

## Servo inverters



0.37 ... 110 kW



# Lenze servo inverters – powerful, compact, safe

The servo inverters set new standards in terms of precision and dynamics thanks to their innovative control technology. Pre-designed drive solutions, consisting of geared motors and servo inverters, ensure time savings in engineering and flexibility in production.

Lenze inverters are an important component in modern drive solutions which range from the cloud via control systems to motors and geared motors.

## Typical application fields

- Winders
- Textile machines
- Packaging technology
- Forming technology
- And many more

## Features

- Operation of synchronous and asynchronous motors, linear and torque motors
- Integrated One Cable Technology (OCT)
- Highly dynamic control algorithms
- Integrated safety functions
- DC-bus connection with regenerative feedback mode
- PLC Open, IEC 61131-3, CiA402

## The benefits for you

- Parameterizable technology applications (FAST) for fast configuration of simple and special requirements in the machine
- Easy commissioning and adjustment thanks to guided commissioning routines
- Auto-tuning for optimum motor adaptation
- Optimum controller setting in a short time without expert knowledge
- Provision of real-time data for cloud-based solutions.

# Features at a glance

## Servo drives



Actuators are widely used in servo technology. The basis for this in our product portfolio is the i750 cabinet servo inverter with single and double axes in the power range 1.1 ... 15 kW.

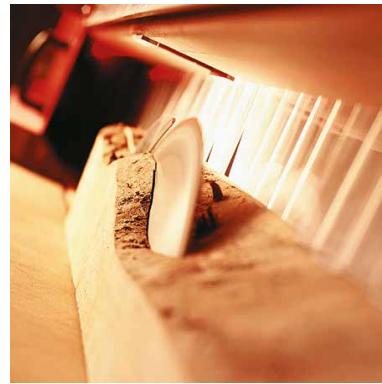
In the power range 0.37 ... 110, the i950 cabinet is available in parallel as an intelligent servo inverter. It is designed for easy coupling to the i750 cabinet in the high power range.

## Control performance



Our claim is that the best machines in the world run with Lenze. For this reason, we deal intensively with the machine processes and kinematics of modern machine tasks. Our servo inverters set new standards in integrated control technology.

## Functional safety



The safety functions integrated in the inverter are certified in accordance with EN ISO 13849-1.

Depending on the requirements of the machine, three different versions of the servo inverters with integrated safety functions can be used.

## Technology application



The i950 cabinet combines state-of-the-art servo technology with the requirements of future-oriented machine automation. In addition to outstanding servo characteristics, the i950 cabinet technology applications (TA) have been implemented. The use of these software modules saves time and money when implementing machine tasks.

## Ready for the cloud



Modern production systems are based on comprehensive networking and an extensive exchange of important user data between production and management. At the same time, more networked machines mean more complexity - and therefore higher demands on processes and technologies. Knowledge of the merging of the IT and OT worlds has become a prerequisite for success.

## Programmable



Pre-tested, documented and reusable software modules lead to better quality and optimized resource management. This allows you to easily reuse, expand and maintain software modules - efficiently, reliably and securely. In addition, standards such as PLCopen ensure the openness of our Lenze system.

# Scaled portfolio for machines

Competitiveness in mechanical engineering is becoming increasingly challenging due to rising requirements in terms of energy efficiency, machine intelligence, and market needs, along with a shortage of skilled personnel and cost pressure. The i750 cabinet and i950 cabinet servo inverters meet these challenges and are already equipped for the future.

The EASY engineering tools simplify the engineering of the machine and support the selection of the most suitable controllers, servo inverters and motors - energy-efficiently and sustainably. You can easily call up a lot of information online when selecting a product:

- Use the EASY Product Finder to configure your required version of the servo inverters in next to no time (simply click on the  icon).
- For further technical details such as data sheets, CAD data or EPLAN data, please contact our support team .



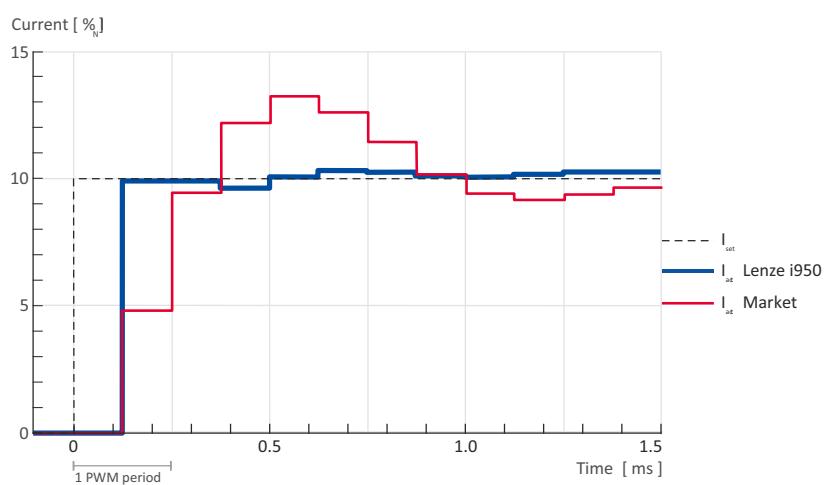
# Control performance

Increase the cycle rate of the machine by up to 20 % and improve the quality of the machine process at the same time.

Our claim is that the best machines in the world run with Lenze. For this reason, we deal intensively with the machine processes and kinematics of modern machine tasks and help to optimize the entire control path of the drive axis with the underlying mechanics in terms of control technology. With our servo inverters, we are setting new standards in integrated control technology.

## Highlights

- Fastest response time thanks to dead time-optimized hardware and software:
  - Current control: 62.5  $\mu$ s, position control: 62.5  $\mu$ s
- Automatic controller setting
- Extremely fast correction of disturbance variables within the controlled system
- Intelligent vibration compensation process for suppressing resonance points in the machine
- High dynamics thanks to patented current and position detection



# i750 cabinet

The i750 cabinet servo inverter offers everything for precise and dynamic motion control in complex multi-axis applications. Extended safety functions and One Cable Technology reduce wiring and control complexity. Intelligent data-based functions and IIoT enable innovative motion control concepts.

As a single or double axis, the i750 cabinet with matching supplier fits seamlessly into the Lenze automation system. The strengths can be seen in numerous applications in a network with Lenze controllers and the FAST Application Software Toolbox. The scalable range of hardware, software, engineering services, and digital services supports the realization of end-to-end automation systems from the cloud to the drive shaft.

As a power extension of the i750 cabinet servo inverter in the range of 22 ... 110 kW, the i950 cabinet servo inverter can be used.

Mains connection/power range

<b>3ph AC 400 V (DC supply via suppliers)</b>	1.1 ... 15 kW
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## Highlights

- Integrated DC-bus connection
- Small overall width from 50 mm for the double axis
- Axis modules capable of multiple overloads for peak output currents between 5 and 64 A, double axes up to 32 A
- One Cable Technology (OCT)
- Integrated safety technology with a wide range of functions, complies with up to SIL 3/PL e Cat. 4
- Autotuning function for quick and easy controller adjustment



# i950 cabinet

The intelligent i950 cabinet servo inverter can be easily integrated into modular machine solutions on the basis of prepared technology applications - parameterizing instead of programming.

The same architecture, the same engineering and the use of the same application software, based on decades of application experience, dissolve the boundaries between centralized and decentralized motion control. Our FAST application software toolbox becomes universally usable. If required, the pre-designed software modules can be easily customized and extended.

In addition, the i950 cabinet servo inverter serves as a power extension to the i700 cabinet servo inverter in the Lenze automation system in the range of 22 ... 110 kW.

The requirements of the Ecodesign Directive are met.

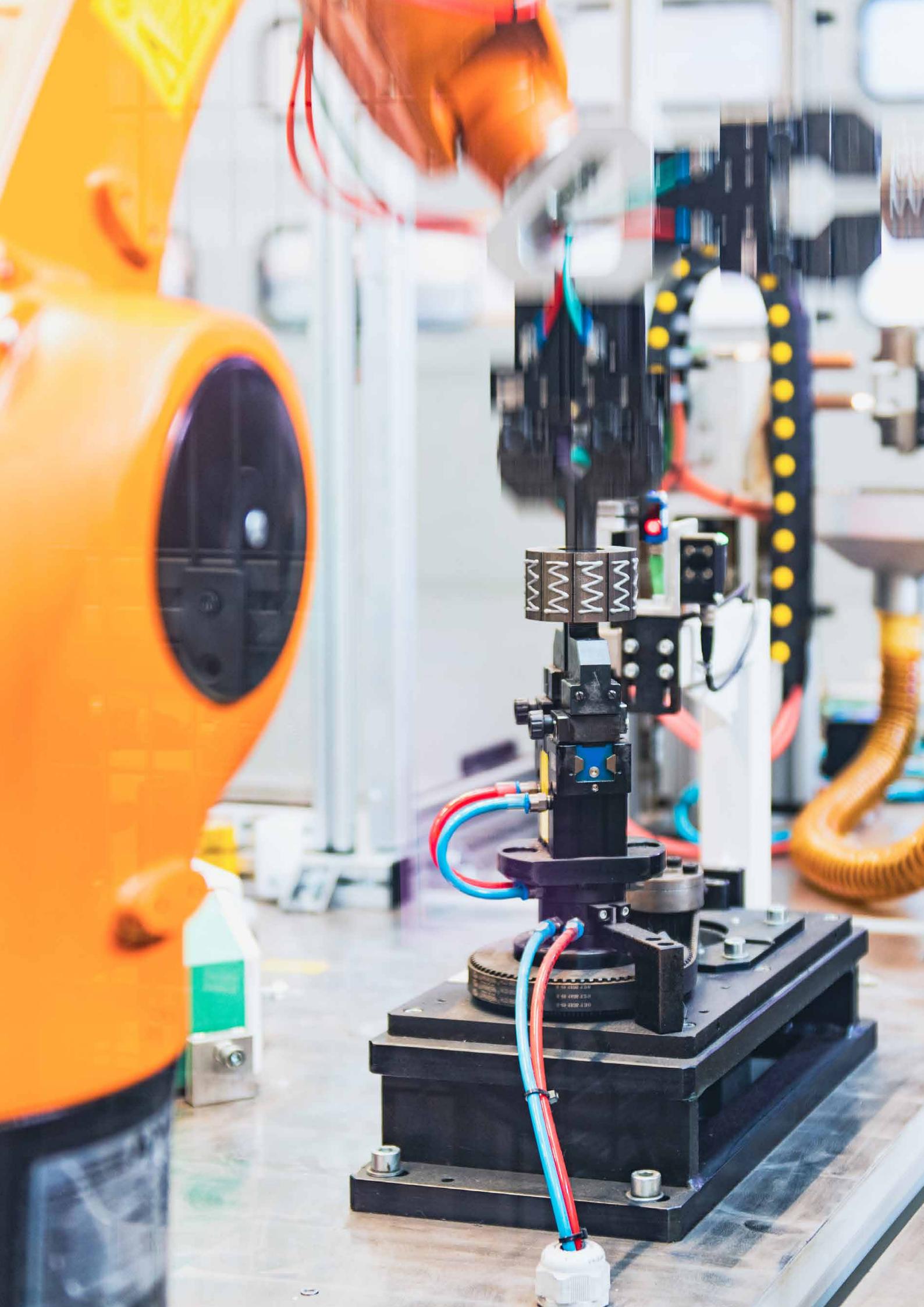
## Mains connection/power range

<b>1ph AC 230 V</b>	0.37 ... 1.5 kW
<b>3ph AC 230 V</b>	0.37 ... 5.5 kW
<b>3ph AC 400 V</b>	0.55 ... 110 kW

## Highlights

- Prepared technology applications, e.g. table positioning, electronic gearbox, winder
- One Cable Technology (OCT)
- Modular scalability for feedback system and fieldbus connections
- Autotuning function for quick and easy controller adjustment
- Integrated safety technology with a wide range of functions, complies with up to SIL 3/PL e Cat. 4





# Technical data

**i750 cabinet****i950 cabinet**

<b>Design/mounting</b>	Control cabinet
<b>Degree of protection</b>	IP20

Control cabinet
IP20

## Mains connection/power range

**i750 cabinet**

<b>1ph AC 230 V</b>	0.37 ... 1.5 kW
<b>3ph AC 230 V</b>	0.37 ... 5.5 kW
<b>3ph AC 400 V</b>	0.55 ... 110 kW
<b>3ph AC 400 V (DC supply via suppliers)</b>	1.1 ... 15 kW

**i950 cabinet**


## Market approvals/environment

**i750 cabinet**

<b>CE</b>	yes
<b>UKCA</b>	yes
<b>UL</b>	yes
<b>CSA</b>	yes
<b>CCC</b>	yes
<b>RoHs</b>	yes
<b>Energy efficiency</b>	Class IE2
<b>Degree of pollution</b>	2
<b>Vibration resistance during operation</b>	up to 1 g
<b>Insulation resistance</b>	Category III

**i950 cabinet**


## Control connections

**i750 cabinet**

<b>Digital inputs</b>	2
<b>Digital outputs</b>	4 (optional: 5 / 4) (optional: 5 / 2)
<b>Analog inputs</b>	1 (optional 0 / 1)
<b>Analog outputs</b>	(optional (0 / 1))

**i950 cabinet**


## Protective measures

**i750 cabinet**

<b>Earth-fault protected</b>	yes
<b>Short-circuit-proof</b>	yes
<b>Overvoltage-proof</b>	yes
<b>Motor stalling protection</b>	yes
<b>Motor overtemperature</b>	with PT 1000, I <sup>2</sup> xt

**i950 cabinet**


	i750 cabinet	i950 cabinet
<b>Design/mounting</b>	Control cabinet	Control cabinet
<b>Degree of protection</b>	IP20	IP20
<b>Communication</b>		
	i750 cabinet	i950 cabinet
<b>CANopen</b>	yes	yes
<b>EtherCAT</b>	yes	yes
<b>EtherNet/IP</b>	yes	yes
<b>PROFINET</b>	yes	yes
<b>Feedback</b>		
	i750 cabinet	i950 cabinet
<b>HIPERFACE DSL® absolute value encoder (One Cable Technology OCT)</b>	yes	yes
<b>Resolver</b>	yes	yes
<b>HIPERFACE® SinCos absolute value encoder</b>	yes	yes
<b>Endat (V2.1&amp;V2.2) SinCos absolute value encoder</b>	in preparation	yes
<b>SSI absolute value encoder</b>	yes	yes
<b>SSI SinCos absolute value encoder</b>	yes	yes
<b>TTL incremental encoder</b>	yes	yes
<b>HTL incremental encoder</b>	yes	yes
<b>Cooling</b>		
	i750 cabinet	i950 cabinet
<b>Operation (EN 60721-3-3)</b>	3K3 (-10 ... +55 °C)	3K3 (-10 ... +55 °C)
<b>Derating</b>	2.5 % / °C above 40 °C	2.5 % / °C above 45 °C
<b>Storage (EN 60721-3-1)</b>	1K3 (-25 ... +60 °C)	1K3 (-25 ... +60 °C)
<b>Transport (EN60721-3-2)</b>	2K3 (-25 ... +70 °C)	2K3 (-25 ... +70 °C)
<b>Operation on public supply systems</b>		
	i750 cabinet	i950 cabinet
<b>Device below 1 kW (EN IEC 61000-3-2)</b>	-	With Mains choke
<b>Devices above 1 kW up to 16 A (EN IEC 61000-3-2)</b>	yes	yes
<b>Devices above 16 A (EN IEC 61000-3-2)</b>	With mains choke	With Mains choke
<b>Motor cable lengths</b>		
	i750 cabinet	i950 cabinet
<b>EMC category C1</b>		
<b>EMC category C2</b>	Depending on the number of axes	max. 20 m above this with filter
<b>Fusing</b>		
	i750 cabinet	i950 cabinet
<b>Fuse characteristic</b>	gG/gI or gRL	gG/gI or gRL
<b>Circuit breaker characteristic</b>	C	B or C
<b>Earth-leakage circuit breaker</b>		Type B

	i750 cabinet	i950 cabinet
<b>Design/mounting</b>	Control cabinet	Control cabinet
<b>Degree of protection</b>	IP20	IP20

## Functional safety

Stop functions

	i750 cabinet	i950 cabinet
<b>Safe torque off (STO)</b>	yes	yes
<b>Safe stop 1 (SS1)</b>	yes	yes
<b>Safe stop 2 (SS2)</b>	yes	yes
<b>Safe stop emergency (SSE)</b>	yes	yes
<b>Safe operational stop (SOS)</b>	yes	yes
<b>Safe brake control (SBC)</b>	yes	yes
<b>Cascading STO (CAS)</b>		yes

Monitoring functions

	i750 cabinet	i950 cabinet
<b>Safe maximum speed (SMS)</b>	yes	yes
<b>Safely limited speed (SLS)</b>	yes	yes
<b>Safe speed monitoring (SSM)</b>	yes	yes
<b>Safely limited increment (SLI)</b>	yes	yes
<b>Safe direction (SDI)</b>	yes	yes
<b>Safely limited position (SLP)</b>	yes	yes
<b>Safe position-dependent speed (PDSS)</b>	yes	yes
<b>Safe cam (SCA)</b>	yes	yes

## Motor controls

Motor controls

	i750 cabinet	i950 cabinet
<b>V/f characteristic control</b>	yes	yes
<b>V/f characteristic control with feedback</b>	yes	yes
<b>Servo control for asynchronous motors</b>	yes	yes
<b>Servo control for synchronous motors</b>	yes	yes
<b>Vector control for asynchronous motors</b>	yes	yes
<b>Sensorless control for synchronous motors</b>	yes	yes

Additional functions

	i750 cabinet	i950 cabinet
<b>Auto-tuning</b>	yes	yes
<b>Wiring check</b>	yes	yes
<b>Torque control</b>	yes	yes
<b>Skip frequencies</b>	yes	yes
<b>Motor monitoring</b>	yes	yes
<b>Oscilloscope</b>	yes	yes
<b>Access protection for parameters</b>	yes	yes

## Technology applications

	i750 cabinet	i950 cabinet
<b>Speed Control</b>	With c430, c520 or c550 controller and FAST	yes
<b>Table Positioning</b>	With c430, c520 or c550 controller and FAST	yes
<b>Electronic Gearbox</b>	With c430, c520 or c550 controller and FAST	yes
<b>Sync and Correction</b>	With c430, c520 or c550 controller and FAST	yes
<b>Winder Dancer</b>	With c430, c520 or c550 controller and FAST	yes
<b>Winder Tension</b>	With c430, c520 or c550 controller and FAST	yes
<b>CiA 402 advanced</b>	With c430, c520 or c550 controller and FAST	yes
<b>AC Drive Profile</b>	With c430, c520 or c550 controller and FAST	yes



# Product selection

## i750 cabinet servo inverter



3-phase mains connection 400 V single axes

	P <sub>rated</sub> [kW]	V <sub>mains</sub> [V]	I <sub>rated</sub> [A]	Degree of protection	m [kg]	H x W x D [mm]	Material number
<b>i750-C1.1/400-3</b>	1.1	3 AC 400 V	2.5	IP20	2.7	350 x 50 x 261	16855464 <a href="#">i</a> <a href="#">B</a>
<b>i750-C2.2/400-3</b>	2.2	3 AC 400 V	5	IP20	2.7	350 x 50 x 261	16854642 <a href="#">i</a> <a href="#">B</a>
<b>i750-C4/400-3</b>	4	3 AC 400 V	10	IP20	2.7	350 x 50 x 261	16854470 <a href="#">i</a> <a href="#">B</a>
<b>i750-C7.5/400-3</b>	7.5	3 AC 400 V	16	IP20	5.2	350 x 100 x 261	16862089 <a href="#">i</a> <a href="#">B</a>
<b>i750-C11/400-3</b>	11	3 AC 400 V	24	IP20	5.2	350 x 100 x 261	16862132 <a href="#">i</a> <a href="#">B</a>
<b>i750-C15/400-3</b>	15	3 AC 400 V	32	IP20	5.2	350 x 100 x 261	16862134 <a href="#">i</a> <a href="#">B</a>

3-phase mains connection 400 V double axes

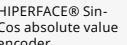
	P <sub>rated</sub> [kW]	V <sub>mains</sub> [V]	I <sub>rated</sub> [A]	Degree of protection	m [kg]	H x W x D [mm]	Material number
<b>i750-C1.1/400-3/2</b>	1.1	3 AC 400 V	2.5	IP20	2.9	350 x 50 x 261	16855463 <a href="#">i</a> <a href="#">B</a>
<b>i750-C2.2/400-3/2</b>	2.2	3 AC 400 V	5	IP20	2.9	350 x 50 x 261	16854643 <a href="#">i</a> <a href="#">B</a>
<b>i750-C4/400-3/2</b>	4	3 AC 400 V	10	IP20	5.2	350 x 100 x 261	16857399 <a href="#">i</a> <a href="#">B</a>
<b>i750-C7.5/400-3/2</b>	7.5	3 AC 400 V	16	IP20	5.2	350 x 100 x 261	16862091 <a href="#">i</a> <a href="#">B</a>

### Power supply modules

	P <sub>rated</sub> [kW]	V <sub>mains</sub> [V]	I <sub>rated</sub> [A]	Degree of protection	m [kg]	H x W x D [mm]	Material number
<b>i700-CV30/400-3</b>	15.4	3 AC 400 V	30	IP20	2.5	350 x 50 x 261	13498841 <a href="#">i</a> <a href="#">B</a>
<b>i700-CV60/400-3</b>	30.9	3 AC 400 V	60	IP20	5.3	350 x 100 x 261	13439538 <a href="#">i</a> <a href="#">B</a>

The i750 cabinet products specified here are equipped with feedback evaluation for the digital absolute value encoder (One Cable Technology OCT). The fieldbuses always communicate via EtherCAT. Alternatively available product versions can be found on the Internet.

## Options – i750 cabinet (1.1 ... 15 kW)

Axis modules	Communication	Functional safety	Feedback
 Single axis  Double axis	 EtherCAT EtherCAT	 Basic Safety STO	 Resolver
	 Advanced Safety	 Extended Safety	 HIPERFACE® Sin-Cos absolute value encoder
 Terminal connection			 TTL incremental encoder

### Axis modules

<b>Single axis</b>	Axis module for a motor
<b>Double axis</b>	Axis module for two motors

### Communication

<b>EtherCAT</b>	Ethernet-based fieldbus system EtherCAT Connection via standardized RJ45 connectors	Included as standard
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### Functional safety

<b>Basic Safety STO</b>	Safe torque off (STO)
<b>Advanced Safety</b>	Advanced Safety L: Stop functions: Safe torque off (STO), safe stop 1 (SS1), safe brake control (SBC)
<b>Extended Safety</b>	Extended Safety L: Stop functions: Safe torque off (STO), safe stop 1 (SS1), safe stop 2 (SS2), safe stop emergency (SSE), safe operational stop (SOS), safe brake control (SBC) Monitoring functions: Safe maximum speed (SMS), safely limited speed (SLS), safe speed monitoring (SSM), safely limited increment (SLI), safe direction (SDI), safely limited position (SLP), safe position-dependent speed (PDSS), safe cam (SCA)

### Feedback

<b>HIPERFACE DSL® absolute value encoder (One Cable Technology OCT)</b>	One Cable Technology (OCT) is supported via the open motor feedback protocol HIPERFACE DSL®.	Included as standard
<b>Resolver</b>	Module for resolver feedback	
<b>HIPERFACE® SinCos absolute value encoder</b>	Module for feedback via HIPERFACE SinCos absolute value encoder	
<b>TTL incremental encoder</b>	Module for incremental encoder feedback	

## Power supply modules

### Power supply modules

		Material number
<b>Power supply modules</b>	30 A power supply module for the axes 60 A power supply module for the axes	13498841  
<b>Regenerative modules</b>	13 kW r750 regenerative module feeds energy back into the mains 26 kW r750 regenerative module feeds energy back into the mains	13439538  
		13603882  
		13603883  

## Accessories – i750 cabinet axis modules (1.1 ... 15 kW)

### System cables

		Material number
<b>OCT motor cables</b>	See brochure	
<b>Motor cables</b>	See brochure	
<b>Blower cables</b>	See brochure	
<b>Feedback cables</b>	See brochure	
	0.25 m Ethernet cable	13426097
	0.5 m Ethernet cable	13641901
<b>Communication cables</b>	1 m Ethernet cable	13641902
	2 m Ethernet cable	13641903
	3 m Ethernet cable	13641904
	5 m Ethernet cable	13641905

### Power supply units

		Material number
<b>24 V power supply units</b>	See brochure	
<b>48 V power supply units</b>	See brochure	

## Accessories – power supply modules

### Connection

		Material number
<b>Mounting kit</b>	For 30 A power supply module	13402984
	For 60 A power supply module	13402985

### RFI and mains filters

		Material number
<b>RFI and mains filters IOFAE</b>	See brochure	

### Mains chokes

		Material number
<b>Mains chokes EZAEVN3</b>	See brochure	

### Braking operation and brake control

		Material number
<b>Brake resistors</b>	See brochure	



## i950 cabinet servo inverter



1-phase mains connection 230 V without integrated RFI filter

	P <sub>rated</sub> [kW]	V <sub>mains</sub> [V]	I <sub>rated</sub> [A]	Degree of protection	m [kg]	H x W x D [mm]	Material number
<b>i950-C0.37/230-2</b>	0.37	1 AC 230 V	2.4	IP20	1.6	250 x 60 x 187	16432616
<b>i950-C0.55/230-2</b>	0.55	1 AC 230 V	3.2	IP20	1.6	250 x 60 x 187	16430047
<b>i950-C0.75/230-2</b>	0.75	1 AC 230 V	4.2	IP20	1.6	250 x 60 x 187	16430046
<b>i950-C1.5/230-2</b>	1.5	1 AC 230 V	7	IP20	1.6	250 x 60 x 187	16430043

3-phase mains connection 230 V without integrated RFI filter

	P <sub>rated</sub> [kW]	V <sub>mains</sub> [V]	I <sub>rated</sub> [A]	Degree of protection	m [kg]	H x W x D [mm]	Material number
<b>i950-C0.37/230-2</b>	0.37	3 AC 230 V	2.4	IP20	1.6	250 x 60 x 187	16432616
<b>i950-C0.55/230-2</b>	0.55	3 AC 230 V	3.2	IP20	1.6	250 x 60 x 187	16430047
<b>i950-C0.75/230-2</b>	0.75	3 AC 230 V	4.2	IP20	1.6	250 x 60 x 187	16430046
<b>i950-C1.5/230-2</b>	1.5	3 AC 230 V	7	IP20	1.6	250 x 60 x 187	16430043
<b>i950-C2.2/230-3</b>	2.2	3 AC 230 V	9.6	IP20	1.6	250 x 60 x 187	16428806
<b>i950-C4.0/230-3</b>	4	3 AC 230 V	16.5	IP20	3.9	276 x 120 x 187	16438949
<b>i950-C5.5/230-3</b>	5.5	3 AC 230 V	23	IP20	3.9	276 x 120 x 187	16438953

3-phase mains connection 400 V with integrated RFI filter

	P <sub>rated</sub> [kW]	V <sub>mains</sub> [V]	I <sub>rated</sub> [A]	Degree of protection	m [kg]	H x W x D [mm]	Material number
<b>i950-C0.55/400-3</b>	0.55	3 AC 400 V	1.8	IP20	1.6	250 x 60 x 187	16269962
<b>i950-C0.75/400-3</b>	0.75	3 AC 400 V	2.4	IP20	1.6	250 x 60 x 187	16271610
<b>i950-C2.2/400-3</b>	2.2	3 AC 400 V	5.6	IP20	1.6	250 x 60 x 187	16271611
<b>i950-C4.0/400-3</b>	4	3 AC 400 V	9.5	IP20	1.6	250 x 60 x 187	16271612
<b>i950-C7.5/400-3</b>	7.5	3 AC 400 V	16.5	IP20	3.9	276 x 120 x 187	16271613
<b>i950-C11/400-3</b>	11	3 AC 400 V	23.5	IP20	3.9	276 x 120 x 187	16271614
<b>i950-C15/400-3</b>	15	3 AC 400 V	32	IP20	3.9	276 x 120 x 187	16271615
<b>i950-C22/400-3</b>	22	3 AC 400 V	47	IP20	10.7	347 x 204 x 253	16096386
<b>i950-C30/400-3</b>	30	3 AC 400 V	61	IP20	16.7	450 x 250 x 245	16096387
<b>i950-C45/400-3</b>	45	3 AC 400 V	89	IP20	16.7	450 x 250 x 245	16096388
<b>i950-C55/400-3</b>	55	3 AC 400 V	110	IP20	24	536 x 250 x 281	16096389
<b>i950-C75/400-3</b>	75	3 AC 400 V	150	IP20	24	536 x 250 x 281	16096390
<b>i950-C90/400-3</b>	90	3 AC 400 V	180	IP20	35.6	685 x 258 x 321	16163564
<b>i950-C110/400-3</b>	110	3 AC 400 V	212	IP20	35.6	685 x 258 x 321	16163521

A mains choke is mandatory from 22 kW.

The i950 cabinet products specified here are equipped with feedback evaluation for the digital absolute value encoder (One Cable Technology OCT), from 22 kW with resolver evaluation. The standard communication is always onboard EtherCAT. Alternatively available product versions can be found on the Internet.

## Options – i950 cabinet (0.37 ... 110 kW)

Connections	Communication	Functional safety	Feedback	FAST Application Software
 Terminal connection	CANopen	Basic Safety STO	Resolver	
 Digital I/O	EtherCAT	Extended Safety	Multi-encoder module	
 Extended I/O	Ethernet/IP		HTL encoder (Extended I/O)	
 Motor connection	PROFINET			

### Connection

<b>Digital I/O</b>	Extension module 5 x digital input and 5 x digital output
<b>Extended I/O</b>	Extension module with 8400 TopLine functions 4 x digital input and 2 x digital output, 1 x analog input and 1 x analog output 4 x digital input can be used for HTL incremental encoders.

### Communication

<b>CANopen</b>	CANopen communication protocol Connection via screw terminals
<b>EtherCAT</b>	Ethernet-based fieldbus system EtherCAT Connection via standardized RJ45 connectors
<b>EtherNet/IP</b>	Ethernet-based fieldbus system EtherNet/IP Connection via standardized RJ45 connectors
<b>PROFINET</b>	Ethernet-based fieldbus system PROFINET Connection via standardized RJ45 connectors

### Functional safety

<b>Basic Safety STO</b>	Safe torque off (STO)
<b>Extended Safety</b>	Extended Safety LT functions: Stop functions: Safe torque off (STO), safe stop 1 (SS1), safe stop 2 (SS2), safe stop emergency (SSE), safe operational stop (SOS), safe brake control (SBC), cascading STO (CAS) Monitoring functions: Safe maximum speed (SMS), safely limited speed (SLS), safe speed monitoring (SSM), safely limited increment (SLI), safe direction (SDI), safely limited position (SLP), safe position-dependent speed (PDSS), safe cam (SCA)

### Feedback

<b>HIPERFACE DSL® absolute value encoder (One Cable Technology OCT)</b>	One Cable Technology (OCT) is supported via the open motor feedback protocol HIPERFACE DSL®.	Series up to 22 kW
<b>Resolver</b>	Multi-encoder module, set to resolver	
<b>HIPERFACE® SinCos absolute value encoder</b>	Multi-encoder module, set to HIPERFACE SinCos absolute value encoder	
<b>Endat SinCos absolute value encoder</b>	Multi-encoder module, set to Endat SinCos absolute value encoder (version 2.1)	
<b>SSI absolute value encoder</b>	Multi-encoder module, set to SSI absolute value encoder	
<b>SSI SinCos absolute value encoder</b>	Multi-encoder module, set to SSI SinCos absolute value encoder	
<b>TTL incremental encoder</b>	Multi-encoder module, set to TTL incremental encoder	
<b>HTL incremental encoder</b>	Extended I/O, set to HTL incremental encoder	

## FAST Application Software

<b>Application Credit</b>	50 ... 4000 Credit
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## Accessories – i950 cabinet (0.37 ... 110 kW)

## Connection

	<b>Material number</b>
1 x motor shield plate incl. fixing material 0.25 ... 3 kW	13560530  
5 x motor shield plate incl. fixing material 0.25 ... 3 kW	13560529  
1 x motor shield plate incl. fixing material 4 ... 5.5 kW	13481481  
5 x motor shield plate incl. fixing material 4 ... 5.5 kW	13481482  
1 x motor shield plate incl. fixing material 7.5 ... 11 kW	13481483  
5 x motor shield plate incl. fixing material 7.5 ... 11 kW	13481484  
10 x fixing material for integrated motor shield plate 15 ... 22 kW	13433061  
10 x fixing material for integrated motor shield plate 30 ... 75 kW	13433062  

## System cables

	<b>Material number</b>
<b>OCT motor cables</b>	See brochure  
<b>Motor cables</b>	See brochure  
<b>Blower cables</b>	See brochure  
<b>Feedback cables</b>	See brochure  
0.5 m Ethernet cable	13641901  
1 m Ethernet cable	13641902  
2 m Ethernet cable	13641903  
3 m Ethernet cable	13641904  
5 m Ethernet cable	13641905  

## RFI and mains filters

	<b>Material number</b>
<b>RFI and mains filters IOFAE</b>	See brochure  

## Mains chokes

	<b>Material number</b>
<b>Mains chokes EZAELN3</b>	See brochure  

## Braking operation and brake control

	<b>Material number</b>
<b>Brake resistors</b>	See brochure  

## Power supply units

	<b>Material number</b>
<b>24 V power supply units</b>	See brochure  
<b>48 V power supply units</b>	See brochure  

## Electrical protection devices and busbars

	<b>Material number</b>
<b>Fuses</b>	See brochure  
<b>Fuse holders</b>	See brochure  
<b>Busbars</b>	See brochure  

## Power supply modules

	<b>Material number</b>
<b>Regenerative modules</b>	13 kW r750 regenerative module feeds energy back into the mains  
	26 kW r750 regenerative module feeds energy back into the mains  



# Accessories

By simply selecting the accessories, the operation of the inverter can be optimally adjusted. This is how a modern drive solution can be safely achieved.

The scalable concept enables easy selection, sophisticated accessories saves space and time during installation, and energy-efficient requirements can be optimally solved. Your benefits from this are more productivity and functional safety as well as sustainability and reliability.

For information on accessories, refer to the [Accessories brochure](#).



