

**SIEMENS**

*Ingenuity for life*

Versatile.  
Seamless.  
Safety Integrated.

SIMATIC MICRO-DRIVE

[siemens.com/micro-drive](https://www.siemens.com/micro-drive)

# First-class servo drive in the protective extra-low voltage range

The requirements relating to motion control tasks in the automation environment are continuously increasing and becoming more diverse and complex. Digitalization is creating new solutions irrespective of the sector or the specific application.

## Fit for digitalization with SIMATIC MICRO-DRIVE

The SIMATIC MICRO-DRIVE servo drive system allows you to make a perfect entry into the world of digitalization. Based on Totally Integrated Automation (TIA), converters and motors are completely integrated into the Siemens automation environment, and can be simply selected and configured using the TIA Selection Tool and the TIA Portal. A wide range of tools for the complete machine building cycle ensures efficient engineering and fast commissioning. Machine data is made available through MindSphere, the cloud-based, open IoT operating system from Siemens.

## Well conceived, flexible and fit for the future

SIMATIC MICRO-DRIVE is an extremely versatile, seamless and safety integrated servo drive system that covers a wide range of applications in the protective extra-low voltage range. It comprises servo converter as well as motors and plug-in cables that can be flexibly used. The appropriate control systems from the SIMATIC portfolio optimally round off the motion control functions of this future-proof solution.



## Can be combined with motors and plug-in cables from selected Siemens product partners

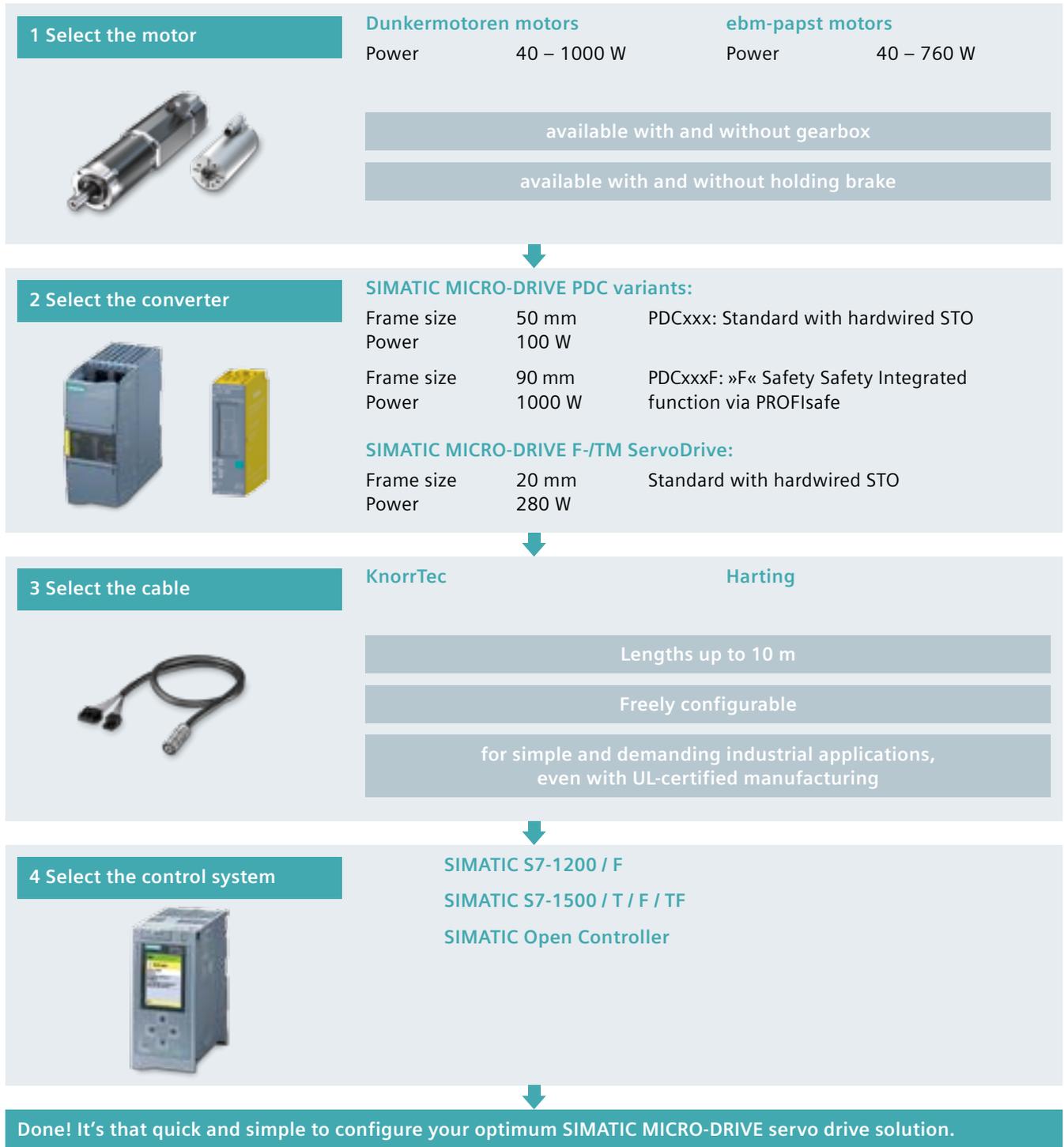
The SIMATIC MICRO-DRIVE servo drive system is compatible with individual and supplementary motors (Dunkermotoren, ebm-papst) and plug-in cables (Harting, KnorrTec) from well-established Siemens product partners. You can optimally master all your drive system requirements. This allows you to select the optimum combination of suitable products from well-proven product partners to address your specific application requirements.

## Strong in classic and innovative applications

SIMATIC MICRO-DRIVE proves itself as ideal drive system over a wide range of applications. The system is attractive when it comes to precise positioning tasks in manufacturing and production environments – as well as in innovative application domains. Examples include drives for storage and retrieval machine shuttles and high bay racking systems as well as medical applications such as safely and reliably moving MRT examination tables and precisely and automatically aligning ceiling-mounted devices in radiographic applications.

# One system, many possibilities

The SIMATIC MICRO-DRIVE servo drive system can be simply combined with numerous components to create a customized solution. The TIA Selection Tool helps you when making the optimum selection: [siemens.com/tia-portal/selection-tool](http://siemens.com/tia-portal/selection-tool)



# Technical data

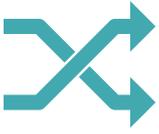
Type	Servo drive system for extra low voltage
Applications	AGVs, shuttles, conveyor belts, actuator drives, medical systems
Power range	100 W – 1000 W*
Torque range	0.1 Nm – 100 Nm
Motor supply voltage	24 – 48 V DC
Communication	PROFINET with PROFIdrive and PROFIsafe
Safety functions**	STO, SS1, SLT, SLS, SSM
Application Engineering Update	TIA Selection Tool TIA Portal with HSP for SIMATIC MICRO-DRIVE Siemens Automation Tool (SAT)
EMC filter	Integrated EN 61800-3:C1 = EN 55011:B1 (residential areas) EN 61800-3:C2 = EN 55011:A1 (residential/industrial areas)
Standards	CE/UL-certified/Marine/RoHS*** <b>Performance Level:</b> PL d according to IEC ISO 13849-1 <b>Safety Integrity Level:</b> SIL2 according to IEC 61508-1 <b>Safety Category:</b> Cat. 3 acc. to IEC ISO 13849-1
Motor connection system	M12 connector – encoder signals and power cable connected in one plug-in cable up to 200 W (Dunkermotoren) Bayonet connector – encoder signals and power cable in one plug-in cable up to 400 W (ebm-papst)
Typical controllers	SIMATIC S7-1200 / F, S7-1500 / T / F / TF, SIMATIC Open Controller
Packaging technology	IP20 housing, no fan, convection cooling, mounted on 35-mm rails or mounting panels for PDC: 50-mm- to 90-mm-wide for ET200SP as F-/TM Modul: wide 20 mm with Base Unit
Motor versions	<ul style="list-style-type: none"> <li>• EC motors are supported</li> <li>• Integrated Hall sensors and IQ encoders</li> <li>• Optional as planetary gearbox or with holding brake</li> <li>• Additional gearbox types and connection systems are available in the Product Partner portfolio</li> </ul>

\* Being prepared

\*\* for PDC F-variant

\*\*\* Certifications will be released at a later date

# Leverage the benefits



## Versatile

- Flexible system components that can be combined
- Wide range of certificates (UL, CE, etc.) for global system use
- The servo drive system can be simply commissioned as a result of the IQ encoder technology
- PDC braking chopper can be deactivated, allowing energy recovery for battery operation
- Planning and direct transfer of all operating modes to the SIMATIC control system so that data can be sent to Cloud platforms via MindConnect



## Seamless

- For motor power ratings of 100 and 1000 watts
- Motor supply voltage in the protective extra-low voltage range from 24 to 48 V DC
- Operates perfectly with SIMATIC controllers
- Fast and secure communication via PROFINET IRT with PROFIdrive and PROFIsafe
- Seamless range of tools based on Totally Integrated Automation (TIA) – from selection and dimensioning using the TIA Selection Tool up to commissioning and service in the TIA Portal



## Safety Integrated

- Higher-level, standard safety concepts can be drawn up with maximum safety for man and machine
- PDC: Safety Integrated functions STO, SS1, SLT, SLS, SSM
- PDC: New SLT function (Safely Limited Torque): Safely Limited Torque monitors the motor current and motor torque in operation
- F-TM ServoDrive: STO hardwired
- All Safety Integrated functions are simply commissioned using the TIA Portal and control using a SIMATIC controller via PROFIsafe

## For all applications



### Moving

Energy-efficient and rugged solutions for basic conveyor technology with roller or chain conveyors, for hoisting gear and elevators – as well as for storage and retrieval machines that demand a high dynamic performance – and always with Safety Integrated on board.



### Processing

The ideal solution for continuous processes demanding high speed and torque precision, for instance, for extruders, centrifuges, agitators and all types of production machines – motion control, isochronous communication and Safety Integrated.



### Positioning

When high dynamic performance and precision are demanded: The precise positioning of individual axes allows several axes to be interpolated in a coordinated fashion – for example, as required in complex robotic applications.

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