

L-force *Controller 3200 C*



Control and visualisation compactly combined



Lenze

L-force | Your future is our drive

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Cost efficiency, saving time and improving quality are the challenges of the future. Lenze is tackling these challenges head-on with L-force – the drive and automation range with a holistic portfolio of solutions and coordinated interfaces and components. L-force gives you faster project planning and commissioning, more power and a higher degree of flexibility during production.

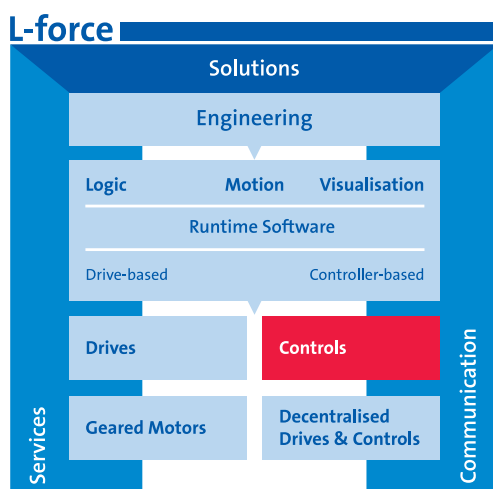
Complex machines such as robots, packaging machines and handling systems require a powerful and uniform automation system with a central control system. This enables the coordinated movement of multiple axes and is also able to assume the control functions of a line process.

We call it controller-based automation for central motion control and are now offering a new central controller generation - the L-force Controller 3200 C, which combines control and visualisation in a compact design.

In order to cope with the increasing complexity of your automation tasks efficiently and cost-effectively, you expect your automation supplier to provide not only a uniform automation system, but also advanced engineering tools and, if required, comprehensive support from qualified personnel.

At Lenze, accomplished experts in sales and support are on hand for all the advice you need, whether it involves project planning, design, choosing the most suitable components or programming a mechatronic solution.

In Europe alone, our customers have access to a network of over 100 highly qualified application engineers. An all-round service, training and a globally accessible helpline round off the benefits on offer from Lenze.



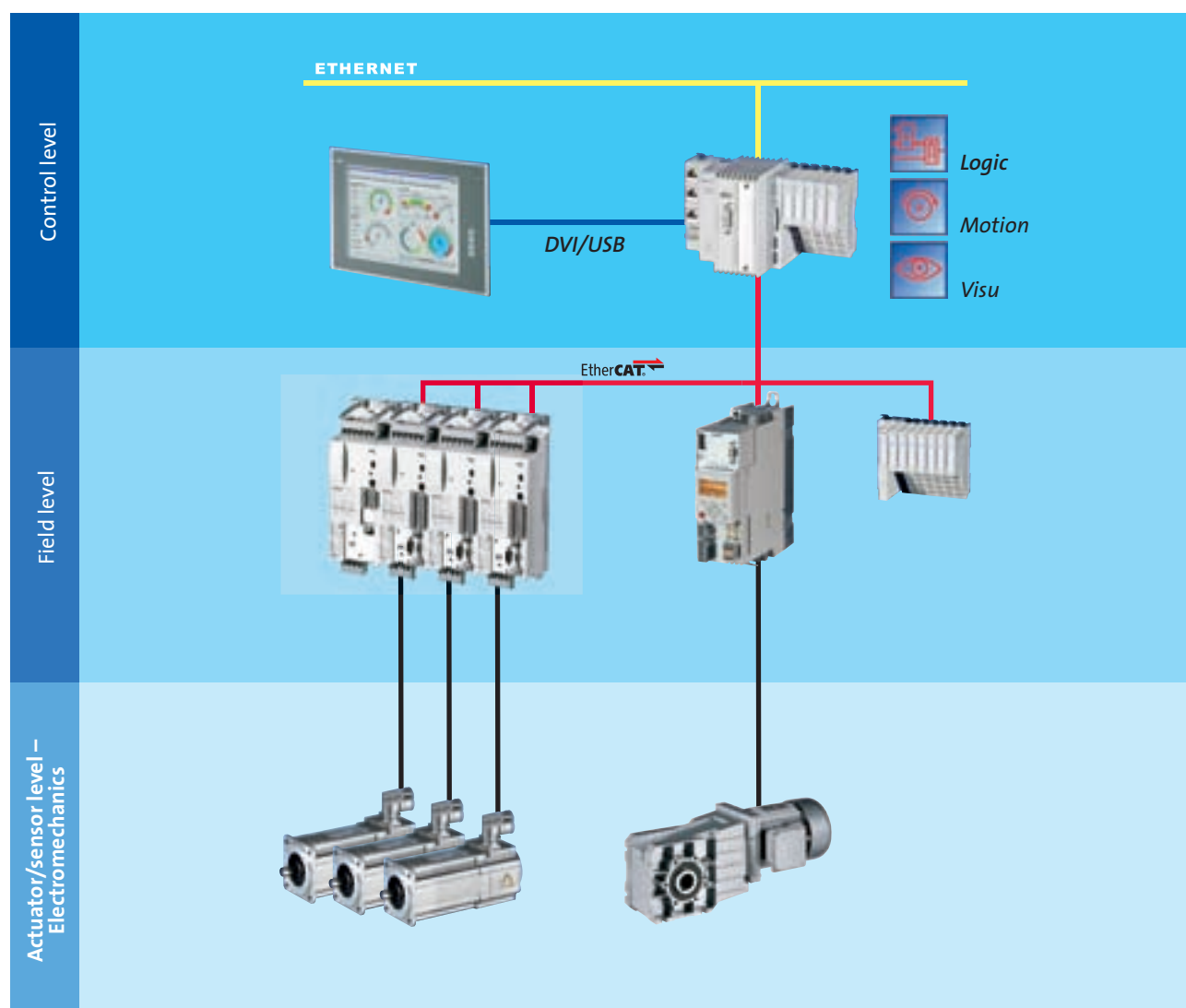
Motion Centric Automation | Controller-based

Included in the controller-based automation system from Lenze are the new 3200 C controller range and an end-to-end product portfolio:

- ▶ Servo and frequency inverters with compatible standard three-phase AC motors and synchronous and asynchronous servo motors
- ▶ Can each be combined with gearboxes in various designs
- ▶ Also includes decentralised I/O systems

The central architecture offers a particular advantage to the project engineer, who only has to develop and manage a single control program.

Thanks to the latest processor technology, a powerful computer architecture can be implemented in the smallest of spaces, without the need for forced cooling and other moving components. Logic controller (PLC), motion controller and visualisation can thereby be combined in an extremely compact manner on a single platform. This approach tends to offer a cost advantage when compared with traditional solutions with dedicated motion and sequence control, and excels through its simplified engineering.





Logic (PLC), motion and visualisation in a single device

- ▶ Optimised for machines/modules with central motion control
- ▶ Simple engineering using central data storage

➤ Saves space in the control cabinet

Maintenance-free

- ▶ Operation without fan
- ▶ Operation without battery via integrated UPS
- ▶ High degree of safety thanks to integrated backup process



High precision control for optimum production results

- ▶ Touch probe capable inputs
- ▶ High precision output control
- ▶ Highly deterministic backplane bus with precise time stamp 1 μ s

➤ Don't react, instead act with precision!



Easy to use

- ▶ Automated standard set-up and backup via USB flash drive
- ▶ Simple device replacement via pluggable memory card
- ▶ Diagnostics via integrated web server

➤ Minimises the time required for commissioning and maintenance

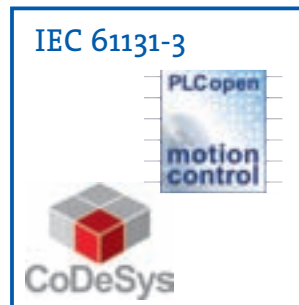




Future-proof through industry standards

- ▶ Programming to IEC 61131-3
- ▶ Motion in accordance with PLCopen
- ▶ PLC Designer based on CoDeSys 3

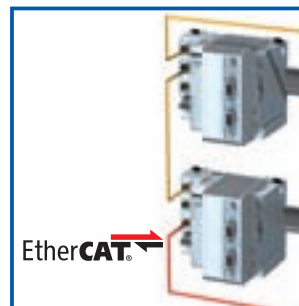
➤ Security for your investment



Communicative

- ▶ Daisy-chain cabling using integrated Ethernet switch
- ▶ EtherCAT implemented as fast bus system directly on board
- ▶ Precisely tailored thanks to modular extension option

➤ No external components are required



I/O system 1000 for local signals

- ▶ Permanent wiring thanks to separation of the electronic and base module
- ▶ Fast diagnostics achieved using well-structured labelling and LEDs clearly assigned to each channel
- ▶ Easy to connect thanks to printed circuit diagram
- ▶ Fully integrated shield connection without the need for special shield terminals

➤ Compact and clever

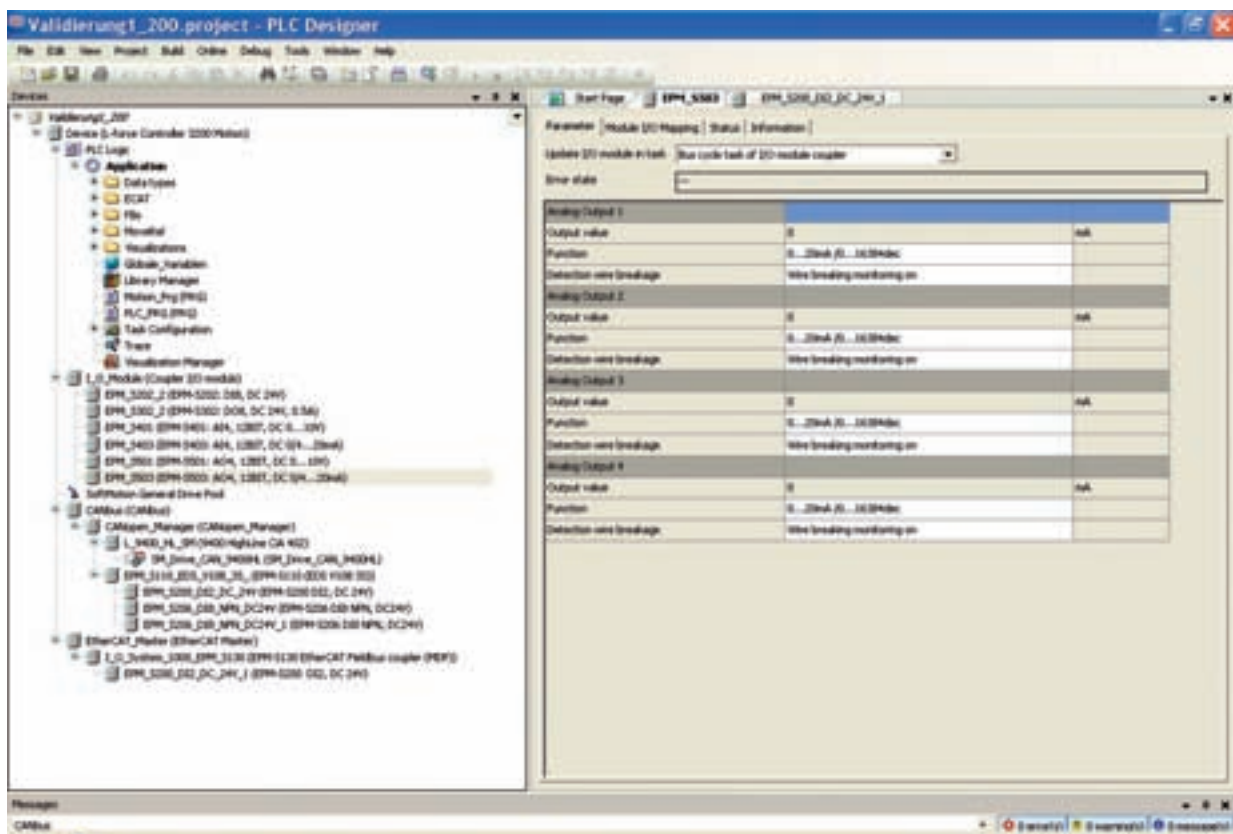


Engineering | based on the latest industry standards

PLC Designer 3





With the PLC Designer, which is based on the familiar CoDeSys, you can create your control program. In accordance with IEC 61131-3, the 6 programming languages are available to you: instruction list, structured text, ladder diagram, function block and sequential function chart, as well as function block diagram. In addition, mechanisms for object-oriented programming are built in, which enable the creation of classes, methods and the associated inheritance methods. This represents state-of-the-art software technology in an automation system.

With dialogs and drivers that are specially tailored to Lenze hardware, timing, for example, has been optimised and adapted to the special communication interfaces, which guarantees an optimised packing density for the best possible utilisation of the bus performance. In addition, the system has been enhanced by a gateway function, which enables drive parameter setting programs such as the L-force Engineer to access the connected field devices through the controller. The most significant enhancement, however, is the integration of the I/O system 1000 into the control configuration. The backplane bus of the I/O system has been fully integrated into the PLC Designer, as a virtual new bus system, while special user interfaces make setting the parameters of the I/O system particularly simple.



Overview

Product portfolio overview

	L-force Controller 3221 C	L-force Controller 3231 C
		
Processor	Intel® Atom™ 1.1 GHz	Intel® Atom™ 1.6 GHz
Interfaces		
Monitor		1 * DVI-D for the connection of a monitor panel  
USB	2	3
Ethernet	2 * 100 Mbps (integrated switch)	2 * 100 Mbps (integrated switch)
EtherCAT	1	1
Option	Double CANopen PROFIBUS Master	Double CANopen PROFIBUS Master
Operating system	Windows® CE 6.0	Windows® CE 6.0
Minimum cycle time	1 ms	1 ms
Time stamp resolution	1 µs	1 µs
Project data memory	SD card	SD card
Runtime software		
Logic (IEC 61131-3)	LPC 1000	LPC 1000
Motion (PLCopen)	MPC 1200	MPC 1200
Visu		VisiWinNET® compact with 500 power tags
UPS	integrated UPS for mains failure protected saving of retain variables	
Voltage supply	24 V DC	24 V DC

It's good to know | why we are there for you



"Our customers come first. Customer satisfaction is what motivates us. By thinking in terms of how we can add value for our customers we can increase productivity through reliability."



"We will provide you with exactly what you need – perfectly co-ordinated products and solutions with the right functions for your machines and installations. That is what we mean by 'quality'."



"Take advantage of our wealth of expertise. For more than 60 years now we have been gathering experience in various fields and implementing it consistently and rigorously in our products, motion functions and pre-configured solutions for industry."



"The world is our marketplace. Wherever you are in the world, we are nearby, providing you with our drive and automation solutions."

Algeria · Argentina · Australia · Austria · Belarus · Belgium · Bosnia-Herzegovina · Brazil · Bulgaria · Canada · Central America · Chile · China · Colombia · Croatia · Czech Republic · Denmark · Egypt · Estonia · Finland · France · Germany · Greece · Hungary · Iceland · India · Indonesia · Iran · Israel · Italy · Japan · Latvia · Lebanon · Lithuania · Luxembourg · Macedonia · Malaysia · Mauritius · Mexico · Morocco · Netherlands · New Zealand · Norway · Philippines · Poland · Portugal · Romania · Russia · Serbia-Montenegro · Singapore · Slovak Republic · Slovenia · South Africa · South Korea · Spain · Sweden · Switzerland · Syria · Taiwan · Thailand · Tunisia · Turkey · Ukraine · United Arab Emirates · United Kingdom/Eire · USA · Vietnam

You can rely on our service. Expert advice is available 24 hours a day, 365 days a year, in more than 30 countries via our international helpline: 008000 24 Hours (008000 2446877).

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