SEW EURODRIVE

Reliable and flexible for all power ranges: **MOVITRAC® 31C.**

Frequency Inverters

We have every application under control – with MOVITRAC® 31C

The MOVITRAC® 31C inverters span the entire power range from 0.55 to 55 kW for supply voltages of 3 x 230 V and 3 x 380 ... 500 V. As the full range of functions is implemented as a standard in these inverters, nothing stands in the way of a wide range of applications, even on an international basis. The uniform user interface for all sizes is an additional asset ensuring quick and simple startup.

Combined with the tried and proven geared motors from SEW-EURODRIVE, these inverters stand for economic system solutions that satisfy every wish and make full use of every technical possibility. The stepless, electronic speed control of geared, brake and standard motors is carried out with the lowest mains pollution possible. Designed and produced in-house, the MOVITRAC® 31C inverters certainly live up to the high standards guaranteed by the “Made by SEW-EURODRIVE” quality seal.

Five sizes cover the complete power range from 0.55 to 55 kW.

Our frequency inverters stand for comprehensive functionality and meticulous design

The MOVITRAC® 31C series is designed for voltage ranges from 200 ... 240 V_{AC} or 380 ... 500 V_{AC} ± 10 % at 50 ... 60 Hz ± 5 % and can be operated within a frequency control range of 0 … 400 Hz. The inverters can be connected to all standard low voltage systems and have both CE and UL-/cUL approval.

Modular expansion options facilitate the use of MOVITRAC® 31C for customized application solutions. High overload capacity, long motor cables, low mains perturbation and a high start-up torque from standstill are standard features that make economic control of systems and machinery concepts possible.

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.

The frequency inverters of the MOVITRAC® 31 C series cover the complete power range from 0.5 to 55 kW. Serially equipped with comprehensive functionality, they are the fitting solution for every requirement.

Individual system solutions using geared motors and MOVITRAC® 31C for every application

Ready, Willing, Enabled: MOVITRAC® 31C

MOVITRAC® 31C is not just a frequency inverter. MOVITRAC® 31C consists of a basic unit that can be tailored to suit a wide range of the most different requirements due to its diversity of expandable options and accessories. A frequency inverter that can do service in any application.

A standardized keypad, synchronous operation controller and speed controller are just some of the options that can be expanded at wish to provide customized solutions.

Accessories à la carte Braking resistor, EMC module, input or output filter or choke:
– customize the functions to suit your own requirements.

MOVITRAC® 31C communicates on all levels

Modular drive systems have become the norm in today's automation concepts. That's why the MOVITRAC® 31C can be fitted with serial or fieldbus interfaces.

Serial interfaces:

– RS-323 serial interface
  This peer-to-peer connection is usually employed for setting parameters, and for the operation and diagnostics of stand-alone units using a PC or the SHELL software.

– RS-485 serial interface
  By means of a universal communication protocol, several inverters can be linked to higher-level machine control (PLC, industrial PC etc.) via the RS-485.

Fieldbus interfaces:

The fieldbus interfaces allow standardized networking of decentralized sensors and actuators – from different manufacturers – with higher-level automation systems.

A principle feature of the MOVITRAC® 31C communications interface is the uniform, fieldbus-independent performance of the unit. This makes it possible to use different fieldbus systems for the same application program. SEW-EURODRIVE fieldbus interfaces allow the exchange of both processes and parameters. System conformity is certified by independent testing institutions.

PROFIBUS, INTERBUS and DeviceNet fieldbus links are available for the MOVITRAC® 31C.

Individual solutions:

Options for MOVITRAC® 31C
– FBG 31C keypad
– USS 21A serial interface
– FEA 31C, FIO 31C input/output functions
– FRS 31C synchronous operation controller
– PROFIBUS FFP 31C fieldbus interface
– INTERBUS FFI 31C fieldbus interface
– DeviceNet FFD 31C fieldbus interface
– FRN 31C / FEN 31C closed-loop speed controller
– IPOS FPI 31C positioning control
– FIT 31C motor temperature sensor evaluation

Accessories for MOVITRAC® 31C
– BW braking resistor
– FKB heat sink for brake resistors in flatpack design
– EF EMC-module
– ND line choke
– NF...-... mains filter
– HF output filter
– HD... output choke

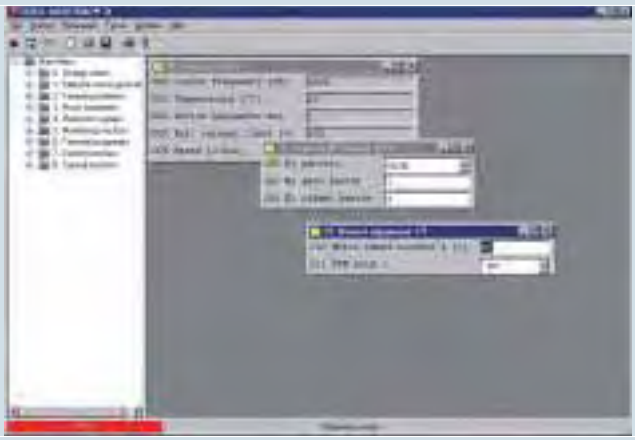
Startup – simply, quickly, reliably

As with all our components for drive engineering, the MOVITRAC® 31C also puts safe and user-friendly startup and diagnostics to the fore.

The handheld keypad allows the parameters of the applications data to be entered in eight different languages. All the operation parameters can be adjusted, status information and measurement data queried, and parameter sets saved and transferred to other units using the keyboard and plain text display.

Setting parameters and programming via the RS-232/RS-485 interface can be conveniently performed with a PC or laptop in combination with the MCDTools user software. Up to 16 inverters can be centrally controlled via the RS-485 serial interface from one PC. The integrated fieldbus monitor serves as a diagnostic tool for fieldbus operation with PROFIBUS, INTERBUS and DeviceNet.

The MCDTools user software also incorporates integrated process data visualization. This software has an oscilloscope function for easy startup and optimization of the control parameters – online, of course. You can specify setpoint sets for instance, and the program records the reaction of the inverter in real time and then presents the results in graph form.



MCDTools user software
in Windows version

MOVITRAC® 31C – one inverter, many applications. Customized options that can be readily added to at all times for a full range of functions, a comprehensive program of accessories and user-friendly software for effortless startup – all this adds up to make an inverter that stands out.

Always reliable, always flexible: MOVITRAC® 31C

400 / 500 V units

MOVITRAC® Type	31C005	31C007	31C011	31C014	31C008	31C015	31C022	31C030
Supply voltage [V]	3 x 380 … 500 ± 10 % for 50 ... 60 Hz ± 5 %							
Output frequency [Hz]	0 … 400							
Recommended motor power [kW] with overload reserve 1.5 x I_N	0.55	0.75	1.1	1.5	0.75	1.5	2.2	3.0
Output current [A] at 400 V	2.0	2.5	3.2	4.0	2.5	4.0	5.5	7.3
Recommended motor power [kW] without overload reserve	0.75	1.1	1.5	2.2	1.1	2.2	3.0	4.0
Output current [A] at 400 V	2.5	3.1	4.0	5.0	3.1	5.0	6.9	9.1
Main dimensions W x H x D [mm]	105 x 188 x 189				184 x 281 x 170			

MOVITRAC® Type	31C040	31C055	31C075	31C110	31C150	31C220	31C300	31C370	31C450
Supply voltage [V]	3 x 380 … 500 ± 10 % for 50 … 60 Hz ± 5 %								
Output frequency [Hz]	0 … 400								
Recommended motor power [kW] with overload reserve 1.5 x I_N	4.0	5.5	7.5	11.0	15.0	22.0	30.0	37.0	45.0
Output current [A] at 400 V	9.6	12.0	16.0	24.0	33.0	47.0	61.0	75.0	92.0
Recommended motor power [kW] without overload reserve	5.5	7.5	11.0	15.0	22.0	30.0	37.0	45.0	55.0
Output current [A] at 400 V	12.0	15.0	20.0	30.0	41.0	58.0	76.0	93.0	115.0
Main dimensions W x H x D [mm]	184 x 281 x 218			220 x 405 x 264			220 x 555 x 264		

230 V units

MOVITRAC® Type	31C005	31C011	31C008	31C015	31C022	31C037	31C055	31C075
Supply voltage [V]	3 x 200 … 240 ± 10 % for 50 … 60 Hz ± 5 %							
Output frequency [Hz]	0 … 400							
Recommended motor power [kW] with overload reserve 1.5 x I_N	0.55	1.1	0.75	1.5	2.2	3.7	5.5	7.5
Output current [A] at 230 V	3.2	4.9	4.0	7.3	8.6	16.0	22.0	29.0
Recommended motor power [kW] without overload reserve	0.75	1.5	1.1	2.2	3.0	5.5	7.5	11.0
Output current [A] at 230 V	4.0	6.1	5.0	9.1	10.8	20.0	27.5	36.3
Main dimensions W x H x D [mm]	105 x 188 x 189		184 x 281 x 170		184 x 296 x 218 x	220 x 405 x 264		