Controllers, system components and engineering tools

Easy to automate

We are motivated and committed to working with you to create the best possible solution that sets your ideas in motion – regardless of whether you are looking to optimize an existing machine or develop a new one. We strive to make things easy and seek perfection therein. This is ingrained in our thinking, in our service, and in every detail of our products.

Automation

Our central automation systems enable simple integration into production lines thanks to standard interfaces. In this way, you remain independent and protect your investment.

The following components form the Lenze approach for a robust and efficient automation solution:

Controllers

Lenze controllers provide a powerful, integrated system that enables coordinated multi-axis movements. In addition, the system must be able to assume the control function of a line process. Our controllers do this and more effectively and safely.

System components

The robust Lenze Web Panels are the ideal visualization solution for carrying out all settings and monitoring functions directly on the machine.

The I/O system 3000 connected to the controllers via EtherCAT is characterized by its compact design.

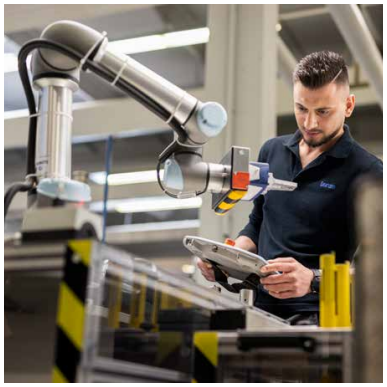
Engineering tools

A holistic concept is crucial for controlling your machine. From planning to implementation, you make decisions that are important for functions and efficiency. We support you with our engineering tools.

This means that at Lenze you will find the hardware and software solutions that are suitable for your application and necessary for future-proof automation.

Features at a glance

Use of market standards



We can network with control and drive systems at any time. This enables simple integration into superimposed line structures. This openness creates future security, both for the machine manufacturer and for the end user.

Keep your core competence in-house and secure your competitive advantage.

Modern visualization

We support you in the implementation of user-centric visualization solutions with a future-proof web-based visualization offering.

Core elements are the use of web-based client-server architectures, parameterization of the displayed interfaces and a library of prepared visualization elements that are designed according to usability principles.

Reduced engineering effort

An engineering tool chain without system breaks is the basis for efficient engineering of logic, visualization and movement.

Predefined and tested software engineering modules for basic functions reduce the engineering effort and thus the time to market.

Controllers

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Four different control systems are available, which are tailored to the requirements of a modular machine solution.

With the help of the FAST Application Software, future-proof machine solutions can be easily implemented.

System components

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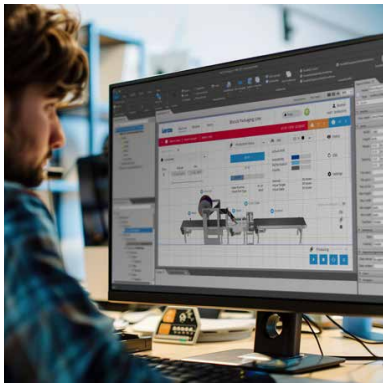
From web panels and safety controllers to I/O systems.

The system components turn the use of the controller into a complete automation solution.

Engineering tools



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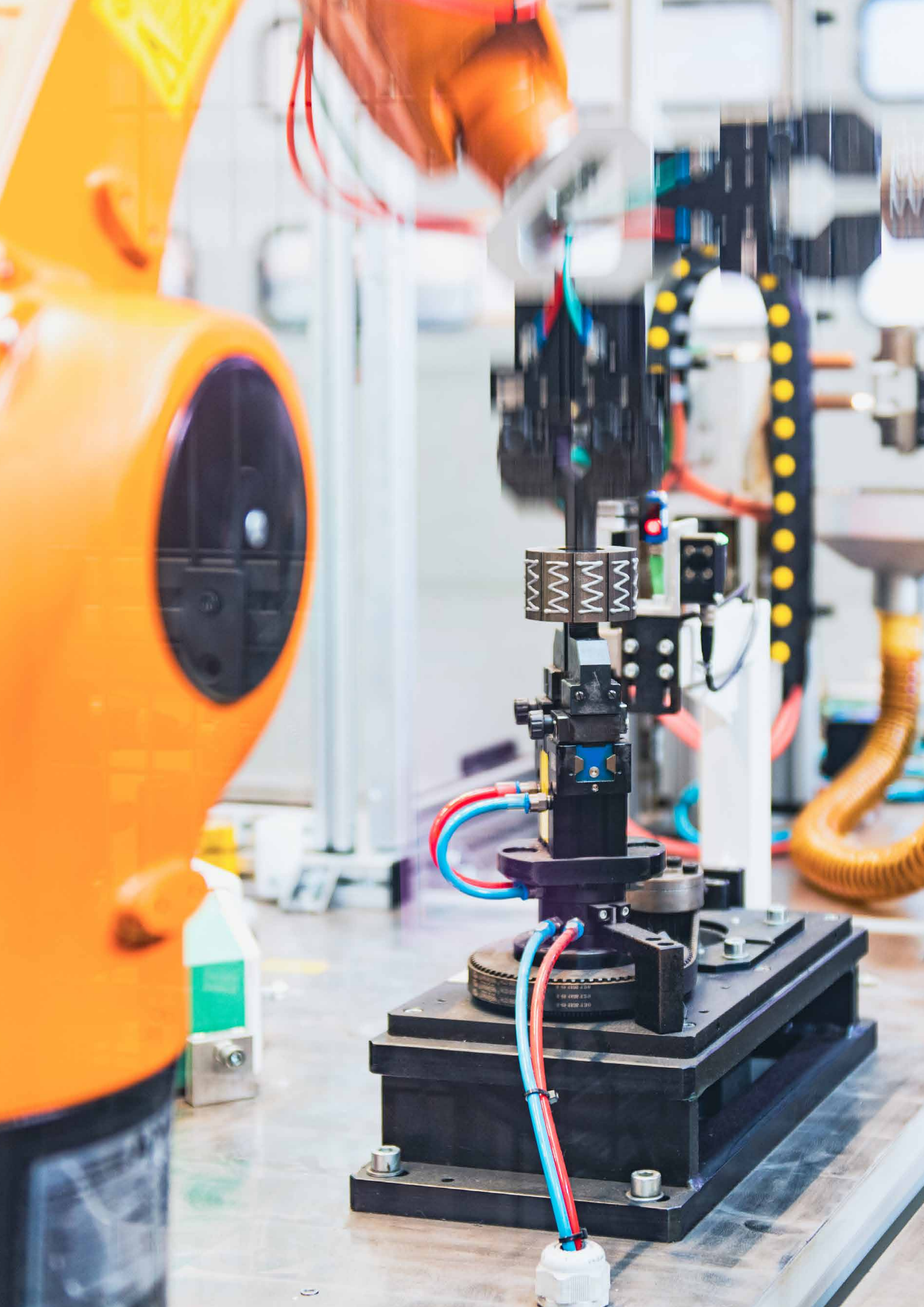
Pre-tested, documented and reusable software modules lead to better quality and optimized resource management.

In addition, standards such as PLCopen ensure the openness of our Lenze system.



Controllers

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. Our controllers with matching system components are facing up to 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, frequency 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 product 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 simply click on the icon).

c430/c520/c550 controller

Growing machine requirements and new challenges in the field of Digital Services increase the demands on controllers. Lenze's new generation of cabinet controllers is the perfect answer to these demands.

This product range enables you to easily realize high-end control applications, such as printing machines with many printing units or picker lines with multiple robots. Thus, modern and modular machine controls can be implemented based on our software modules.

Highlights

- Scaled computing power for simple to demanding motion control in compact machines
- Maintenance-free and resistant: The battery-free design and the extended ambient operating temperature to 60 °C are the guarantors of a use in all areas of industry
- Communication via EtherNet/IP, PROFINET or EtherCAT
- Ready for state-of-the-art web-based machine visualizations in combination with the v430/v450 web panels

Product overview

	c430	c520	c550
Design/mounting	Control cabinet	Control cabinet	Control cabinet
Mounting	DIN rail	DIN rail	DIN rail
Degree of protection	IP20	IP20	IP20

Market approvals

	c430	c520	c550
CE	✓	✓	✓
UKCA	✓	✓	✓
UL	✓	✓	✓
RoHS	✓	✓	✓

Ambient conditions

	c430	c520	c550
Pollution degree	2	2	2
Operation (EN 60721-3-3)	3K3 (0 ... +60 °C)	3K3 (0 ... +60 °C)	3K3 (0 ... +60 °C)
Storage (EN 60721-3-1)	1K3 (-25 ... +70 °C)	1K3 (-25 ... +60 °C)	1K3 (-25 ... +60 °C)
Transport (EN 60721-3-2)	2K3 (-25 ... +70 °C)	2K3 (-25 ... +60 °C)	2K3 (-25 ... +60 °C)

Communication

	c430	c520	c550
EtherCAT master	✓	✓	✓
EtherCAT slave	✓	✓	✓
EtherNet/IP slave	✓	✓	✓
PROFINET slave	✓	✓	✓

Processor/memory

	c430	c520	c550
Processor	Arm® Cortex®-A9 800 MHz	Intel Atom® 1.6 GHz	Intel® Core™ i7 2.8 GHz
Operating system	RT Linux	RT Linux	RT Linux
Flash memory	4 GB	4 GB	8 GB
RAM memory	2 GB	2 GB	4 GB
Retain data	512 kB	1024 kB	1024 kB

Interfaces

	c430	c520	c550
Voltage supply	24 V DC	24 V DC	24 V DC
USB 2.0	1	2	2
Ethernet 100 Mbps/s	2	-	-
Ethernet 1000 Mbps/s	-	1	1

Application software

With Lenze FAST, our ready-to-use software engineering modules, our customers can build on an existing but flexible and easily scalable basic framework for the machine application.

FAST Runtime

Basis for the FAST application, which is pre-installed on the controller. This makes it very easy to create the modules and integrate them into the overall process.

FAST UI Runtime

Basis for transferring operating and diagnostic information from the FAST application to the machine visualization. Depending on the controller, a certain number of variables can be evaluated in the visualization.

Controller	Power tags	Variables	Messages	User	Languages	Scan time
c430	500	500	1000	50	10	1000 ms
c520	1000	1000	1000	50	10	1000 ms
c550	2000	2000	1000	50	10	1000 ms

FAST Application Template

Application template standardized by Lenze for modularized and clear programming in the PLC Designer. For a modularized implementation of the mechatronic structure of an automation system, prefabricated, reusable machine modules and module applications (e.g. a cross cutter) can be created in the FAST Application Template.

FAST technology modules

Pre-tested, documented and reusable software modules lead to better quality and optimized resource management. The FAST technology modules are used for the simple development of a modular machine control system. You can easily reuse, expand and maintain these software modules - efficiently, reliably, and securely.

FAST technology modules

FAST motion modules

	Basic Motion	Basic motion functions: Manual operation, homing, absolute and relative positioning, continuous travel
	Follow SetValues	Realizes a speed or torque follower
	Temperature Control	Controls the temperature of a system with heating element and temperature sensor
	SpeedControl	Implements speed operation and organizes different speed profiles
	VirtualMaster	Virtual master axis in the machine
	Table Positioning	Positioning profiles for single axes with velocity changeover and touch probe positioning
	Electronic Gearbox	Implements synchronous operation with adjustable stretching ratio between drives in the network
	SyncPos	Implements precise angular synchronism between drives in the network
	FlexCam	Implements one or more electrical cams and flexible management of online and offline cams
	CrossCutter	Synchronizes the movements of drives for cross-sealing or cross-cutting products
	SyncAndCor-rection	Implements a precise angular synchronism and clock-synchronized drive for setting up a register control with print mark detection
	FlyingSaw	Cuts and processes material during movement
	Traverser	Controls the even distribution of a material across the total winding width
	Winder	Winding drive with dancer position control or with tension and speed control
	StackerCrane	Controls the horizontal and vertical movement of a storage and retrieval unit

FAST robotic modules

	Pick & Place	Implements complex movements in space with the help of profiles for up to four drives with different kinematics
	Coordinated Motion	Coordinated multi-axis movement with FAST Robotic
	Articulated P	Articulated arm kinematics with 4 degrees of freedom
	Belt	Belt kinematics with 2 degrees of freedom
	Scara	Universal serial scara kinematics
	Delta 2	Parallel kinematics with 2 degrees of freedom
	Delta 3	Parallel kinematics with 3 degrees of freedom
	Linear Delta 3	Parallel kinematics with 3 degrees of freedom with linear axes
	Portal3	Universal Cartesian gantry kinematics with 3 degrees of freedom
	Portal5	Universal Cartesian gantry kinematics with 5 degrees of freedom

AddOns

	TorquePre Control	Torque feedforward control for a single axis
	Oscillation Comp	Oscillation compensation
	Online IdentStiff Mechanics	Identifies control parameters of a motor-load combination
	Online IdentStiff Mechanics Double	Identifies control parameters of a motor-load combination of two synchronized axes
	GroupTorque PreControl	Torque feedforward control for an axis group

Calculation of application credit

Before you select the controller for your application, calculate the required application credit based on the topology requirements and required FAST technology modules:

Topology of the system

		c430 controller	c520 controller	c550 controller	Application Credit
IIoT via OPC-UA	1 client	✓	✓	✓	0
	4 clients	✓	-	-	100
	6 clients	-	✓	✓	150
Communication	EtherCAT slave	✓	See option	See option	100
	PROFINET slave	✓	See option	See option	150
Visualization (FAST UI Runtime)	2 web clients	✓	✓	✓	0
	Each additional	✓	✓	✓	75

FAST Toolbox

		c430 controller	c520 controller	c550 controller	Application Credit
Creation aid / PLC Designer	Application Template	✓	✓	✓	0
FAST motion modules	Basic motion	✓	✓	✓	25
	FollowSetValues	✓	✓	✓	25
	Temperature control	✓	✓	✓	50
	Speed control	✓	✓	✓	25
	Virtual master	✓	✓	✓	25
	Table positioning	✓	✓	✓	50
	Electronic gearbox	✓	✓	✓	25
	SyncPos	✓	✓	✓	25
	FlexCam	✓	✓	✓	50
	CrossCutter	✓	✓	✓	100
	Sync & Correction	✓	✓	✓	100
	FlyingSaw	✓	✓	✓	100
	Traverser	✓	✓	✓	100
	Winder	✓	✓	✓	100
	StackerCraneAxisControl	✓	✓	✓	50
FAST robotic modules	PickAndPlace	-	✓	✓	100
	CoordinatedMotion	-	✓	✓	100
	ArticulatedP	-	✓	✓	100
	Belt	-	✓	✓	0
	Scara	-	✓	✓	100
	Delta2	-	✓	✓	100
	Delta3	-	✓	✓	100
	Linear Delta3	-	✓	✓	100
	Portal3	-	✓	✓	0
	Portal5	-	✓	✓	100
FAST AddOn	TorquePreControl	✓	✓	✓	25
	OscillationComp	✓	✓	✓	50
	OnlineIdentStiffMechanics	✓	✓	✓	25
	OnlineIdent StiffMechanicsDouble	✓	✓	✓	25
	GroupTorquePreControl	-	✓	✓	50

Free programming in FAST

		c430 controller	c520 controller	c550 controller	Application Credit
Creation aid / PLC Designer	Application Template	✓	✓	✓	0
PLCopen, own program creation	Motion control	✓	✓	✓	150
	Coordinated motion	-	✓	✓	300

Calculation examples

The selection of which topology requirements and FAST technology modules are necessary is based on the automation design of the machine. For the topology requirements, the environment must be considered for the calculation; for the technology modules, the number of module calls.

Example 1:

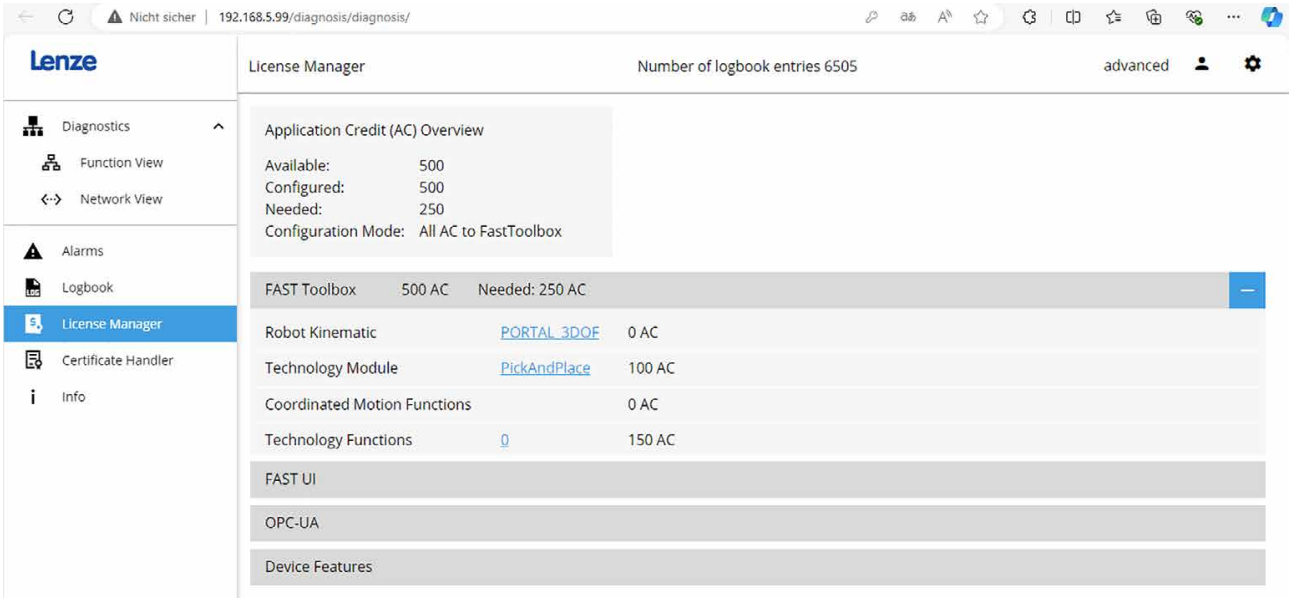
Number	Technology module	Calculation of application credit
1 x	Virtual master	25
1 x	Electronic gearbox	25
2 x	Winder	200 (2 x 100)
1 x	Cross cutter	100
Sum		350

Example 2:

Number	Technology module	Calculation of application credit
1 x	Virtual master	25
1 x	Speed control	25
2 x	FlexCam	100 (2 x 50)
Sum		200

Inventory control

The controller displays available and used application credit by IP address:



Product selection

	Processor	Runtime		Degree of protection	m [kg]	H x W x D [mm]	Information	ID
c430	Arm® Cortex®-A9 800 MHz	FAST		IP20	0.3	136 x 49.8 x 107.7		17004483
		FAST	FAST UI					17004543
c520	Intel Atom® 1.6 GHz	FAST		IP20	1.15	145 x 139 x 114.5		16282279
		FAST	FAST UI					16420355
c550	Intel® Core™ i7 2.8 GHz	FAST		IP20	1.45	145 x 200 x 114.5		16250065
		FAST	FAST UI					16317827

The products listed here are equipped without system functions (application credit=0). SD cards with different system requirements can be selected directly in the product configuration. The corresponding card is inserted in the device.

Options

Communication

EtherCAT
EtherNet/IP
PROFINET

Application credit

Application credit

Communication

EtherCAT slave	Ethernet-based fieldbus system EtherCAT, can be activated via parameterization Connection via 4-pole M12-Steckverbinder. D coded
EtherNet/IP slave	Ethernet-based fieldbus system EtherNet/IP, can be activated via parameterization Connection via 4-pole M12-Steckverbinder. D coded
PROFINET slave	Ethernet-based fieldbus system PROFINET, can be activated via parameterization Connection via 4-pole M12-Steckverbinder. D coded

Application credit

Application credit	50 credits
	100 credits
	150 credits
	200 credits
	300 credits
	400 credits
	500 credits
	600 credits
	700 credits
	1000 credits
	1200 credits
	1500 credits
	2000 credits
	2500 credits
	3000 credits
	4000 credits

Accessories

System cables

		Info	ID
Communication cables	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

Power supply units

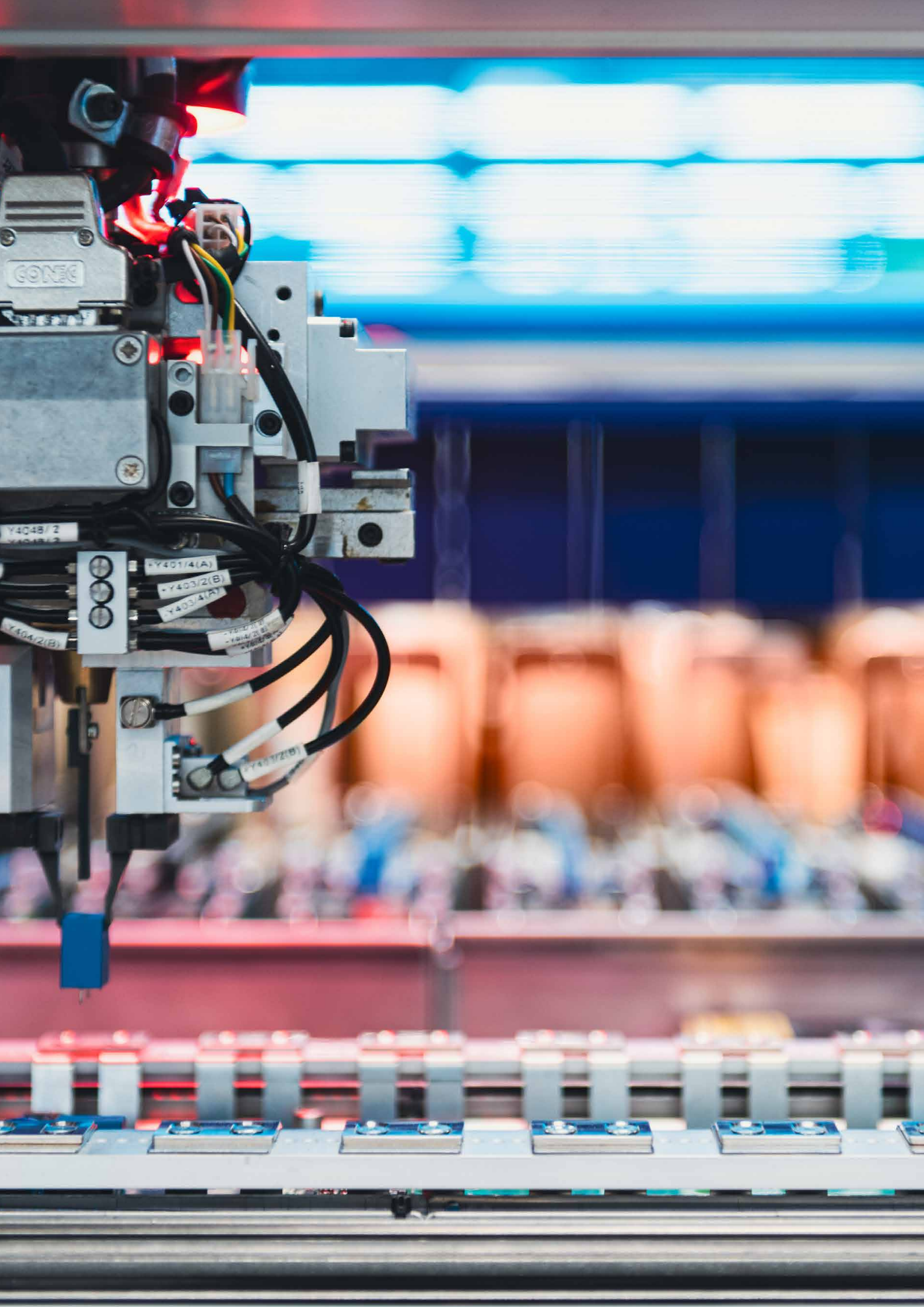
	I_{rated} [A]	U_{Out} [V]	V_{mains} [V]	Degree of protection	m [kg]	H x W x D [mm]	Info	ID
EZVA024005BB000000	5	24	1 AC 230/240 V	IP20	0.86	130 x 40 x 125		13613136
EZVA024010BB000000	10	24	1 AC 230/240 V	IP20	1.05	130 x 60 x 125		13613137
EZVA024005FB000000	5	24	3 AC 400/480 V	IP20	0.78	130 x 40 x 125		13613138
EZVA024010FB000000	10	24	3 AC 400/480 V	IP20	1.32	130 x 60 x 125		13613139
EZVA024020FB000000	20	24	3 AC 400/480 V	IP20	1.6	130 x 70 x 150		13613140

SD card with application credit

		Info	ID
Application credit	50 credits		16040466
	100 credits		16040809
	150 credits		16042190
	200 credits		16041267
	300 credits		16040283
	400 credits		16047082
	500 credits		16040228
	600 credits		16048561
	700 credits		16046263
	1000 credits		16040231
	1200 credits		16056351
	1500 credits		16056462
	2000 credits		16042191
	2500 credits		16049590
	4000 credits		16056464

Further accessories

		Info	ID
USB stick	Stick for transferring the current programming between controllers		13615659


CONEC
-Y401/4(A)
-Y403/2(B)
-Y403/4(A)

System components

You will find the system components optimally adapted to your machine solution for the controllers here. The interaction with the controllers can be parameterized or programmed via the engineering tools.

You can call up a lot of information about the following products easily online when selecting a product:

- Use the EASY Product Finder to configure your required version of the product 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 simply click on the icon).

v430/v450 web panel

Aesthetic machine visualizations in modern design, which can also be operated intuitively, are becoming increasingly important. With the v430 and v450 web panel and our web-based offer, consisting of the EASY UI Designer project planning tool and the FAST UI Runtime on the c430, c520, and c550 controllers, we offer a solution for such visualizations.

The v430 and v450 web panels as browser-based display units with capacitive multi-touch displays are the ideal devices for modern topologies of machine visualization. Both device series are offered in 7", 10.1" and 15.6" screen diagonals and are identical in terms of performance and functionality. The main difference arises from the way they are mounted:

The Web Panel v450 has a fully enclosed housing with IP67 protection and is therefore suitable for flexible applications. It can be mounted on a support arm, on a wall, or on the control cabinet wall.

The v430 web panel, on the other hand, is ideally suited for classic mounting in the control cabinet wall.

Visually, both device series are real eye-catchers and confirm the high-quality impression of your machine.

Highlights

- Chromium based web panel
- TFT color display in 7", 10.1", and 15.6"
- Multi-touch glass front

Product overview

	v430			v450		
Design/mounting	Mounting in housing			Support arm or wall		
Degree of protection	IP66 (front side), IP20 (back side)			IP67		

Market approvals

	v430	v450
CE	✓	✓
UKCA	✓	✓
UL	✓	✓
RoHs	✓	✓

Screen

	v430			v450		
Diagonal	7" (17.8 cm)	10.1" (25.7 cm)	15.6" (39.6 cm)	7" (17.8 cm)	10.1" (25.7 cm)	15.6" (39.6 cm)
Resolution (pixel)	1024 x 600	1280 x 800	1920 x 1080	1024 x 600	1280 x 800	1366 x 768
Brightness	500 cd/m²	500 cd/m²	400 cd/m²	400 cd/m²	400 cd/m²	400 cd/m²
Number of colors	16 million			16 million		
Touchscreen technology	Capacitive glass surface, multi-touch			Capacitive glass surface, multi-touch		

Processor/memory

	v430	v450
Processor	i.MX8M Mini Quad ARM Cortex-A53 (1.60 GHz)	i.MX8M Mini Quad ARM Cortex-A53 (1.60 GHz)
Operating system	Linux	Linux
Flash memory	4 GB	4 GB
RAM memory	2 GB	2 GB

Interfaces

	v430	v450		
Voltage supply	24 V DC	IEEE 802.3af PoE	IEEE 802.3af PoE	IEEE 802.3at PoE+
USB 2.0	1	1 (via adapter cable)		
Ethernet 100 Mbps/s	1	1		
Ethernet 1000 Mbps/s	-	-		

Product selection

	Display	Degree of protection	m [kg]	H x W x D [mm]	Info	ID
v430 web panel	7" (17.8 cm)	IP66/20	0.7	147 x 187 x 37		13642485
v430 web panel	10.1" (25.7 cm)	IP66/20	1.3	197 x 282 x 37		13642486
v430 web panel	15.6" (39.6 cm)	IP66/20	3.2	267 x 422 x 45		13642487
v450 web panel	7" (17.8 cm)	IP67	0.7	131.6 x 195.2 x 16.5		13597105
v450 web panel	10.1" (25.7 cm)	IP67	1.2	183.1 x 264.5 x 16.5		13597172
v450 web panel	15.6" (39.6 cm)	IP67	4.0	248 x 398.6 x 26.5		13597174

Accessories

System cables

		Info	ID
Communication cables	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
	5 m Ethernet cable, 90° angled plug, Power over Ethernet (PoE)-capable		13597180
	5 m Ethernet cable, Power over Ethernet (PoE)-capable		13597182
	5 m USB cable, Power over Ethernet (PoE)-capable		13597194

Connection

		Info	ID
PoE injector	Power over Ethernet (PoE) injector for DIN rail mounting		13597175

Mounting

		Info	ID
Mounts	Pipe mount for v450 7" or 10.1"		13597176
	Pipe mount for v450 15.6"		13597177
	Wall mount for v450 7",10.1"		13597178
	Wall mount for v450 15.6"		13597179
	VESA mount for v450		13597181
Tool	Cable installation tool for the PoE communication cable		13598417

c250-S safety controller

Safety in the system does not start with the drives, but at the control level. The c250-S safety controller provides a complete automation solution for safety technology, control and drive tasks. Rounded off by the safety I/O modules, all safety aspects can be evaluated in the machine module. Data is transferred via EtherCAT/FSoE.

Highlights

- Outputs available with output current up to 2 A
- Safety I/O modules with pluggable connections and integrated connection directly stackable
- High-quality safety solution thanks to PL e/SIL 3
- Consistent engineering platform
- Compliance with the PLCopen standard

Product overview

	c250-S
Design/mounting	DIN rail
Degree of protection	IP20

Market approvals

	c250-S
CE	✓
UKCA	✓
UL	✓
RoHs	✓

Communication

	c250-S
EtherCAT slave	✓

Interfaces

	c250-S
Voltage supply	24 V DC
USB 2.0	-
Ethernet 100 Mbps/s	-
Ethernet 1000 Mbps/s	-

Product selection

	Degree of protection	m [kg]	H x W x D [mm]	Info	ID
c250-S safety controller	IP20	0.125	120 x 25 x 90		13520259

Accessories

Extensions

	Inputs	Outputs	Degree of protection	m [kg]	H x W x D [mm]	Info	ID
Safety bus coupler	-	-	IP20	0.135	120 x 25 x 90		13520258
Safety I/O module	4 x digital	2 x digital	IP20	0.050	120 x 25 x 90		13559071
	8 x digital	2 x digital	IP20	0.220	120 x 25 x 90		13580383
	16 x digital	-	IP20	0.220	120 x 25 x 90		13580384
	16 x digital	4 x digital	IP20	0.220	120 x 25 x 90		13580385

EtherCAT CAN Gateway x750

With the EtherCAT-CAN Gateway x750, existing CAN networks can be easily integrated into EtherCAT networks. In the EtherCAT network, the gateway behaves like an EtherCAT device. The number of CAN nodes is only limited by the CANopen specification.

Highlights

- Parameterizing the gateway via the Lenze PLC Designer
- Using the PLC Designer CANopen libraries with the gateway
- Generating a highly accurate clock signal for the CAN bus
- High Speed CAN interface with up to 1 Mbps

Product overview

	x750
Design/mounting	DIN rail
Degree of protection	IP20

Market approvals

	x750
CE	✓
UKCA	✓
UL	-
RoHs	✓

Communication

	x750
CANopen	✓
EtherCAT slave	✓

Interfaces

	x750
Voltage supply	24 V DC
USB 2.0	-
USB 3.0	-
Ethernet 100 Mbps/s	-
Ethernet 1000 Mbps/s	-

Product selection

	Degree of protection	m [kg]	H x W x D [mm]	Info	ID
EtherCAT CAN gateway x750	IP20	0.2	116 x 28 x 95		13626911

I/O system 3000

The integration of intelligent sensors and actuators, combined with shorter development times, is increasing the demand for high-performance I/O systems in automation.

The I/O system 3000 combines a consistently flexible system design with a compact construction, reduced wiring effort and simple error diagnostics.

You benefit from precise control of input and output modules, power and technology modules, communication modules and safety I/Os. Touch probe inputs and distributed clocks, as required for synchronized movements in clocked production processes, are also supported.

Highlights

- Modular structure for flexible system design
- Space-saving due to 11.5 mm slim modules with up to 32 connections
- Decentralized IP67 modules with digital inputs and outputs
- Modules for IO-Link, CANopen, stepper motor, and safety I/Os
- Simple diagnostics and status detection

Product selection

Bus coupler

w580-C-FB-001	EtherCAT
w580-C-FB-002	EtherCAT, Economy

Power modules

w510-C-PF-001	Supply (input current path)
w510-C-PF-002	Supply (output current path)
w510-C-MT-001	3-phase measurement (motor)
w510-C-AX-001	Potential distribution functional earth
w510-C-AX-002	Potential distribution GND (input current path)
w510-C-AX-003	Potential distribution GND (output current path)
w510-C-AX-004	Potential distribution 24 V DC (input current path)
w510-C-AX-005	Potential distribution 24 V DC (output current path)

Communication modules

w580-C-NT-001	CANopen
w580-C-NT-002	RS 232/485/422
w580-C-NT-003	SSI interface
w580-C-NT-004	IO-Link (master/device)

Technology modules

w570-C-CT-001	1 digital counter, pulse, 100 Hz, 1 digital output
w570-C-CT-002	1 digital counter, pulse, 500 Hz
w570-C-CT-003	2 digital counters, pulse, 100 Hz
w570-C-CT-004	2 digital counters, frequency, 100 Hz
w570-C-PW-001	Pulse width modulation, pos./neg. switching, 0.5 A
w570-C-PW-002	Pulse width modulation, pos./neg. switching, 2 A
w570-C-PW-003	Pulse width modulation, pos. switching, 2.5 A
w570-C-SM-001	Stepper motor, 50 W, 6 digital inputs, 2 digital outputs

Safety modules

w590-C-2B-001	4 safe inputs, 4 safe outputs, pos./neg. switching, FSoE
w590-C-3E-001	8 safe inputs, pos./neg. switching, FSoE
w590-C-PF-001	Safe supply, 1 safe input, 1 safe output (24 V safe)
w590-C-PF-002	Safe supply, 2 safe inputs, 1 safe output (24 V safe), switch-off delay
w590-C-PF-003	Safe supply, 2 safe inputs, 1 safe output (24 V safe)

Analog inputs and outputs

w540-C-1E-001	2 analog inputs, 16 bits
w540-C-1E-002	2 analog inputs, 16 bits, diagnostics
w540-C-1E-003	2 analog inputs, 24 bits, strain gauge
w540-C-2E-001	4 analog inputs, 16 bits, HART
w540-C-2E-002	4 analog inputs, 16 bits, HART, galv. isolation
w540-C-2E-003	4 analog inputs, 12 bits
w540-C-2E-004	4 analog inputs, 16 bits
w540-C-2E-005	4 analog inputs, 16 bits, diagnostics
w540-C-2E-006	4 analog inputs, 16 bits, diagnostics, high density connectors
w540-C-2E-007	4 analog inputs, 16 bits, high density connectors
w540-C-2E-008	4 analog inputs, 16 bits, differential input, diagnostics
w540-C-2E-009	4 analog inputs, 32 bits, differential input, diagnostics
w540-C-2E-010	4 analog inputs, 16 bits, galv. isolation, diagnostics
w540-C-3E-001	8 analog inputs, 16 bits, current, diagnostics, high density connectors
w540-C-3E-002	8 analog inputs, 16 bits, current, high density connectors
w540-C-3E-003	8 analog inputs, 16 bits, current, PLC connection
w540-C-2E-011	4 analog inputs, 16 bits, potentiometer input
w540-C-2E-012	4 analog inputs, 16 bits, resistance thermometer
w540-C-2E-013	4 analog inputs, 16 bits, resistance thermometer, high precision
w540-C-2E-014	4 analog inputs, 16 bits, temperature compensation
w540-C-3E-004	8 analog inputs, 16 bits, resistance thermometer, 2-wire sensor connection
w540-C-1A-001	2 analog outputs, 16 bits
w540-C-1A-002	2 analog outputs, 16 bits, diagnostics
w540-C-1A-003	2 analog outputs, 16 bits, galv. isolation, diagnostics
w540-C-2A-001	4 analog outputs, 16 bits
w540-C-2A-002	4 analog outputs, 16 bits, diagnostics
w540-C-2A-003	4 analog outputs, 16 bits, maritime approval, diagnostics
w540-C-2A-004	4 analog outputs, 16 bits, maritime approval

Digital inputs and outputs

w560-C-1E-001	2 digital inputs, time stamp input, pos. switching
w560-C-2E-001	4 digital inputs, 230 V AC, 2-wire sensor connection
w560-C-2E-002	4 digital inputs, neg. switching
w560-C-2E-003	4 digital inputs, pos. switching
w560-C-2E-004	4 digital inputs, pos. switching, 3-wire sensor connection
w560-C-2E-005	4 digital inputs, time stamp input, pos. switching
w560-C-3E-001	8 digital inputs, 2-wire sensor connection, galv. isolation
w560-C-3E-002	8 digital inputs, neg. switching, 3-wire sensor connection
w560-C-3E-003	8 digital inputs, pos. switching, 2-wire sensor connection
w560-C-3E-004	8 digital inputs, pos. switching, 3-wire sensor connection
w560-C-3E-005	8 digital inputs, pos. switching, 3-wire sensor connection, high density connectors
w560-C-4E-001	16 digital inputs, neg. switching
w560-C-4E-002	16 digital inputs, neg. switching, PLC connection
w560-C-4E-003	16 digital inputs, pos. switching
w560-C-4E-004	16 digital inputs, pos. switching, PLC connection
w560-C-3B-001	8 digital inputs/outputs (configurable), pos. switching, 3-wire sensor connection, diagnostics
w560-C-2A-001	4 digital outputs, galv. isolation, 4 A
w560-C-2A-002	4 digital outputs, neg. switching
w560-C-2A-003	4 digital outputs, neg. switching, 2 A
w560-C-2A-004	4 digital outputs, pos. switching
w560-C-2A-005	4 digital outputs, pos. switching, 2 A
w560-C-2A-006	4 digital outputs, pos./neg. switching, 2 A
w560-C-3A-001	8 digital outputs, neg. switching
w560-C-3A-002	8 digital outputs, pos. switching
w560-C-3A-003	8 digital outputs, pos. switching, 2-wire sensor connection, high density connectors
w560-C-4A-001	16 digital outputs, neg. switching
w560-C-4A-002	16 digital outputs, neg. switching, PLC connection
w560-C-4A-003	16 digital outputs, pos. switching
w560-C-4A-004	16 digital outputs, pos. switching, PLC connection
w560-C-2A-007	4 digital outputs, relay changeover contact, 255 V
w560-C-2A-008	4 digital outputs, solid-state relay, 255 V

Decentralized IP67 modules

w560-P-4E-002	16 digital inputs, M12 connectors
w560-P-4B-002	16 digital inputs/outputs (configurable), M12 connectors
w560-P-4A-002	16 digital outputs, M12 connectors
w560-P-4B-004	8+8 digital inputs/outputs, M12 connectors

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Engineering tools

Whether programming processes or visualizing machine monitoring - Lenze has the right engineering tools for your machinery.

EASY UI Designer for machine visualization

Using the EASY UI Designer in combination with the FAST UI Runtime of the new c430, c520 and c550 control systems, web-based machine visualizations can be easily created. Our v450 and v450 web panels round off the solution perfectly with their high-quality design.

Create individual interfaces without web programming knowledge by adapting our prepared templates and controls. Put the user at the center of attention without much effort - with intuitive and user-friendly machine operation.

PLC Designer for programming the controller

The PLC Designer is the tool for program creation and commissioning of products with PLC functionality on the basis of CODESYS V3. Logic & motion is programmed in accordance with the IEC 61131-3 standard. PLCopen certified modules for motion control and coordinated motion make it easy to implement even extensive PLC projects. A graphical cam editor for cam profiles, a debugger and monitoring functions provides you with support.

EASY UI Designer

Expert-level visualization without programming knowledge

The visualization is the face of your machine. In a world in which intuitively designed user interfaces are becoming more and more standard, expectations regarding the operation of a machine are also increasing. With EASY UI Designer, you can develop modern web visualizations with an appealing design.

Configure your project efficiently by using the various templates and control elements in our software. When designing these components, we pay attention to both aesthetics and ease of use for the machine operator to give you the best starting point for creating user-friendly applications.

With our solution, you are also technologically well equipped for flexible surfaces and topologies. The client-server architecture and standards such as OPC UA, HTML5, CSS and JS allow your application to be accessed and viewed at scale on a smartphone, tablet or panel. This means that you do not have to make any adjustments to your visualization even in the event of a migration. All this is possible without any web programming. However, if there is an individual need for extensions, we can develop them together thanks to the open approach.

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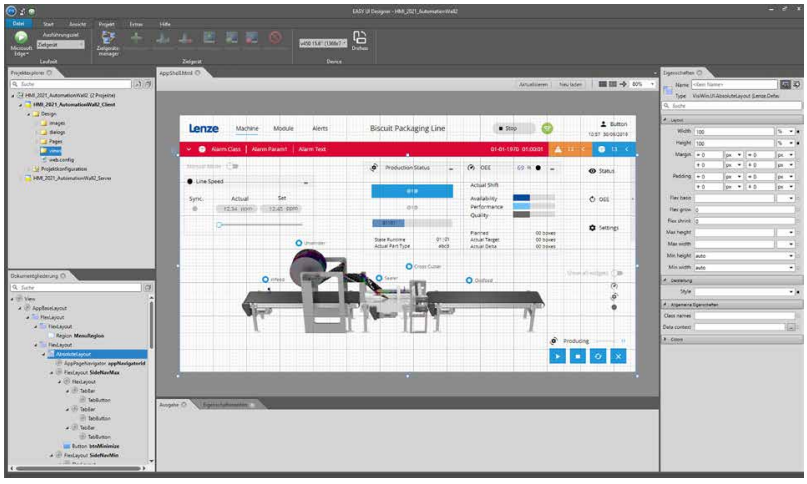

PLC Designer

Program creation and commissioning

The PLC Designer is the tool for creating programs and commissioning our PLC products that comply with the IEC 61131-3 standard.

The PLC Designer includes all functions for convenient engineering of controller-based solutions. The functionality Designer functionalities include an extensive library of function blocks for a wide range of tasks. The PLC Designer can be used in combination with the EASY Starter for straightforward commissioning.

The software is based on CODESYS V3 and is intended for project engineers of mechanical engineering companies. In addition, we offer you comprehensive support in the realization of your projects through our application engineers in every project phase.

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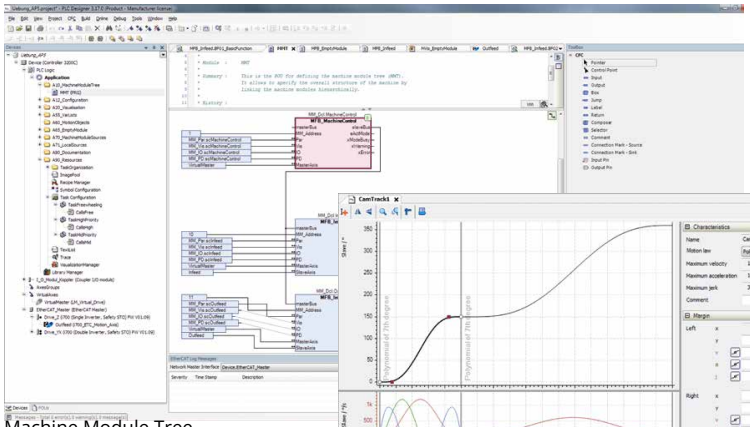
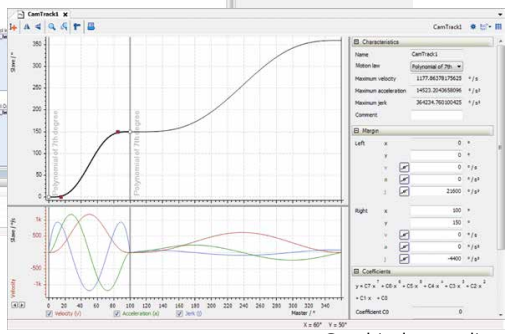


Machine Module Tree



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