

L-force Controls HMI EL 100 series

Visualisation and control under Windows® CE



Having processes safely in view



Lenze

L-force | your future is our drive

Cost efficiency, saving time and improving quality are the challenges of the future. Lenze is meeting these challenges with L-force – the drive and automation family with wide-ranging solutions and compatible interfaces and components. L-force means faster project planning and commissioning, enhanced performance and flexibility in production.

Driven by innovation – New ideas for new possibilities

Always on the lookout: Our idea of innovation is working on even better solutions for our customers, every day.

Driven by flexibility – High degree of scalability for individual solutions

Scalability is an important aspect of the L-force philosophy. Performance, scope of functions, software, service provisions and aftersales care – Lenze will provide you with exactly the combination you require.

Driven by usability – Simple solutions, even for complex applications

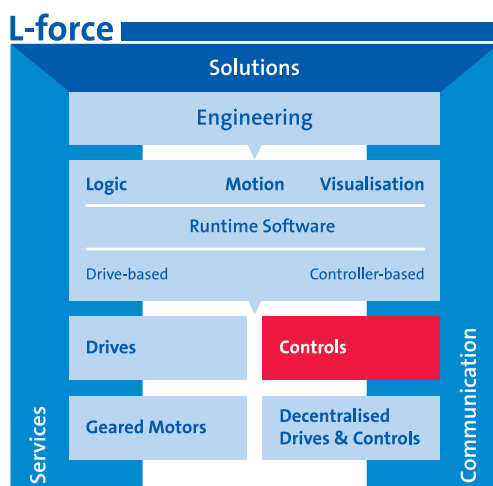
We always focus on the user. Therefore, when we developed L-force, we made sure that people with plenty of practical experience were involved, right from the start.

Driven by compatibility – Universal products and solutions

Don't waste any more time searching for suitable components and the right interfaces. With L-force, everything is compatible.

HMI with Windows® CE

Ideal for small control and visualisation tasks, due to the integrated control system and the coordinated hardware and software.



HMI | precise visualisation – simple and reliable

The processes of modern production plants are becoming faster and more complex with every step of innovation. The objective behind this is the development of ever more efficient production procedures. However, in spite of all the complexity, the man at the machine always has to be considered.

The more complex the individual processes are, the more important is a human-machine interface which can be operated safely and simply – as it is essential to keep the equipment and the workpiece in view.

Therefore the HMI EL 100 series was developed for applications for which the higher flexibility and functionality of the Windows® CE environment is required. The interface units operate with the standard operating system Windows® CE 5.0, the visualisation system VisiWinNET® Smart which is coordinated to the hardware, and with an optionally available Soft-PLC according to the standard IEC 61131.

With display sizes from 8.9 cm (3.5") to 26.4 cm (10.4"), the integrated visualisation system VisiWinNET®, and the optionally available Soft-PLC, the devices provide a cost-effective complete system for operation & control.



The hardware | flexible with a high performance

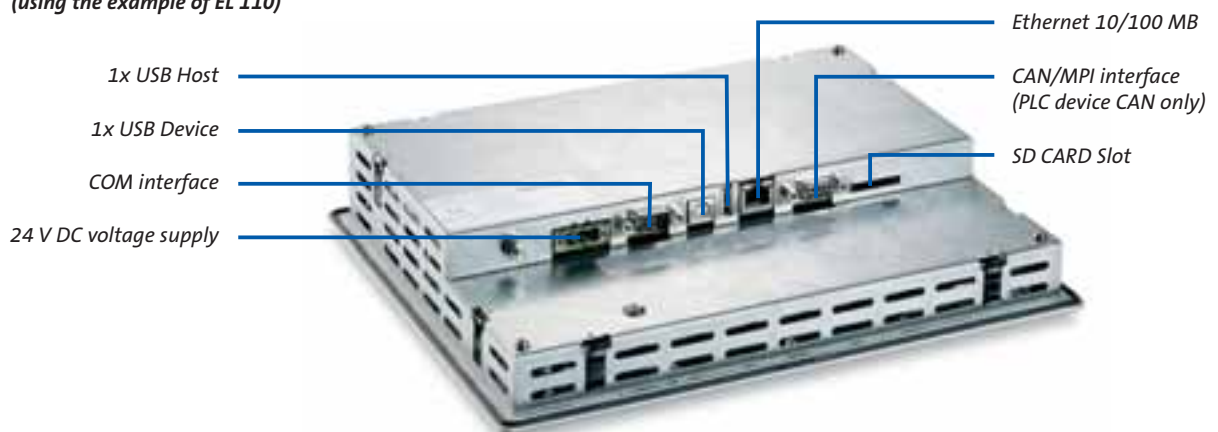
Function in line with the operator

With regard to their basic equipment, the HMIs already form cost-effective and powerful complete systems for operator control and process monitoring: Thanks to Windows® CE, the compact touch panels are equipped with a flexible, graphical user interface and a PC-typical functionality. Well proven IPC standard interfaces provide for communication with master controls and enable the integration in the complete Lenze system world.

Communication on all channels

Apart from the CAN bus as Lenze standard, the panels are also provided with interfaces like MPI and RS232. Furthermore Ethernet, USB-A, and USB-B interfaces ensure industry-compatible communication with higher-level PCs and allow for the connection of additional drives, printers, keyboards, or other communication media.

Connection example for device type EL 105 - EL 110
(using the example of EL 110)



EL 103 ECO connections



The software | graphical user interfaces and logic are tailor-made

VisiWinNET® Smart – visualisation with intelligence and function

Applications with comfortable user interfaces can be created simply and quickly: VisiWinNET® Smart was designed specifically for the HMI EL 100 series and for visualisation tasks in the machine-oriented area. A project wizard supports the user with regard to the selection of the target hardware and provides a basic configuration that can be adapted freely for each project.

The system is characterised by a simple configuration. It supports the direct acceptance of variables from the control system and connected field devices, as well as the import of system variables like the time or display brightness.

Additionally VisiWinNET® offers a user management, and various editors for an alarm management, recipes and trending. A language switch enables the optional use and combination of all languages available worldwide.

What else can we do for you?

The performance diversity of VisiWinNET® Smart can be extended at any time by the integrated Visual Basic.NET script language. This allows for the access to functions of the .NET compact framework and the VisiWinNET® class library in order to be able to even implement more complex functions as, for instance, file handling. Thus, comprehensive and company-specific tasks can be solved where standard visualisation functions are not enough.



EL 100 PLC – the intelligent extension

Development of PLC programs on the basis of PLC Designer – For a quick and convenient configuration within the workflow with VisiWinNET® Smart, the user is provided access to all PLC variables via an integrated browser. Because of the integrated UPS it is not required to copy projected retain variables cyclically in a slow memory.

In the cases of voltage loss or “emergency stop”, all retain variables are stored on the integrated flash disk. By this, the PLC can be reset to a defined state during restart.



Teamwork | a powerful combination

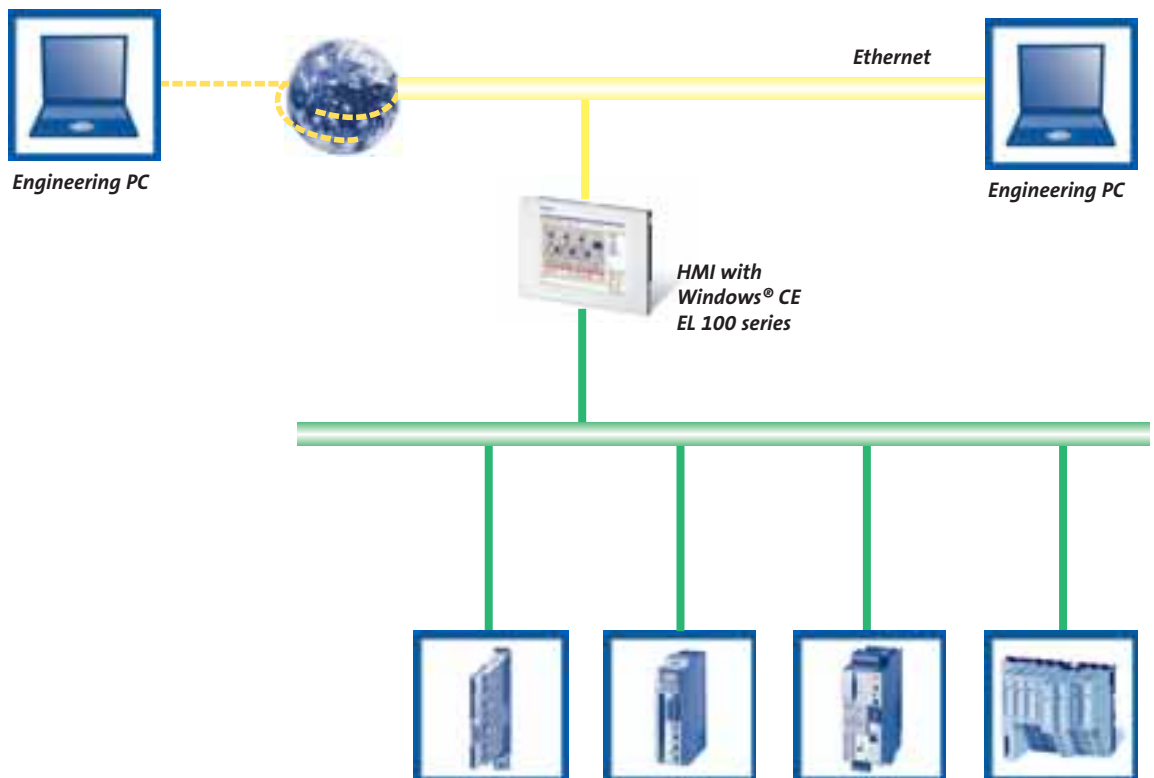
Co-working

The great strength of the HMI EL 100 series is the intelligent dialog between the operator and the system. A graphical machine representation, multilingual operating and help texts, and simple editing options of all parameters provide the basis for this. During the operation phase, trend diagrams and the optimised alarm management ensure a trouble-free operation of the machine.

Networking






In order to implement all functions of an operator interface and the Soft PLC on the hardware of the EL 100 series, VisiWinNET® and PLC Designer provide powerful software tools. Via Ethernet, the applications of the PLC program and the visualisation are simply transferred from the PC to the HMI with Windows® CE. Of course, in the event of service, this connection can also be established via modem. Comfortable remote maintenance functions with access via FTP server and a remote desktop program are implemented on all devices of the EL 100 series.

HMI with Windows® CE – Never lose sight of your processes



Overview | the model series at a glance

Rated data

Product							
Standard device	EL 103 ECO	EL 105		EL 106	EL 108	EL 110	EL 110s
PLC device	EL 103 ECO PLC	EL 105 PLC		EL 106 PLC	EL 108 PLC	EL 110 PLC	EL 110s PLC
							
Display	colour	shades of grey	colour	colour graphical	colour	colour	colour
Design	TFT	STN	TFT	TFT	TFT	TFT	TFT
Type	64k	16	64k	64k	64k	64k	64k
Display version	8.9 cm (3.5")	14.5 cm (5.7")	14.5 cm (5.7")	16.3 cm (6.4")	20.3 cm (8.0")	26.4 cm (10.4")	26.4 cm (10.4")
No. of colours	320x240 pixels	320x240 pixels	320x240 pixels	640x480 pixels resistiv	640x480 pixels	640x480 pixels	800x600 pixels
Display size							
Resolution							
Touch screen							
Power consumption	5.0 W	6.0 W	7.2 W	7.2 W	12.0 W	12.0 W	12.0 W
DC supply voltage	24 V ± 25 %						
U _{DC}							
User memory	32 MB			32 MB/64 MB			
Flash (Standard/PLC)	64 MB			64 MB/128 MB			
RAM (Standard/PLC)							
Clock	Yes, buffer time 2 weeks			Yes, with back-up battery, Off time 7 years at 25°C			
Real-time clock with date							

Visualisation functions

Product							
Standard device	EL 103 ECO	EL 105		EL 106	EL 108	EL 110	EL 110s
PLC device	EL 103 ECO PLC	EL 105 PLC		EL 106 PLC	EL 108 PLC	EL 110 PLC	EL 110s PLC
Online language switching				Yes			
Password				Any			
Dynamic text				Yes			
Bitmaps				Import option during configuration			
Graphical icons				static/dynamic			
Alarms				Yes			
Info messages				Yes			
Alarm buffer				Yes			
Recipes				Yes			
Trend display				Line graph			
No. of power tags		500				1000	

PLC functions (IEC 61131-3)

EL 100 PLC devices are HMIs with control technology and the following PLC functions.

Product							
PLC device	EL 103 ECO PLC	EL 105 PLC		EL 106 PLC	EL 108 PLC	EL 110 PLC	EL 110s PLC
IL, FBD, LD, ST, SFC and CFC editor	Yes				Yes		
Source code	256 kB				2 MB		
Data memory variables	64 kB				1 MB		
Data memory global variables	64 kB				512 kB		
Flags	4 kB				4 kB		
Input (process image)	1 kB				4 kB		
Output (process image)	1 kB				4 kB		
Retain data	16 kB				128 kB		
Integrated UPS for storing retain data in flash memory	Yes				Yes		

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 · Montenegro · Morocco · Netherlands · New Zealand · Norway · Philippines · Poland · Portugal · Romania · Russia · Serbia · 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).

www.Lenze.com

13384745