

**NEW: MOVI-C®**  
**Modular automation system**

The future of automation –  
in central and decentralized installations



**NEW:**  
**MOVI-C®, the modular  
automation system**  
for all-in-one solutions from a single source

MOVI-C® is the all-in-one solution for automation tasks. Whether you want to implement standards-based single-axis or multi-axis applications, or customized and/or particularly complex motion control applications or automation solutions, MOVI-C® can help you do all that and give you the scope to achieve optimum automation for new projects.

**Your benefits:** MOVI-C® is the all-in-one modular automation system from SEW-EURODRIVE. This end-to-end solution from a single manufacturer covers all your needs – planning, commissioning, operation and diagnostics software, electronic control and monitoring devices, mechanical drives and gearmotors. There is only one place you have to go to for all the automation components you need. Naturally, all components can be fully integrated into all automation concepts, fieldbus topologies and network standards. You have complete freedom when it comes to the communication topology, as MOVI-C® harnesses all communication advantages – from PROFIBUS and Industrial Ethernet to Modbus and, in the future, OPC UA.

**MOVI-C® offers automation and a whole range of benefits from a single source – specifically, a company that is both an automation specialist and a manufacturer.**

The four components are:

1. Engineering software
2. Control technology
3. Central and decentralized inverter technology
4. Drive technology

Together, these components form one complete, end-to-end modular automation system made up of devices and field units that you can combine to suit your requirements and bus topology perfectly.



[www.sew-eurodrive.de/en/movi-c](http://www.sew-eurodrive.de/en/movi-c)



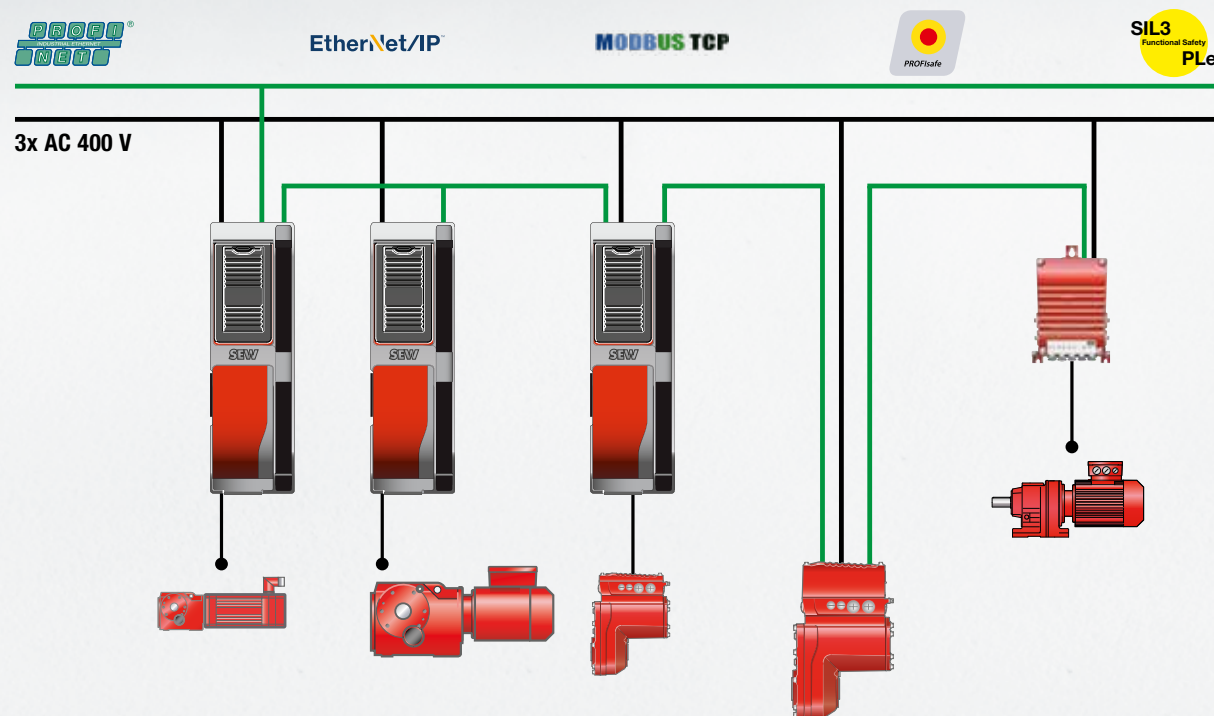
## MOVI-C®, the all-rounder for any topology

### 1 Topology for single-axis automation

The MOVIDRIVE® technology application inverter and the MOVIGEAR® performance and MOVIMOT® flexible mechatronic drive system are connected directly to the higher-level master via fieldbus interfaces. Predefined MOVIKIT® software modules ensure the drive function can be quickly and reliably implemented using graphical editors. Each axis

is controlled individually via the network. Data is stored via a data exchange function on a memory card in the application inverters and in the decentralized units.

**Typical application: Material transportation.**

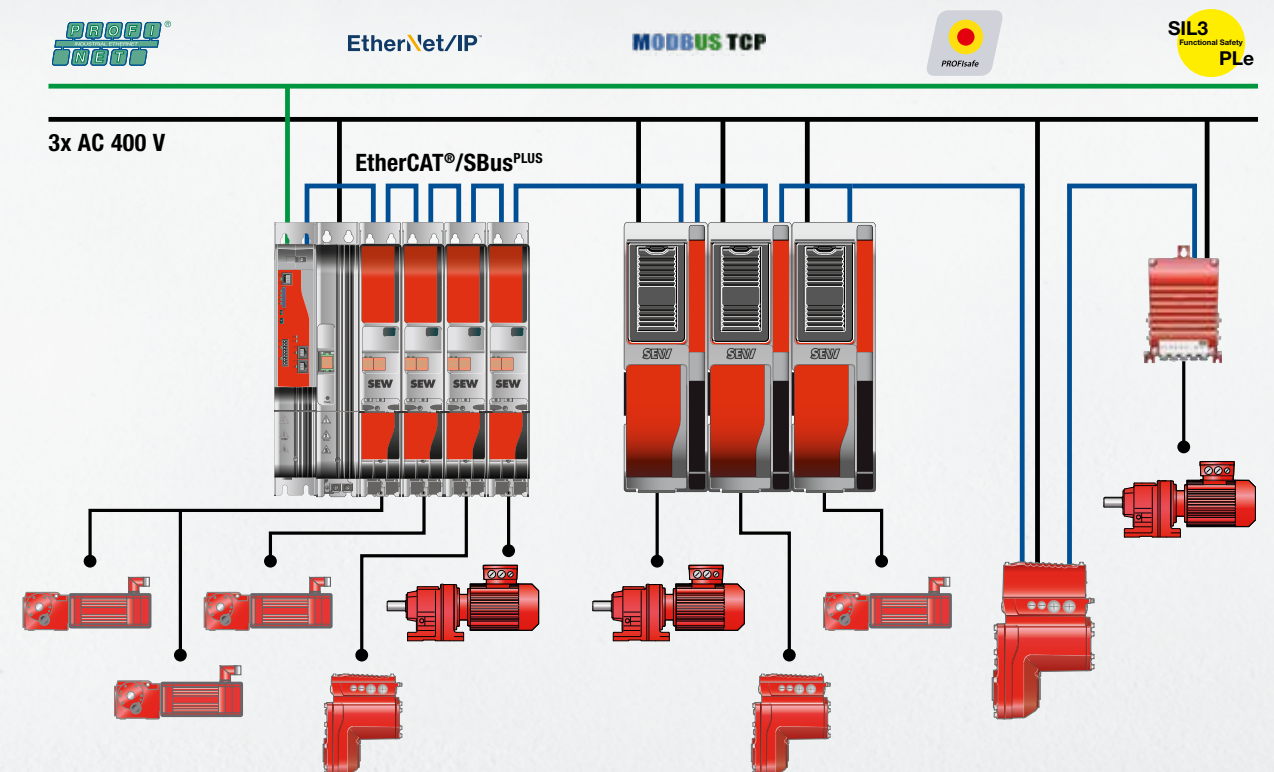


### 2 Topology for motion control

The MOVIDRIVE® modular and MOVIDRIVE® system application inverters and decentralized peripherals such as the MOVIGEAR® performance mechatronic drive system and MOVIMOT® flexible have a real-time-capable connection to the MOVI-C® CONTROLLER via EtherCAT®/SBusPLUS. The MOVI-C® CONTROLLER receives setpoints for single-axis motions or coordinated motions from the higher-level master via the fieldbus. The MOVI-C® CONTROLLER determines the setpoints for the connected application inverters, thereby taking care of tasks such as phase-synchronous operation, electronic cam function or kinematics. Predefined

MOVIKIT® software modules are used to implement the motion control drive function quickly and reliably with the aid of graphical editors. Thanks to more than 50 kinematic models, a large number of mechanical configurations are already covered. New functions for kinematic models can be custom-made by SEW-EURODRIVE. Data is stored via a data exchange function on a memory card in the MOVI-C® CONTROLLER.

**Typical application: Multiple column hoists, tripod mechanics, robots, including auxiliary axes.**



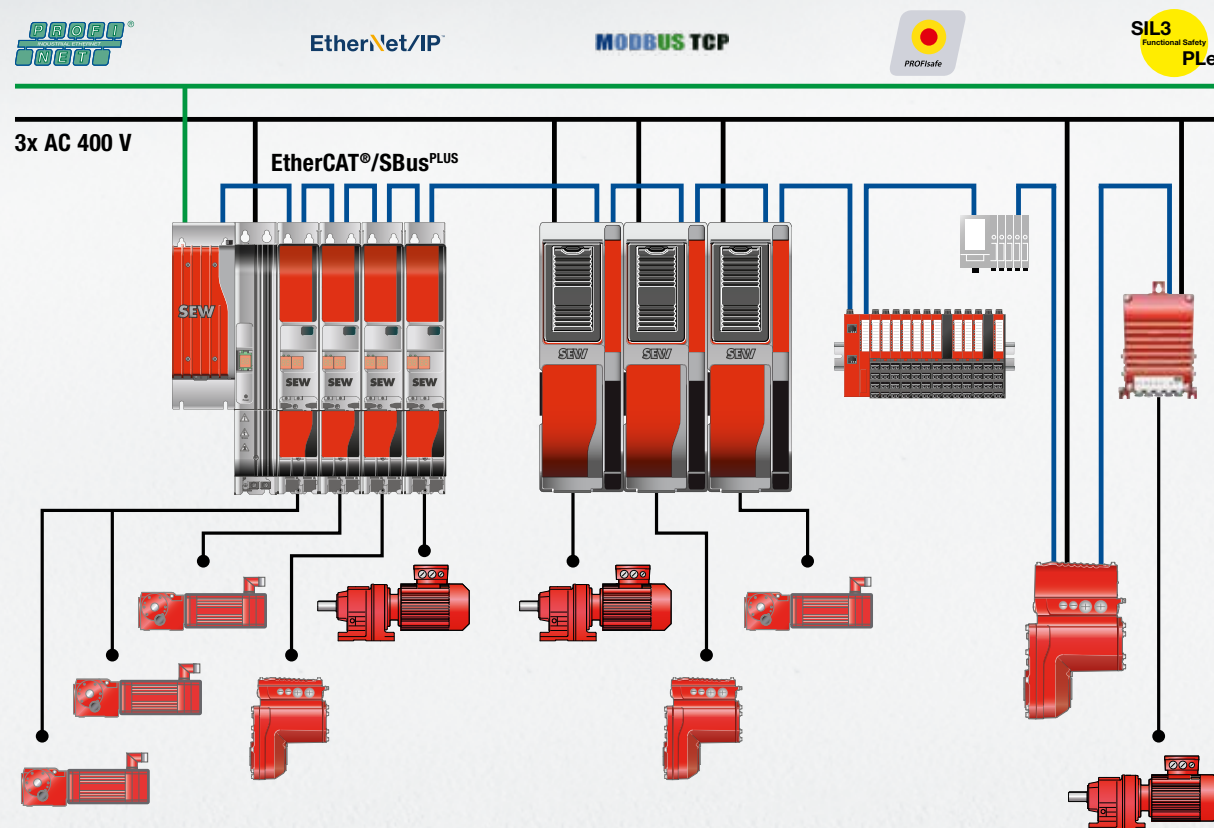


### 3 Topology for module automation

All drive functions of the motion control topology are available in the module automation topology. In addition to the graphical editors for the drive functions, automation tasks associated with the higher-level master controller can also be implemented in part or in full in a straightforward and flexible approach using the programming system (IEC 61131) in the MOVI-C® CONTROLLER. To support automation, any EtherCAT® devices

can be integrated centrally or decentralized in addition to the MOVI-C® application inverters and drives.

**Typical application:**  
**Packaging machines, processing machines,**  
**complex transportation tasks.**

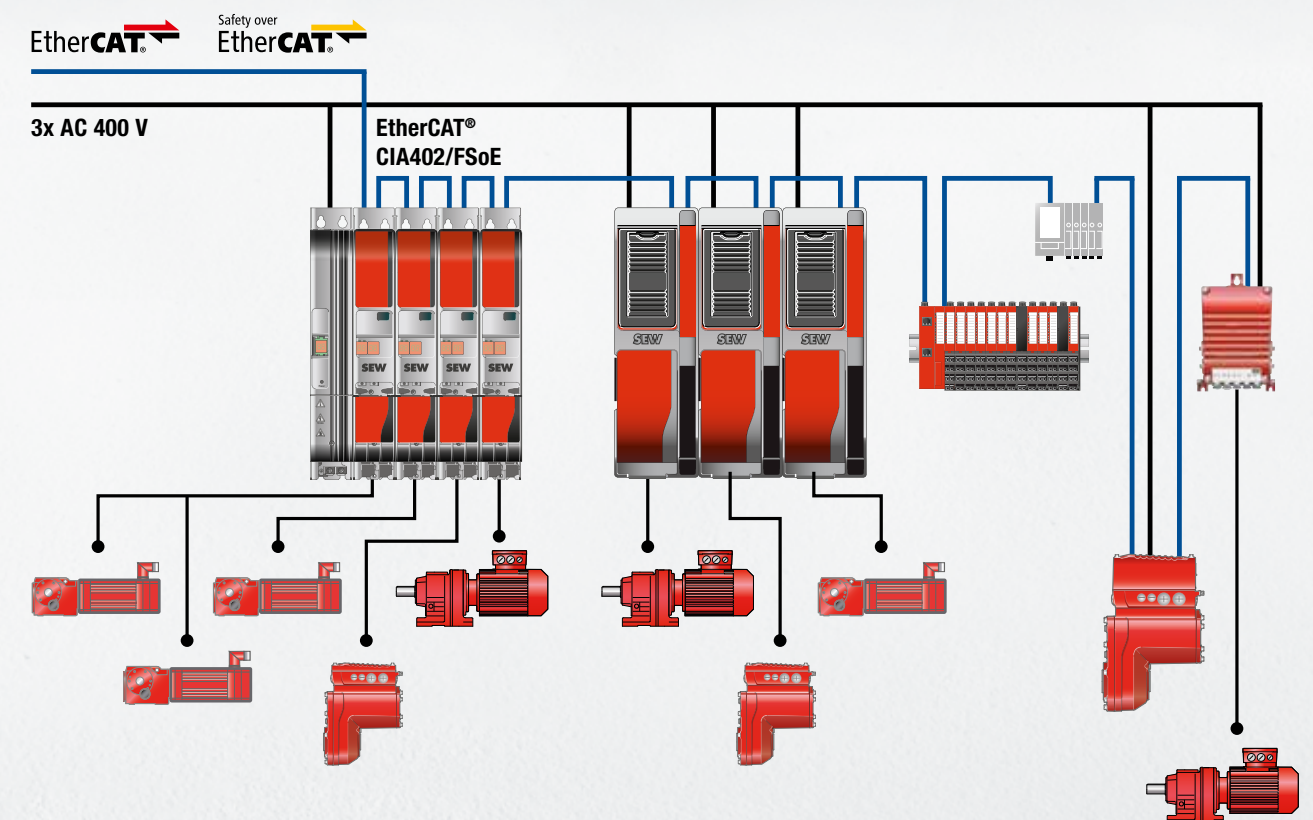


### 4 Topology for EtherCAT® motion slave

The CiA402 profile for controlling inverters has established itself in plants with highly specific motion control applications that are calculated in the higher-level master controller. To support control via CiA402, the application inverter MOVIDRIVE® modular, MOVIDRIVE® system and the mechatronic drive system MOVIGEAR® performance and MOVIMOT® flexible can be connected directly to the controller via the integrated EtherCAT® interface. This means integration into the higher-level controller can be achieved

particularly quickly and easily, and does not require extensive conversion work. More sophisticated safety functions can be triggered via FSoE directly from the safety control system.

**Typical application:**  
**Series machines with numerous axes,**  
**kinematic calculation in the higher-level PLC.**



In all topologies, the higher-level master controller uses safe communication to activate safety functions that are executed in the MOVISAFE® CS..A safety card in the application inverter and also in the mechatronic drive system MOVIGEAR® performance and in the MOVIMOT® flexible.



## Engineering software: MOVISUITE®

Save time and money

Is there one software package that can handle every aspect of machine and plant automation? A software that can be used for planning, commissioning, operation and diagnostics and also speed things up and reduce costs for users while improving usability, even during the software engineering process? Yes there is – MOVISUITE® from SEW-EURODRIVE.

### Allow us to introduce the multi-talented MOVISUITE®

MOVISUITE® sets new standards for engineering software in drive technology. In addition to marked savings in terms of time and cost thanks to accelerated engineering, the software is especially convincing for its unique usability: Planung, startup, operation and diagnostics are quicker and easier than before.

### Features of MOVISUITE® standard

- End-to-end engineering for all components in the MOVI-C® modular automation system, from inverters to customer-specific drive technology
- Rapid engineering thanks to unique usability and optimized workflows
- User-friendly operation with a modern look and feel, and state-of-the-art GUI technology
- Simple accessibility thanks to homogenized engineering interfaces
- Commissioning and parameter setting of the MOVIDRIVE® modular and system application inverters
- State-of-the-art interactive design ensures users can familiarize themselves with the software quickly and easily
- Optimized workflows for professional and occasional users
- Intuitive handling of inverter functions such as manual mode and drive train commissioning
- Configuration and creation of IEC programs for MOVI-C® CONTROLLER
- Parameter setting and diagnostics of the MOVIKIT® modules
- Efficient data management
- Integrated project management
- Network scan and device display
- Scope function
- Electronic catalog for SEW-EURODRIVE products
- Extensive context-sensitive help for users



# MOVI-C® CONTROLLER

## Cut complexity

The MOVI-C® CONTROLLER provides added flexibility for parameterization and reduces programming outlay. It's all thanks to the ready-standardized MOVIKIT® modules and MOVIRUN® software platform – and the end results are lower costs and less complexity.

### Enjoy more flexibility

Our control technology and software also give you the option of writing your own programming. Would you prefer to create your own bespoke programs for your application, such as PLC functions or specific rules, so you can stand out from your competitors? If so, then our software platform has exactly what you need.



The control technology is available in four different performance classes – power, progressive, advanced and standard. You also benefit from simple data storage and an auto-reload function for axis replacement. MOVI-C® CONTROLLER units can be connected to all standard control systems.

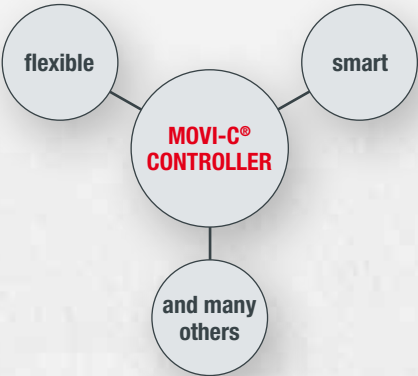
Hardware	Performance class MOVI-C® CONTROLLER standard	Performance class MOVI-C® CONTROLLER advanced	Performance class MOVI-C® CONTROLLER progressive	Performance class MOVI-C® CONTROLLER power
Features and equipment	<ul style="list-style-type: none"><li>– Straightforward and centralized data management</li><li>– Can be connected to all standard control systems</li><li>– High performance and user-friendly</li><li>– Auto reload function for axis replacement</li><li>– Startup – MOVIRUN® software platform – module for parameterization and programming</li><li>– Operation – MOVIKIT® modular software system with function blocks for easy speed control, positioning, robotics, electronic cam, mechanically coupled axes, and much more besides.</li><li>– Routing from PROFIsafe to the axis modules</li><li>– 1x ETHERNET (10/100 BaseT) for engineering or TCP/IP and UDP via IEC 61131-3</li><li>– 1x EtherCAT®/SBus<sup>PLUS</sup> Master</li></ul>			
	<ul style="list-style-type: none"><li>– 1x CAN, non-isolated</li><li>– PROFINET slave, EtherNet/IP™ slave, Modbus TCP/IP slave</li><li>– Status display for PLC and fieldbus</li><li>– SD memory card</li><li>– ≤ 2 interpolating axes</li><li>– ≤ 6 auxiliary axes</li></ul>	<ul style="list-style-type: none"><li>– 2x CAN, 1 electrically isolated</li><li>– 1x RS485</li><li>– PROFINET slave, EtherNet/IP™ slave, Modbus TCP/IP slave</li><li>– Status display for PLC and fieldbus</li><li>– Optional: installation in a master module, can be added to MOVIDRIVE® modular</li><li>– SD memory card</li><li>– ≤ 8 interpolating axes</li><li>– ≤ 8 auxiliary axes</li></ul>	<ul style="list-style-type: none"><li>– PROFINET slave, EtherNet/IP™ slave, Modbus TCP/IP slave</li><li>– CFast memory card 2 GB</li><li>– ≤ 16 interpolating axes</li><li>– ≤ 16 auxiliary axes</li><li>– PC-based</li></ul>	<ul style="list-style-type: none"><li>– PROFINET slave, EtherNet/IP™ slave, Modbus TCP/IP slave</li><li>– 7x USB 2.0</li><li>– CFast memory card 2 GB</li><li>– ≤ 32 interpolating axes</li><li>– ≤ 32 auxiliary axes</li><li>– Optional: 2nd Windows 7 Embedded operating system connected using cutting-edge Hypervisor technology for integrated visualization, for example</li><li>– PC-based</li></ul>

Control technology software:  
MOVIRUN® and MOVIKIT®  
Control applications more easily

Software	MOVIRUN® The software platform for MOVI-C® CONTROLLER	MOVIKIT® The software modules for MOVI-C® CONTROLLER
Features and equipment	<b>Startup with MOVIRUN® flexible,</b> the flexible and open platform: <ul style="list-style-type: none"><li>– Automation with MOVI-C® and third-party components</li><li>– Interpolated operating modes for demanding motion control applications</li><li>– State-of-the-art programming system (IEC 61131)</li><li>– Ready-made MOVIKIT® software modules can be integrated into the user program</li></ul>	<b>Operation with MOVIKIT®</b> For everything from simple drive functions to challenging motion control functions <ul style="list-style-type: none"><li>– Graphical configuration and diagnostics</li><li>– Available for MOVIDRIVE® technology, MOVIRUN® smart as a purely parameterizable solution with a fieldbus connection, and MOVIRUN® flexible for integration into the IEC program with a user-friendly IEC interface</li></ul>
	<b>MOVIRUN® smart,</b> the intelligent, purely parameterizable motion control platform <ul style="list-style-type: none"><li>– Parameter setting instead of programming</li><li>– Ready-made MOVIKIT® software modules can be easily connected to higher-level controllers using the defined fieldbus interface</li><li>– No additional programming work required</li><li>– Guaranteed, documented functional performance</li></ul>	<b>Modules:</b> <ul style="list-style-type: none"><li>– MOVIKIT® Velocity, Positioning</li><li>– MOVIKIT® MultiMotion, MultiMotion Camming</li><li>– MOVIKIT® MultiAxisController</li><li>– MOVIKIT® Robotics</li><li>– And many more</li></ul>
Advantages	<ul style="list-style-type: none"><li>– High functionality and user-friendly graphical interface</li><li>– Choose between parameter setting and programming</li><li>– Parameter setting instead of programming:<ul style="list-style-type: none"><li>- Speed up commissioning by using standardized software modules</li><li>- Only parameters that are relevant to the application need to be entered</li><li>- Guided parameter setting instead of complex programming</li><li>- No drawn-out process of familiarization, which means fast project planning and commissioning</li></ul></li></ul>	



MOVIRUN®  
Software platform



MOVIKIT®  
software modules





Inverter technology:  
MOVIDRIVE®  
Control any motor

The MOVIDRIVE® application inverters control and monitor synchronous, asynchronous and linear motors (linear direct drives), with and without encoders. They are available as a modular multi-axis system with single-axis and double-axis modules up to a rated current of 180 A, and as a single-axis application inverter with power supply connection up to a rated output of 315 kW. Even the basic unit incorporates the safety function STO in PLe.

Safety option cards extend functionality with more than 15 safety functions. In addition to extremely straightforward initial startup and exceptionally energy-efficient operation, applications can also be quickly and easily implemented using MOVIKIT® modules. The advantage is that you get everything from a single source.



	MOVIDRIVE® modular	MOVIDRIVE® system	MOVIDRIVE® technology
Features and equipment	<b>A frequency inverter family for all motors – they control:</b> <ul style="list-style-type: none"><li>– Synchronous and asynchronous AC motors with/without encoders as well as</li><li>– Asynchronous motors with LSPM technology and</li><li>– Synchronous and asynchronous linear motors</li></ul> Available as <ul style="list-style-type: none"><li>– Modular multi-axis system with single-axis and double-axis modules that have a rated current of up to 180 A and</li><li>– Single-axis application inverters with power supply connection up to a rated output of 315 kW</li></ul> <b>Practical benefits include</b> <ul style="list-style-type: none"><li>– Extremely straightforward commissioning using the electronic nameplate or electronic catalog</li><li>– Simple startup of unrecognized motors using the calibration function</li><li>– Energy-saving functions for partial-load operation and standby mode</li><li>– A simple and speedy solution – ready-made MOVIKIT® software modules are available for a whole range of applications</li></ul>		
	<b>Design-independent configuration:</b> <ul style="list-style-type: none"><li>– Multi-encoder input in basic unit</li><li>– Control of torque, rotational speed and position</li><li>– EtherCAT®/SBus<sup>PLUS</sup> in the basic unit</li><li>– State-of-the-art control modes for optimum control performance</li><li>– Suitable for use in TN, TT and IT networks</li><li>– IP20 protection in all sizes</li><li>– Suitable for extended storage without additional measures</li><li>– DC link connection for connecting to DC or regenerative power supply</li><li>– Simple commissioning using MOVIKIT® software modules</li><li>– Expansion for inputs and outputs, regenerative power supply, braking resistors, line choke, line filter, output choke, output filter</li></ul>		
	Compact multi-axis system comprising power supply modules, regenerative power supply modules, single-axis and double-axis modules: <ul style="list-style-type: none"><li>– Up to 30 drives to one power supply module</li><li>– Up to 800 m overall motor cable length</li><li>– Control via MOVI-C® CONTROLLER</li><li>– Particularly compact design</li><li>– Master module for compact integration of the MOVI-C® CONTROLLER</li><li>– Available as variant with EtherCAT® CiA402 profile</li></ul>	Single-axis application inverter with its own power supply connection: <ul style="list-style-type: none"><li>– Perfect addition to the multi-axis system for high outputs or long motor cables</li><li>– Up to 1200 m motor cable length</li><li>– Control via MOVI-C® CONTROLLER</li><li>– Available as variant with EtherCAT® CiA402 profile</li></ul>	Single-axis application inverter with its own power supply connection and direct fieldbus connection via plug-in fieldbus interfaces. In addition to the features of the MOVIDRIVE® system, MOVIDRIVE® technology offers <ul style="list-style-type: none"><li>– Commissioning via plug-in operating devices or engineering software</li><li>– Integrated memory card for backing up device data</li><li>– Integrated 24 V DC switched-mode power supply</li><li>– Alphanumeric or fully-graphical control unit for commissioning the application inverter and MOVIKIT® software modules</li></ul>
Integrated safety technology	MOVISAFE® For all information, refer to pages 18+19		
Explosion protection	The application inverters also support the operation of explosion-proof motors		



Inverter technology:  
**MOVIDRIVE®**  
Technical data

	MOVIDRIVE® modular	MOVIDRIVE® system	MOVIDRIVE® technology
Rated supply voltage V	3x AC 380 – 500	3x AC 200 – 240 3x AC 380 – 500	
Rated output – power supply module kW	10 – 110	–	
Rated output, regenerative power supply module, block-shaped kW	50 – 75	–	
Rated output current, single-axis module A	2 – 180	–	
Rated output kW	–	0.55 – 315	
Rated output current, double-axis module A	2 – 8	–	
Overload capacity	250%	200%	



MOVISAFE®

functional safety

integrated in the inverter technology

Due to the requirements laid down in technical standards and the drive to have humans and machines working hand in hand, the number of plant areas equipped with functional safety technology is constantly growing. As a result, functional safety is an integral part of any application.

By introducing MOVISAFE® CS..A safety cards, SEW-EURODRIVE has made functional safety an integral element of all MOVI-C® application inverters. Even the basic unit in the MOVIDRIVE® series features STO in PL e. All higher-level safety functions are achieved by inserting an

option card, including all the necessary connections to the inverter technology – encoder, communication and STO. This helps you reduce costs to only what is necessary to achieve the functions you actually need.

Functions in the basic unit

- STO (safe torque off)
  - SIL 3 to EN 61800-5-2, EN 61508
  - PL e to EN ISO 13849-1
  - Can be activated via safe inputs
- Can be activated via safe communication if a CS..A safety card is inserted
  - Extremely short response times of 2 ms enable small safety clearances

MOVISAFE® safety card functions

- Five scalable safety cards as appropriate to application requirements
  - More than 15 higher-level safety functions can be incorporated by inserting option cards
  - Can be inserted retrospectively at any time, no additional external cables needed
- Also with additional multi-encoder input
  - Safe communication via PROFIsafe/PROFINET and FSoE – Fail Safe over EtherCAT®



Hardware	MOVISAFE® CSB21A	MOVISAFE® CSB31A	MOVISAFE® CSS21A	MOVISAFE® CSS31A	MOVISAFE® CSA31A
Safe inputs	4	4	4	4	4
Safe outputs	–	2	2	2	2
Safe stop function	STO, SS1c	STO, SS1c, SBC	STO, SS1c, SBC	STO, SS1c, SBC	STO, SS1c, SBC, SBT
Safe motion function	–	–	SOS, SS1b, SS2, SLS, SSR, SLA, SSM	SOS, SS1b, SS2, SLS, SSR, SLA, SSM	SOS, SS1b, SS2, SLS, SSR, SLA, SSM
Safe positioning function	–	–	SLI, SDI	SLI, SDI	SLI, SDI, SCA, SLP
Safe communication	PROFIsafe, FSoE	PROFIsafe, FSoE	PROFIsafe, FSoE	PROFIsafe, FSoE	PROFIsafe, FSoE
Additional multi-encoder input	–	Yes	–	Yes	Yes



**NEW:**

## Decentralized drives and mechatronic solutions from the MOVI-C® modular automation system

### Automation delivered with decentralized drive technology

State-of-the-art drive engineering and automation technology – particularly power electronics – are increasingly melding into each other, with the result that wiring and installation work are eating up more and more time and money. Customers in the mechanical and plant engineering sector need to design machinery, systems and applications that require minimal outlay and materials but can be started up quickly and easily. In many applications and logistics and system concepts, integrated, decentralized drive engineering has the potential to reduce overall costs, which makes it a technically efficient alternative to centralized automation technology.



The MOVI-C® modular automation system offers special components for use in decentralized installations, applications and system topologies, such as the fully integrated mechatronic MOVIGEAR® performance drive system and the pairing of MOVIGEAR® classic with MOVIMOT® flexible electronics, which are installed close to the motor. What's more, these systems already deliver an efficiency rating of IE5 (to IEC TS 60034-30-2) and boast unsurpassed overall system efficiency. As a result, they combine the advantages of decentralized installation with the benefits of the MOVI-C® modular automation system.

**MOVIGEAR® keeps things moving**  
in decentralized drive and automation  
technology

MOVIGEAR® classic	
<div><div>– Integrated and compact design</div><div>– Drive system with gear unit and permanent magnet synchronous motor</div></div>	
MOVIGEAR® classic is available in three torque and four power classes:	
MGF..1-DSM-C	torque class 100 Nm; up to 0.4 kW rated output
MGF..2-DSM-C	torque class 200 Nm; up to 0.9 kW rated output
MGF..4-DSM-C	torque class 400 Nm; up to 2.1 kW rated output
In Vorbereitung: MGF..4/XT-DSM-C	torque class 400 Nm with extended continuous torque; up to 3 kW rated output

MOVIMOT® flexible	
<div><div>– Decentralized inverter</div><div>– For installing the electronics close to the motor</div></div>	
The decentralized inverter MOVIMOT® flexible (MMF.) is available with a nominal current from 2 – 5.5 A for asynchronous motors with a rated output from 0.55 – 2.2 kW.	

MOVIGEAR® performance	
<div><div>– Fully integrated and compact design</div><div>– Permanent magnet motor, gear unit and electronics combined in a single mechatronic drive unit</div></div>	
MOVIGEAR® performance is available in two sizes respectively three power classes:	
MGF..2-xxx-C	torque class 200 Nm, up to 0.8 kW rated output
MGF..4-xxx-C	torque class 400 Nm, up to 1.5 kW rated output
In preparation: MGF..4-xxx-C/XT	torque class 400 Nm with extended continuous torque; up to 2.1 kW rated output
Communication/ installation types	<div><div>– DFC – Direct Fieldbus Control (PROFINET, EtherNet/IP™, Modbus TCP)</div><div>In preparation:</div><div><div>– DFC – Direct Fieldbus Control (POWERLINK)</div><div>– DBC – Direct Binary Communication</div><div>– DAC – Direct AS Interface Communication</div><div>– DSI – Direct System Bus Control (EtherCAT®, SBusPLUS)</div><div>– SNI – Single Line Network Installation</div></div></div>





## Digital motor integration

A digital data cable makes the motor an active part of your data network, providing all motor data – such as encoder data, temperature data, commissioning data, and data from other sensors – to the application inverter and the connected networks at any time. This information can be used to capture detailed operational data and compile maintenance forecasts. As the type designations, serial numbers and logistics data associated with motors are identified and supplied automatically, an inventory of all the drives in a plant can be compiled automatically at the touch of a button. Repairs, exchanges and enhancements can be tracked and traced at any time.



- Intelligent, digital connection using just one standardized hybrid cable to connect data transmission and power supply lines between the motors (synchronous machine and asynchronous machine) and the application inverters:
  - The data line is linked to the application inverter using a series-standard coaxial connector
  - Plug connector on motor or, alternatively, terminal box connection for on-site assembly

### Available for motors up to size 315

- Extremely robust, high-performance design for data transmission with coaxial data cable, ideal for especially space-saving installations
- Also suitable for very long cables measuring up to 200 m
- Fully integrated digital motor encoder in various designs
- Data memory in the motor for drive and application data, automatic start-up of the application inverter without engineering tool
- MOVILINK® DDI digital data interface for transmitting:
  - Information from the electronic nameplate
  - Brake and diagnostic data (e.g. temperature sensor data)
  - Encoder data, safe and non-safe
- Brake control integrated into the motor for synchronous and asynchronous drive technology:
  - For holding brakes and working brakes
  - No need for brake control device in the control cabinet
  - Continuous electronic detection of switching status and brake wear
  - Transmission of brake diagnostic data via data interface to application inverter
  - Condition-based maintenance intervals, forward planning of maintenance work, wear information, even for difficult-to-access drives

Drive technology  
MOVI-C® gets any application moving

Diversity centered around applications – that is what it's all about. The range includes gear units for standard and servo applications that come in different sizes and with different outputs, speeds, torques, designs and varied finishes, all combined with asynchronous or synchronous AC motors. Linear motors, electric cylinders, brakes, built-in encoders and diagnostic units provide the finishing touch for this wide-ranging portfolio. Naturally, the products have all the necessary worldwide approvals.

The mechanical side of the range is being extended, with **NEW** elements available from 2018. The first is single-cable technology with a digital encoder for synchronous and asynchronous AC motors.

	Standard and servo gear units	Motors
Overview	<b>Five standard gear unit series:</b> <ul style="list-style-type: none"><li>– One-, two- and three-stage helical gear units, R series: Output torque 50 – 18 000 Nm</li><li>– Two- and three-stage parallel-shaft helical gear units, F series: Output torque 130 – 18 000 Nm</li><li>– Two- and three-stage helical-bevel gear units, K series: Output torque 80 – 50 000 Nm</li><li>– Two-stage helical-worm gear units, S series: Output torque 92 – 4000 Nm</li><li>– One- and two-stage right-angle gear units, W series: Output torque 25 – 180 Nm</li><li>– With a few exceptions, the standard gear units are also available as double gear units</li></ul>	<ul style="list-style-type: none"><li>– DR.. and DT56 series AC motors (1 speed), 2-, 4- and 6-pole and</li><li>– Multi-speed DR.. series AC motors (2 speeds): These cover outputs from 0.09 to 225 kW and satisfy energy efficiency classes from IE1 to IE4</li></ul> <p><b>Also available:</b> Torque motors, single-phase motors, aseptic motors and motors with explosion protection</p>
	<b>Two servo gear unit series:</b> <ul style="list-style-type: none"><li>– Low-backlash planetary servo gear units from the PS.F series: Rated torques 25 – 3000 Nm</li><li>– PS.C: Rated torques 30 – 320 Nm</li><li>– Low-backlash helical-bevel servo gear units from the BS.F series: Rated torques 40 – 1200 Nm</li></ul>	<ul style="list-style-type: none"><li>– Synchronous and asynchronous servomotors for highly dynamic requirements, also available with explosion protection</li><li>– And linear motors and electric cylinders round out the modular motor system.</li></ul>
		Combined with a wide range of brakes, encoders, plug connectors, forced cooling fans, special coatings and surface treatments, the modular system has the ideal drive for your application.





**MOVI-C® in use:**  
packaging machine with  
multipacker and top loader



**① Control cabinet:**

Use of a multi-axis system with double-axis inverter – high power density, minimal power loss, and compact enough to fit into even small machine control cabinets.

**② Software system:**

The machine is operated with software based on the SEW-EURODRIVE automation framework. Besides the sequential program, this PackML-compliant framework also offers a standardized user interface, for example.

**③ Controller algorithms:**

Thanks to new, universally used controller algorithms, all motors can be controlled using just one type of inverter.

**④ MAXOLUTION® parallel-arm kinematics kit:**

A modular automation system for robots that includes controller, drive technology, software – in fact, everything you need to automate a robotic solution.



**MOVI-C® in practice:**  
carton erector implemented with automation framework  
based on PackML standard – full functionality integrated

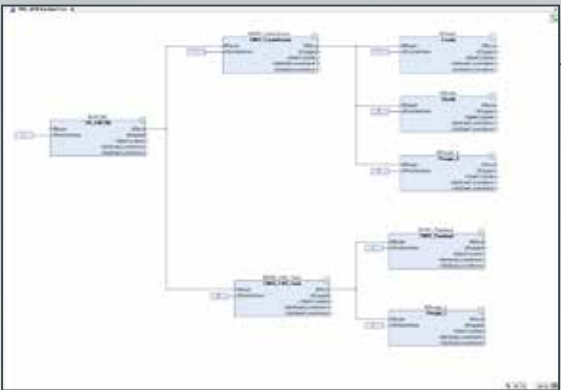
The following software functions have already been implemented in the automation framework (AFW):



**1 Modes & states**

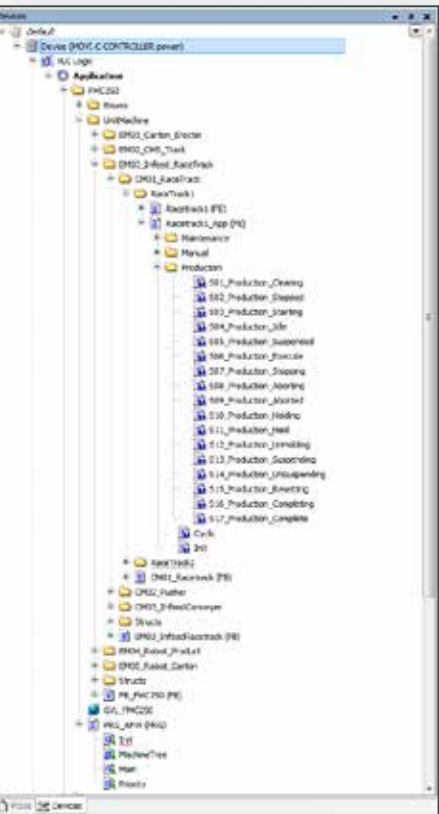
A wide range of modes (such as “Production”, “Manual mode”, “Maintenance mode”) can be defined. All 17 PackML-compliant states are available within the individual modes. Depending on the type of machine and the mode being used, either all 17 states can be used or only some of them.

Advantages: user-friendly technology from a single source



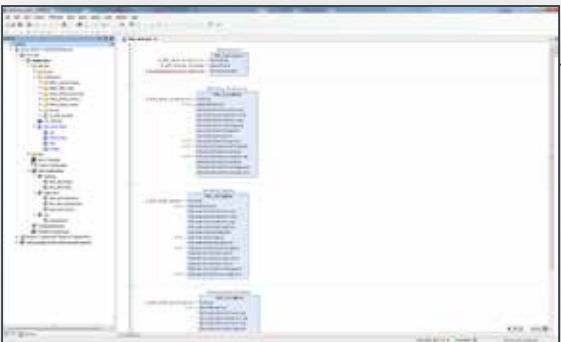
**Reduced engineering effort**

- Thanks to integrated functions and ready-made standard modules
- Certain aspects of the machine program are parameterized instead of programmed
- The use of standard modules saves time on programming and helps avoid errors



**2 Modular software design and programming**

The use and structure of SEW-EURODRIVE's AFW support a modular software structure right from the start, which means that a great deal of code can be reused. The methods set out in the ISA-88 industry standard – one of the most widely used standards in the food industry – have been used to structure the software.



**Reduced integration costs**

- Thanks to the standardized “PackTags” data interface. “PackTags” are used when communicating with other machines or the higher-level controller. They also act as a standardized interface for all incoming and outgoing machine notifications. This ensures the widest range of machines and their manufacturers can share data with each other openly.

**3 Event (and error) handling**

Events such as errors, warnings and notifications can be easily initiated and sorted using the integrated and predefined event handling. Thanks to automated information processing, data can be transferred easily and quickly to external visualization systems.



**Increased productivity**

- Thanks to improved diagnostics options and standardized visualization behavior on various different machines in a production line.



## SEW-EURODRIVE is right there for you

**Argentina**

Tel. +54 3327 4572-84  
Fax +54 3327 4572-21  
sewar@sew-eurodrive.com.ar

**Australia**

Tel. +61 3 9933-1000  
Fax +61 3 9933-1003  
enquires@sew-eurodrive.com.au

**Austria**

Tel. +43 1 617 55 00-0  
Fax +43 1 617 55 00-30  
sew@sew-eurodrive.at

**Belarus**

Tel. +375 17 298 47 56  
Fax +375 17 298 47 54  
sales@sew.by

**Belgium**

Tel. +32 16 386-311  
Fax +32 16 386-336  
info@sew-eurodrive.be

**Brazil**

Tel. +55 19 3835-8000  
sew@sew.com.br

**Cameroon**

Tel. +237 233 39 12 35  
Fax +237 233 39 02 10  
sew@sew-eurodrive.cm

**Canada**

Tel. +1 905 791-1553  
Fax +1 905 791-2999  
marketing@sew-eurodrive.ca

**Chile**

Tel. +56 2 2757 7000  
Fax +56 2 2757 7001  
ventas@sew-eurodrive.cl

**China**

Tel. +86 22 25322612  
Fax +86 22 25323273  
info@sew-eurodrive.cn

**Colombia**

Tel. +57 1 54750-50  
Fax +57 1 54750-44  
sew@sew-eurodrive.com.co

**Czech Republic**

Tel. +420 255 709 601  
Fax +420 235 350 613  
sew@sew-eurodrive.cz

**Denmark**

Tel. +45 4395 8500  
Fax +45 4395 8509  
sew@sew-eurodrive.dk

**Finland**

Tel. +358 201 589-300  
Fax +358 3 780-6211  
sew@sew.fi

**France**

Tel. +33 3 88 73 67 00  
Fax +33 3 88 73 66 00  
sew@usocome.com

**Ghana**

Tel. +233 303 963 772  
info@sew-eurodrive.com.gh

**Great Britain**

Tel. +44 1924 893-855  
Fax +44 1924 893-702  
info@sew-eurodrive.co.uk

**Hungary**

Tel. +36 1 437 06-58  
Fax +36 1 437 06-50  
office@sew-eurodrive.hu

**India**

Tel. +91 265 3045200  
Fax +91 265 3045300  
marketing@seweurodriveindia.com

**Italy**

Tel. +39 02 96 9801  
Fax +39 02 96 980 999  
sewit@sew-eurodrive.it

**Ivory Coast**

Tel. +225 21 21 81 05  
Fax +225 21 25 30 47  
info@sew-eurodrive.ci

**Japan**

Tel. +81 538 373811  
Fax +81 538 373814  
sewjapan@sew-eurodrive.co.jp

**Kazakhstan**

Tel. +7 727 350 5156  
Fax +7 727 350 5156  
sew@sew-eurodrive.kz

**Malaysia**

Tel. +60 7 8590288  
Fax +60 7 8590629  
sales@sew-eurodrive.com.my

**Mexico**

Tel. +52 442 1030-300  
Fax +52 442 1030-301  
scmexico@seweurodrive.com.mx

**Morocco**

Tel. +212 522 88 85 00  
Fax +212 522 88 84 50  
sew@sew-eurodrive.ma

**Netherlands**

Tel. +31 10 4463-700  
Fax +31 10 4155-552  
info@sew-eurodrive.nl

**New Zealand**

Tel. +64 9 2745627  
Fax +64 9 2740165  
sales@sew-eurodrive.co.nz

**Norway**

Tel. +47 69 24 10 20  
Fax +47 69 24 10 40  
sew@sew-eurodrive.no

**Paraguay**

Tel. +595 991 519695  
Fax +595 21 3285539  
sewpy@sew-eurodrive.com.py

**Peru**

Tel. +51 1 3495280  
Fax +51 1 3493002  
sewperu@sew-eurodrive.com.pe

**Poland**

Tel. +48 42 293 00 00  
Fax +48 42 293 00 49  
sew@sew-eurodrive.pl

**Portugal**

Tel. +351 231 20 9670  
Fax +351 231 20 3685  
info@sew@sew-eurodrive.pt

**Russia**

Tel. +7 812 3332522  
Fax +7 812 3332523  
sew@sew-eurodrive.ru

**Singapore**

Tel. +65 68621701  
Fax +65 68612827  
sewsingapore@sew-eurodrive.com

**Slovakia**

Tel. +421 2 33595 202  
Fax +421 2 33595 200  
sew@sew-eurodrive.sk

**South Africa**

Tel. +27 11 248 7000  
Fax +27 11 248 7289  
info@sew.co.za

**South Korea**

Tel. +82 31 492-8051  
Fax +82 31 492-8056  
master.korea@sew-eurodrive.com

**Spain**

Tel. +34 94 4318470  
sew.spain@sew-eurodrive.es

**Sweden**

Tel. +46 36 34 42 00  
Fax +46 36 34 42 80  
sew@sew-eurodrive.se

**Switzerland**

Tel. +41 61 41717-17  
Fax +41 61 41717-00  
info@imhof-sew.ch

**Tanzania**

Tel. +255 22 277 5780  
Fax +255 22 277 5788  
info@sew.co.tz

**Thailand**

Tel. +66 38 454281  
Fax +66 38 454288  
sewthailand@sew-eurodrive.com

**Turkey**

Tel. +90 262 999 1000-04  
Fax +90 262 999 1009  
sew@sew-eurodrive.com.tr

**Ukraine**

Tel. +380 56 370 3211  
Fax +380 56 372 2078  
sew@sew-eurodrive.ua

**United Arab Emirates**

Tel. +971 4 8086 500  
Fax +971 4 8086 464  
info@sew-eurodrive.ae

**Uruguay**

Tel. +598 2 2118189  
Fax +598 2 2118190  
sewuy@sew-eurodrive.com.uy

**USA**

Tel. +1 864 439-7537  
Fax +1 864 439-7830  
cslyman@seweurodrive.com

**Venezuela**

Tel. +58 241 832-9804  
Fax +58 241 838-6275  
ventas@sew-eurodrive.com.ve

## How we're driving the world



**SEW-EURODRIVE**  
Driving the world

**SEW**  
**EURODRIVE**

SEW-EURODRIVE GmbH & Co KG  
Ernst-Blickle-Str. 42  
76646 Bruchsal/Germany  
Tel. +49 7251 75-0  
Fax +49 7251 75-1970  
sew@sew-eurodrive.com

→ [www.sew-eurodrive.com](http://www.sew-eurodrive.com)