



# AC SERVO DRIVES SIGMA-5 SERIES

EN

DE

ES

FR

IT



Overview  
Overview  
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Overview

# SIGMA-5

# 5 REASONS

## 1 Outstanding performance

Speed Loop Bandwidth of 1.6 kHz

▶ Shortens the settling time, reduces the positioning time, higher throughput

Overload 350% for 3 – 5 sec

▶ High peak torque, fast acceleration, no amplifier oversizing

Ambient Temperature 0 – 55 °C without derating

▶ No air conditioning, reduced cooling

High encoder resolution:

20 bit => 1.048.576 information per revolution

▶ Highest positioning accuracy, better product quality, less waste

## 2 Space saving

Reduced overall package size

▶ Less mounting space, more amplifiers in a smaller cabinet

## 3 Proven Quality

More than 8.000.000 servo systems in the field

▶ Improved machine reliability, reduced service and maintenance costs, less standstill time

## 4 Easy Tuning

Advanced Autotuning, One Parameter Tuning

▶ Faster commissioning, for 80% of applications no tuning necessary

Excellent anti vibration control

▶ Simpler mechanics with less weight, higher machine production, less energy consumption

## 5 Safety Features: SIL2 STO on board

Advanced Functional Safety SS1, SS2, SLS

▶ Meets new Machinery Directive, maintenance and commissioning during machine operates, less external components

## Comprehensive Range

### Rotary Servo Motors

- ▶ 5 different rotary motor series in low and medium inertia
- ▶ 200 V class, 50 W to 1.5 kW, 0.5 Nm to 14.3 Nm
- ▶ 400 V class, 200 W to 15 kW, 5.8 Nm to 224 Nm
- ▶ Direct Drive Motors, 200 V class, 6 Nm to 600 Nm
- ▶ Encoder electronic nameplate
- ▶ Motor vibration resistance 5 G
- ▶ Incremental/absolute encoder



### Servo Amplifiers

- ▶ 200 V class, 50 W to 1.5 kW
- ▶ 400 V class, 500 W to 15 kW
- ▶ Analog/Pulse, Mechatrolink-2 embedded, Mechatrolink-3 embedded
- ▶ Safety STO on board
- ▶ Feedback: Encoder, EnDat, Hiperface, SinCos

### Optional:

- ▶ Safety Module with STO, SS1, SS2 and SLS
- ▶ CANopen, EtherCAT, Profinet, POWERLINK, Indexer (point-to-point)
- ▶ MP2600iec (1.5 axis controller) IEC 61131-3 programming with unmatched scalability and modularity

### Linear Servo Motors

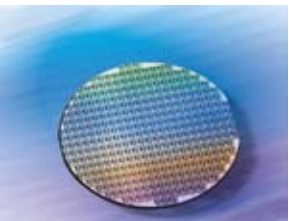
- ▶ 3 different linear motor series
- ▶ 200 V/400 V class, iron core, from 86 N to 5400 N peak force
- ▶ 200 V class, iron less, from 40 N to 3000 N peak force
- ▶ 400 V class, iron core with attraction cancellation, from 600 N to 7500 N peak force
- ▶ Incremental/absolute linear scale



# Best in Class Servo Drives

The Sigma-5 servo system fits in motion applications demanding high dynamic and accuracy, fast positioning and perfect multi-axes synchronisation

- ▶ Wood
- ▶ Printing
- ▶ Glass
- ▶ Converting
- ▶ Textile
- ▶ Electronic assembling
- ▶ Packaging
- ▶ Pick and Place
- ▶ Semiconductor
- ▶ Material Handling



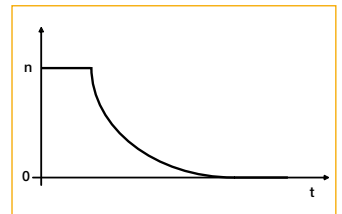
## Functional Safety

## Unrivalled System Integration

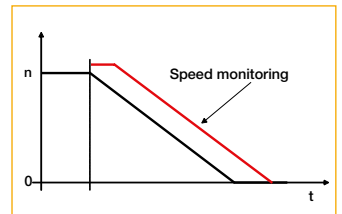


\* coming in the second half of 2011

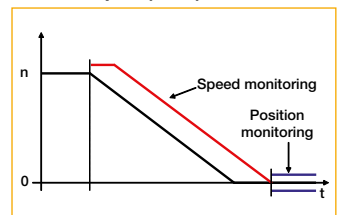
### Safe Torque Off (STO)



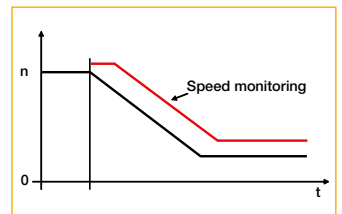
### Safe Stop 1 (SS1)



### Safe Stop 2 (SS2)



### Safely Limited Speed (SLS)





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International Standards



Safety Standards

Safety Stop

RoHS Directive

RoHS Directive Stands for the EU directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment



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