



## 8200 vector product key

	E82	E	V	751	K	2	C	x	x	x
<b>Design</b>										
E – installation										
C – cold plate technology (0.25 ... 22 kW)										
<b>Power</b>										
e.g. 751 - 0.75 kW										
e.g. 752 - 7.5 kW										
e.g. 113 - 11 kW										
<b>Voltage class</b>										
2 – 230/240 V										
4 – 400/500 V										
<b>Variant</b>										
– standard, RFI filter integrated (0.25 ... 11 kW)										
1 – IT system										
2 – no RFI filter										
0 – not coated (0.25 ... 11 kW)										
1 – coated (15 ... 90 kW)										
302 – with footprint mains filter (15 ... 90 kW)										



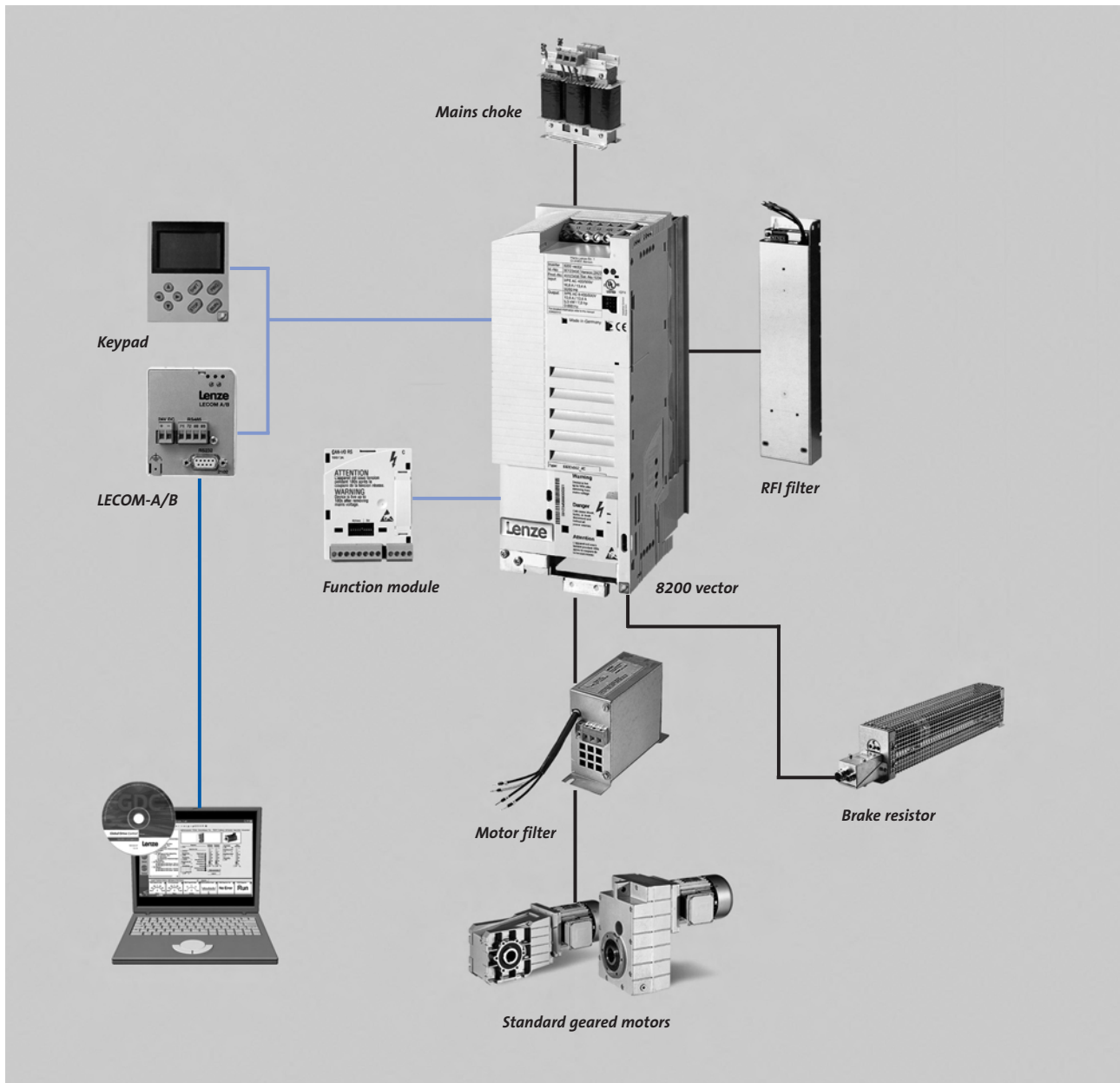


### About this catalogue

This catalogue contains all frequency inverter components. The corresponding automation components can be found in the PC-based Automation catalogue.

For some components the "arrow" symbol appears together with an identifier printed in bold. This identifier can be retrieved directly in the electronic catalogue. The catalogue can be found online at: [www.lenze.de/dsc](http://www.lenze.de/dsc)

### Inverters and accessories





## 8200 vector frequency inverter

### Product information

#### 8200 vector – for standard applications

The concept of the 8200 vector frequency inverter is based on a modular system of components adjusted to each other. If combined with a Lenze geared motor or a Lenze three-phase AC motor, you can produce electronic variable speed drives for a wide range of applications in the 0.25 ... 90 kW power range.

##### The option of 'bookcase' mounting

permits a space-saving installation in the control cabinet. Installation costs are reduced using integrated filters (optional).

##### Flexible

The modular structure allows you to optimise the inverters to your application, making cost-effective drive solutions possible while maintaining high performance levels. Regardless of whether you opt for "stand alone" inverters with potentiometer-based setpoint selection or inverters networked in a bus system – the functionality of the inverter can be adapted to your application.

##### Adaptable

The selectable form of the V/f characteristic allows the frequency inverters to be adapted to loads with torque requirements rising in a constant or quadratic manner. The integrated flying restart circuit means that a drive can be easily restarted when the shaft is still turning.

##### Energy-saving

The power level is adapted such that the inverter is only driven to suit the current demand for torque/power.

##### Immediately ready for operation

The frequency inverters are preset for standard use. Amongst other things, parameters are set for:

- ▶ controlled acceleration and deceleration using set acceleration and deceleration times
- ▶ assignment of inputs and outputs with standard functions.

##### Simple

This series of inverters are characterised by simple operability and handling while also offering high levels of functionality. A clear menu structure and user-guided commissioning thanks to the Global Drive Control easy (GDC easy) parameterisation software makes rapid frequency converter parameter setting and diagnostics possible. GDC easy is free of charge and can be downloaded from [www.Lenze.de](http://www.Lenze.de).

##### Clear

The XT keypad is also available for operation. Users can quickly access all inverter parameters in the clear menu structure using the 8 keys and a text display. The XT keypad is also used for status display, error diagnosis and, thanks to its integrated memory, for transferring settings to other inverters.





### 8200 vector – for standard applications

#### The right setpoint source for every requirement

- ▶ via setpoint potentiometer to the control terminals
- ▶ via master voltage or master current to the control terminals
- ▶ via digital frequency input
- ▶ via an operator module
- ▶ via a bus module from a host system

#### Communication-capable

In communication with a host system, inverters can be incorporated using plug-on bus modules. Virtually all common field bus systems are available (CAN, CANopen, PROFIBUS, INTERBUS, DeviceNet, AS interface and ETHERNET Powerlink).

#### Reliable

An adjustable slip compensation balances load-related speed variations without costly speed feedback. The maximum current limiting function ensures stable operation under static and dynamic loads. A PTC resistor can be connected to protect the motor.

#### Used around the world

Thanks to the huge mains voltage range of up to 500 V (+10%), you don't need to worry about where in the world your machine is supplied. And the 8200 vector series is of course certified in line with international standards.





## 8200 vector frequency inverter

### Product information

#### Functions and features

<b>Control modes/motor control</b>	V/f control (linear or quadratic) Zero-sensor vector control
<b>Basic functions</b>	Freely assignable user menu 4 freely programmable parameter sets (can be swapped over online) Fault history buffer DC brake function Flying restart with coasting motor S-ramps for smooth acceleration Max. output frequency 650 Hz Fixed frequencies Masking frequencies PID controller Freely configurable inputs and outputs Level inversion
<b>Monitoring and protective measures</b>	Short circuit Earth fault Overvoltage Motor stalling Motor phase failure detection Load rejection/V-belt monitoring I <sup>2</sup> x t-Motor monitoring Motor overtemperature (input for PTC or thermal contact)
<b>Diagnostics</b> Status displays	2 LEDs
<b>Braking operation</b> Brake chopper Brake resistance	0.25 ... 11 kW integrated; 15 ... 90 kW external External



### Control connections

The 8200 vector receives digital and analogue inputs and outputs through an I/O function module. These are used to control the inverter and/or incorporate it in automation and control concepts.

Communication with a host system can also be established and matched to the application using a plug-in communication module. This ensures great flexibility for various drive and automation tasks (bus and I/O mixed operation).

You can select from two I/O function modules:

- ▶ standard I/O PT for standard applications
- ▶ application I/O PT for challenging applications.

The function module is integrated on the bottom slot of the 8200 vector. There is a second slot for a bus-function module on the 8200 vector in the 15 to 90 kW power range. This allows the standard I/O PT to be combined with a bus function module; diagnostics with an operating module is for example possible at the same time.

Design	8200 vector with standard I/O PT <sup>1)</sup>	8200 vector with application I/O PT <sup>1)</sup>
<b>Product key</b> I/O function module	<b>E82ZAF5C010</b>	<b>E82ZAFAC010</b>
<b>Inputs/outputs</b>		
Analog inputs	<ul style="list-style-type: none"> <li>▶ Quantity: 1</li> <li>▶ Voltage or current input (can be switched over)</li> <li>▶ Resolution: 10 bits</li> <li>▶ Value range: 0 ... +/-10 V, 0/4 ... 20 mA</li> </ul>	<ul style="list-style-type: none"> <li>▶ Quantity: 2</li> <li>▶ Voltage or current input (can be switched over)</li> <li>▶ Resolution: 10 bits</li> <li>▶ Value range: 0 ... +/-10 V, 0/4 ... 20 mA</li> </ul>
Analog outputs	<ul style="list-style-type: none"> <li>▶ Quantity: 1</li> <li>▶ Resolution: 10 bits</li> <li>▶ Value range: 0 ... 10 V, max. 2 mA</li> </ul>	<ul style="list-style-type: none"> <li>▶ Number: 2, optional: voltage or current input</li> <li>▶ Resolution: 10 bits</li> <li>Voltage: <ul style="list-style-type: none"> <li>▶ Value range: 0 ... 10 V, max. 2 mA</li> </ul> </li> <li>Current: <ul style="list-style-type: none"> <li>▶ Value range: 0/4 ... 20 mA</li> </ul> </li> </ul>
Digital inputs	<ul style="list-style-type: none"> <li>▶ Quantity: 5</li> <li>▶ Switching level: PLC (IEC 61131-2)</li> <li>▶ 2 inputs, can optionally be used as a frequency input (10 kHz, 1-track)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Quantity: 7</li> <li>▶ Switching level: PLC (IEC 61131-2)</li> <li>▶ 2 inputs, can optionally be used as a frequency input (10 kHz, 2-track)</li> </ul>
Digital outputs	<ul style="list-style-type: none"> <li>▶ Quantity: 1</li> <li>▶ Switching level: PLC (IEC 61131-2)</li> <li>▶ Max. output current: 50 mA</li> </ul>	<ul style="list-style-type: none"> <li>▶ Quantity: 2</li> <li>▶ Switching level: PLC (IEC 61131-2)</li> <li>▶ Quantity: 1, frequency output (10 kHz, HTL)</li> <li>▶ Max. output current: 8 A</li> <li>▶ Max. output current: 50 A</li> </ul>
Relay	<ul style="list-style-type: none"> <li>▶ Quantity: 1 (15 ... 90 kW: 2)</li> <li>▶ Contact: change-over</li> <li>▶ AC connection: 250 V, 3 A</li> <li>▶ DC connection: 24 V, 2 A</li> </ul>	<ul style="list-style-type: none"> <li>▶ Quantity: 1 (15 ... 90 kW: 2)</li> <li>▶ Contact: change-over</li> <li>▶ AC connection: 250 V, 3 A</li> <li>▶ DC connection: 24 V, 2 A</li> </ul>
<b>Interfaces</b>		
Extension modules	<ul style="list-style-type: none"> <li>▶ Optional communication module</li> <li>▶ Optional bus-function module (15 ... 90kW)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Optional communication module</li> <li>▶ Optional bus-function module (15 ... 90kW)</li> </ul>

<sup>1)</sup> The pluggable terminal strips of the function module ("PT" design) protrude around 15 mm out of the front of the inverter

→ Circuit diagrams  
**DS\_SP\_8200v\_0001**  
Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)



# 8200 vector frequency inverter

## Product information

### Standards and operating conditions

<b>Conformity</b>	CE: Low-Voltage Directive (2006/95/EC)
<b>Approvals</b> UL 508C	Power Conversion Equipment (file no. 132659)
<b>Enclosure</b> EN 60529 NEMA	IP20 Protection against contact according to NEMA 250 type 1
<b>Climatic conditions</b> Storage (EN 60721-3-1)  Transport (EN 60721-3-2) Operation (EN 60721-3-3)  Rated output current derating	0.25 ... 11 kW: 1K3 (temperature: -25 °C ... + 60 °C) 15 ... 90 kW: 1K3 (temperature: -25 °C ... + 55 °C) 2K3 (temperature: -25 °C ... + 70 °C) 0.25 ... 11 kW: 3K3 (temperature: -10 ... + 55 °C) 15 ... 90 kW: 3K3 (temperature: 0 ... + 50 °C) above + 40 °C by 2.5 %/°C
<b>Permissible installation height</b>	0 ... 4000 m amsl
Rated output current derating	Above 1000 m amsl by 5%/1000 m
<b>Vibration resistance</b>	Acceleration resistant up to 0.7 g according to Germanischer Lloyd, general conditions
<b>Permissible supply forms</b> Unrestricted use	Systems with earthed star point (TN and TT systems) Networks with high-impedance or insulated star point (IT networks) with one variant (15 ... 90 kW)
<b>Noise emission</b> EN 61800-3	Conducted emissions, category C1 or C2 with shielded motor cable <sup>1)</sup> Depending on device version with integrated RFI measures or additional RFI and/or mains filter
<b>Insulation resistance</b> EN 61800-5-1	Overvoltage category III, more than 2000 m above sea level overvoltage category II
<b>Pollution degree</b> EN 61800-5-1	2
<b>Protective insulation of control circuits</b> EN 61800-5-1	Safe isolation of mains: double/reinforced insulation

<sup>1)</sup> Motor cable lengths depend on inverter type and switching frequency





# 8200 vector frequency inverter

## Inverter


### Rated data

- ▶ The data is valid for operation at 1 /PE AC 230 V.
- ▶ Unless otherwise specified, the data refers to the default setting with a switching frequency of 8 kHz.

→ Other rated data, e.g. for operating with increased rated power

**DS\_GD\_8200v\_0001**

Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)

			
<b>Motor power</b> (asynchronous motor, 4-pole)	$P_N$ [kW]	0.25	0.37
<b>Product key</b> Filter integrated <sup>2)</sup> No filter		<b>E82EV251K2C</b> <b>E82EV251K2C200</b>	<b>E82EV371K2C</b> <b>E82EV371K2C200</b>
<b>Mains voltage range</b>	$U_{Netz}$ [V]	1/N/PE AC 180 V -0% ... 264 V +0%; 45 Hz -0% ... 65 Hz +0%	
<b>Alternative DC supply</b>	$U_{DC}$ [V]	Not possible	
<b>Rated mains current</b> Without mains choke With mains choke	$I_{Netz}$ [A] $I_{Netz}$ [A]	3.4 3	5 4.2
<b>Rated output current</b> 8 kHz	$I_N$ [A]	1.7	2.4
<b>Max. output current</b> 8 kHz <sup>1)</sup>	$I_{max}$ [A]	2.5	3.6
<b>Brake chopper data</b> Min. brake resistance	$R$ [Ohm]	470	
<b>Power loss</b>	$P_V$ [W]	30	40
<b>Dimensions</b> Height Width Depth	$H$ [mm] $B$ [mm] $T$ [mm]	120 60 140	
<b>Mass</b>	$m$ [kg]	0.8	
<b>Permissible motor cable length</b> Shielded <sup>3)</sup> Unshielded <sup>3)</sup>	$l$ [m] $l$ [m]	50 100	

<sup>1)</sup> 60 s

<sup>2)</sup> Max. 20 m motor cable (shielded) for category C2 according to EN 61800-3  
(motor cable length for category C1 depends on inverter type and switching frequency)

<sup>3)</sup> Permissible cable length may be affected if EMC conditions have to be met.

→ Dimensioned drawings

**DS\_MB\_8200v\_0001**

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# 8200 vector frequency inverter



## Inverter



### Rated data

- ▶ The data is valid for operation at 1/N/PE (3/PE) AC 230 V or DC 325 V.
- ▶ Unless otherwise specified, the data refers to the default setting with a switching frequency of 8 kHz.

→ Other rated data, e.g. for operating with increased rated power  
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<b>Motor power</b> (asynchronous motor, 4-pole)	P <sub>N</sub> [kW]	0.55	0.75	1.5	2.2
<b>Product key</b> Filter integrated <sup>2)</sup> No filter		E82EV551K2C E82EV551K2C200	E82EV751K2C E82EV751K2C200	E82EV152K2C E82EV152K2C200	E82EV222K2C E82EV222K2C200
<b>Mains voltage range</b>	U <sub>Netz</sub> [V]	1/N/PE AC 180 V -0% ... 264 V +0%; 45 Hz -0% ... 65 Hz +0% 3/PE AC 100 V -0% ... 264 V +0%; 45 Hz -0% ... 65 Hz +0%			
<b>Alternative DC supply</b>	U <sub>DC</sub> [V]	DC 140 V - 0 % ... 370 V + 0 %			
<b>Rated mains current</b> Without mains choke 1/N/PE With mains choke 1/N/PE Without mains choke 3/PE With mains choke 3/PE	I <sub>Netz</sub> [A] I <sub>Netz</sub> [A] I <sub>Netz</sub> [A] I <sub>Netz</sub> [A]	6 5.6 3.9 2.7	9 7.5 5.2 3.6	15 12.5 9.1 6.3	4) 18 4) 9
<b>Rated output current</b> 8 kHz	I <sub>N</sub> [A]	3	4	7	9.5
<b>Max. output current</b> 8 kHz <sup>1)</sup>	I <sub>max</sub> [A]	4.5	6	10.5	14.2
<b>Brake chopper data</b> Min. brake resistance	R [Ohm]	90		47	
<b>Power loss</b>	P <sub>V</sub> [W]	50	60	100	130
<b>Dimensions</b> Height Width Depth	H [mm] B [mm] T [mm]	180		60 140	240
<b>Mass</b>	m [kg]	1.2		1.6	
<b>Permissible motor cable length</b> Shielded <sup>3)</sup> Unshielded <sup>3)</sup>	l [m] l [m]			50 100	

<sup>1)</sup> 60 s

<sup>2)</sup> Max. 20 m motor cable (shielded) for category C2 according to EN 61800-3 (motor cable length for category C1 depends on inverter type and switching frequency)

<sup>3)</sup> Permissible cable length may be affected if EMC conditions have to be met.

<sup>4)</sup> Operation only permitted with mains choke

→ Dimensioned drawings  
**DS\_MB\_8200v\_0001**  
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## 8200 vector frequency inverter

### Inverter

#### Rated data

- ▶ The data is valid for operation at 3/PE AC 230 V or DC 325 V.
- ▶ Unless otherwise specified, the data refers to the default setting with a switching frequency of 8 kHz.

→ Other rated data, e.g. for operating with increased rated power  
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<b>Motor power</b> (asynchronous motor, 4-pole)	$P_N$ [kW]	3	4	5.5	7.5
<b>Product key</b> Filter integrated <sup>2)</sup> No filter		<b>E82EV302K2C</b> E82EV302K2C200	<b>E82EV402K2C</b> E82EV402K2C200	<b>E82EV552K2C</b> E82EV552K2C200	<b>E82EV752K2C</b> E82EV752K2C200
<b>Mains voltage range</b>	$U_{\text{Netz}}$ [V]	3/PE AC 100 V -0% ... 264 V +0%; 45 Hz -0% ... 65 Hz +0%			
<b>Alternative DC supply</b>	$U_{\text{DC}}$ [V]	DC 140 V - 0 % ... 370 V + 0 %			
<b>Rated mains current</b> Without mains choke	$I_{\text{Netz}}$ [A]	15.6	21.3	29.3	<sup>4)</sup>
With mains choke	$I_{\text{Netz}}$ [A]	12	16	21	28
<b>Rated output current</b> 8 kHz	$I_N$ [A]	12	16.5	22.5	28.6
<b>Max. output current</b> 8 kHz <sup>1)</sup>	$I_{\text{max}}$ [A]	18	24.8	33.8	42.9
<b>Brake chopper data</b> Min. brake resistance	$R$ [Ohm]	29		19	
<b>Power loss</b>	$P_V$ [W]	150	190	250	320
<b>Dimensions</b> Height	$H$ [mm]	240			
Width	$B$ [mm]	100		125	
Depth	$T$ [mm]	140			
<b>Mass</b>	$m$ [kg]	2.9		3.6	
<b>Permissible motor cable length</b> Shielded <sup>3)</sup>	$l$ [m]	50			
Unshielded <sup>3)</sup>	$l$ [m]	100			

<sup>1)</sup> 60 s

<sup>2)</sup> Max. 20 m motor cable (shielded) for category C2 according to EN 61800-3  
 (motor cable length for category C1 depends on inverter type and switching frequency)

<sup>3)</sup> Permissible cable length may be affected if EMC conditions have to be met.

<sup>4)</sup> Operation only permitted with mains choke

→ Dimensioned drawings  
**DS\_MB\_8200v\_0001**  
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# 8200 vector frequency inverter

## Inverter





### Rated data

- ▶ The data is valid for operation at 3/PE AC 400 V.
- ▶ Unless otherwise specified, the data refers to the default setting with a switching frequency of 8 kHz.

→ Other rated data, e.g. for operating with increased rated power

**DS\_GD\_8200v\_0001**

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<b>Motor power</b> (asynchronous motor, 4-pole)	$P_N$ [kW]	<b>0.55</b>	<b>0.75</b>	<b>1.5</b>	<b>2.2</b>
<b>Product key</b> Filter integrated <sup>2)</sup>		<b>E82EV551K4C</b>	<b>E82EV751K4C</b>	<b>E82EV152K4C</b>	<b>E82EV222K4C</b>
No filter		<b>E82EV551K4C200</b>	<b>E82EV751K4C200</b>	<b>E82EV152K4C200</b>	<b>E82EV222K4C200</b>
<b>Mains voltage range</b>	$U_{\text{Netz}}$ [V]	3/PE AC 320 V-0 % ... 550 V+0 %; 45 Hz-0 % ... 65 Hz+0 %			
<b>Alternative DC supply</b>	$U_{\text{DC}}$ [V]	DC 450 V-0 % ... 775 V+0 %			
<b>Rated mains current</b> Without mains choke	$I_{\text{Netz}}$ [A]	2.5	3.3	5.5	7.3
With mains choke	$I_{\text{Netz}}$ [A]	2	2.3	3.9	5.1
<b>Rated output current</b> 8 kHz	$I_N$ [A]	1.8	2.4	3.9	5.6
<b>Max. output current</b> 8 kHz <sup>1)</sup>	$I_{\text{max}}$ [A]	2.7	3.6	5.9	8.4
<b>Brake chopper data</b> Min. brake resistance	$R$ [Ohm]	455		230	155
<b>Power loss</b>	$P_V$ [W]	50	60	100	130
<b>Dimensions</b> Height	$H$ [mm]	180		240	
Width	$B$ [mm]		60		
Depth	$T$ [mm]		140		
<b>Mass</b>	$m$ [kg]	1.2		1.6	
<b>Permissible motor cable length</b> Shielded <sup>3)</sup>	$l$ [m]		50		
Unshielded <sup>3)</sup>	$l$ [m]		100		

<sup>1)</sup> 60 s

<sup>2)</sup> Max. 20 m motor cable (shielded) for category C2 according to EN 61800-3  
(motor cable length for category C1 depends on inverter type and switching frequency)

<sup>3)</sup> Permissible cable length may be affected if EMC conditions have to be met.

→ Dimensioned drawings

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## 8200 vector frequency inverter

### Inverter



#### Rated data

- ▶ The data is valid for operation at 3/PE AC 400 V.
- ▶ Unless otherwise specified, the data refers to the default setting with a switching frequency of 8 kHz.

→ Other rated data, e.g. for operating with increased rated power

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<b>Motor power</b> (asynchronous motor, 4-pole)	P <sub>N</sub> [kW]	3	4	5.5
<b>Product key</b> Filter integrated <sup>2)</sup> No filter		<b>E82EV302K4C</b> <b>E82EV302K4C200</b>	<b>E82EV402K4C</b> <b>E82EV402K4C200</b>	<b>E82EV552K4C</b> <b>E82EV552K4C200</b>
<b>Mains voltage range</b>	U <sub>Netz</sub> [V]	3/PE AC 320 V-0 % ... 550 V+0 %; 45 Hz-0 % ... 65 Hz+0 %		
<b>Alternative DC supply</b>	U <sub>DC</sub> [V]	DC 450 V-0 % ... 775 V+0 %		
<b>Rated mains current</b> Without mains choke	I <sub>Netz</sub> [A]	9	12.3	16.8
With mains choke	I <sub>Netz</sub> [A]	7	8.8	12
<b>Rated output current</b> 8 kHz	I <sub>N</sub> [A]	7.3	9.5	13
<b>Max. output current</b> 8 kHz <sup>1)</sup>	I <sub>max</sub> [A]	11	14.2	19.5
<b>Brake chopper data</b> Min. brake resistance	R [Ohm]	100		68
<b>Power loss</b>	P <sub>V</sub> [W]	145	180	230
<b>Dimensions</b> Height	H [mm]	240		
Width	B [mm]	100		
Depth	T [mm]	140		
<b>Mass</b>	m [kg]	2.9		
<b>Permissible motor cable length</b> Shielded <sup>3)</sup>	l [m]	50		
Unshielded <sup>3)</sup>	l [m]	100		

<sup>1)</sup> 60 s

<sup>2)</sup> Max. 20 m motor cable (shielded) for category C2 according to EN 61800-3  
(motor cable length for category C1 depends on inverter type and switching frequency)

<sup>3)</sup> Permissible cable length may be affected if EMC conditions have to be met.

→ Dimensioned drawings

**DS\_MB\_8200v\_0001**


Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)



### Rated data

- ▶ The data is valid for operation at 3/PE AC 400 V.
- ▶ Unless otherwise specified, the data refers to the default setting with a switching frequency of 8 kHz.

→ Other rated data, e.g. for operating with increased rated power  
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 Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)

			
<b>Motor power</b> (asynchronous motor, 4-pole)	$P_N$ [kW]	<b>7.5</b>	<b>11</b>
<b>Product key</b> Filter integrated <sup>2)</sup> No filter		<b>E82EV752K4C</b> <b>E82EV752K4C200</b>	<b>E82EV113K4C</b> <b>E82EV113K4C200</b>
<b>Mains voltage range</b>	$U_{\text{Netz}}$ [V]	3/PE AC 320 V-0 % ... 550 V+0 %; 45 Hz-0 % ... 65 Hz+0 %	
<b>Alternative DC supply</b>	$U_{\text{DC}}$ [V]	DC 450 V-0 % ... 775 V+0 %	
<b>Rated mains current</b> Without mains choke With mains choke	$I_{\text{Netz}}$ [A] $I_{\text{Netz}}$ [A]	21.5 15	<sup>3)</sup> 21
<b>Rated output current</b> 8 kHz	$I_N$ [A]	16.5	23.5
<b>Max. output current</b> 8 kHz <sup>1)</sup>	$I_{\text{max}}$ [A]	24.8	35.3
<b>Brake chopper data</b> Min. brake resistance	$R$ [Ohm]	47	33
<b>Power loss</b>	$P_V$ [W]	300	410
<b>Dimensions</b> Height Width Depth	$H$ [mm] $B$ [mm] $T$ [mm]	240 125 140	
<b>Mass</b>	$m$ [kg]	3.6	
<b>Permissible motor cable length</b> Shielded <sup>4)</sup> Unshielded <sup>4)</sup>	$l$ [m] $l$ [m]	50 100	

<sup>1)</sup> 60 s

<sup>2)</sup> Max. 20 m motor cable (shielded) for category C2 according to EN 61800-3  
 (motor cable length for category C1 depends on inverter type and switching frequency)

<sup>3)</sup> Operation only permitted with mains choke

<sup>4)</sup> Permissible cable length may be affected if EMC conditions have to be met.

→ Dimensioned drawings  
**DS\_MB\_8200v\_0001**  
 Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)



## 8200 vector frequency inverter

### Inverter


#### Rated data

- ▶ The data is valid for operation at 3/PE AC 400 V.
- ▶ Unless otherwise specified, the data refers to the default setting with a switching frequency of 8 kHz.

→ Other rated data, e.g. for operating with increased rated power

**DS\_GD\_8200v\_0001**

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<b>Motor power</b> (asynchronous motor, 4-pole)	$P_N$ [kW]	15	22	30
<b>Product key</b> Without mains filter		E82EV153K4B201	E82EV223K4B201	E82EV303K4B201
<b>Mains voltage range</b>	$U_{Netz}$ [V]	3/PE AC 320 V-0 % ... 550 V+0 %; 45 Hz-0 % ... 65 Hz+0 %		
<b>Rated mains current</b> Without mains choke	$I_{Netz}$ [A]	43.5	2)	
With mains choke	$I_{Netz}$ [A]	29		
<b>Rated output current</b> 8 kHz	$I_N$ [A]	32	47	59
<b>Max. output current</b> 8 kHz <sup>1)</sup>	$I_{max}$ [A]	48	70.5	89
<b>Power loss</b>	$P_V$ [W]	430	640	810
<b>Dimensions</b>				
Height	H [mm]	350		
Width	B [mm]	250		
Depth	T [mm]	250		
<b>Mass</b>	m [kg]	15		
<b>Permissible motor cable length</b>				
Shielded <sup>3)</sup>	l [m]	50		
Unshielded <sup>3)</sup>	l [m]	100		

<sup>1)</sup> 60 s

<sup>2)</sup> Operation only permitted with mains choke or mains filter

<sup>3)</sup> Permissible cable length may be affected if EMC conditions have to be met.

→ Dimensioned drawings

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# 8200 vector frequency inverter

## Inverter






### Rated data

- ▶ The data is valid for operation at 3/PE AC 400 V.
- ▶ Unless otherwise specified, the data refers to the default setting with a switching frequency of 8 kHz.

→ Other rated data, e.g. for operating with increased rated power

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<b>Motor power</b> (asynchronous motor, 4-pole)	$P_N$ [kW]	45	55	75	90
<b>Product key</b> Without mains filter		E82EV453K4B201	E82EV553K4B201	E82EV753K4B201	E82EV903K4B201
<b>Mains voltage range</b>	$U_{Netz}$ [V]	3/PE AC 320 V-0 % ... 550 V+0 %; 45 Hz-0 % ... 65 Hz+0 %			
<b>Rated mains current</b> Without mains choke	$I_{Netz}$ [A]	2)			
With mains choke	$I_{Netz}$ [A]	80	100	135	165
<b>Rated output current</b> 8 kHz	$I_N$ [A]	89	110	150	171
<b>Max. output current</b> 8 kHz <sup>1)</sup>	$I_{max}$ [A]	134	165	225	221
<b>Power loss</b>	$P_V$ [W]	1100	1470	1960	2400
<b>Dimensions</b>					
Height	H [mm]	510	591	680	
Width	B [mm]	340		450	
Depth	T [mm]		285		
<b>Mass</b>	m [kg]	34	37	59	
<b>Permissible motor cable length</b>					
Shielded <sup>3)</sup>	l [m]		50		
Unshielded <sup>3)</sup>	l [m]		100		

<sup>1)</sup> 60 s

<sup>2)</sup> Operation only permitted with mains choke or mains filter

<sup>3)</sup> Permissible cable length may be affected if EMC conditions have to be met.

→ Dimensioned drawings

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### Brake choppers and brake resistors

An external brake resistor is needed to decelerate larger moments of inertia or in the event of longer operations in generator mode. It converts braking energy into heat.

The brake resistors recommended in the table are designed for around 1.5 times the regenerative power for a cycle time of 15/135 s (brake/pause). The brake resistors are fitted with a thermostat (potential-free NC contact).

► The ERBD... brake resistors are tested according to UR



Brake resistance ERBM...(IP20)

Motor power	Mains voltage	Product key				Brake resistor data			
(asynchronous motor, 4-pole)		Inverter	Brake chopper	Quantity	Brake resistance	Quantity	Resistance	Continuous power	Thermal capacity
P <sub>N</sub> [kW]	U <sub>Netz</sub> [V]						R [Ohm]	P [W]	WK [kWs]
0.25	1 AC	E82EV251K2C	Integrated		ERBM470R020W	1	470	20	3
0.37	230/240	E82EV371K2C							
0.55	1 AC	E82EV551K2C							
0.75	230/240	E82EV751K2C							
1.5	3 AC	E82EV152K2C							
2.2	230/240	E82EV222K2C							
3	3 AC	E82EV302K2C							
4		E82EV402K2C							
5.5		E82EV552K2C							
7.5	3 AC	E82EV752K2C							
0.55		E82EV551K4C							
0.75		E82EV751K4C							
1.5		E82EV152K4C							
2.2		E82EV222K4C							
3		E82EV302K4C							
4		E82EV402K4C							
5.5		E82EV552K4C							
7.5		E82EV752K4C							
11		E82EV113K4C							
15		E82EV153K4B							
22		E82EV223K4B							
30		E82EV303K4B							
45		E82EV453K4B							
55		E82EV553K4B							
75		E82EV753K4B							
90		E82EV903K4B							
			EMB9352-E	1	ERBD033R02K0	2	33	2000	240
				2					
				3					
				4					

→ Data sheet on ERBD brake resistors  
**DS\_ZB\_ERBP\_0001**  
 Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)

→ Data sheet on ERBM brake resistors  
**DS\_ZB\_ERBM\_0001**  
 Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)

→ Data sheet on brake choppers  
**DS\_ZB\_EMB\_0001**  
 Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)



### Brake choppers and brake resistors

Motor power	Mains voltage	Product key			Brake resistor data	
(asynchronous motor, 4-pole)		Inverter	Brake chopper	Brake resistance	Dimensions	Mass
P <sub>N</sub> [kW]	U <sub>Netz</sub> [V]				H x B x T [mm]	m [kg]
0.25	1 AC 230/240	E82EV251K2C	Integrated	ERBM470R020W	160 x 45 x 36	0.3
0.37		E82EV371K2C				
0.55	1 AC 230/240	E82EV551K2C		ERBM200R100W	160 x 80 x 95	0.6
0.75		E82EV751K2C				
1.5		E82EV152K2C		ERBM082R150W	240 x 80 x 95	1
2.2		E82EV222K2C		ERBM052R200W	340 x 80 x 66	1.3
3	3 AC 230/240	E82EV302K2C		ERBD047R01K2	639 x 172 x 142	4.9
4		E82EV402K2C				
5.5		E82EV552K2C				
7.5		E82EV752K2C				
0.55	3 AC 400/500	E82EV551K4C	EMB9352-E	ERBM470R100W	240 x 70 x 59	0.8
0.75		E82EV751K4C		ERBM370R150W	240 x 80 x 95	1
1.5		E82EV152K4C		ERBM240R200W	340 x 80 x 66	1.3
2.2		E82EV222K4C		ERBD180R300W	439 x 64 x 142	2
3		E82EV302K4C		ERBD100R600W	639 x 64 x 142	3.1
4		E82EV402K4C		ERBD082R600W		
5.5		E82EV552K4C		ERBD068R800W	539 x 172 x 142	4.3
7.5		E82EV752K4C		ERBD047R01K2	639 x 172 x 142	4.9
11		E82EV113K4C		ERBD033R02K0	639 x 262 x 142	7.1
15		E82EV153K4B		ERBD022R03K0	739 x 172 x 247	10.6
22		E82EV223K4B		ERBD018R03K0		
30		E82EV303K4B		ERBD022R03K0		
45		E82EV453K4B		ERBD018R03K0		
55		E82EV553K4B		ERBD022R03K0		
75		E82EV753K4B		ERBD018R03K0		
90		E82EV903K4B				

→ Data sheet on brake choppers  
**DS\_ZB\_EMB\_0001**  
 Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)

→ Data sheet on brake resistors  
**DS\_ZB\_EBR\_0001**  
 Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)

### Mains chokes

A mains choke is an inductance which is switched in the inverter's mains cable. Using a mains choke delivers the following benefits:

- ▶ **less system perturbation:**  
the curved shape of the mains current approaches a sine shape.
- ▶ **reduction in effective mains current:**  
reduction in mains, cable and fuse load.

There are no limitations on using a mains choke together with RFI filters and/or motor filters.

Please note:

- ▶ when using a mains choke, the mains voltage on the inverter input is reduced slightly – typical voltage drop on the mains choke at the rated point approx. 5%.
- ▶ A mains choke or mains filter always has to be used for some inverters because otherwise the permissible rated data for the components used may be exceeded as a result of excess mains currents.
- ▶ The following assignment applies to operation with rated power.

Motor power (asynchronous motor, 4-pole)	Mains voltage	Product key		Mains choke data		
P <sub>N</sub> [kW]	U <sub>Netz</sub> [V]	Inverter	Mains choke	Rated current I <sub>N</sub> [A]	Dimensions H x B x T [mm]	Mass m [kg]
0.25	1 AC 230/240	E82EV251K2C	ELN1-0900H005	5	80 x 66 x 67	2.3
0.37		E82EV371K2C				
0.55	1 AC 230/240 3 AC 230/240	E82EV551K2C	ELN1-0500H009	9	155 x 95 x 82	1
			EZN3A1500H003	3		1.1
0.75		E82EV751K2C	ELN1-0500H009	9	80 x 66 x 67	1
			EZN3A1500H003	3	155 x 95 x 82	1.1
1.5		E82EV152K2C	ELN1-0250H018	18	120 x 108 x 103	2.3
			E82ZL22234B	6.1	120 x 61 x 126	2
2.2		E82EV222K2C <sup>1)</sup>	ELN1-0250H018	18	120 x 108 x 103	2.3
			E82ZL22234B	6.1	120 x 61 x 126	2
3	3 AC 230/240	E82EV302K2C	ELN3-0120H017	17	120 x 65 x 162	3
4		E82EV402K2C				
5.5		E82EV552K2C	ELN3-0120H025	25	150 x 100 x 185	5.7
7.5		E82EV752K2C <sup>1)</sup>	ELN3-0088H035	35	180 x 125 x 225	9.8
0.55	3 AC 400/500	E82EV551K4C	EZN3A1500H003	3	155 x 95 x 82	1.1
0.75		E82EV751K4C				
1.5		E82EV152K4C	E82ZL22234B	6.1	120 x 61 x 126	2
2.2		E82EV222K4C				
3		E82EV302K4C	EZN3A0500H007	7	138 x 119 x 95	2.5
4		E82EV402K4C	EZN3A0300H013	13	162 x 150 x 106	5.2
5.5		E82EV552K4C				
7.5		E82EV752K4C	ELN3-0120H017	17	120 x 65 x 162	3
11		E82EV113K4C <sup>1)</sup>	ELN3-0150H024	24	180 x 86 x 192	8
15		E82EV153K4B	ELN3-0088H035	35	180 x 125 x 225	9.8
22		E82EV223K4B <sup>1)</sup>	ELN3-0075H045	45		10.1
30		E82EV303K4B <sup>1)</sup>	ELN3-0055H055	55	228 x 120 x 265	13
45		E82EV453K4B <sup>1)</sup>	ELN3-0038H085	85	228 x 111 x 263	19.5
55		E82EV553K4B <sup>1)</sup>	ELN3-0027H105	105	228 x 155 x 265	20.2
75		E82EV753K4B <sup>1)</sup>	ELN3-0022H130	130	264 x 135 x 265	21.4
90		E82EV903K4B <sup>1)</sup>	ELN3-0017H170	170	265 x 170 x 268	30.3

<sup>1)</sup> Operation only permitted with mains choke or mains filter

→ Data sheet on mains chokes  
**DS\_ZB\_ELN\_0001**  
Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)

→ Data sheet for mains chokes for operating with increased rated power  
**DS\_ZB\_ELN\_0002**  
Available for download at [www.lenze.de/dsc](http://www.lenze.de/dsc)