

DSA-25X-Servo

Extended Servo Amplifier of the DSA-25-Servo Series

Standardized, Digital, Compact, Powerful

Another powerful module completes the DSA amplifier product line. With 160 A peak current the **DSA-25X-Servo** offers even more efficiency, more dynamics, and more performance for your applications. It is the best choice for all high power, low voltage brush and brushless drives.

Application Range

- ◆ **Pumps**
Speed and volume control
- ◆ **Electric Screwdrivers**
Torque control
- ◆ **Conveyers**
Velocity control, Positioning
- ◆ **Storage**
Cart positioning
- ◆ **Rigging**
Mechanical stop adjustment
- ◆ **Feeding**
Synchronous component feeding
- ◆ **Winding**
Velocity / torque control of the hub
- ◆ **Dosing**
Injection plunger control
- ◆ **Labeling**
Synchronous label ejection

Did we miss your application?
Please, call us!

We can also offer solutions for multi-axis or complex synchronization applications. zub machine control AG is not just a vendor. We are also your engineering and development partner on demand.



Product Highlights

- ◆ 9 - 60V DC
- ◆ 160 A peak current
- ◆ Compact 4-quadrant controller for DC, EC, and linear motors
- ◆ Current, torque, speed and position control
- ◆ CANopen DS402
Optional: EtherCAT, Profibus, Modbus, RS485, RS232

Standardized

Modern bus interfaces and standardized protocols guarantee a maximum of compatibility and long-term investment protection. CANopen is the standard interface. But there are also versions with EtherCAT, Ethernet TCP/IP, Profibus, Modbus, RS485, and RS232 available on request.

Digital

Full digital configuration means 100% reproducibility of all settings and high transparency of all process data. In practice, this means: Quick configuration of series machines and exact control at runtime.

Compact

The compact full metal housing optimizes heat flow without an additional cooling system. The small front side is very space saving in a cabinet. An easy mounting near to the motor is also possible on the flat side of the module.

Powerful

Dynamics and torque have their origin in the latest MOS-FET technology, which provides up to 1.5 kW continuous and 6 kW peak for brushed or brushless motors.

Optimized for Series

The **DSA-Servo** amplifier line is designed for usage in machines and devices produced in series:

Pluggable tension spring clamps fit best for low-cost assembly using preconfigured cables, but also for quick service tasks without special tools.

Due to the wide supply range and high current ratings, the **DSA-25X-Servo** can be used for different motor power levels, even in battery powered devices. Such a single component strategy lowers your costs for stock holding and increases your flexibility, especially for special demands. Please ask for the best priced 12-month contract on a defined number of DSAs.

High-Power Amplifier DSA-25X-Servo

Modes of Operation

Torque control	Yes ☞ Profile Torque Mode
Velocity control (encoder or hall)	Yes ☞ Velocity Mode
Position control (encoder or hall)	Yes ☞ Profile Position Mode
OEM custom modes	On request

Electrical Data

Electronic supply voltage U _e	9 ... 30 VDC
Current consumption electronic @ U _e =24 V	Typ. 70 mA
Power supply voltage U _p	9 ... 60 VDC
Peak output current	160 A
Continuous output current @ U _p =24V	60 A, ambient temperature 40 °C, PWM frequency 32 kHz
Output voltage	100 % U _p
PWM frequency	25, 32 (standard), 50 kHz
Min. required inductance	200 µH

Controller Cycle Times

Current controller (CURR)	125 µs
Speed controller (SVEL)	250 µs
Speed controller (VEL), positioning controller (POS)	1000, 2000 µs (standard)

Encoder

Type	Incremental
Signals	A, /A, B, /B, Inx, /Inx
Max. frequency per track	500 kHz
Input signal (24 V tolerant)	5 V
Signal type	Differential, open collector, single ended

Hall Sensors

Signals	H1, /H1, H2, /H2, H3, /H3
Max. frequency per track	10 kHz
Input signal (24 V tolerant)	5 V
Signal type	Differential, open collector, single ended

Inputs & Outputs

Digital inputs	6 (0 ... 5)	low: -30 ..5 V / high: 8 .. 30 V
Digital output	2 (0 .. 1)	Continuous output current 0.7 A, resistive, inductive, pulse switching; output voltage: electronic supply voltage U _e
Analog input	1 (0)	±10 V, 12 Bit, differential
Analog input	1 (1)	±10 V, 12 Bit, single ended

Bus Interfaces

CAN-bus (standard)	Max. baud rate 1 Mbit/s DS301, DSP402, CAN specification 2.0B, galvanically isolated
Variants on request	EtherCAT, Ethernet TCP/IP, Profibus, Modbus, RS485, RS232.

Controls

HEX switches	Setting the device node ID
Status LEDs	Power, status, error

Protection Functions

Overvoltage/ low voltage monitor	Yes
Overtemperature	Yes

Mechanical Data

Type of housing	Compact full metal module
Connector type	Spring / screw terminals, panel mounting
Dimensions L x W x H	111 x 100 x 40 mm
Weight	380 g

Temperature Range

Operation / storage	0 ... 70 °C
Humidity (non-condensing)	5 ... 85 %
Protection class	IP20