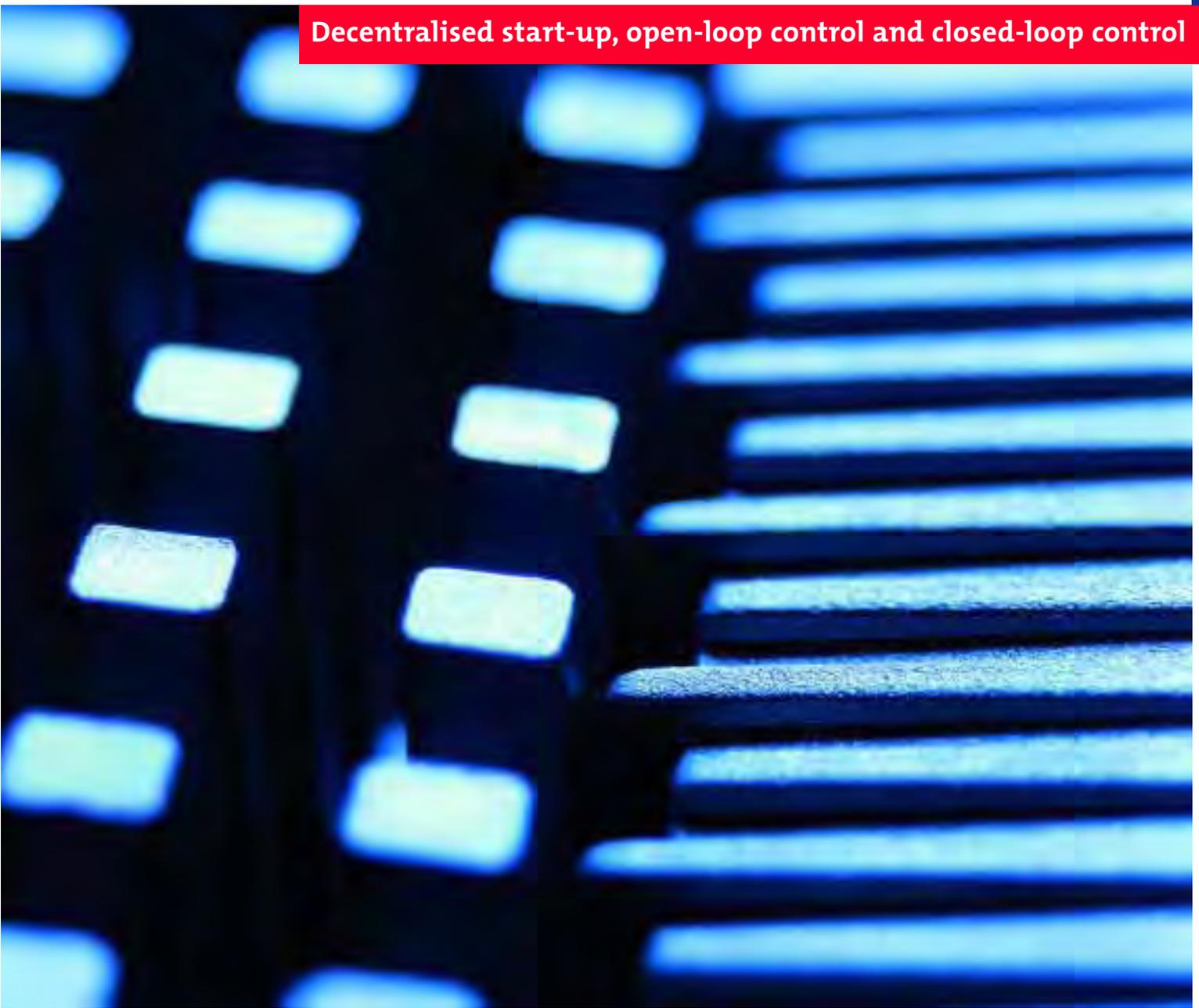


8200 motec *frequency inverter* starttec *motor starter*



Decentralised start-up, open-loop control and closed-loop control



Lenze

Efficient distribution of tasks | with the 8200 motec and starttec

Have you run out of space in your plant control cabinet? Have expensive motor cables been a bone of contention for as long as you can remember? You might already have considered converting your plant to decentralised drive technology to benefit from all the advantages this would bring in respect of cost-effectiveness and efficiency. Appropriate drive concepts can speed up assembly and installation times, reduce project-planning expenditure, cut maintenance expenditure and provide a basis on which machine modules can be built cost-effectively.

Plant modularity is a worthwhile investment. Sub-systems can be produced in high quantities on a standardised basis. Individual customer solutions can be created by combining specific modules and then subsequently integrating them into an existing overall plant concept with ease. Decentralised drive technology supports such modularisation. With the 8200 motec frequency inverter and starttec motor starter, Lenze can offer the right products with the necessary features for efficient implementation.



starttec motor starter 8200 motec frequency inverter

Of benefit | in simple and complex tasks

Ideal for decentralised drive tasks – the rugged 8200 motec range of frequency inverters, the starttec motor starter and associated accessories can provide you with drive components tailored precisely to meet the individual requirements of your application. The option to purchase these components mounted on Lenze geared motors or three-phase AC motors ready to run will reduce the time and money you have to spend on project planning and assembly.

The 8200 motec frequency inverter has already been tried and tested in applications for electronic speed control. Examples include materials handling, air conditioning or general automation engineering. The starttec motor starter supports the electronic - and therefore wear-free - switching of motors described as "directly coupled to the mains". However, the starttec is capable of so much more than just switching and is ideal for automation tasks.

Powerful

- ▶ 8200 motec frequency inverter
0.25 to 0.37 kW (single-phase),
0.55 to 7.5 kW (three-phase)
- ▶ starttec motor starter
typically 0.25 to 4 kW (three-phase)

Use all over the world

- ▶ Usability on standard mains voltages provides the basis for use all over the world
- ▶ Certification in accordance with international standards: CE, UL, cUL



*8200 motec and starttec:
Installation options*

Universal

Numerous features such as parameter setting, operation, diagnostics, functionality and fieldbus connection run on the 8200 motec and starttec motor starter in exactly the same way as on the 8200 vector control cabinet frequency inverter. This results in reduced project planning and training requirements for combined central/decentralised drive concepts.

Adaptable

Regardless of whether motors simply start up or also need to control their speed, whether inverters are operating as "standalone" units with setpoint selection via potentiometer or are networked, the 8200 motec and starttec will always provide a suitable solution.

Installation and assembly | decentralisation is key

Rugged structure with high degree of protection (to IP65): The 8200 motec and starttec provide a rapid and cost-effective means of solving drive tasks directly on the machine. The decentralised drive technology can for example save space in control cabinets and significantly reduce the length of expensive shielded cables. The loop-through option for the fieldbus and power cables enables a bus system - even for power - to be built instead of using expensive star wiring configurations, thereby making shielded motor cables superfluous.

Lenze can also supply the 8200 motec and starttec decentralised drive compo-

nents as compact drives. If required, the frequency inverters/motor starters can be supplied mounted on geared motors or Lenze three-phase AC motors ready to run.

Advantages

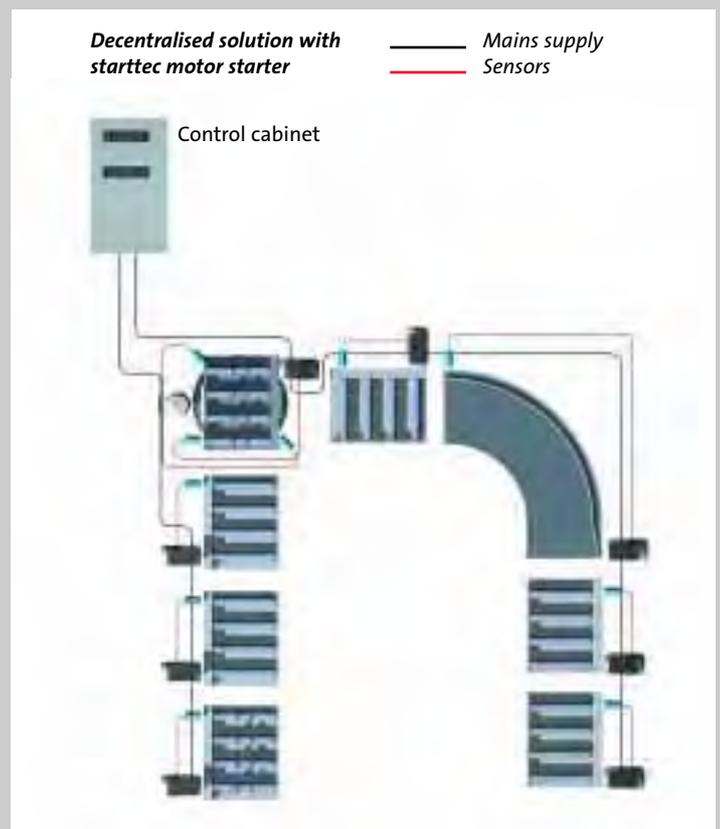
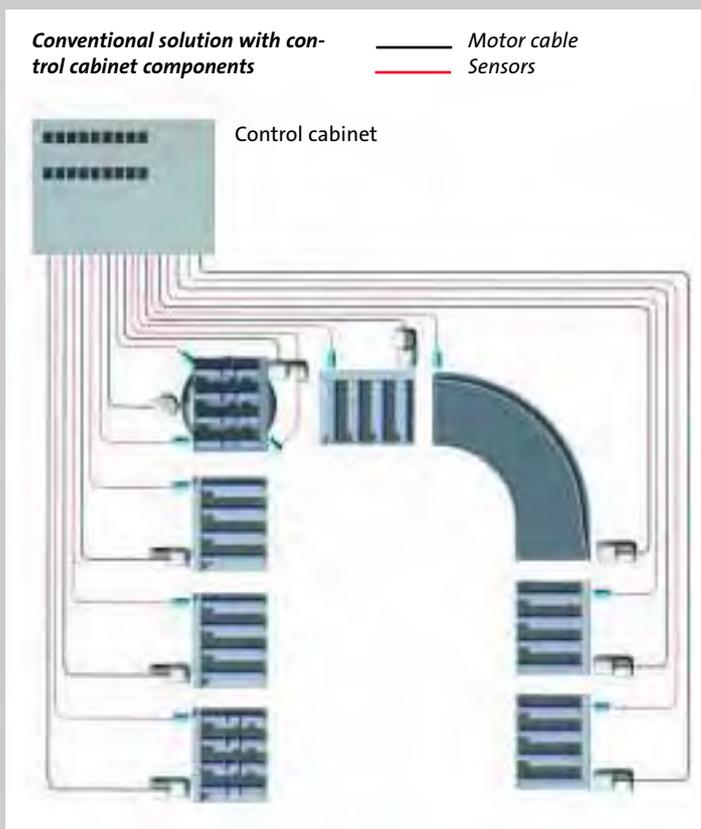
- ▶ Faster installation
- ▶ Reduction in costs due to shorter cables
- ▶ Fewer sources of error

Comparison of installation effort

using the example of a materials handling application with the starttec motor starter

Conclusion

- ▶ Significantly fewer cables
- ▶ Transparent wiring/cabling
- ▶ Reduction in control cabinet requirements



Operation and diagnostics | fast and easy to use



Like the starttec, the 8200 motec is operated via menus selected using the plug-in keypad. Alternatively, a PC can be used for operation in conjunction with the user-friendly "Global Drive Control" parameter setting/operating software. Status displays (2 LEDs) support local diagnostics and useful status information can be accessed via the keypad or PC. The copying of parameter settings (also performed using a keypad or PC) is particularly useful when commissioning plants with a number of drives. The option to mount the 8200 motec or starttec on the machine frame – separate from the motor – optimises accessibility during local operation and diagnostics.

On the 8200 motec frequency inverter, the power supply is isolated from the drive electronics via plug contacts. Just four screws have to be loosened should servicing be required. The heatsink can then be removed from the carrier housing, along with the electronics, and replaced in a matter of seconds – that's all there is to it. The entire wiring in the carrier housing remains untouched.

Advantages

- ▶ Fast commissioning
- ▶ User-friendly set-up on site
- ▶ Increased machine availability



Materials handling application with the 8200 motec frequency inverter



Technical data | 8200 motec frequency inverter

Types, mains voltage range and dimensions

Type	Rated power [kW]	Supply voltage [V]	Dimensions [mm]
E82MV251_2B	0.25	230 1 x 180 ... 264 ± 0%	190 x 138 x 100
E82MV371_2B	0.37		
E82MV551_4B	0.55	400 3 x 320 ... 550 ± 0%	202 x 156 x 151
E82MV751_4B	0.75		
E82MV152_4B	1.5		230 x 176 x 167
E82MV222_4B	2.2		
E82MV302_4B	3.0		
E82MV402_4B	4.0		Motor mounting: 325 x 211 x 163 Wall mounting: 325 x 211 x 223
E82MV552_4B	5.5		
E82MV752_4B	7.5		

Functions and features

Degree of protection	IP65, protection against accidental contact to Nema 250 Type 4 (3 ... 7.5 kW for wall mounting: IP54)					
Interference suppression Limit classes A and B to EN55011	Integrated as standard					
Ambient temperature range	-20 ... +60°C (above +40°C with power reduction)					
Approvals	CE, UL, cUL					
Switching frequencies	2, 4, 8, 16 kHz					
Standard functions	PTC input, PID controller, integrated brake transistor, motor parameter adaptation and adjustment, programmable relay output, S-shaped ramps, level inversion, skip frequencies, fixed speeds, four parameter sets can be switched online, password protection, bipolar setpoint processing, etc.					
Open-loop and closed-loop control	Optional vector control, U/f characteristic control (linear, quadratic), torque selection					
Drive features	1.8 x M _{rated} (60 s), torque setting range 1:10 for 3 ... 50 Hz, speed setting range 1:50 with M _{rated} (50 Hz), concentricity ± 0.1 Hz					
Function modules (option)		Analogue IN	Analogue OUT	Digital IN	Digital OUT	Freq. OUT
I/O modules	Standard I/O	1	1	4*	1	–
	Application I/O	2	2	6*	2	1
* Can contain 1 frequency input						
Bus modules	INTERBUS, PROFIBUS, LECOM-B (RS485), system bus (CAN), CANopen, DeviceNet, AS-Interface					
Options	Switch potentiometer unit, diagnosis terminal with keypad or RS232 interface, control module external brake (brake rectifier), external brake resistor, mains bus connector					

Types, mains voltage range and dimensions

Type	Design	Rated power [kW]	Supply voltage [V]	Dimensions [mm]
E71MM402_2A010	Single drive, brake control via bridge rectifier	Typical 0.25 ... 4.0 *	400 (3 x 100 ... 550 +/- 0%)	228 x 129 x 71
E71MM402F2A010	Single drive, brake control via bridge rectifier, AS-Interface integrated			
E71MM402_4A010	Single drive, brake control via half-wave rectifier			
E71MM402F4A010	Single drive, brake control via half-wave rectifier, AS-Interface integrated			
E71MM402_2A020	2-motor operation/change of direction of rotation, brake control via bridge rectifier			
E71MM402F2A020	2-motor operation/change of direction of rotation, brake control via bridge rectifier, AS-Interface integrated			
E71MM402_4A020	2-motor operation/change of direction of rotation, brake control via half-wave rectifier			
E71MM402F4A020	2-motor operation/change of direction of rotation, brake control via half-wave rectifier, AS-Interface integrated			

* Dependent on the mains voltage applied, the motor used and the wiring (star/delta); the permissible range of the rated motor current (1.0 ... 9.5 A) is decisive

Functions and features

Degree of protection	IP65, protection against accidental contact to NEMA 250 Type 4
Ambient temperature range	-25 ... + 60°C (wall mounting up to + 40°C)
Approvals	CE, UL, cUL
Standard functions	<ul style="list-style-type: none"> ▶ PTC input ▶ Level inversion ▶ Acceleration time can be set via potentiometer ▶ "Accumulating" digital signals for forwarding to PLC, logic link option (AND, OR, XOR, NOT) for input signals, ▶ Time-delayed brake control (configurable) ▶ Inching mode with a time-adjustable travel rate ▶ And many more
Open-loop and closed-loop control	Generalised phase control
Rated motor current range	1.0 ... 9.5 A (configurable via step switch)
Inputs and outputs	<ul style="list-style-type: none"> ▶ 5 digital inputs ▶ 4 digital outputs ▶ 1 output for brake connection (wear-resistant, electronic output)
Bus modules (option)	INTERBUS, PROFIBUS, LECOM-B (RS485), system bus (CAN), CANopen, DeviceNet
Options	▶ Diagnosis terminal with keypad or RS232 interface