

# DSA-45-Servo and DSA-45-Servo-HC

## Slim Size and powerful CANopen Servo Amplifier!

**A drive controller for (almost) every application.**

The well-established **DSA** product line offers with the new drive controller **DSA-45-Servo** another powerful amplifier for a wide power range of brush and brushless drives. A supply voltage of 9V up to 60V and up to 50A peak gives maximum flexibility according to the application needs.



### Produkt-Highlights

- ◆ 9 - 60 V DC Leistungsspannung
- ◆ 50 A Spitzenstrom
- ◆ für DC- und EC-Motoren
- ◆ Strom-, Drehzahl-, Positionsregelung
- ◆ CANopen DS402
- Optional: EtherCAT, Profibus, Modbus, RS485, RS232

### Application Range

- ◆ **Pumps**  
Speed and volume control
- ◆ **Electric Screwdrivers**  
Torque control
- ◆ **Conveyers**  
Velocity control
- ◆ **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.

### 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 **DSA-45-Servo** 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 & Light-weight

- ◆ Space-saving assembly in an electrical cabinet through narrow module housing.
- ◆ Mobile applications through low weight and low minimum supply voltage.

### Powerful & Dynamics

A peak current enables quick motor response and high dynamics. The latest MOS-FET technology provides a peak current up to 50 A. The continuous current depends on the load as well as on the respective conditions of the environment.

The high-current version **DSA-45-Servo-HC** with an additional heatsink allows higher continuous current.

### Optimized for Series

The DSA servo amplifier line is designed for usage in machines and devices produced in series:

Due to the wide supply range of 9 up to 60VDC and the high peak current, the **DSA** can be used for different motor power levels. 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 DSA amplifiers.

## CANopen Servo Amplifier DSA-45-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

### Electrical Data

Supply voltage: Logic $U_e$	9 .. 30 V
Power consumption: Logic @ $U_e = 24$ V	typ. 60 mA
Supply voltage: Power stage $U_p$	9 .. 60 V
Peak output current	50 A
Efficiency	100 % $U_p$
PWM frequency	25, 32, 50 kHz (32 kHz = standard)
Min. required inductance $L_{Motor}$	200 $\mu$ H

### 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

### Digital Inputs

Number	8 (DIN 0..7)
Low threshold	-30 .. 5 V
High threshold	8 .. 30 V

### Digital Outputs

Number	2 (DOUT 0..1)
Continuous output current	2.5 A
Load	resistive, inductive
Output voltage	supply voltage electronics $U_e$
Signal type	pulse-switching

### Analog Inputs

Number / signal type	1 (AIN 0) / $\pm 10$ V, 12 Bit, differential
Number / signal type	1 (AIN1) / $\pm 10$ V, 12 Bit, single ended

### CAN-Bus

Protocol	DS301
Device profile	DS402
Max. baud rate	1 Mbit/s
CAN Specification	2.0B
Galvanic isolation	no

### Mechanical Data

Type of housing	Hat rail module
Dimensions L x W x H (HC Version)	110 x 22.5 (40) x 77 mm
Weight (HC Version)	110 (310) g

### Environment

Protection class	IP20
Temperature range	0 ... 70 °C
Humidity (noncondensing)	5 ... 85 %

### Part numbers

DSA-45-Servo	AN001501
DSA-45-Servo-HC	AN001558

### Pin assignment:

