

Introduction

nEXT1 Servo Driver is EtherCAT AC Servo Driver. nEXT1 Servo Driver has compact size, using DC power supply up to 350 volt and current output up to 16 ampere. It support a wide variety of position feedback sensors from Tamagawa, Yaskawa, Panasonic,...

nEXT1 Servo Driver has built-in EtherCAT CiA402 Drive Profile. It is installed by daisy chain connection that provides a more scalable system with fewer wires and easy setup with EtherCAT master and other EtherCAT Slave devices in the market.

The setup and tuning process in nEXT1 Servo Driver can be done easily through nEXT Configurator software. The product also support analysis and advance filtering function for enhanced dynamic performance application.

nEXT1 SERVO DRIVER

XSC-ECAT-ASDXX

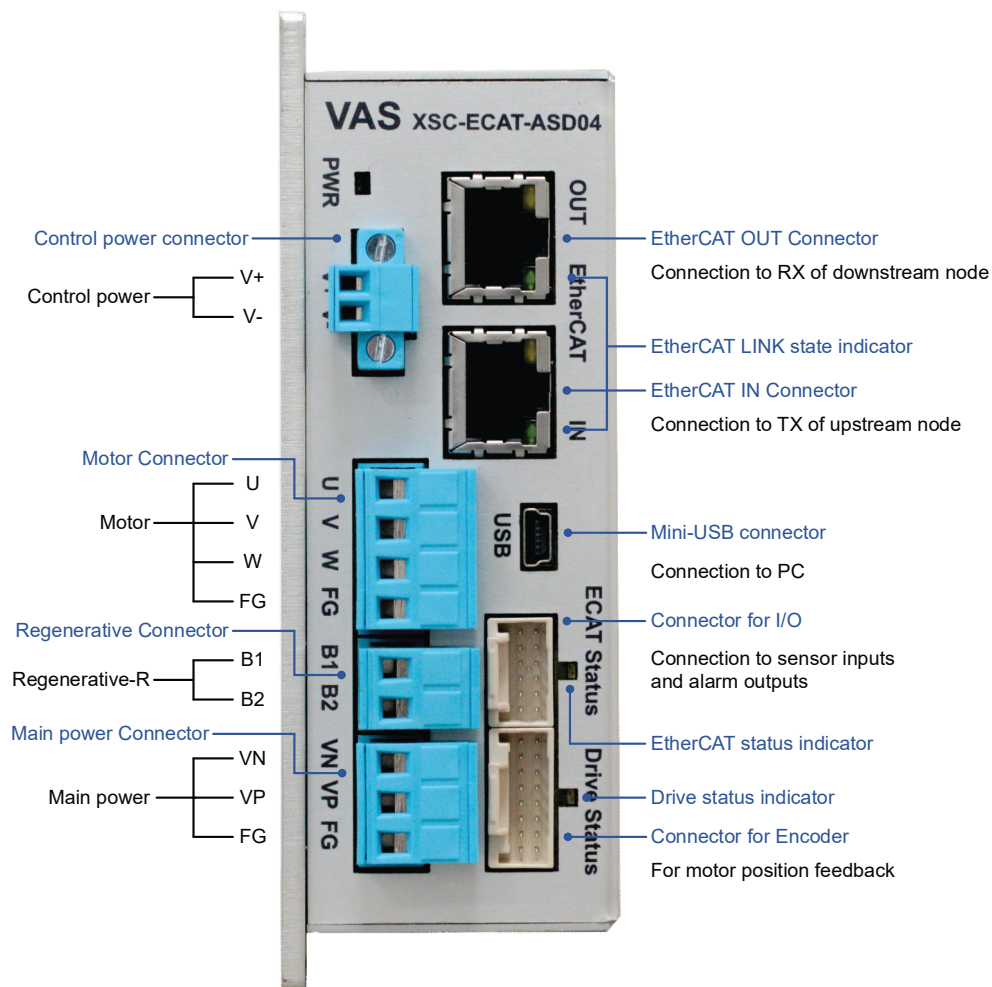


FEATURES

- Compact size
- High DC voltage power supply
- High output current
- Supports a wide variety of position feedback sensors
- High bandwidth performance
- Support EtherCAT CiA402 Drive Profile
- Support analysis and advanced filtering for enhanced dynamic performance
- Easy setup and tuning by PC software

SPECIFICATIONS

Power Supply	XSC-ECAT-ASD04	XSC-ECAT-ASD10
Main Power Supply	DC voltage from 48VDC up to 350VDC	
Control Power Supply	24VDC (±15%)	
Current control output	Maximum 6.5A	Maximum 16A
Control system	Smart Power Module, PWM Control	
Position Feedback Support		
Encoder support	<ul style="list-style-type: none">Quadrature Incremental (ABZ) + Hall sensorTamagawa incremental/ absolute encoderPanasonic Minas A4, A5, A6 encoderYaskawa Sigma II, Sigma III, Sigma V, Sigma VII encoder	
EtherCAT Communication Specifications		
Communications Standard	IEC 61158 Type 12, IEC 61800-7 CiA 402 Drive Profile	
Physical layer	100BASE-TX (IEEE802.3)	
Connectors	RJ45 connector x 2 EtherCAT input, EtherCAT output	
Communication media	Ethernet Category 5e (100BASE-TX) or higher is recommended	
Communication distance	Distance between nodes: 100m max	
Process data	Configurable PDO mapping	
Mailbox (CoE)	Emergency messages, SDO requests, SDO responses and SDO information	
Synchronization	Synchronization in: <ul style="list-style-type: none">Free RunDistributed clocks (DC) DC cycles: 250μs, 500μs, 1ms, 2ms, 4ms	
LED Indicators	L/A IN (Link/Activity IN), L/A OUT (Link/Activity OUT), RUN, ERROR	
CiA402 drive profile	<ul style="list-style-type: none">Cyclic Synchronous Position ModeHoming ModeStandard Touch Probe Function	
I/O signals		
Digital Inputs	Positive Limit, Negative Limit, Home signal, Touch Probe, General purpose input	
Digital Outputs	Holding Brake, General purpose output	
Protection Function		
Protection support	Over voltage, Under voltage, Over load, Over heat, Encoder fault, Over speed, EtherCAT communication,...	
Software		
Communication type	Mini-USB	
Support Function	<ul style="list-style-type: none">Motion monitoring, Status MonitoringManual TuningEdit parametersTrial RunMechanical AnalysisFirmware Update	
Mechanical	XSC-ECAT-ASD04	XSC-ECAT-ASD10
Dimension (W x L x H)	109mm x 126mm x 43mm	109mm x 130mm x 53mm
Casing	Anode Aluminium	
Weight	300 g	400g
Installation	Screw Mounting	
Environment		
Operating temperature	0 ~ 55°C	
Storage temperature	0 ~ 70°C	
Relative humidity	10 ~ 90%RH, Non-condensing	



TERMINAL CONNECTION

Control Power Connector



Model / Manufacturer	Pin No.	Function
TBP021P1W-381-02BE CUI Devices	1	V+
	2	V-

Main Power Connector



Model / Manufacturer	Pin No.	Function
TBP01P1-508-03BE CUI Devices	1	VN
	2	VP
	3	FG

Dynamic Brake Connector



Model / Manufacturer	Pin No.	Function
TBP01P1-508-02BE CUI Devices	1	B1
	2	B2

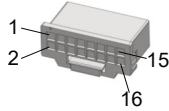
TERMINAL CONNECTION

Motor Connector



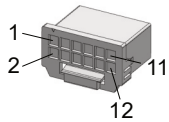
Model / Manufacturer	Pin No.	Function
TBP01P1-508-04BE CUI Devices	1	U
	2	V
	3	W
	4	FG

Encoder Connector



Model / Manufacturer	Pin No.	Function	Pin No.	Function
5016461600 Molex	1	E1-	2	E1+
	3	E2-	4	E2+
	5	E3-	6	E3+
	7	E4-	8	E4+
	9	E5-	10	E5+
	11	E6-	12	E6+
	13	GND	14	PWR
	15	FG	16	RST

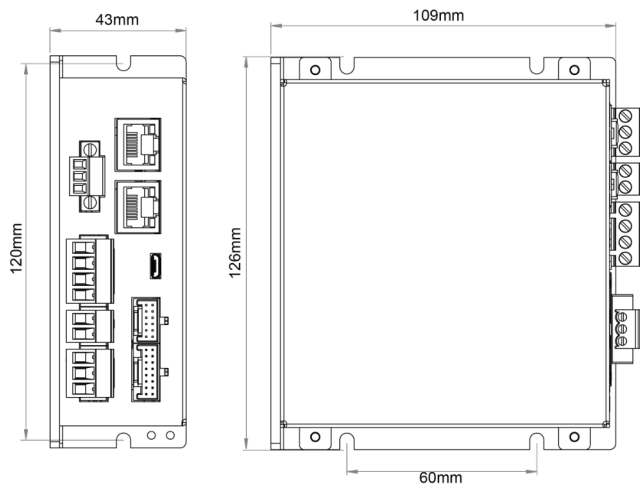
Digital I/O Connector



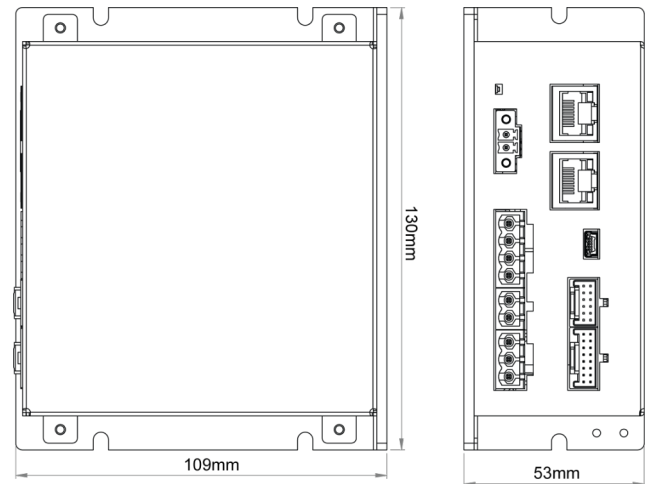
Model / Manufacturer	Pin No.	Function	Pin No.	Function
5016461600 Molex	1	I2	2	I1
	3	O1	4	I3
	5	O2	6	I4
	7	O3	8	I5
	9	O4	10	I6
	11	V+	12	V-

DIMENSIONS

XSC-ECAT-ASD04



XSC-ECAT-ASD10



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