

# S700 Servo Drives

## Universal with Optional Safety Functions

The S700 range of servo drives has been designed for universal use with synchronous servo motors, asynchronous motors, DC motors, HF motors, and rotary and linear direct drives. The S700 offers a function for suppressing cogging torques within defined traverse distances. This function has been specifically designed for applications with the toughest synchronism requirements. Even linear motors can be operated at extremely low speeds with a high degree of synchronous accuracy. For all application options, the DriveGUI setup software offers a wide range of tools for easy start-up.



Gearheads



AKM™ Servo Motors



AKM™ Washdown Food



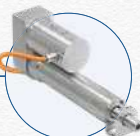
AKMH™ Hygienic Stainless Steel Servo Motors



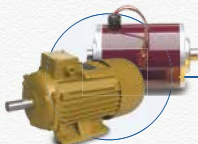
Cartridge DDR Rotary Motor Drives™



ICH Linear Direct Drives



ERD Linear Actuators



Asynchronous Motors,\*  
DC Motors\*



HF Motors\*



Series-produced bus options: **CANopen** **EtherCAT** **RS232**

Option/expansion card:



\*Third-party motor types

S700 series digital servo drives are available in rated current options of 1.5 A, 3 A, 6 A, 12 A, 24 A, 48 A, and 72 A. Customers can benefit from a consistent servo concept from a single source, which enables time and cost savings in project development, installation, and start-up. The finely staged scaling of the drive powers allow optimum adjustment to the requirements of each individual axis in the system, resulting in outstanding overall machine performance.

## General Specifications

Rated data	DIM	S701	S703	S706	S712	S712S*	S724	S724S*	S748	S772
Rated line voltage	V AC	1 x 110 V to 230 V, 3 x 208 V -10% to 3 x 480 V +10%							3 x 208 V to 3 x 480 V	
Rated line power for S1 operation	kVA	1.1	2.2	4.5	9	9	18	18	35	50
Auxiliary supply	V DC	24								
Rated DC-link voltage	V DC	290 to 675								
Rated output current										
At 1 x 110 V	A <sub>rms</sub>	1.5	3	6	7	7	10	10	It is also referred to as Commutation Alignment and Pole Locking.	It is also referred to as Commutation Alignment and Pole Locking.
At 3 x 110 V	A <sub>rms</sub>	2.5	5	6	12	12	24	24	It is also referred to as Commutation Alignment and Pole Locking.	It is also referred to as Commutation Alignment and Pole Locking.
At 1 x 230 V	A <sub>rms</sub>	1.5	3	6	8	8	11	11	It is also referred to as Commutation Alignment and Pole Locking.	It is also referred to as Commutation Alignment and Pole Locking.
At 3 x 230 V	A <sub>rms</sub>	2	4	6	12	12	24	24	48	72
At 3 x 400 V	A <sub>rms</sub>	1.5	3	6	12	12	24	24	48	72
At 3 x 480 V	A <sub>rms</sub>	1.5	3	6	12	12	24	24	48	72
Peak output current	A <sub>rms</sub>	4.5	9	18	24	30	48	72	96	140

\* Higher peak current



S701 - 712



S724



S748/772

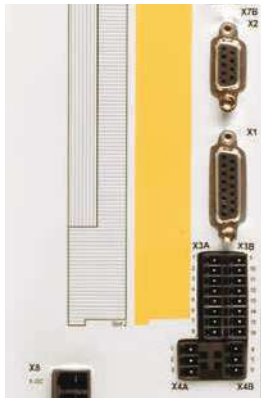
## Dimensions (mm)

	DIM	S701	S703	S706	S712	S712S	S724	S724S	S748	S772
(H) Height incl. fan	mm	345						348	385	
(W) Width	mm	70						100	190	
(D) Depth incl. connector	mm	285							285	

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## Features

The S700 can read data from a wide range of feedback systems and evaluate three different systems in parallel. This ensures a high level of flexibility where integration the S700 into various applications is concerned. Control without a feedback system is also supported, e.g. in the case of asynchronous motors.



2 to 36-pin resolvers

Incremental encoder (AquadB) 24 V

Incremental encoder (AquadB) 24 V + hall-effect sensor

Pulse / direction, 24 V

Optional: SSI absolute encoder pulse / direction 5 V

SinCos encoder with BiSS

SinCos encoder with EnDat 2.2, EnDat 2.1

SinCos encoder with HIPERFACE

SinCos encoder without data track

SinCos encoder with hall-effect sensors

Hall-effect sensor

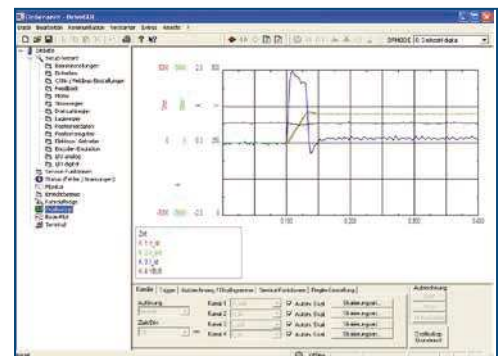
Digital Resolver SFD3 with HIPERFACE DSL

Incremental encoder (AquadB) 5 V

Incremental encoder (AquadB) 5 V + hall-effect sensor

## Simple Configuration with DriveGUI Setup Software

With the graphic-based DriveGUI setup tool, you have access to all the S700 functions and parameters. You can therefore quickly configure all S700 interfaces, select all connected devices (e.g. motor type, feedback system, fieldbus) and the autotuning functions can be launched. The four-channel oscilloscope and Bode plot function ensure optimum display of the autotuning results.



## Integrated Macro Programming

The Macro Language forms part of the S700 firmware and enables independent, single-axis programmable positioning. Missing functions in the standard amplifier firmware can be programmed with IEC 61131 structured text. The MacroStar development tool supports the quick programming of functions with integrated variables and command catalogs.

- 62.5  $\mu$ s / 250  $\mu$ s / 1 ms / 4 ms / 16 ms / IDLE / IRQ
- 128 kByte code memory
- 400 simple instructions every 62.5  $\mu$ s
- CAN objects for multi-axis control

