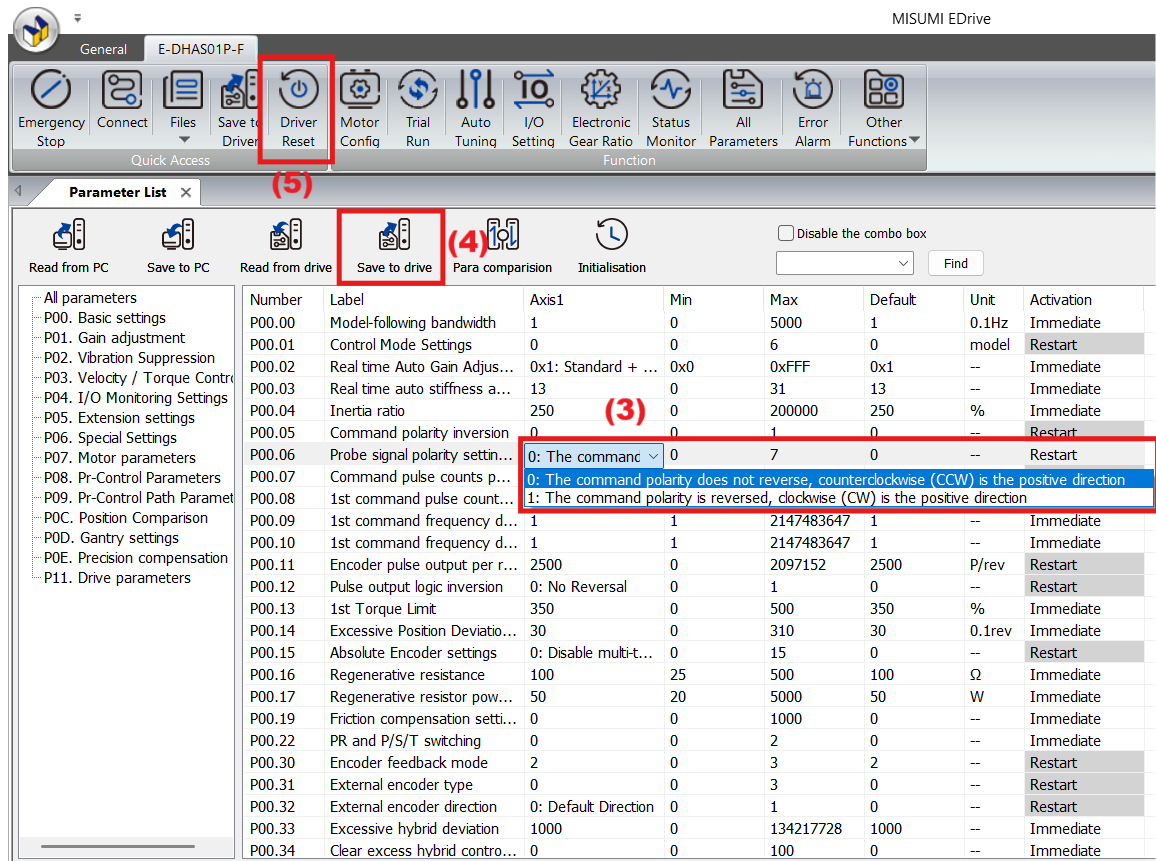
- If now 'Command Pulse Polarity' setting is '0', press (3) ↑ button and change to '1'. If it's '1', then press (4) ↓ button and change to '0'.
- After changing the parameter, restart the driver to activate the setting.

Method 2: Change through 'All Parameters' in EDrive software

1. Click 'All Parameters'.



2. Change value of (2) P00.06 'Command Pulse Polarity' from '0: Reverse' to '1: Forward' or vice versa. Then click (3) 'Save to drive', and click (4) 'Driver Reset'.



6. Change Electronic Gear Ratio

If the upper controller's pulse count is insufficient and the speed cannot meet the requirement, the motor command pulse count must be adjusted.

P00.08	Label	1st Command Pulses Count per Revolution					Valid mode(s)			F
	Range	0~67108864	Unit	-	Default	0	Activation	Re-enable	Index	2008h
This parameter sets the number of command pulses required for one full revolution of the motor. Note: This setting can also be configured via the object dictionary entries 608F, 6091, and 6092, but P00.08 takes priority when set.										

P00.09	Label	1st Command Frequency Divider/Multiplier Numerator					Valid mode(s)			F
	Range	0~2147483647	Unit	-	Default	0	Activation	Re-enable	Index	2009h
This parameter sets the numerator for scaling the input command pulses (for frequency division or multiplication). Corresponds to object dictionary 6091-01. Can be modified directly on the control panel to update the value of 6091-01. Effective only when P00.08 = 0.										

P00.10	Label	1st Command Frequency Divider/Multiplier Denominator					Valid mode(s)			F
	Range	0~2147483647	Unit	-	Default	0	Activation	Re-enable	Index	2010h
This parameter sets the denominator for scaling the input command pulses. Also corresponds to object dictionary 6091-01. Can be modified directly on the control panel to update the value of 6091-01. Effective only when P00.08 = 0.										

When setting the numerator and denominator for command pulse input scaling, you must first set P00.08 to 0.

To configure the denominator for frequency division or multiplication of the command pulse input, follow the steps below:

Definitions:

X – Number of command pulses input to the drive

Y – Encoder pulses after frequency division/multiplication

Z – Encoder pulses per motor revolution

W – Number of motor revolutions

Calculations:

1) Relationship between X and Y:

$$Y = X \times P00.10 / P00.09$$

Note: The values of P00.09 and P00.10 must each be less than 2^{24} (16,777,216).

Exceeding this range may result in incorrect frequency division or multiplication.

2) Explanation of Z (Encoder Resolution):

For a 17-bit motor: $Z = 2^{17} = 131,072$

For a 23-bit motor: $Z = 2^{23} = 8,388,608$

3) Relationship between Y, Z, and W:

$$W = Y / Z$$

Note: Although the numerator and denominator can be set to any value within the valid range, using extreme frequency division or multiplication ratios may cause the system to malfunction. If the resulting command pulses per motor revolution is less than 500, an Er1b1 alarm will be triggered.

Method 1: Set with Front Panel

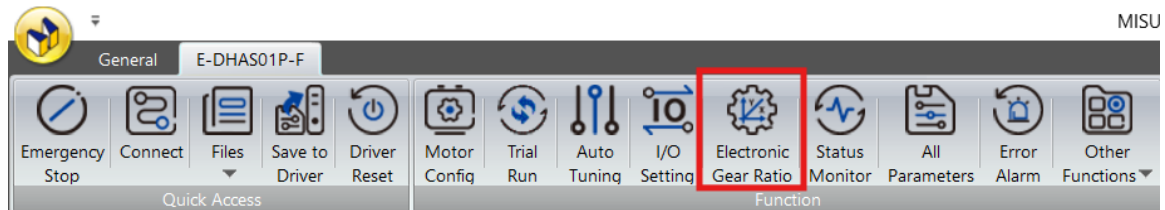
1. Press (1) 'S', display shows d345E. Press (2) 'M', display shows P00.00. Press (3) $\uparrow$ to scroll to P00.08. Press (1) 'S' again to enter the parameter setting for command pulses per motor revolution.



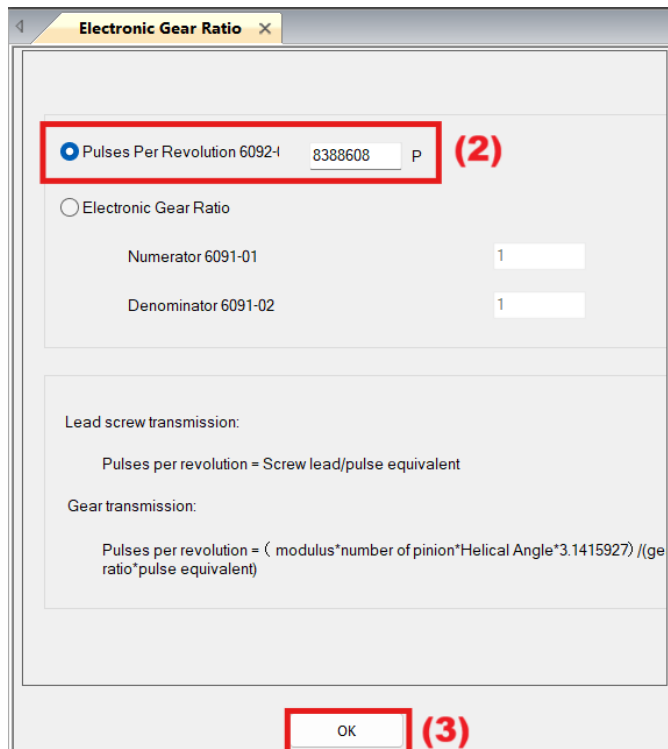
2. P00.08 must be set as an integer. To apply pulse input scaling (division/multiplication), first set P00.08 = 0, then configure P00.09: Numerator of the scaling ratio, P00.10: Denominator of the scaling ratio.
3. After modifying parameters, power cycle the driver for changes to take effect.

Method 2: Change through 'Electronic Gear Ratio' in EDrive software

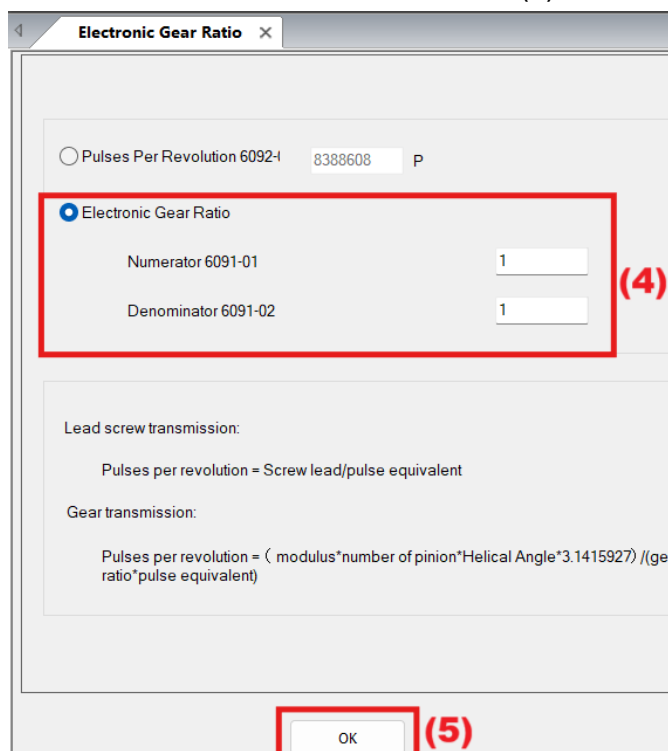
1. Click (1) 'Electronic Gear Ratio'.



2. Select (2) 'Pulse Per Revolution' to set the parameter, then click (3) 'OK'..

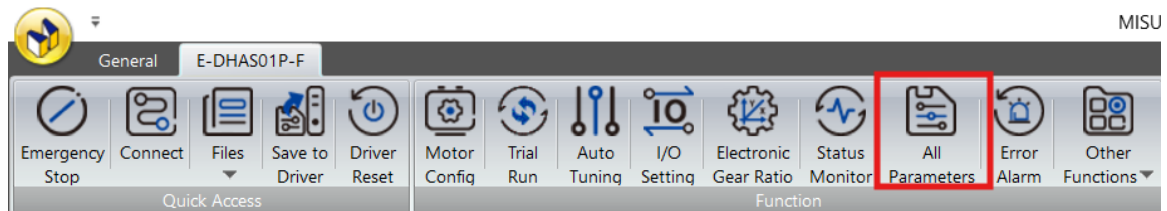


3. To apply pulse input scaling, select (4) 'Electronic Gear Ratio', set parameters 'Numerator' and Denominator'. Click (5) 'OK'.

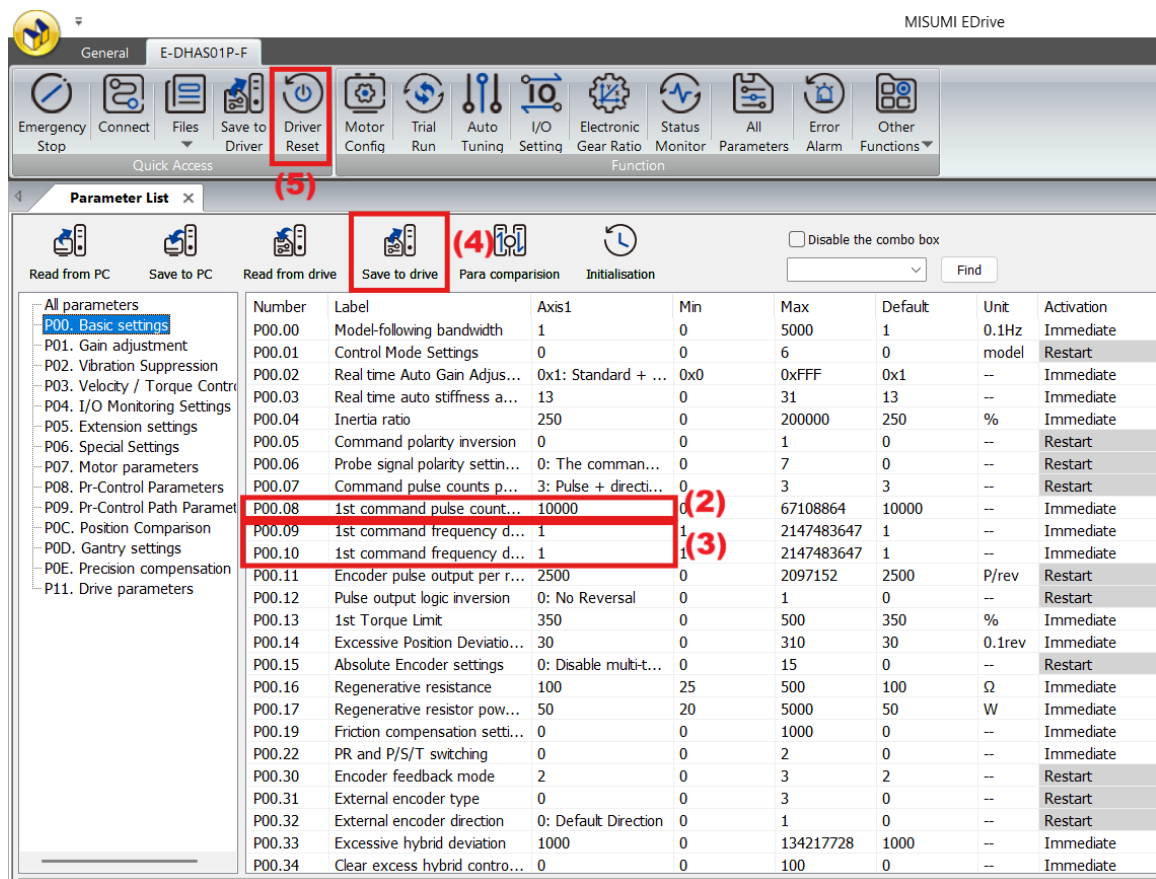


Method 3: Change through 'All Parameters' in EDrive software

1. Click 'All Parameters'.



2. Modify (2) P00.08 '1st Command Pulses Count per Revolution'. If setting scaling ratio, first set (2) P00.08 to 0, then configure (3) P00.09 '1st Command Frequency Divider/Multiplier Numerator' and P00.10 '1st Command Frequency Divider/Multiplier Denominator'. Click (4) 'Save to drive', then (5) 'Driver Reset'.



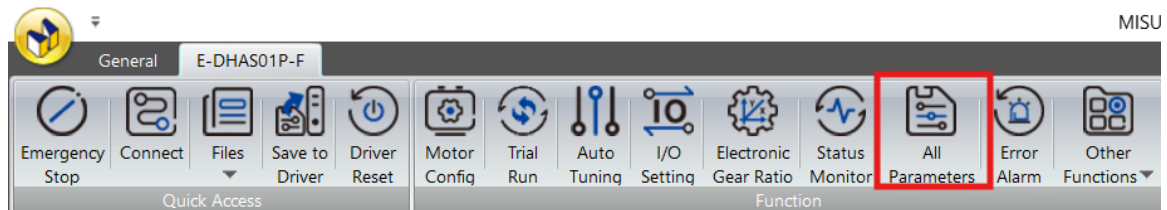
7. Parameter Setting

Method 1: Set with Front Panel

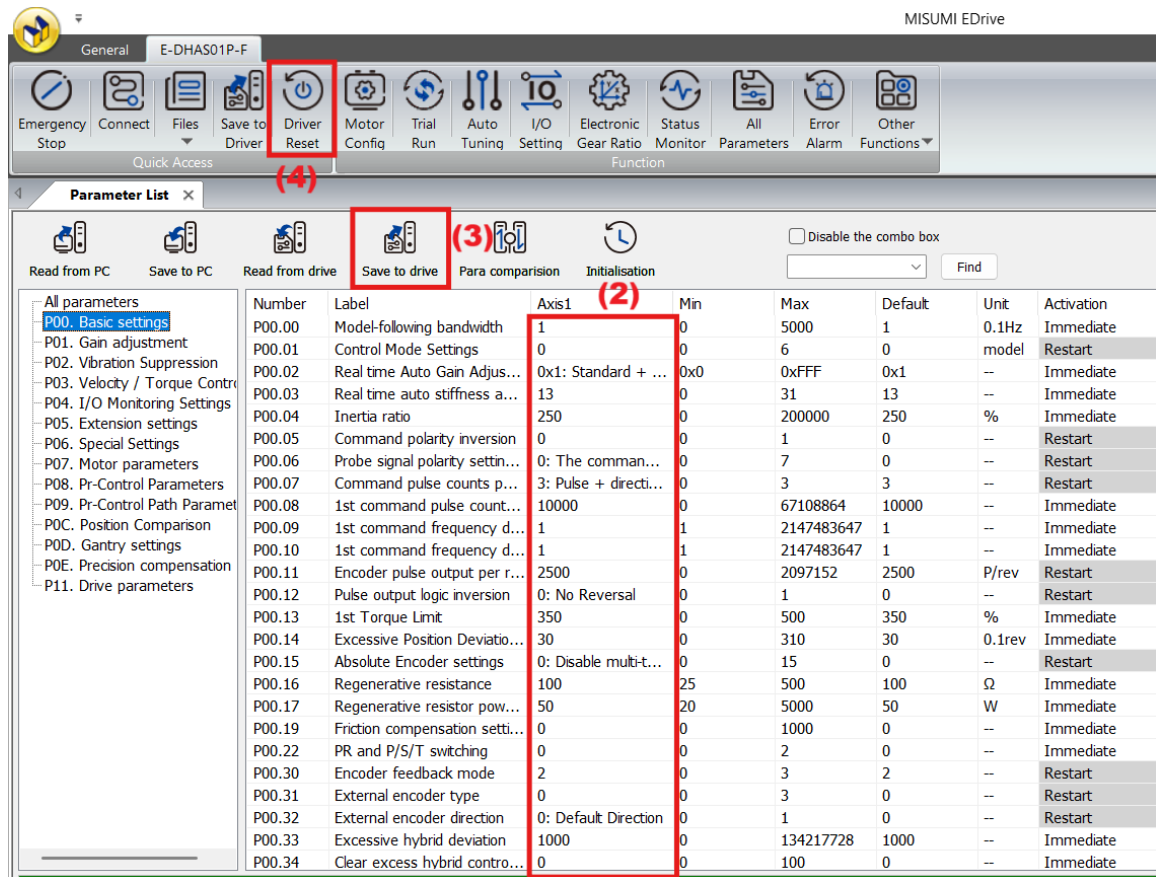
After the servo drive is powered on, Press button 'S', the display shows 'd34 5E'. Press button 'M', the display shows 'P00.00'. Scroll to the parameter code you want to adjust and press button 'S' again to enter the parameter setting page.

Method 2: Change through 'All Parameters' in EDrive software

1. Click 'All Parameters'.



2. In the (2) 'Axis 1' column, modify the desired parameter. After modification, click (3) 'Save to drive'. Then click (4) 'Driver Reset' to apply the changes.



8. PLC RS-485 Communication Example

PLC monitor and modify Servo Driver Object Dictionary via RS-485.

Hardware Used in This Case:

Servo Drive: Misumi E-DHAS01P

PLC: Siemens S7-1200, TIA Portal V20

System Wiring

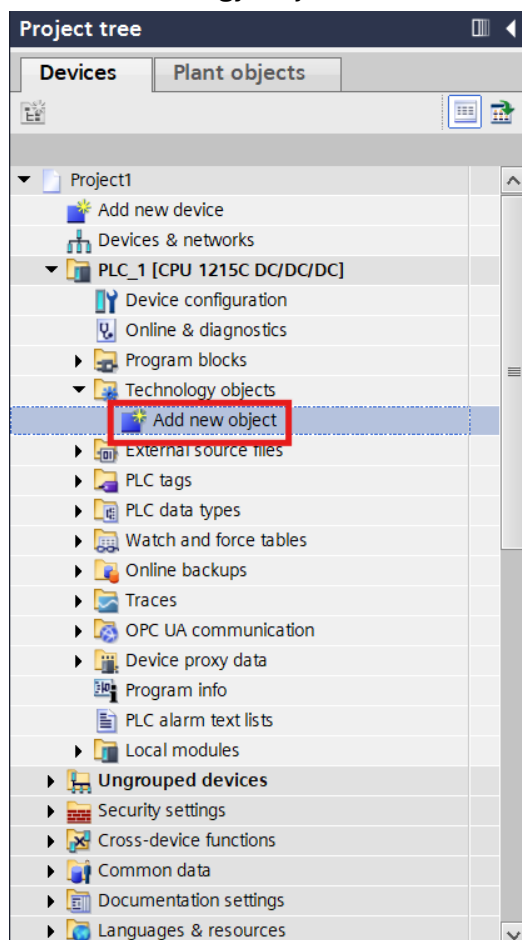
Connect the PLC communication module to the servo drive's Ethernet port.

Connect the PLC's DO (digital output) points to the servo drive's CN1 control signal terminals.

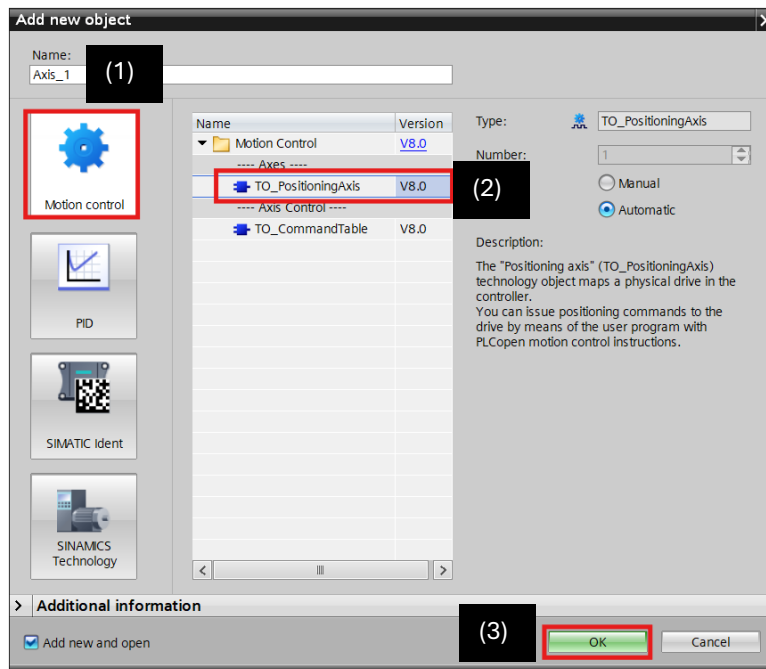
Power on the system.

TIA Portal Axis Technology Configuration

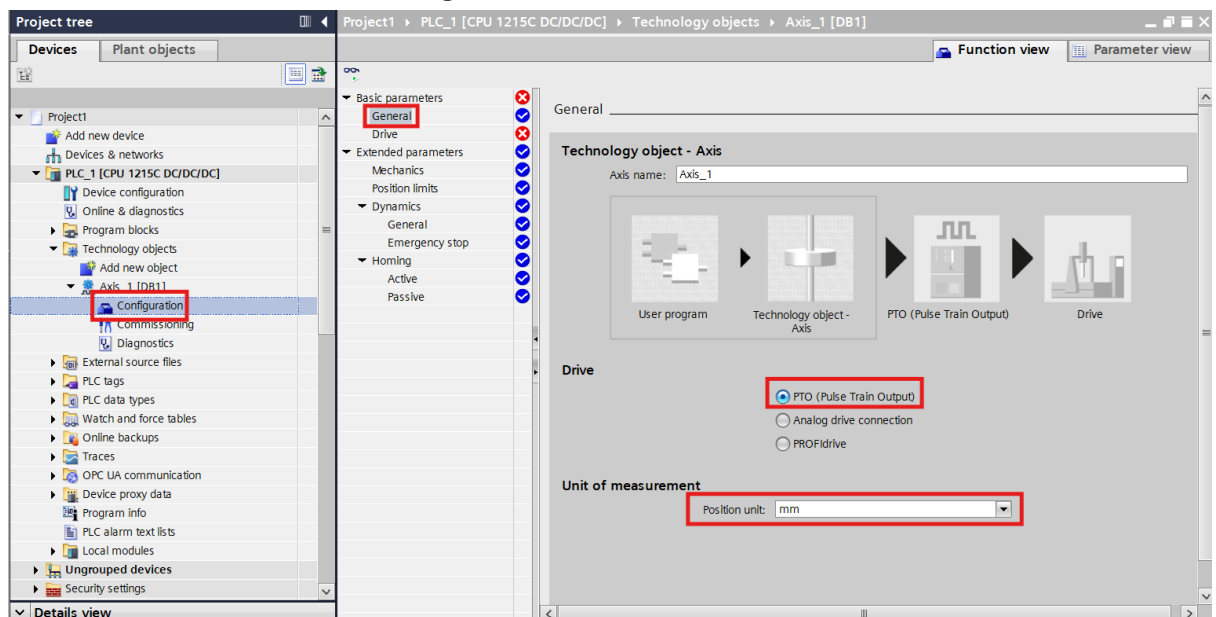
1. In the Technology Objects section of TIA Portal, double-click to add a new object.



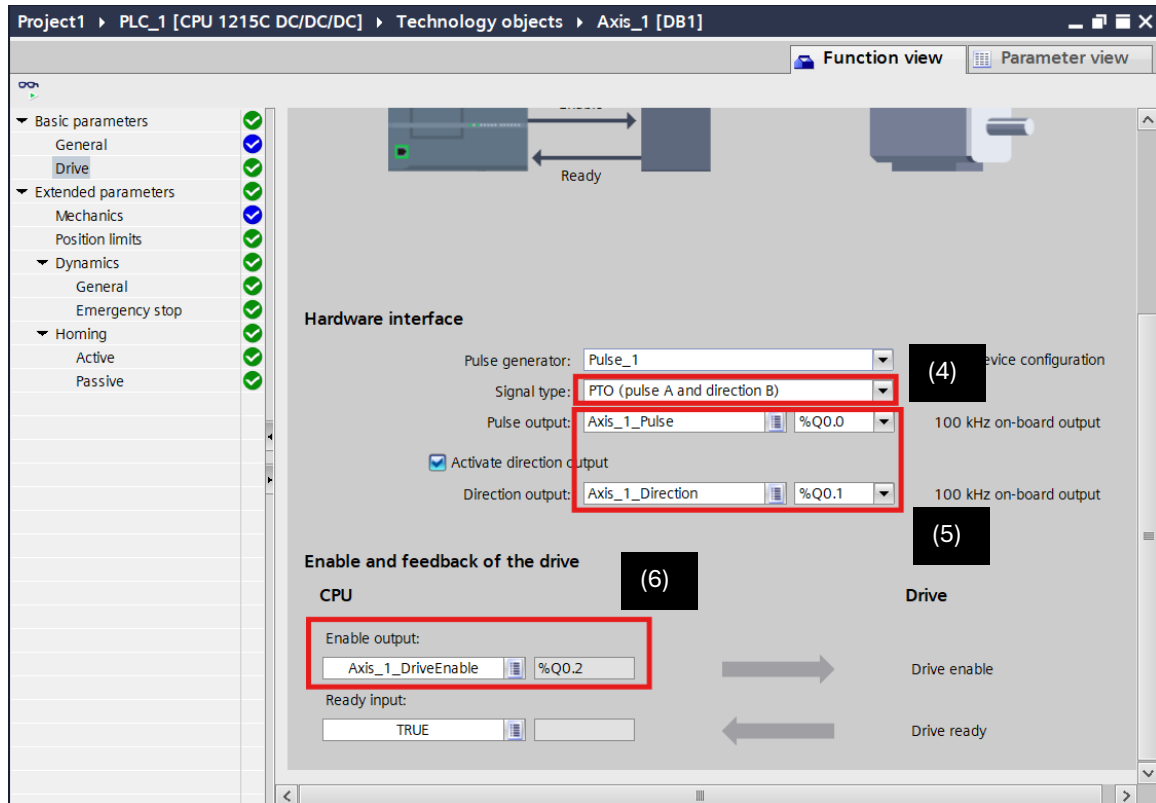
2. Select (1) 'Motion Control', click (2) 'TO_PositioningAxis', then click (3) 'OK'.



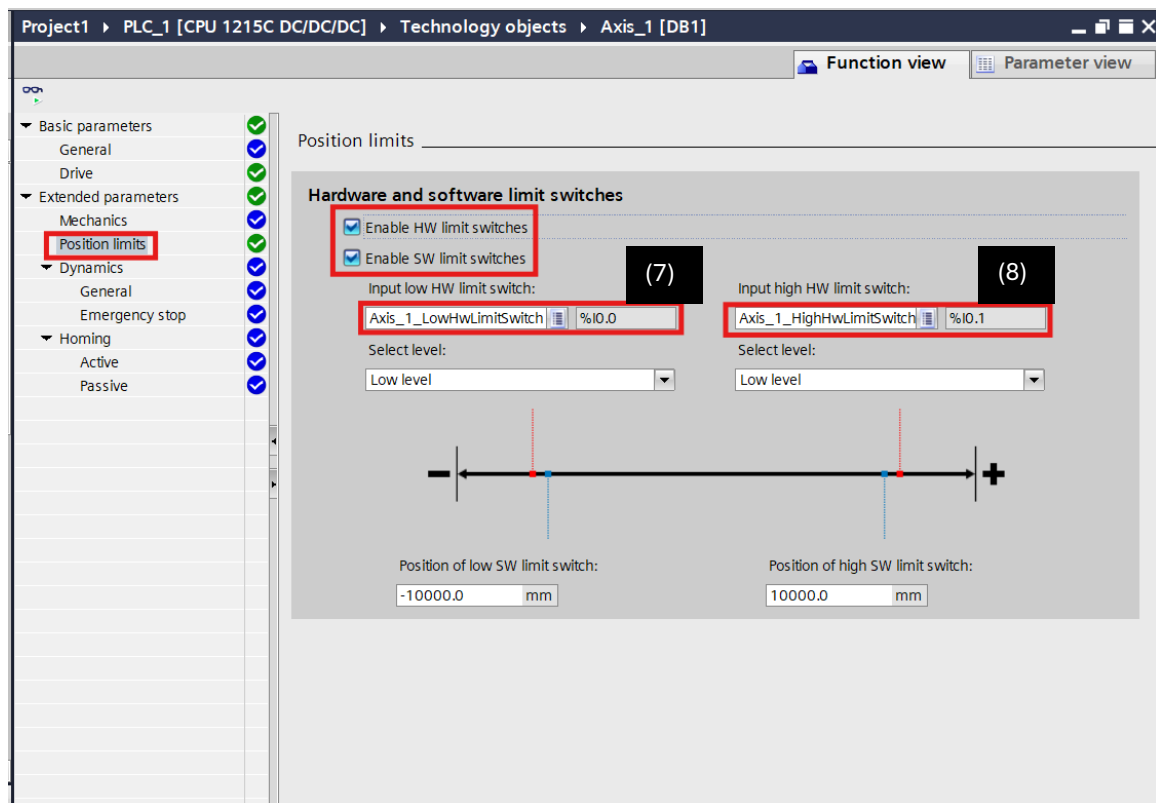
3. In the 'General' tab of the 'Configuration', set the control mode and units.



- In the 'Drive' tab, set (4) Signal Type to PTO. Configure (5) Pulse Output Address to Q0.0, Direction Output Address to Q0.1. Enable (6) Output Address to Q0.2.



- In the Position Limits tab, configure (7) 'Input low HW limit switch'. Configure (8) 'Input high HW limit switch'.



- In the 'General' tab, set (9) Velocity Unit, Maximum Speed, and Start/Stop Speed and (10) Acceleration and Deceleration.

Project1 ▶ PLC_1 [CPU 1215C DC/DC/DC] ▶ Technology objects ▶ Axis_1 [DB1]

Function view Parameter view

Basic parameters
General
Drive
Extended parameters
Mechanics
Position limits
Dynamics
General
Emergency stop
Homing
Active
Passive

General

Note: Changes in the velocity limits affect acceleration and deceleration; the ramp-up time and ramp-down time stay the same.

Velocity

Acceleration / deceleration

Unit of velocity limits:
mm/s

Maximum velocity:
250.0 mm/s

Start/stop velocity:
10.0 mm/s

Acceleration:
48.0 mm/s²

Deceleration:
48.0 mm/s²

5.0 s 5.0 s

- Optionally, click (11) Enable Jerk Limiting, then set (12) Jerk Parameters.

Project1 ▶ PLC_1 [CPU 1215C DC/DC/DC] ▶ Technology objects ▶ Axis_1 [DB1]

Function view Parameter view

Basic parameters
General
Drive
Extended parameters
Mechanics
Position limits
Dynamics
General
Emergency stop
Homing
Active
Passive

General

Velocity

Acceleration / deceleration

Unit of velocity limits:
mm/s

Maximum velocity:
250.0 mm/s

Start/stop velocity:
10.0 mm/s

Acceleration:
48.0 mm/s²

Deceleration:
48.0 mm/s²

5.0 s 5.0 s

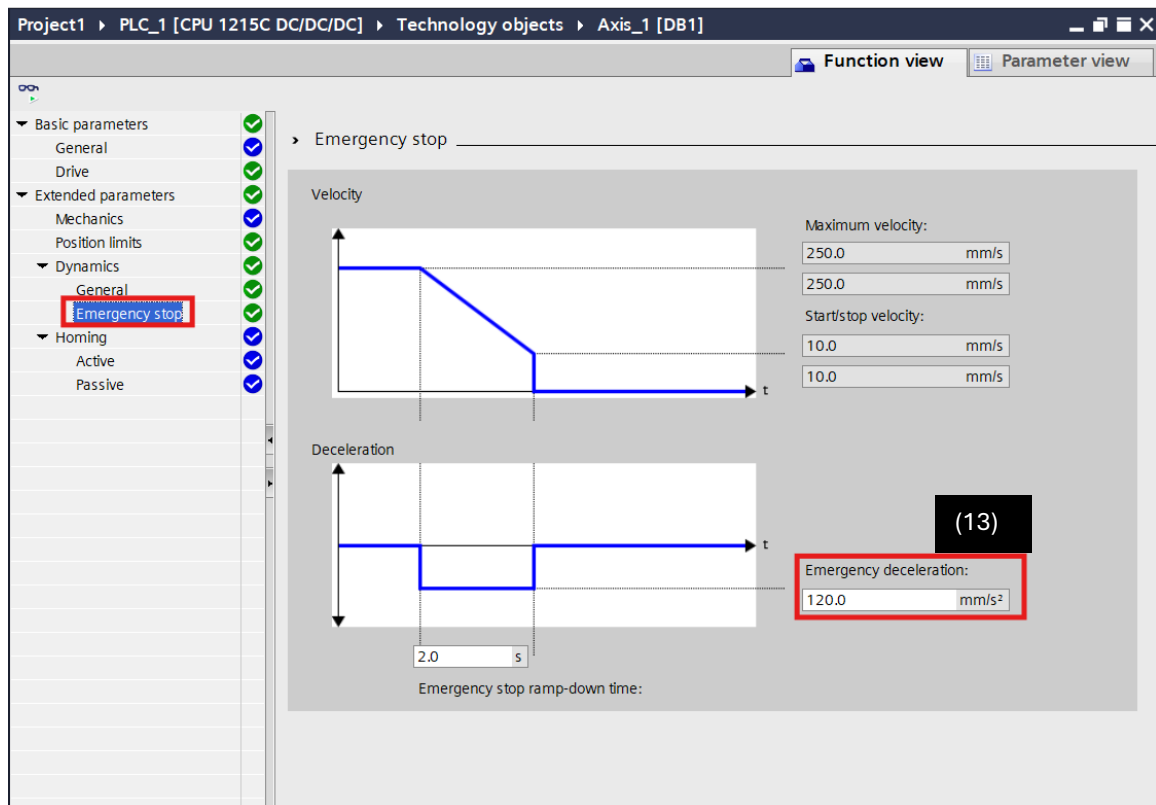
Ramp-up time: Ramp-down time:

(11) ☒ Enable jerk limit

Smoothing time: t₁: 0.25 s t₂: 0.25 s Jerk: 192.0 mm/s³

Note: By enabling the jerk limit, the total time for acceleration and deceleration of the axis is increased.

8. In the emergency stop, can set the speed of (13) Emergency Deceleration.



Project1 > PLC_1 [CPU 1215C DC/DC/DC] > Technology objects > Axis_1 [DB1]

Function view | Parameter view

Basic parameters
General
Drive
Extended parameters
Mechanics
Position limits
Dynamics
General
Emergency stop
Homing
Active
Passive

Emergency stop

Velocity

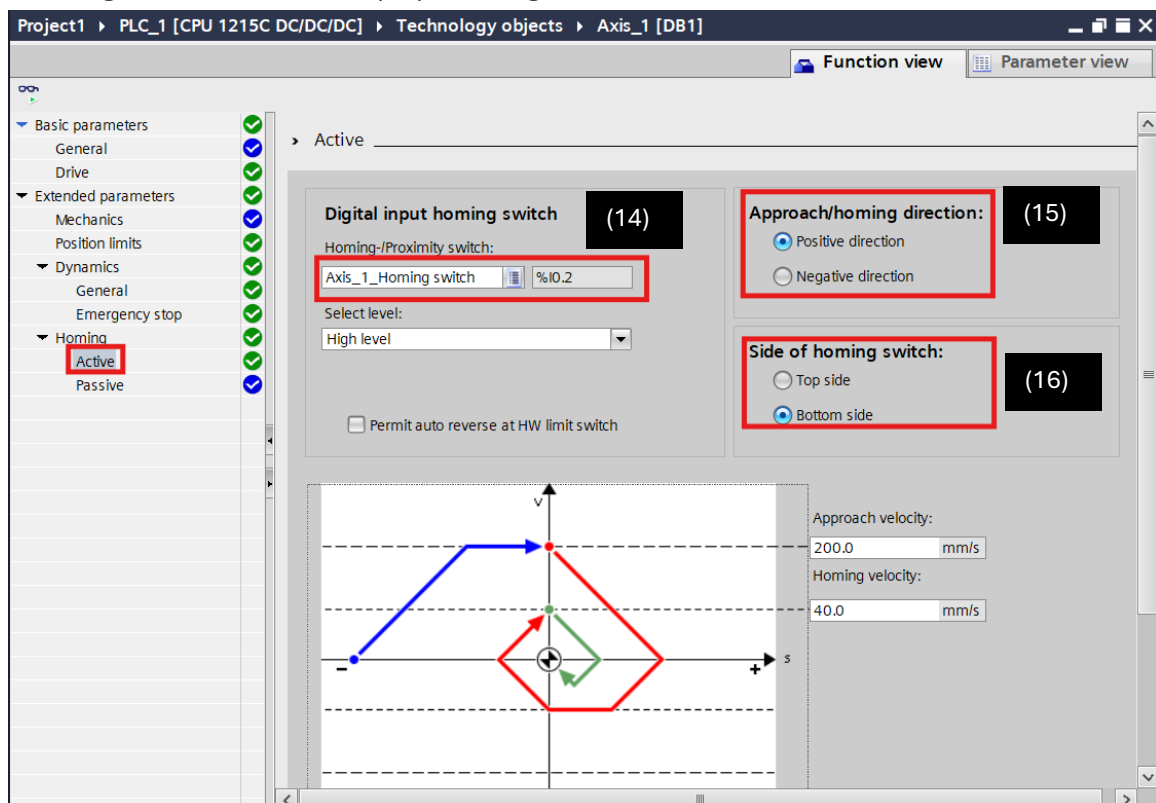
Maximum velocity: 250.0 mm/s
250.0 mm/s
Start/stop velocity: 10.0 mm/s
10.0 mm/s

Deceleration

Emergency stop ramp-down time: 2.0 s

Emergency deceleration: 120.0 mm/s² (13)

9. In the Active Homing section, configure (14) Homing Switch Address, select (15) Homing Direction, choose (16) Homing Side.



Project1 > PLC_1 [CPU 1215C DC/DC/DC] > Technology objects > Axis_1 [DB1]

Function view | Parameter view

Basic parameters
General
Drive
Extended parameters
Mechanics
Position limits
Dynamics
General
Emergency stop
Homing
Active
Passive

Active

Digital input homing switch (14)

Homing-/Proximity switch: Axis_1_Homing switch %I0.2

Select level: High level

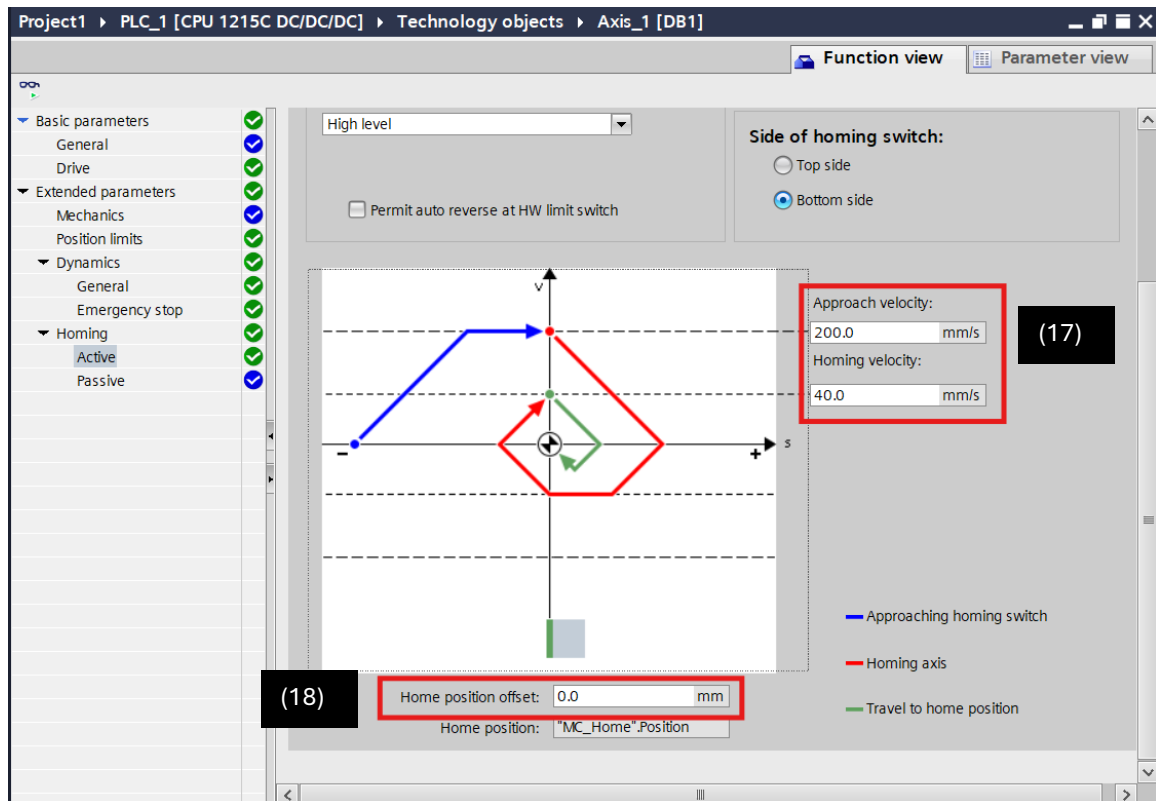
Permit auto reverse at HW limit switch

Approach/homing direction: (15)
☒ Positive direction
☐ Negative direction

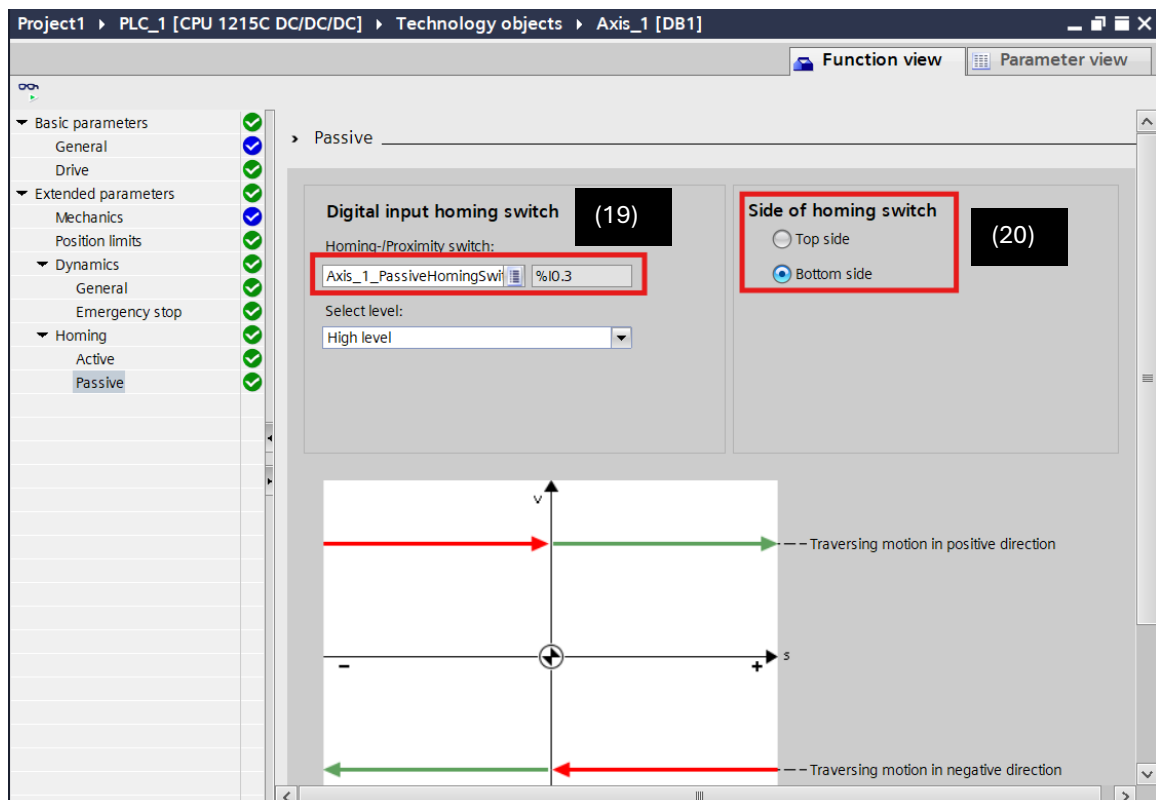
Side of homing switch: (16)
☐ Top side
☒ Bottom side

Approach velocity: 200.0 mm/s
Homing velocity: 40.0 mm/s

10. Set (17) Homing Speed and (18) Homing Offset.

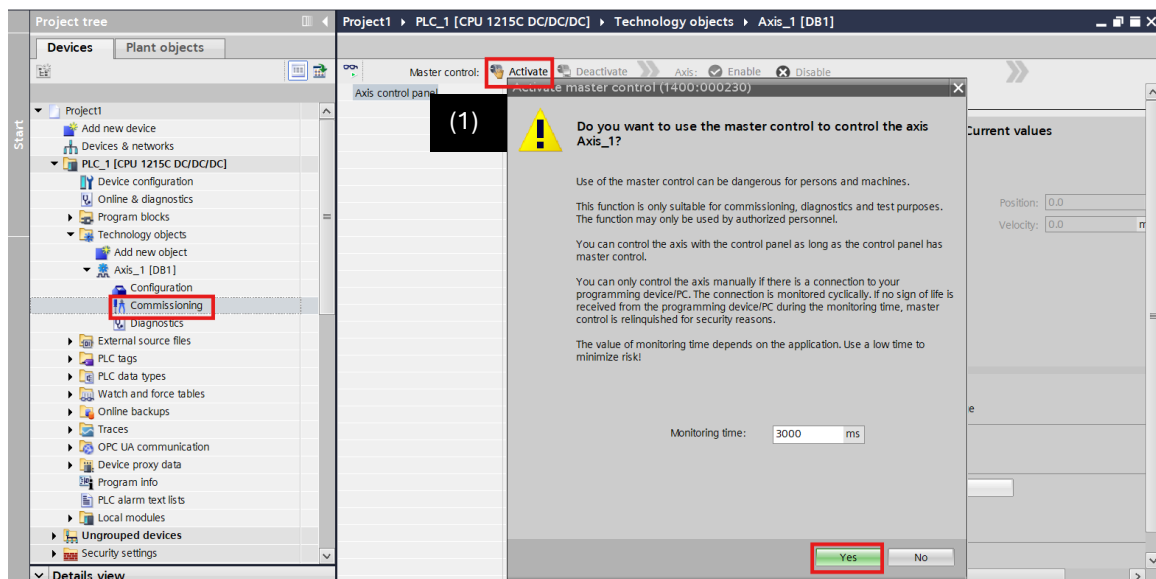


11. In the Passive Homing section, configure (19) Homing Switch Address, choose (20) Homing Side.

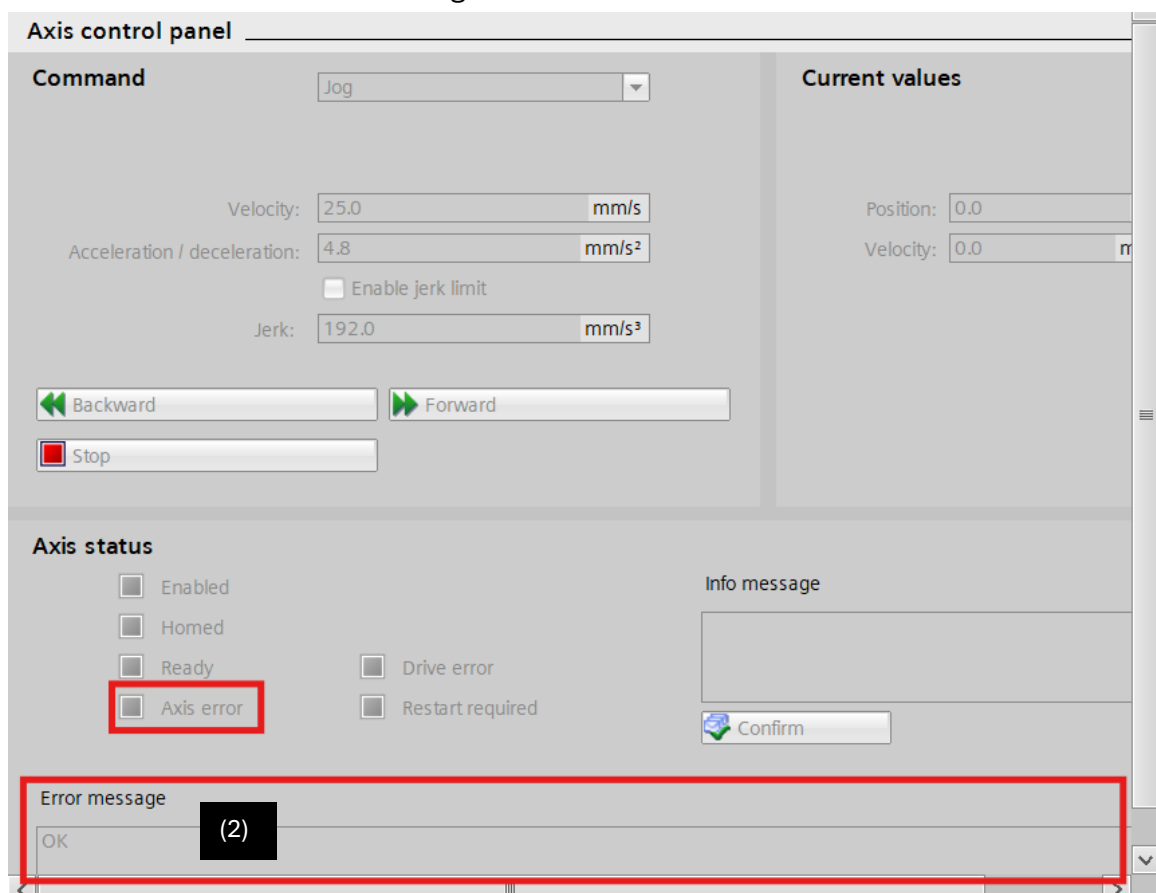


TIA Portal Axis Debugging

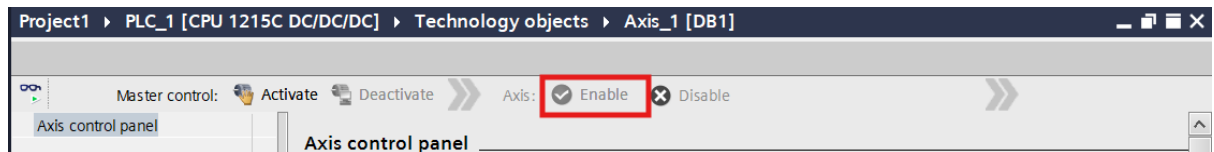
1. After downloading the program to the CPU, double-click 'Commissioning', then click (1) 'Activate'. A prompt will appear asking whether to control the axis—click 'Yes'.



2. In the Axis Status window, monitor the axis. If there are errors, check (2) Error Details and resolve them before enabling the axis.



- Click Enable to activate the axis for debugging.



- Once enabled, in (3) 'Command', select the motion type for the servo motor. In (4), control the motor (forward, reverse, stop). In (5), monitor the current position and speed of the axis.

