MOVI-C® modular automation system for decentralized installations – portfolio overview

Consistent – connected – complete

The decentralized inverter forms the basis for the products MOVIGEAR® performance, MOVIMOT® advanced, MOVIMOT® performance, and MOVIMOT® flexible. The inverter can be either integrated into or installed close to the motor.

Highlights of the new decentralized product portfolio

Consistency

MOVI-C® allows users to switch between control cabinet installation and decentralized installation. The consistency of the functions and features is not dependent on the product family or type of installation.

Modularity

An identical decentralized inverter for the products MOVIGEAR® performance, MOVIMOT® advanced, MOVIMOT® performance, and MOVIMOT® flexible, regardless of whether it is integrated into the product or installed close to the motor, is the perfect complement to the control cabinet inverters of the MOVI-C® modular automation system.

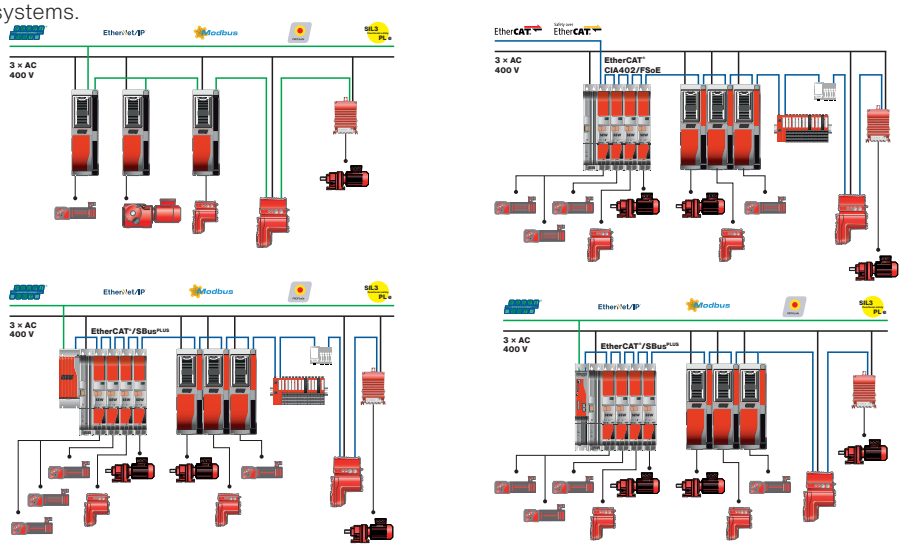
Flexibility

Top left: Single-axis automation
DFC – Direct Fieldbus Communication (PROFINET, EtherNet/IP™, Modbus TCP)
DBC – Direct Binary Communication
DAC – Direct AS-Interface Communication

Top right: Motion slave
DFC – Direct Fieldbus Communication (POWERLINK CiA402)
DSI – Direct System Bus Installation (EtherCAT®/CiA 402)

Bottom: Motion/automation control
DSI – Direct System Bus Installation (EtherCAT® /SBus^{PLUS})

The decentralized product range provides flexible support for connections to various higher-level systems.



Simple installation

On the supply side, installation is made easier using terminals or plug connectors, along with digital motor integration when installed close to the motor (single-cable technology).

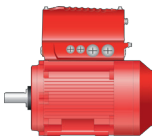
Maximum energy efficiency

Combining the inverter with motors of any efficiency class means energy efficiency is scalable. For example, MOVIGEAR® performance is equivalent to highest energy efficiency class IE5 according to IEC TS 60034-30-2 and system efficiency IES2 of the Power Drive System according to IEC 61800-9-2.

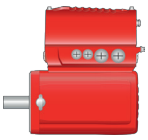
Nominal output currents available for the inverter

2 A, 2.5 A, 3.2 A, 4 A, and 5.5 A
7 A, 9.5 A, 12.5 A, 16 A

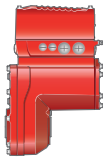
Integrated, decentralized inverter



MOVIMOT® advanced
DRN.. (IE3) asynchronous motor or DR2C (IE5) synchronous motor 0.37 kW – 7.5 kW nominal power (DRN..) 0.69 kW– 7.4 kW nominal power (DR2C..)



MOVIMOT® performance
Synchronous motors (≙ IE5) 0.75 kW – 4.2 kW nominal power and 3.6 kW – 20 Nm nominal torque

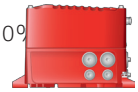


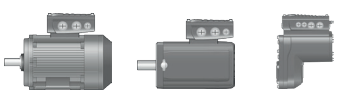
MOVIGEAR® performance
Synchronous motors (≙ IE5) 0.8 kW – 2.1 kW nominal power and up to 400 Nm continuous output torque

Decentralized inverter installed close to motor

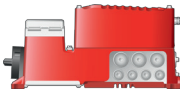
MOVIMOT® flexible
2 A – 16 A nominal output current, up to 300% overload capacity

MMF11

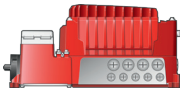




MMF31



MMF32



Can be combined with all SEW-EURODRIVE motors

Technical data

MOVI-C® decentralized inverter	Inverter that can be installed near or directly on the motor in the field
Size and nominal output currents	– Size 1: 2 A, 2.5 A, 3.2 A – Size 2: 7 A, 9.5 A – Size 1E: 4 A, 5.5 A – Size 2E: 12.5 A,16 A
Overload capacity	Up to 300%
Communication variants	– DFC – Direct Fieldbus Communication (PROFINET, EtherNet/IP™, Modbus TCP, POWERLINK/CiA 40) – DSI – Direct System Bus Installation (EtherCAT®/SBus^{PLUS}, EtherCAT®/CiA 402) – DBC – Direct Binary Communication – DAC – Direct AS-Interface Communication
Digital and analog inputs/outputs	DFC / DSI: Up to 4 digital inputs and up to 2 digital inputs or outputs MMF3: Optionally up to 7 digital inputs and up to 2 digital inputs or outputs DBC: 4 digital inputs / 1 relay output and 1 analog input (0 – 10 V, 0 – 20 mA, 4 – 20 mA) DAC: 4 digital inputs / 1 relay output
Options	– Brake control – Design for use in wet areas (/WA)
Safety technology	CSB51A: STO, SS1-t CSL51A: STO, SS1-t STO, SS1-t, SS1-r, SLS, SSM, SDI (with encoder EI7C FS) CSS51A: STO, SS1-t STO, SS1-t, SS1-r, SLS, SSM, SSR, SDI, SLI (with encoder EI7C FS) STO, SS1-t, SS1-r, SOS, SS2, SLS, SSM, SSR, SDI, SLI (with F-DDI) Safe communication: PROFIsafe, CIP Safety™, Safety over EtherCAT®

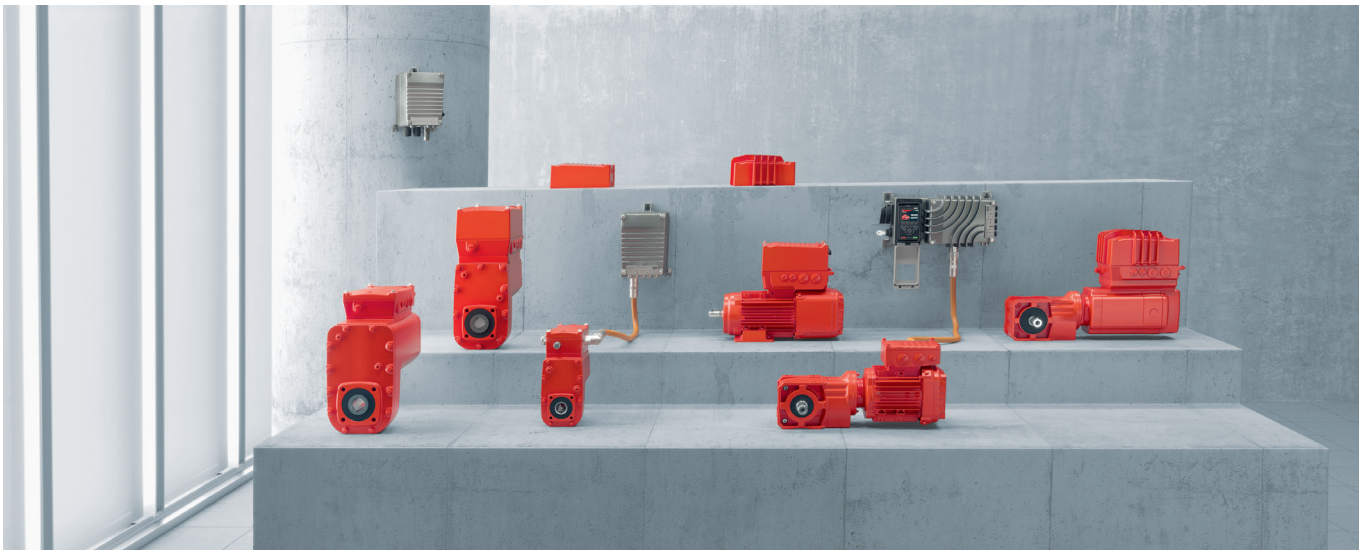
MOVIGEAR® performance (=^ IE5)	Drive unit consisting of permanent-magnet motor, gear unit, and decentralized inverter
Size and power	– MGF..2-C: Torque class: 200 Nm, nominal power of up to 0.8 kW – MGF..4-C: Torque class: 400 Nm, nominal power of up to 1.5 kW – MGF..4-C/XT: Torque class: 400 Nm with extended continuous torque, nominal power of up to 2.1 kW
Options	– Multi-turn absolute encoder /AZ1Z (extended control range 1:2000) – DynaStop® electrodynamic deceleration function (/DSP) – Design for use in wet areas (/WA)

MOVIGEAR® classic (=^ IE5)	Drive unit consisting of gear unit and synchronous motor (can be combined with decentralized inverter installed close to the motor or with control cabinet technology from the MOVI-C® modular automation system)
Size and power	– MGF..1-DSM-C: 100 Nm torque class, nominal power of up to 0.4 kW – MGF..2-DSM-C: 200 Nm torque class, nominal power of up to 0.9 kW – MGF..4-DSM-C: 400 Nm torque class, nominal power of up to 2.1 kW – MGF..4-DSM-C/XT: 400 Nm torque class with extended continuous torque; nominal power of up to 3 kW
Options	– Multi-turn absolute encoder /AZ1Z (extended control range 1:2000) – Design for use in wet areas (/WA)

Technical data

MOVIMOT® flexible	Decentralized inverter for installation close to the motor
Size and power	MOVIMOT® flexible is available in two versions and nine power classes: – MMF11: Nominal output currents 2.0 A, 2.5 A, 3.2 A, and 4.0 A and 5.5 A for power classes 0.55 kW – 3.0 kW (depending on motor type) – MMF31: Nominal output currents 2.0 A, 2.5 A, 3.2 A, 4.0 A, 5.5 A for power classes 0.55 kW – 3.0 kW (depending on motor type) – MMF32: Nominal output currents 7.0 A, 9.5 A, 12.5 A, and 16 A for power classes 3.0 kW – 7.5 kW (depending on motor type)
Options	– Load disconnector or load disconnector with line protection – M12 engineering interface or prepared for CBG11A, CBG21A, and CBG22A keypads – Key switch in combination with on-site CBG22A keypad
MOVIMOT® advanced (IE3/IE5)	Drive unit consisting of DRN.. asynchronous motor or DR2C.. synchronous motor and integrated decentralized inverter
Size and power	**DRN71M – DRN132M (star connection):** – 2.5 Nm – 49.4 Nm nominal torque – 0.37 kW – 7.5 kW nominal power – 2.0 A – 16 A nominal output current (inverter) **DRN71M – DRN132S (delta connection):** – 1.8 Nm – 24.7 Nm nominal torque – 0.55 kW – 7.5 kW nominal power – 2.0 A – 16 A nominal output current (inverter) **DR2C71MS4 – DR2C100LA6 (2000 min^{-1}):** – 3.3 Nm – 32.5 Nm nominal power – 0.69 kW – 6.81 kW nominal power – 2.0 A – 16 A nominal output current (inverter) **DR2C71MS4 – DR2C90LA6 (3000 min^{-1}):** – 3.6 Nm – 23.5 Nm nominal power – 1.1 kW – 7.38 kW nominal power – 3.2 A – 16 A nominal output current (inverter)
Options	– Suitable for combining with series 7 and 9 standard gear units – Brake available (incl. manual brake release) – Integrated load disconnector (incl. feedback contact) – Incremental encoder /EI8Z (others in preparation)

MOVIMOT® performance (=^ IE5)	Drive unit consisting of synchronous motor and integrated decentralized inverter
Size and power	**CM3C80S:** – 0.75 kW – 1.51 kW or 3.6 Nm – 7.3 Nm nominal torque – 2.0 A – 4.0 A nominal output current (inverter) **CM3C80M:** – 1.68 kW – 1.88 kW or 8.0 Nm – 9.0 Nm nominal torque – 4.0 A – 5.5 A nominal output current (inverter) **CM3C100LM:** – 3.14 kW – 4.19 kW or 15.6 Nm – 21.0 Nm nominal torque – 7.0 A – 9.5 A nominal output current (inverter)
Options	– Suitable for combining with series 7 and 9 standard gear units and all servo gear units – Brake available (incl. manual brake release) – DynaStop® electrodynamic deceleration function – Single-turn encoders /EZ2Z and /EZ4Z or multi-turn encoders /AZ2Z and /AZ4Z



The added value for you

One manufacturer, one end-to-end solution for your application! The MOVI-C® modular automation system offers complete solutions from a single source. The new decentralized products from the MOVI-C® modular automation system complement the existing portfolio in terms of functionality and consistency and extend the range of possible applications for our decentralized drive technology, which has been proving its worth for over 90 years.

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