

MOVITRAC® Advanced

The easy way to control any motor



MOVITRAC® Advanced

MOVITRAC® Advanced has been designed and developed as the easy way to control any motor. As a compact all-rounder, it can control synchronous and asynchronous AC motors with or without encoders, asynchronous motors with LSPM technology and linear motors.

Redefining standards in control cabinet technology:
MOVITRAC® Advanced.



Efficient

Quick and easy startup thanks to the electronic nameplate and the use of preconfigured MOVIKIT® software modules.



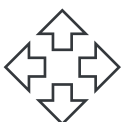
Simple

Fast, simple unit replacement in case of service without engineering PC thanks to portable memory module for storing all device data.



Open

Connection to common control systems thanks to support of various fieldbus protocols and the CiA402 drive profile.



Flexible

Configurable functional safety – from integrated STO safety function to higher quality safety functions and safe communication.



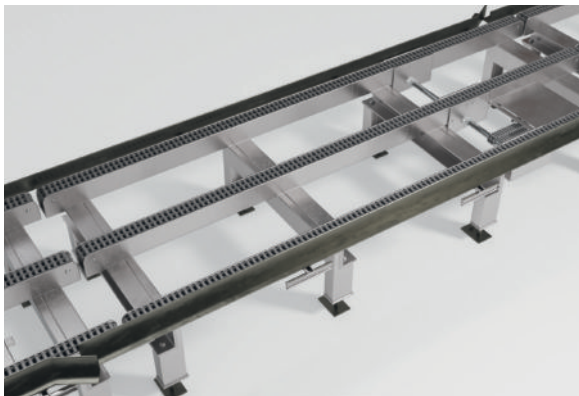
Groundbreaking

The MOVILINK® DDI digital data interface transfers data between the motor and the inverter. This means MOVITRAC® Advanced can also support condition monitoring and predictive maintenance within the machine or system.



Possible applications

for power ranges
from 0.25 to 315 kW



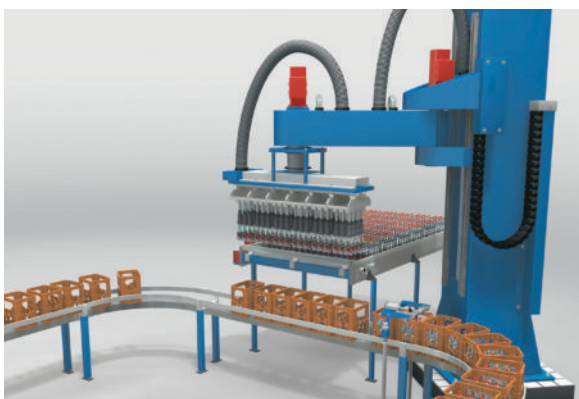
Materials handling technology

MOVITRAC® Advanced communicates via any commercially available fieldbus system and the single-cable technology with standardized connection technology ensures fast, space-saving installation.



Vertical drives

MOVITRAC® Advanced offers a wide range of functional safety features – simply select the appropriate safety option when configuring the standard inverter.



Palletizers

MOVITRAC® Advanced uses parameterization instead of programming – simply use the preconfigured MOVIKIT® software modules.



Agitators

MOVITRAC® Advanced can also be used in combination with an industrial gearmotor. Applications in a power range up to 315 kW can be operated without any difficulty.

Functions and features

MOVITRAC® Advanced

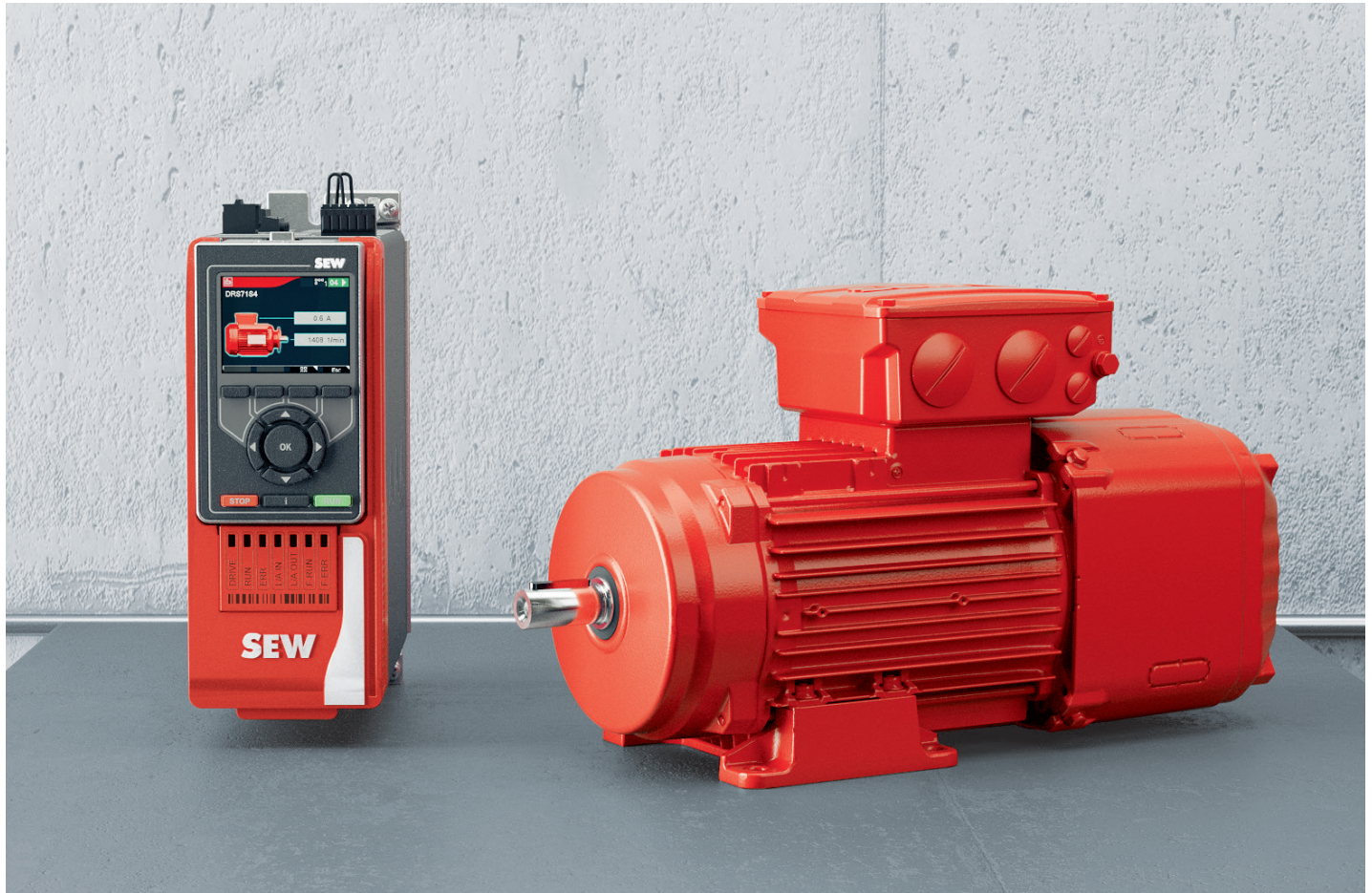
the new standard in control cabinet solutions

For us, this means covering a wide power range – from 0.25 to 315 kW – with our inverter, which also has an STO safety function as standard and is compatible with all commercially available bus systems, while also offering energy efficiency and a comprehensive range of options and accessories.

Most importantly, we offer a compact all-rounder that can be used for any type of motor. MOVITRAC® Advanced controls and monitors the torque, speed and position of synchronous and asynchronous AC motors with or without encoders, asynchronous motors with LSPM technology and synchronous and asynchronous linear motors. Four control modes are available – V/f, VFC^{PLUS}, ELSM®, and CFC.

Just select the appropriate MOVIKIT® software module and the optimum inverter solution tailored to your application-specific requirements is ready for use. Parameterization requires minimal time and effort, and startup is quick and easy, achieved in just a few simple steps.

MOVITRAC® Advanced can be used worldwide – it has been granted certifications of conformity around the world, including CE (Europe), China RoHS and cULus (USA and Canada).



Plan – Connect – Move

When everything slots into place



Line connection

- 1 × AC 200 – 240 V
- 3 × AC 200 – 240 V
- 3 × AC 380 – 500 V
- Spring-loaded terminals up to 7.5 kW
- Matched to power rating:
 - Line filters
 - Line chokes

More information on page 7



Operation

- Scalable keypads
- Diagnostic module and interface adapter
- Plug-in memory module

More information on page 6



Communication

- Binary and analog inputs
- PROFINET®
- EtherNet/IP™
- EtherCAT®/SBus^{PLUS}
- Modbus TCP
- EtherCAT® CiA402
- POWERLINK CiA402

More information on page 12



Functional safety

- Safe inputs/outputs
- Safe stop function
- Safe brake control
- Safe motion
- Safe direction of rotation
- Safe communication
- Safe encoders

More information on page 13



Software

- MOVISUITE® engineering software
- Preconfigured MOVIKIT® software modules

More information on pages 8 and 9



Motor connection

- Spring-loaded terminals up to 7.5 kW
- Matched to power rating:
 - Output filters
 - Output chokes
 - Braking resistors including mounting panels

More information on page 7



Feedback

- Optimized control modes for operation with and without encoders
- Incremental and absolute encoders via MOVILINK® DDI interface (single-cable technology)
- HTL encoders via terminals

More information on pages 10 and 11



MOVITRAC® Advanced
standard inverter
SEW-EURODRIVE

Operation

Accessories and options

Operation / startup / front modules



MOVITRAC® Advanced
with CBG01A keypad



MOVITRAC® Advanced
with CBG11A keypad



MOVITRAC® Advanced
with CBG21A keypad

CBG.. keypads

Four keypads are available that can be plugged directly into the inverter. The CBG01A, CBG11A, and CBG21A keypads (from left to right) can be used, for example, to start up the inverter. The CBG22A keypad is used if customer-specific notifications from the higher-level controller need to be displayed. A door installation frame is available for installations outside the control cabinet.

All keypads store the selected parameter and configuration settings – but they differ in terms of functionality and user experience, for example display or installation features and language selection. Appropriate scalable keypads are thus available to suit requirements.

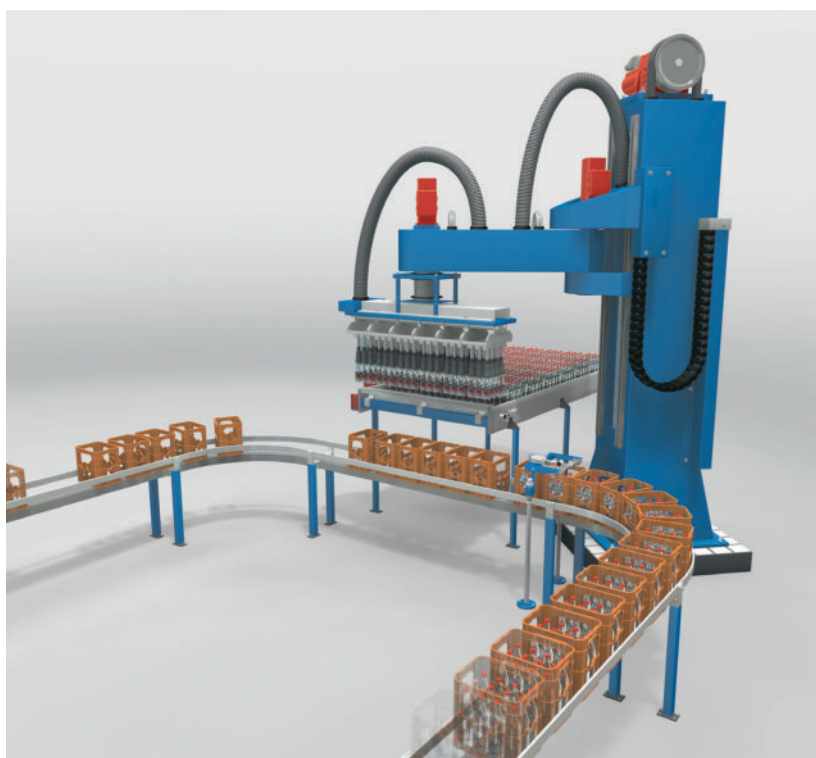
CMM11A memory module

All device data (parameter and configuration settings) is always stored on the memory module and is kept up to date. If a device needs to be replaced, the data can be provided to a new inverter by simply removing the memory module from the old device and plugging it into the replacement. No other resources are therefore required to ensure that the inverter is immediately ready to use for the specific application concerned.

CDM11A diagnostic module

The diagnostic module is the interface to the MOVISUITE® engineering software. It also contains two 7-segment displays for displaying the device status.

Technical data	Nominal power range	– 1 AC × 230 V (0.25 – 3 kW) / sizes 0S, 0L – 3 AC × 230 V (0.25 – 30 kW) / sizes 0S, 0L, 3 – 6 – 3 AC × 400 V (0.25 – 315 kW) / sizes 0S, 0L, 3 – 8
	Overload capacity	150%
Service and assembly		– IoT product label fast access to the product data – Line connection and motor connection using spring-loaded terminals up to 7.5 kW – Portable memory module for quick and easy device replacement – Optimized control cabinet planning possible using online support tools, such as EPLAN data and product configurator
Energy efficiency		– Inverter meets the requirements of energy efficiency class IE2 in accordance with the Ecodesign Regulation (EU) 2019/1781 – Energy-saving thanks to integrated standby mode and optimized flux control
Features		– Integrated motor protection without sensors for asynchronous motors – Suitable for use in TN/TT and IT networks – Integrated EMC filter of category C2 in accordance with EN61800-3 – Design with coated PCB available
Certifications/ conformity		CE, RoHS, cULus, EAC, KC, NM, RCM, UKCA, UkrSEPRO



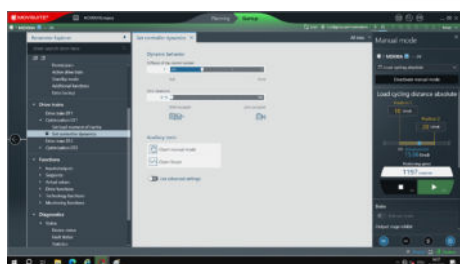
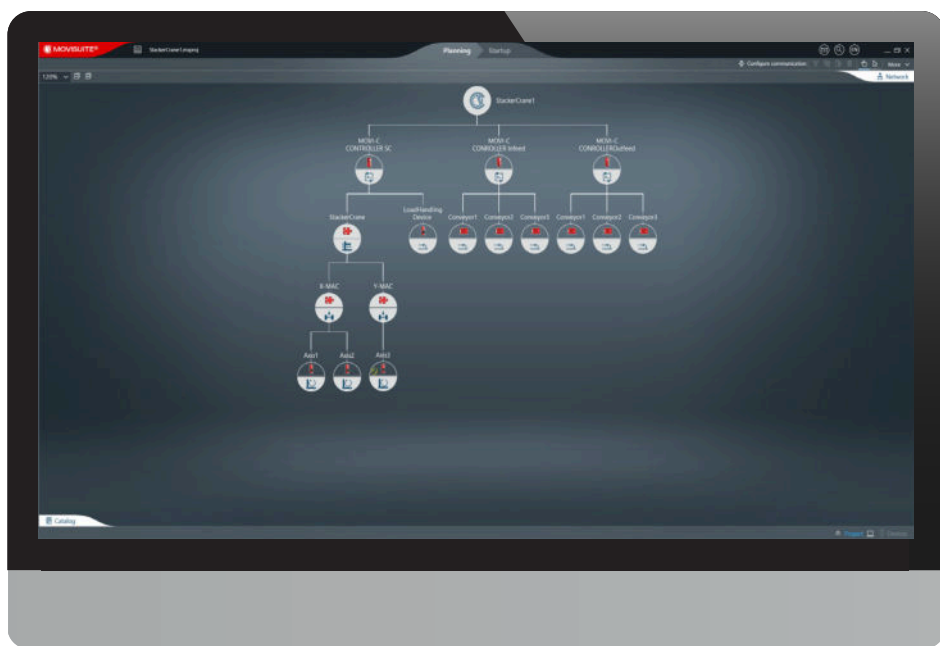
Software

MOVISUITE®

for engineering, diagnostics, startup and operation

In the MOVI-C® modular automation system, MOVISUITE® engineering software is a central tool that can be used for all devices, including the MOVITRAC® Advanced standard

inverter. In addition to startup, other functions such as drive diagnostics are available. The focus is on minimizing the time and costs for the user through optimized usability.



MOVISUITE®
engineering software
SEW-EURODRIVE

MOVIKIT®

Parameter setting instead of programming

Standardized MOKIKIT® software modules, which can be parameterized using graphical configuration and diagnostics, are available for the MOVITRAC® Advanced standard inverter to ensure fast startup of “its” area of operation, such as a conveyor belt or vertical drive.

MOVIKIT® software modules are divided into various categories. In line with the areas of application of a standard inverter, software modules for simple positioning applications and motion control functions are available for MOVITRAC® Advanced.

Examples:

- **MOVIKIT® Velocity Drive:**
MOVIKIT® Velocity Drive allows you to use applications with velocity control and a permanently defined fieldbus interface.
- **MOVIKIT® RapidCreepPositioning Drive:**
MOVIKIT® RapidCreepPositioning Drive is a software module for implementing classic “rapid/creep speed positioning” without a motor encoder.
- **MOVIKIT® Positioning Drive:**
MOVIKIT® Positioning Drive enables positioning applications with a permanently defined fieldbus interface.
- **MOVIKIT® MultiMotion Auxiliary Velocity:**
MOVIKIT® MultiMotion Auxiliary Velocity is a software module for non-interpolating axes for configuring speed and torque specifications. It is suitable for controlling auxiliary axes in simple applications (such as conveyor belts).



MOVIKIT® startup software



MOVIKIT®
software modules
SEW-EURODRIVE

Digital motor integration and feedback



Digital motor integration = a minimalist approach

One cable for power and data

Single-cable technology combines practical and technological benefits. The exceptionally robust and high-performance single-cable technology with coaxial data line enables space-saving installation, saving time and money. There is a single cable for motor control, brake control, and data transmission.

The new MOVILINK® DDI digital data interface makes the motor an active part of your data network.

- Single-cable technology for synchronous and asynchronous motors
- Standardized hybrid cable with uniform plug connector for power supply and data transfer
- Even suitable for very long cables measuring up to 200 m
- Hybrid cable available for fixed and cable carrier installation
- Fully integrated digital motor encoders in various designs

Feedback

MOVILINK® DDI lets data flow

MOVILINK® DDI

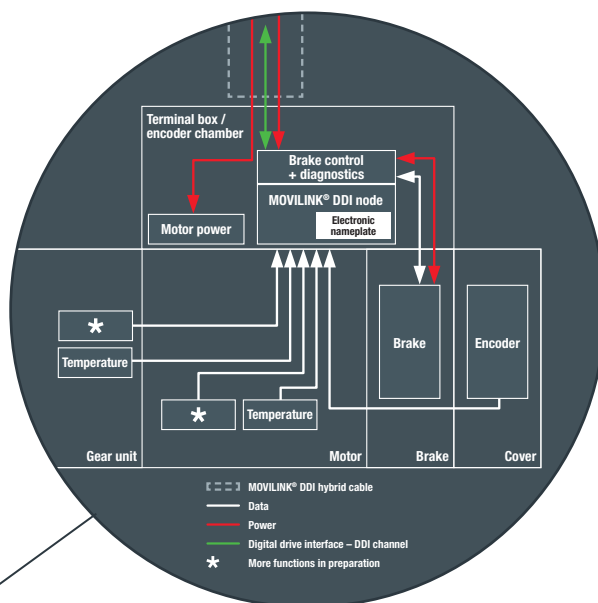
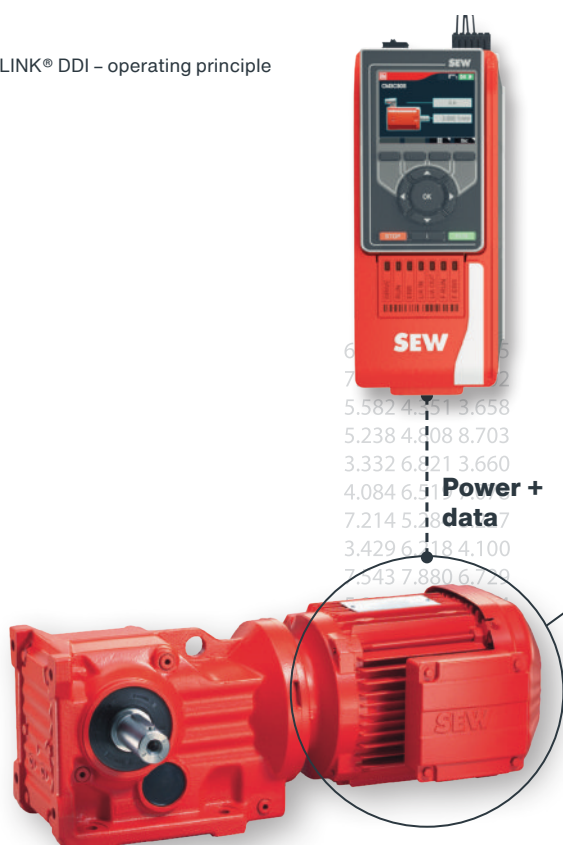
This digital data interface transmits data between the motor and the inverter:

- Information from the electronic nameplate
- For automatic startup of the inverter
- For easy stocktaking
- Automatic detection of motor replacement
- Encoder position
- Diagnostics data
 - For condition monitoring or predictive maintenance
 - Examples of diagnostics data: motor temperature, vibrations, humidity, and mounting position
 - Brake wear

HTL encoders

HTL encoders can be connected to the inverter via digital inputs on the inverter. These are integrated into the motor control loop so that closed-loop applications can also be operated.

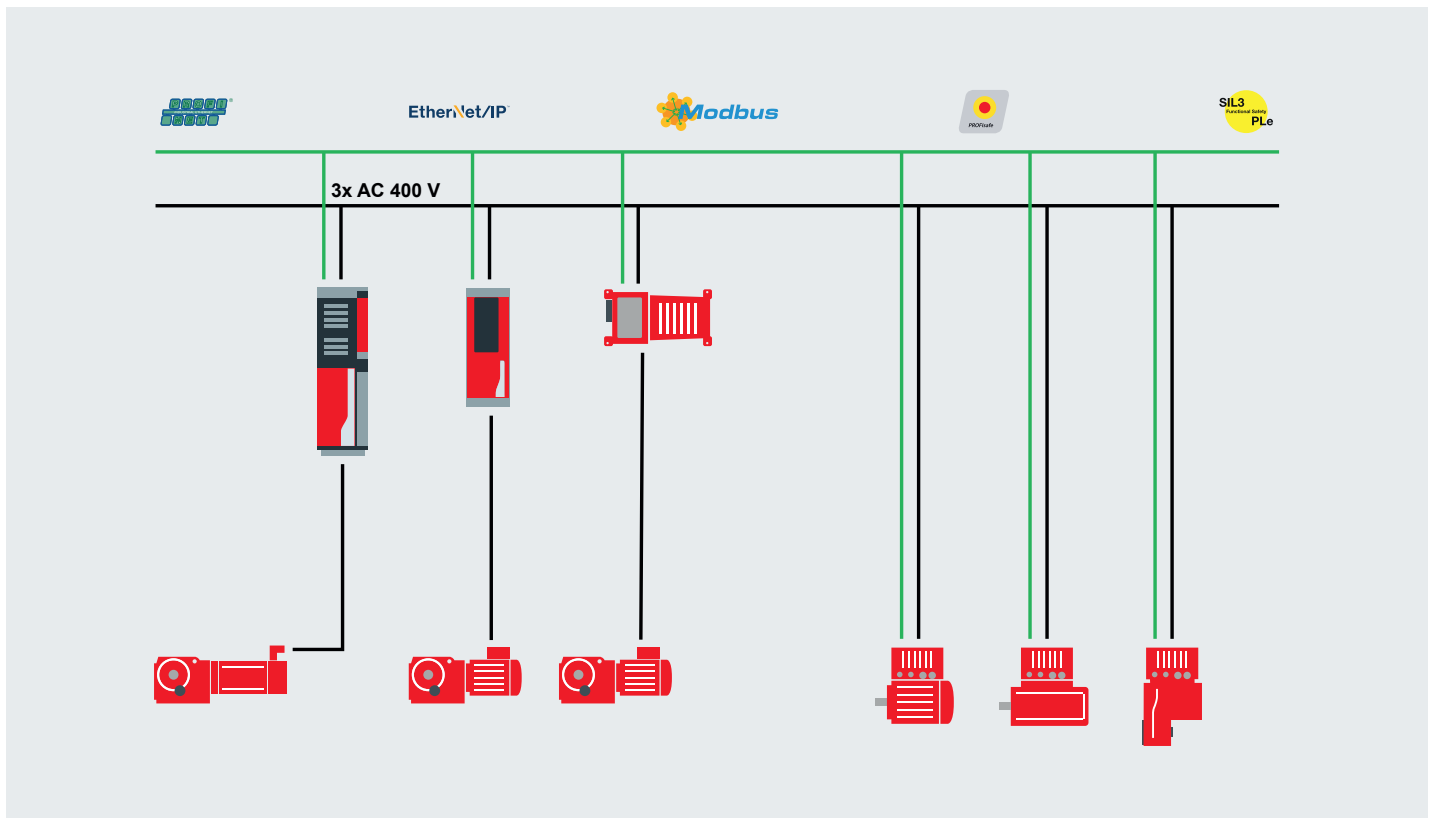
MOVILINK® DDI – operating principle



MOVILINK®
digital motor interface
SEW-EURODRIVE

Topologies and communication

MOVITRAC® Advanced can be connected to common control systems and supports various fieldbus protocols.



Topology example: single-axis automation

The frequency inverter's integrated communication interface makes it versatile and easy to integrate into machine or system layouts. Reliable communication is assured.

Options

- **PROFINET**
- **EtherCAT®/SBus^{PLUS}**
- **EtherCAT® CiA402**
- **POWERLINK CiA402**
- **Modbus TCP**
- **EtherNet/IP™**



Topologies
SEW-EURODRIVE

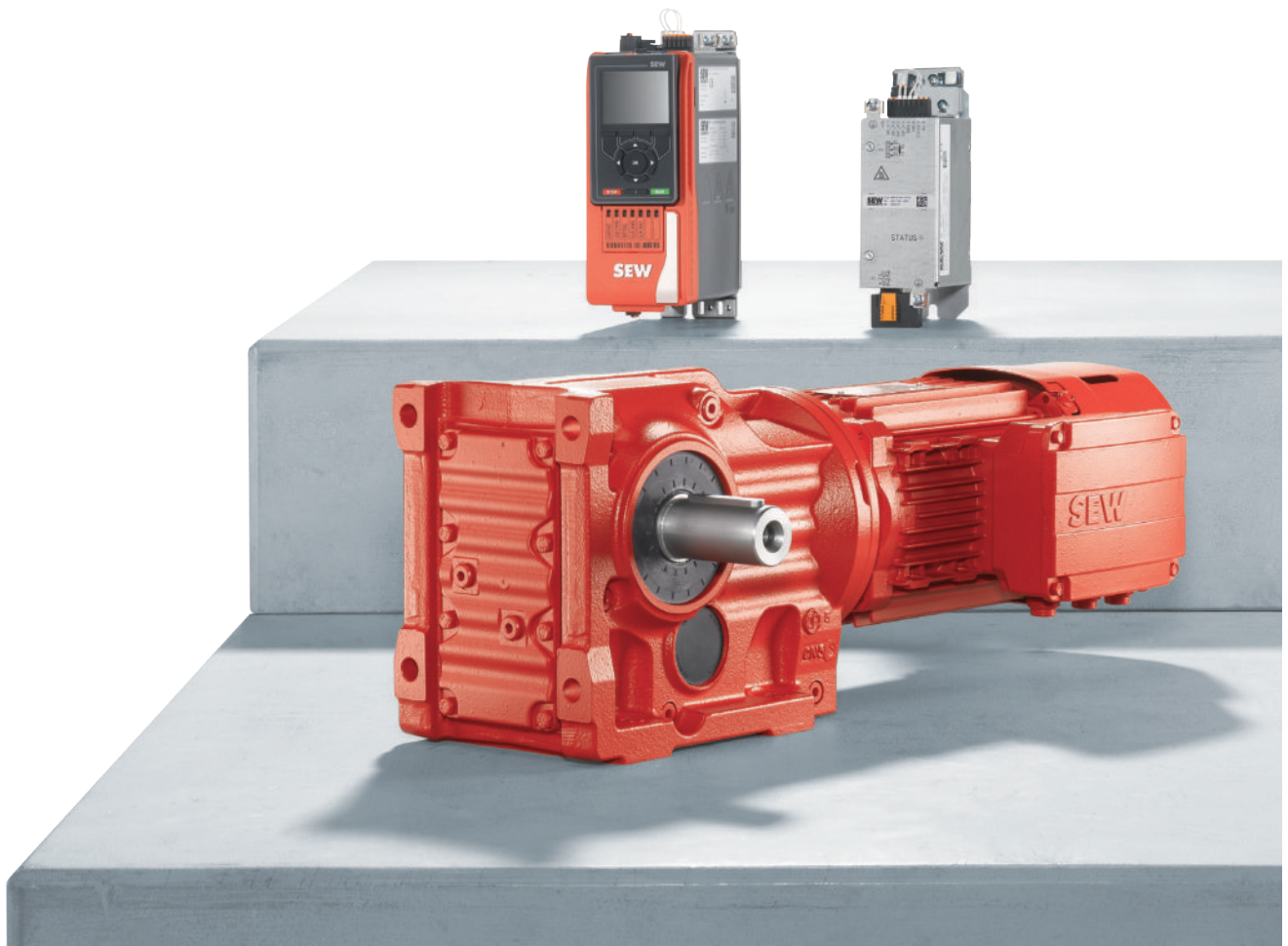
Functional safety

Various functional safety options are available for MOVITRAC® Advanced.

The required safety features can be configured in a modular and scalable way to suit the particular application.

Examples:

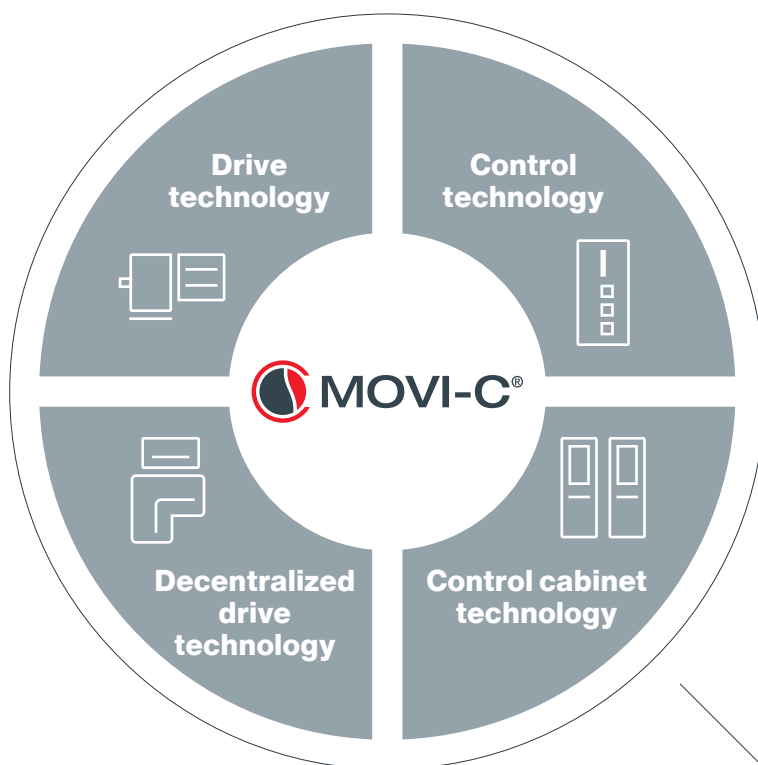
- MOVISAFE® ../CSO safety option for STO PL d safe stop function (integrated as standard in the basic device)
- MOVISAFE® ../CSB safety option, for example for safe communication with PROFIsafe
- MOVISAFE® ../CSL safety option, for example for safe direction of rotation (SDI)
- Safe braking:
 - Safe output
 - Safe brake module
 - Safety-rated brakes



MOVI-C®

The modular automation system

for complete solutions from a single source



MOVITRAC® Advanced
is part of the MOVITRAC®
modular automation system

3 × 3 reasons to use MOVITRAC®

Simplicity

THREE steps: Plan – Connect – Move

Future-proofing

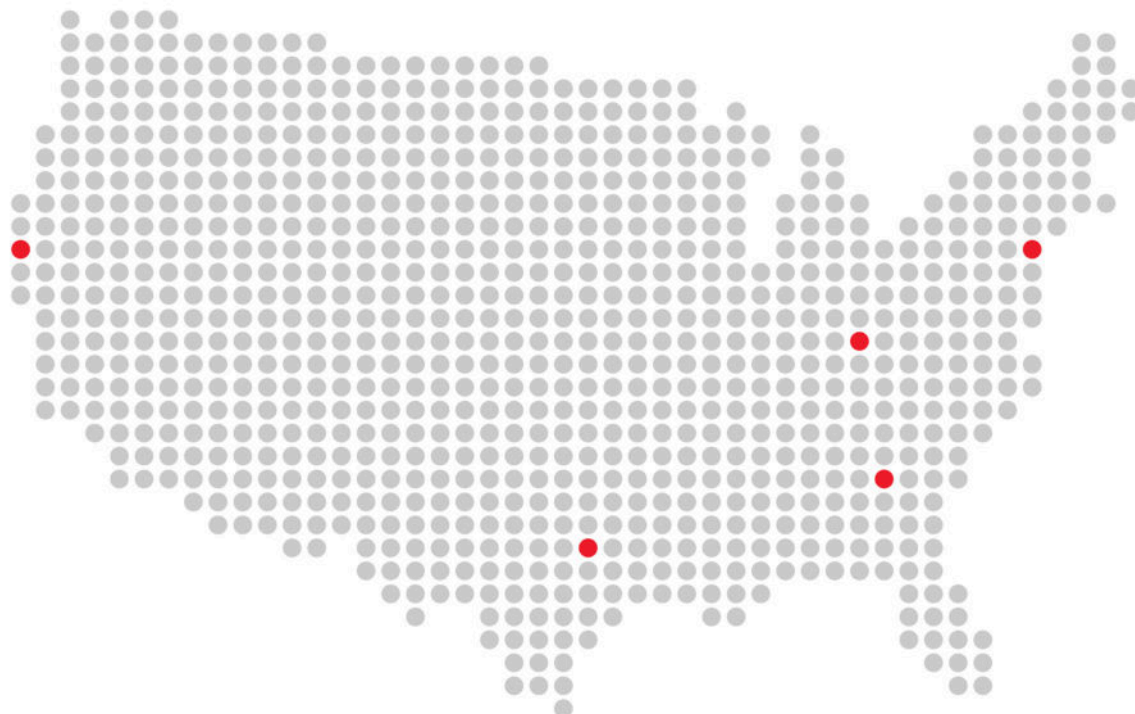
THREE promises: Customized
solutions – Today – and Tomorrow

Consulting and service

THREE success factors: Delivery ca-
pability – Consulting – Worldwide



MOVİ-C®
modular automation system
SEW-EURODRIVE



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