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

SEW-EURODRIVE

Consistent – connected – complete

The new product portfolio is based on the decentralized inverter, which is the same for all
products in the decentralized MOVI-C® range. The inverter can be both 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 all product families, 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 portfolio 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, e.g. MOVIGEAR® performance: highest energy efficiency class IE5 to IEC TS 60034-30-2 and system efficiency IES2 of the Power Drive System to IEC 61800-9-2.
Performance class of the decentralized 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 in preparation)

Integrated, decentralized inverter

MOVIMOT® advanced	**MOVIMOT® performance**	**MOVIGEAR® performance**
asynchronous motors (IE3)	Synchronous motors (≙ IE5)	Synchronous motors (≙ IE5)
0.55 – 2.2 kW nominal power	4 – 9 Nm rated torque classes	0.8 – 2.2 kW nominal power
(more sizes in preparation)	(more sizes in preparation)	or 4 – 10 Nm rated-torque classes

Decentralized inverter installed close to motor

MOVIMOT® flexible	**MMF1.**	**MMF3.**	
2 A – 5.5 A nominal output current, up to 300% overload capacity (more sizes in preparation)		Additional designs in preparation	Can be combined with all SEW motors

U.S. Operations

Southeast Region (U.S. Headquarters)

SEW-EURODRIVE, Inc.
1295 Old Spartanburg Hwy.
Lyman, SC 29365
P: (864) 439-7537
F: (864) 439-7830
cslyman@seweurodrive.com

Midwest Region

SEW-EURODRIVE, Inc.
2001 West Main St.
Troy, OH 45373
P: (937) 335-0036
F: (937) 332-0038
cstroy@seweurodrive.com

Northeast Region

SEW-EURODRIVE, Inc.
2107 High Hill Rd.
Bridgeport, NJ 08014
P: (856) 467-2277
F: (856) 845-3179
csbridgeport@seweurodrive.com

Southwest Region

SEW-EURODRIVE, Inc.
202 W. Danieldale Rd.
DeSoto, TX 75115
P: (214) 330-4824
F: (214) 330-4724
csdallas@seweurodrive.com

Western Region

SEW-EURODRIVE, Inc.
30599 San Antonio St.
Hayward, CA 94544
P: (510) 487-3560
F: (510) 487-6433
cshayward@seweurodrive.com

Industrial Gears

SEW-EURODRIVE, Inc.
148 Finch Rd.
Wellford, SC 29385
P: (864) 439-8792
F: (864) 661-1167
igorders@seweurodrive.com

Technical data

MOVI-C® decentralized inverter	Inverter that can be installed near or directly on the motor in the field
Size and power	– Size 1: 2, 2.5, 3.2 A In preparation, size 2: 7 A, 9.5 A – Size 1E: 4, 5.5 A In preparation, size 2E: 12.5 A,16 A
Overload capacity	300%
Communication versions	DFC – Direct Fieldbus Communication (PROFINET, EtherNet/IP™, Modbus TCP, POWERLINK/ CiA402) – DBC – Direct Binary Communication – DAC – Direct AS-Interface Communication – DSI – Direct System Bus Installation (EtherCAT® / SBus^PLUS, EtherCAT® / CiA 402)

Digital and analog inputs/outputs	DFC / DSI: Up to 4 digital inputs and up to 2 digital inputs or outputs
	        For MMF3 only: Up to 8 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 – CSB51A (STO, SS1c) integrated safety technology

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
Output speed range Speed control range 1:40 (without encoder)	– MGF..2-C: 0.9 – 593 min^{-1} – MGF..4-C/ MGF..4-C/XT: 0.9 – 566 min^{-1}
Options	– Multi-turn absolute encoder /AZ1Z (extended control range 1:2000) – DynaStop® electrodynamic retarding function (/DSP)

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
Output speed range (at n_e=2000 min^{-1})	– MGF..1-DSM-C: 35.7 – 555 min^{-1} – MGF..2-DSM-C: 36.2 – 593 min^{-1} – MGF..4-DSM-C/ MGF..4-DSM-C/XT: 35.4 – 566 min^{-1}

MOVIMOT® flexible	Decentralized inverter for installation close to the motor

Size and power	MOVIMOT® flexible is available in two versions and five performance classes:
	– MMF1.: Nominal output currents 2.0, 2.5, and 3.2 A as well as 4.0 and 5.5 A (with cooling fins)
	   for 0.55 – 3.0 kW performance classes (depending on motor type; up to 7.5 kW in preparation)
	– MMF3.: Nominal output currents 2.0, 2.5, and 3.2 A as well as 4.0 and 5.5 A (with cooling fins)
	   for 0.55 – 3.0 kW performance classes (depending on motor type; up to 7.5 kW in preparation)

Options	– Load disconnector or load disconnector with line protection – M12 engineering interface or prepared for CBG21A keypad – Key switch with feedback contact

Technical data

MOVIMOT® advanced (IE3)	Drive unit consisting of asynchronous motor and integrated decentralized inverter
Size and power	**DRN71M to DRN100LS (star connection):** – Nominal torque of 2.5 Nm to 15 Nm – Nominal power of 0.37 kW to 2.2 kW – Nominal output current (inverter) of 2.0 A to 5.5 A **DRN71M to DRN90L (delta connection):** – Nominal torque of 1.8 Nm to 7.2 Nm – Nominal power of 0.55 kW to 2.2 kW – Nominal output current (inverter) of 2.0 A to 5.5 A
Options	– Suitable for combination with all series 7 and 9 standard gear units – Optionally available as a brakemotor (incl. manual brake release) – Optionally available with integrated load disconnector (including feedback contact) – Optionally available with single-turn encoder /EI8Z (others in preparation)

MOVIMOT® performance (≙ IE5)	Drive unit consisting of synchronous motor and integrated decentralized inverter

Size and power	– CM3C80S:
	   3.6 Nm to 7.2 Nm nominal torque; 2.0 A to 4.0 A nominal output current (inverter)
	– CM3C80M:
	   8.0 Nm to 9.0 Nm nominal torque; 4.0 A to 5.5 A nominal output current (inverter)

Options	– Suitable for combination with all series 7 and 9 standard gear units and all servo gear units – Optionally available as a brakemotor (incl. manual brake release) – Optionally available with the DynaStop® electrodynamic deceleration function – Optionally available with single-turn encoder /EZ2Z or multi-turn encoder /AZ2Z

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 almost 90 years.