

Compact and versatile
MOVITRAC® B

Frequency inverter



Compact and versatile: MOVITRAC® B

“Unit modularity” and “smaller dimensions” are two of the most important criteria considered when selecting a frequency inverter for a specific application. The economic and compact solution from SEW-EURODRIVE: MOVITRAC® B – the latest generation frequency inverter. The versatile unit concept and comprehensive expansion options make for individual combinations of inverter functions for solutions matched to the requirements of the application.

MOVITRAC® B for improved efficiency in component planning and system operation:

The reduced size of MOVITRAC® B frequency inverters makes for improved use of control cabinet space. Especially the reduced size makes a tremendous contribution to component planning.

Easy startup using plug-and-play is a matter of course for MOVITRAC® B frequency inverters. In system operation, they impress with their high level of flexibility and functionality. The basic unit makes for the best adaptation of the inverter functionality to the application.


The combination of basic unit and keypad makes for easy parameter setting and diagnostics. Even the use of several MOVITRAC® B units requires only one keypad. The MOVITOOLS® MotionStudio operating software offers expanded operation and comprehensive diagnostic options.

The necessary optional equipment can be reduced by the modular concept. MOVITRAC® B can even be used without a keypad or communication module.

Driving the world – with innovative drive solutions for all branches of industry and for every application. Products and systems from SEW-EURODRIVE for any application – worldwide. SEW-EURODRIVE products can be found in a variety of industries, e. g. automotive, building materials, food and beverage as well as metal-processing. The decision to use drive technology “made by SEW-EURODRIVE“ stands for safety regarding functionality and investment.



Overview of MOVITRAC® B:

- Comprehensive power range from 0.25 to 75 kW for mains voltages:
1 x 230 V, 3 x 230 V and 3 x 400/500 V
- Overload capacity: up to 125 % I_N in continuous duty and short-term up to 150 % I_N
- Breakaway torque up to 200 % M_N
- Temperature range: up to + 60 °C
- Operating status LED
- Motor control:
 - U/f characteristics control for simple startup
 - VFC (Voltage Flux Control) vector control for field-oriented control (no encoder)
- Control signals: 6 programmable digital inputs, 2 programmable digital outputs, 1 programmable relay output, 1 analog setpoint input with 10 V DC voltage supply, 24 V voltage supply
- Setpoint selection via primary frequency input
- Optional: Analog module FIO11B with 1 analog input and 1 analog output
- Control electronics:
 - 24 V supply for internal or optional external backup mode
 - 10 V supply for external potentiometer
- Removable keypad FBG11B for diagnostics, parameter setting and data backup
- Degree of protection: IP20, IP10 as of 37 kW rated power
- Motor cable length: min. 100 m shielded; min. 200 m unshielded
- IT network capability
- Separable signal terminals
- Separable power terminals (up to 4 kW)
- Startup: plug-and-play
- Cold-plate technology: Heat dissipation interface to external heat sink or machine components
- Certification: 
- Device functions: Hoist function, flying restart circuit, motor potentiometer, setpoint holding function, 2-motor parameter sets, PI controller
- Integrated safety function "Safe stop"
 - STO to IEC 61800-5-2, PL d to EN 13849, EN 954-1 (cat. 3)
 - as standard for units from 5.5 ... 75.0 kW / 3 x 400 V
 - optional for units from 0.55 ... 4.0 kW / 3 x 400 V
- Integrated EMC filter (up to 11 kW)
 - 1 phase class A/B limit
 - 3 phase class A limit (to EN 55011 and EN 50014; meets EN 61800-3)



Modular design and operation

Implementing individual, application-specific machine and system concepts with small but powerful frequency inverters was the objective of the MOVITRAC® B series developers.

The result speaks for itself.

Due to the consistent implementation of the specifications, a series of modular frequency inverters was realized that leaves nothing to be desired with respect to unit design and operation.

The MOVITRAC® B frequency inverters fit even the smallest control cabinet, they can be integrated quickly and simply in existing and new automation concepts via standard interfaces, and they offer a large variety of communication options.

The modular unit concept reduces accessories and options to the components necessary for the application. The multi-tier operating concept offers two operating units for the different requirements of simple or complex machine and system concepts:

- Basic plug-in keypad FBG11B with 5-digit LED display for changing and displaying the parameters, diagnosis LED, setpoint selection and parameter copy functions.

- Or the plain text keypad DBG60B (in preparation) with LCD graphic display, a comfortable 21 keys for quicker data entry, 15 selectable languages (language key) and a permanent status display.

The operator panels of the DOP11B series are also available for customer-specific visualization. Using the MOVITOOLS® MotionStudio operation and configuration software, parameter setting becomes user-friendly and straightforward, and a large range of comfortable diagnostics options or process visualizations is available in addition.

Simple, plug-in keypad FBG11B (optional):

1. 5-digit LED display
2. Display of :
current, speed and output frequency
3. Diagnostic LED



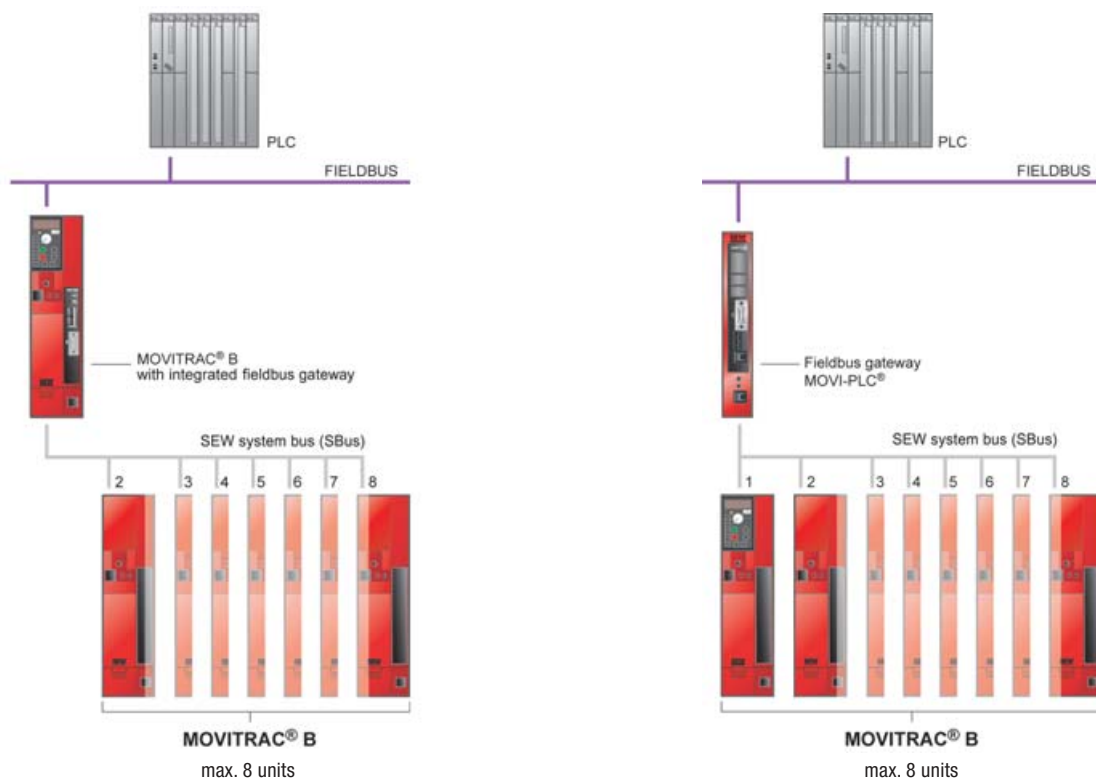
4. Pictograms for
 - Acceleration ramp
 - Deceleration ramp
 - Fixed setpoints
 - Maximum speed
 - Parameter menu
 - Motor startup
 - Data transfer
 - Manual speed control module

Fieldbus gateway for MOVITRAC® B

The modularity and functionality of the MOVITRAC® B frequency inverters also becomes apparent when looking at the fieldbus gateways. There are gateways for five standard bus systems available for integration in existing or new automation concepts. They can control one to eight frequency inverters. MOVITRAC® B exchanges all process data with the control unit via the selected fieldbus. When using the SEW

system bus SBus for an application, MOVITRAC® B can communicate also with other drive electronics components, such as the MOVIDRIVE® drive inverters.

The fieldbus gateways can be mounted either inside the MOVITRAC® B housing or in a separate housing close to the drive. Both variants meet enclosure IP20 requirements.



Overview of fieldbus gateways:

- PROFIBUS U0H/DFP21B
- DeviceNet UFD11A
- INTERBUS UFI11A
- CANopen UFO11A
- ETHERNET: Modbus TCP, PROFINET IO (RT) and EtherNet/IP (in preparation)
- EtherCAT



Basic equipment

Basic unit

- Bookshelf module: Smaller dimensions than its predecessor MC07; its width has been reduced
- Separable terminals – for fast and simple installation (power terminals to 4 kW, signal terminals)
- Separable mounting panels for optimum installation of cable shielding
- Shield plate for shielded cables

Operating concept

- Optional: Plug-in basic keypad FBG11B or plain text keypad DBG60B (in preparation)
 - display and change of parameters
 - presetting of setpoint
 - parameter copy functions
- DOP11B Drive Operator Panels
- MOVITOOLS® MotionStudio operating and diagnostics software: parameter setting, diagnostics, optimization, visualization and data backup
- Straightforward, user-friendly parameter-setting process
- Protection and monitoring functions:
 - Extensive diagnostics options – status/diagnosis display
 - Motor monitoring
 - EMC

FSC11B communication

- RS485 user interface as service and diagnostics interface
- SBus enables communication with other SEW-EURODRIVE units
- Compatible with the DOP operator terminals for process visualization

Options and Accessories

Braking resistor	Optional braking resistor can be mounted on device
Options	<ul style="list-style-type: none"> – Interface adapter: USB11A / UWS11A / UWS21B – Keypad: FBG11B / DBG60B – Standard communication module FSC11B – Analog module FIO11B – Speed control module MBG11A – Parameter module UPB11A Fieldbus gateways: <ul style="list-style-type: none"> – PROFIBUS UOH/DFP21B – DeviceNet UFD11A – INTERBUS UFI11A – CANopen UFO11A – ETHERNET: Modbus TCP, PROFINET IO (RT) and EtherNet/IP (in preparation) – EtherCAT
Motion and Logic Control	Optional: Integrated control card MOVI-PLC® DHP11B <ul style="list-style-type: none"> – Motion and PLC functionality close to the drive – Control of up to 12 axes – Freely programmable motion control via IEC 61331 and function library – Integrated fieldbus interface (PROFIBUS) – Group control of several MOVITRAC® B
Safety technology	Integrated safety function "Safe stop" STO to IEC 61800-5-2, PL d to EN 13849, EN 954-1 (cat. 3) <ul style="list-style-type: none"> – as standard for units from 5.5 ... 75.0 kW / 3 x 400 V – optional for units from 0.55 ... 4.0 kW / 3 x 400 V
Accessories	<ul style="list-style-type: none"> – Braking resistors (some can be submounted) – FHS support rail mounting EMC accessories: <ul style="list-style-type: none"> – Line chokes – Line filters – Flat ferrites ULF11A – EMC module FKExx – Output chokes – Output filters

Application examples of MOVITRAC® B

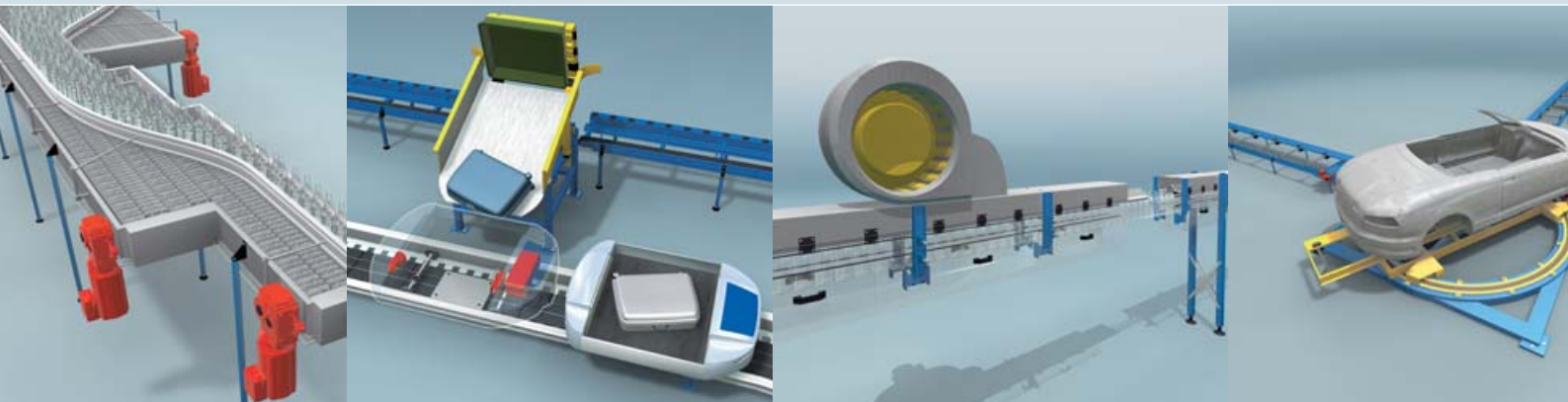
The MOVITRAC® B frequency inverters are suitable for a variety of applications characterized by very different demands. Typical application examples can be found in materials handling technology, such as bottle conveyors, handling machines or transport systems. No matter if you want to use the analog option for displaying the speed value on a display panel in an isolated application or if you want to enable a synchronized process by means of a bus system within a drive group.

It is easy to find the most suitable option for each application thanks to the modular concept of the MOVITRAC® frequency inverters. Special parameter settings for each control mode, for example, ensure straightforward and safe process sequences for fan and hoist applications.

MOVITRAC® B frequency inverters are perfectly integrated into the modular concept of SEW-EURODRIVE. In combination with other SEW-EURODRIVE components, they offer individual, comfortable functions exactly matched to the application. For programming complicated processes, the basic functions of the MOVITRAC® B are simply extended by means of a MOVI-PLC®

control unit. The graded operating concept of MOVITRAC® B is especially application-friendly and cost-effective. Here, too, the basic functionality is simply extended using modules, e.g. the removable keypad FBG11B. It enables quick and user-friendly diagnostics, parameter setting and data backup during system operation.

The operator terminals round off the concept of a modern human-machine interface, which simplifies handling by means of written text and graphics for any application.





Supply voltage V_{AC} : 1 x 200/240 ± 10 %

Mains frequency Hz: 50 ... 60 ± 5 %

MOVITRAC® B Typ	Recommended motor power [kW]	Output current [A]	Size	Dimensions in mm W x H x D
MC07B 0003-2B1-4-00	0.25 ... 0.37	1.7	0XS	55 x 185 x 163
MC07B 0004-2B1-4-00		2.5		
MC07B 0005-2B1-4-00	0.55 ... 0.75	3.3	0S	80 x 185 x 163
MC07B 0008-2B1-4-00		4.2		
MC07B 0011-2B1-4-00	1.1 ... 2.2	5.7	0L	80 x 274 x 163
MC07B 0015-2B1-4-00		7.3		
MC07B 0022-2B1-4-00		8.6		

Supply voltage V_{AC} : 3 x 200/240 ± 10 %

Mains frequency Hz: 50 ... 60 ± 5 %

MOVITRAC® B Typ	Recommended motor power [kW]	Output current [A]	Size	Dimensions in mm W x H x D
MC07B 0003-2A3-4-00	0.25 ... 0.37	1.7	0XS	55 x 185 x 163
MC07B 0004-2A3-4-00		2.5		
MC07B 0005-2A3-4-00	0.55 ... 0.75	3.3	0S	80 x 185 x 163
MC07B 0008-2A3-4-00		4.2		
MC07B 0011-2A3-4-00	1.1 ... 2.2	5.7	0L	80 x 274 x 163
MC07B 0015-2A3-4-00		7.3		
MC07B 0022-2A3-4-00		8.6		
MC07B 0037-2A3-4-00	3.7 ... 7.5	14.5	1	105 x 315 x 144
MC07B 0055-2A3-4-00		22	2	130 x 335 x 196
MC07B 0075-2A3-4-00		29		
MC07B 0110-203-4-00	11.0 ... 15.0	42	3	200 x 465 x 218
MC07B 0150-203-4-00		54		
MC07B 0220-203-4-00	22.0 ... 30.0	80	4	280 x 522 x 222
MC07B 0300-203-4-00		95		

Supply voltage V_{AC} : 3 x 400/500 \pm 10 %

Mains frequency Hz: 50 ... 60 \pm 5 %

MOVITRAC® B Typ	Recommended motor power [kW]	Output current [A]	Size	Dimensions in mm W x H x D
MC07B 0003-5A3-4-00	0.25 ... 0.37	1.0	0XS	55 x 185 x 163
MC07B 0004-5A3-4-00		1.6		
MC07B 0005-5A3-4-00	0.55 ... 1.5	2.0	0S	80 x 185 x 163
MC07B 0008-5A3-4-00		2.4		
MC07B 0011-5A3-4-00		3.1		
MC07B 0015-5A3-4-00		4.0		
MC07B 0022-5A3-4-00	2.2 ... 4.0	5.5	0L	80 x 274 x 163
MC07B 0030-5A3-4-00		7.0		
MC07B 0040-5A3-4-00		9.5		
MC07B 0055-5A3-4-00	5.5 ... 11.0	12.5	2S	105 x 335 x 205
MC07B 0075-5A3-4-00		16.0		
MC07B 0110-503-4-00			24	2
MC07B 0150-503-4-00	15.0 ... 30.0	32	3	200 x 465 x 218
MC07B 0220-503-4-00		46		
MC07B 0300-503-4-00		60		
MC07B 0370-503-4-00	37.0 ... 45.0	73	4	280 x 522 x 222
MC07B 0450-503-4-00		89		
MC07B 0550-503-4-00	55 ... 75	105	5	280 x 610 x 330
MC07B 0750-503-4-00		130		

How we're driving the world

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With a worldwide service network that is always close at hand.

With drives and controls that automatically improve your productivity.

With comprehensive knowledge in virtually every branch of industry today.

With uncompromising quality that reduces the cost and complexity of daily operations.



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Driving the world

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