



# elneos<sup>®</sup> six

a leap ahead



The new device series for the electrical industry.  
Quick reference

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On more than 11,000 m<sup>2</sup>, we produce all technical workplace systems, electronic devices, measuring and testing devices, test systems for electrical safety and function as well as didactical systems for you at our main site in Freudenstadt.

Our particularly great in-house production depth in furniture and electronics is a guarantee for consistent high quality standards. All manufacturing steps are subordinated to the principle of production according to the Industry 4.0 approach. Our manufacturing expertise ranges from cutting to size, edging with laser technology, CNC free-form milling and drilling as well as the entire metal construction in furniture production to circuit board assembly, device construction and the electrification of complete laboratory, workplace and test systems.

The in-house manufacturing expertise we have acquired distinguishes us considerably. We are always one step ahead in product innovation and our solutions have been recognised by prestigious design awards since 1980.

# elneos® six

a leap ahead

The new *elneos six* electronic device system with its innovations once again defines the benchmark for the entire industry. As the successor model to our *elneos five* series, all of the *elneos six* components have been redeveloped and many details have been massively improved. In addition, new device groups such as DC high-current power supply units and AC sources significantly expand the device system to a considerable extent. This bandwidth makes it possible for the new series to be used for the first time in new industries such as battery research and electromobility.

The 8 devices of the elneos® six:

- Precision control power supplies linear up to 660 Watt
- Power arbitrary generators linear up to 660 Watt
- High current power supplies up to 3,000 Watt and up to 125 A
- Digital multimeters up to 125 A
- Power meters 1- and 3-phase
- Function generators up to 40 MHz
- Fast signal arbitrary generators
- AC sources (electrical) 1-phase up to 400 Hz
- AC sources (electromechanical) 1- and 3-phase



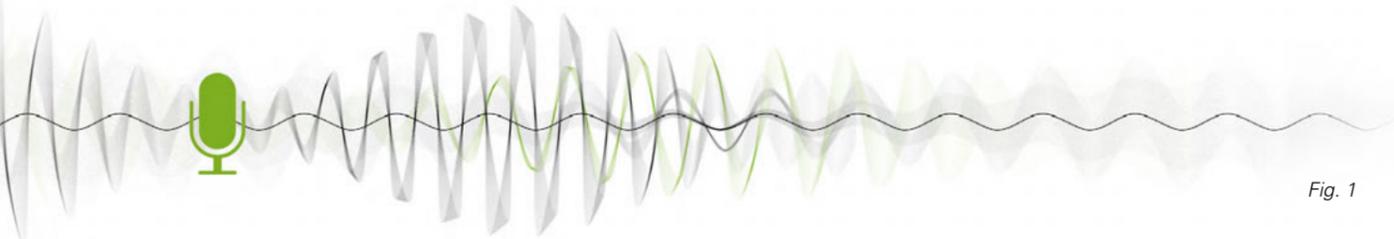


Fig. 1

# elneos® six Innovations

The *elneos six* system sets new standards in the world of electronic devices. With over 100 innovative features, the new system is unbeatable in the areas of agile operating concept, comprehensive integration capability and technical performance. Here are just a few aspects:

- 8-inch multi-touch display with fully tempered security cover glass and ceramic print on the back
- Four splitscreens for variable device display
- 3D gestures through Airwheel and tactile feedback
- Life measurement display via connection panel
- Control center to accommodate 4-fold power supply
- Voice control with built-in intelligence
- Agile ring socket illumination for increased safety

### elneos® six voice control

Control *elneos six* via a network-independent voice control. Several built-in microphones process your spoken words and convert them into device functions at lightning speed using specially developed speech algorithms. For example, you can have the measured values read out to you and malfunctions are prevented. By means of an integrated loudspeaker, *elneos six* provides information about measured values and device statuses in a pleasant voice (Fig. 1).

### elneos® six ring socket illuminations

For the first time, a completely newly developed ring socket illumination with disappearing effect visualises safety-relevant power outputs for all device groups, including the new device groups of high-current power supplies and AC sources. Users are thus safely guided and immediately recognise the unit equipment. Different and safety-relevant unit functions are colour-indexed and thus safely guide the user during all connection work (Fig. 4).

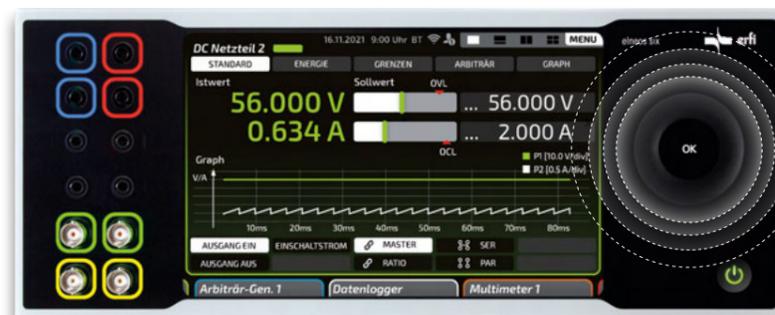


Fig. 2: *elneos six* with 8-inch display and Airwheel with tactile feedback



Fig. 3: Airwheel or two optional encoders



Fig. 4: Intelligent ring socket lighting



Fig. 5: *elneos six* in Half-screen mode



Fig. 6: *elneos six* in Quattro-screen mode



Fig. 7: *elneos six* socket lighting of the AC sources

### elneos® six multi-user mode

*elneos six* allows simultaneous operation by several users. Additional operating elements such as a second capacitive wheel or a second mechanical rotary encoder allow several people to operate multiple devices simultaneously (Fig. 2).

### elneos® six tactile wheel

With the touch-sensitive wheel, you receive immediate feedback from *elneos six*. The optional "Tactile Wheel and Display" provides tactile feedback after a touch or during a detected movement by means of vibration or a simulation of a grid on the control element (Fig.2).

### elneos® six Airwheel

The new Airwheel controls most functions and the device selection completely contactless by hand gestures. With up to 7 cm in front of the surface, the device detects movement (Fig. 2 and 3).

### elneos® six signal transmitter

The signal transmitter connected via the internal bus is operated manually. The operating module, which is placed separately in an additional drawer, can be installed as a single or double version (Fig. 3).

### elneos® six display freedom

Arrange your screen the way you prefer to work. Regardless of whether you want to observe and operate one device or four devices at the same time. The 8-inch display makes the screen modes Full-, Half-, 2/3- or Quattro-screen pleasant to read. Additionally, you can operate all units and all parameters immediately and simultaneously via Quickstart, even without selecting a unit (Fig. 5 and 6).

### elneos® six socket lighting

Especially working with AC voltage, requires high safety. The provision of voltage or current from AC sources via the front panel is signalled by an active light state. The socket light is assigned a function designation and has a disappearing effect when inactive (Fig. 7).

# elneos® six in the Laboratory

The new *elneos six* equipment system integrated in the **19-inch / 6 U equipment cockpit** of the *elneos connect* laboratory workstation with continuous glass equipment front and TechCube under-table installation.

## elneos® six device system:

1. Rack 6 U/70 HP for powerful 1-phase AC sources.
2. Universal drawer 3 U/63 HP for additional DC sources, digital multimeters, power meters, function generators and arbitrary waveform generators which are not integrated in the control centre due to lack of space.
3. 6 U/95 HP slide-in module for 3-phase AC source with intelligent ring socket illumination incl. function labelling.
4. Insert plate with second Airwheel for additional user.
5. Control centre with 8-inch multi-touch display, 3D gesture control and voice control for simultaneous inclusion of all device groups except for AC sources.
6. Insert plate with 2 rotary encoders for additional user.

## elneos® connect laboratory table:

- erfi bridge (orange\*) equipped with *acto* unit system,
- electromotive height adjustment,
- table top with anti-fingerprint surface,
- table top in the front area with embedded *elneos six* control centre incl. power supply unit, digital multimeter and function generator,
- invisible RGB LED light,
- RGB indication light across the width of the bench and
- TechCube for extensions mounted underneath the tabletop.

### Under-table installation TechCube

The TechCubes are installed under the table to accommodate very large power sources that cannot be integrated into the unit cockpit for space reasons or when only very compact unit cockpits are required. Preferably, all power modules are integrated in the control centre or in the 19-inch additional racks.

# Preconfigured Device Types

The preferred types are ready-configured combinations of devices with a single order number without the lengthy compilation of individual order numbers. Within a short time, you select your desired configuration and immediately receive a quotation within a few hours after submitting your request.

The devices can be supplied either as 19-inch racks for integration into your laboratory bench or as Stand-alone units in a aluminium housing, ready for operation.



Device as 19-inch rack



Stand-alone unit with 185 mm depth

### Compact design of the Stand-alone devices device series elneos® six

- Width: 63 HP (320 mm) as 19-inch rack or 350 mm as Stand-alone
- Exception: Combination units with 3- and 4-fold control power supply units, digital multimeter, power meter and function generator: 77 HP (391 mm) as a 19-inch subrack or 420 mm as a Stand-alone unit
- Depth: 185 mm for DC power supplies 2A (single & double power supplies), 360 mm all other models
- Height: 3 HP (128.5 mm) as 19-inch rack, 170 mm as Stand-alone

### Standard scope of delivery

- Outgoing interfaces: LAN, USB A, USB B, 8 digital inputs and 10 digital outputs on SUB-D connector;
- Supplies: USB 2.0 cable type A and type B 1.5 m, RJ45 cable 1.5 m.
- Note: Further models and options can be found in the ordering information of the new *elneos six* main catalog.

Single Units	Order No. 19-inch rack	Order No. Stand-alone
<b>DC Single Control Power Supplies</b>		
DC 0-32V/2A	EL6.V.132.02	EL6.VS.132.02
DC 0-32V/5A	EL6.V.132.05	EL6.VS.132.05
DC 0-32V/10A	EL6.V.132.10	EL6.VS.132.10
DC 0-66V/5A	EL6.V.166.05	EL6.VS.166.05
DC 0-66V/10A	EL6.V.166.10	EL6.VS.166.10
DC 0-30V/50A	EL6.V.130.50	EL6.VS.130.50
DC 0-48 V/31A	EL6.V.148.31	EL6.VS.148.31
DC 0-60V/25A	EL6.V.160.25	EL6.VS.160.25
<b>Digital Multimeter and Power Meter</b>		
Digital multimeter (DMM)	EL6.VD	EL6.VSD
Digital multimeter (DMM) incl. power meter (P)	EL6.VP	EL6.VSP
<b>Double Function Generator</b>		
Double function generator (F)	EL6.VF	EL6.VSF
Fast double signal arbitrary generator (S)	EL6.VS	EL6.VSS
<b>DC Multiple Control Power Supplies</b>		
2 x DC 0-32V/2A	EL6.V.232.02	EL6.VS.232.02
2 x DC 0-32V/5A	EL6.V.232.05	EL6.VS.232.05
3 x DC 0-32V/2A	EL6.V.332.02	EL6.VS.332.02
4 x DC 0-32V/2A	EL6.V.432.02	EL6.VS.432.02

Combined Units	Order No. 19-inch rack	Order No. Stand-alone
<b>DC Single Control Power Supplies, DMM incl. Power Meter (P)</b>		
1 x DC 0-32V/2A, DMM incl. power meter (P)	EL6.V.132.02.P	EL6.VS.132.02.P
1 x DC 0-32V/5A, DMM incl. power meter (P)	EL6.V.132.05.P	EL6.VS.132.05.P
1 x DC 0-32V/10A, DMM incl. power meter (P)	EL6.V.132.10.P	EL6.VS.132.10.P
1 x DC 0-66V/5A, DMM incl. power meter (P)	EL6.V.166.05.P	EL6.VS.166.05.P
1 x DC 0-66V/10A, DMM incl. power meter (P)	EL6.V.166.10.P	EL6.VS.166.10.P
1 x DC 0-48V/31A, DMM incl. power meter (P)	EL6.V.148.31.P	EL6.VS.148.31.P
1 x DC 0-60V/25A, DMM incl. power meter (P)	EL6.V.160.25.P	EL6.VS.160.25.P
<b>DC Single Control Power Supplies, DMM incl. Power Meter (P) + Double Function Generator (F)</b>		
1 x DC 0-32V/2A, DMM incl. power meter (P) + Double function gen. (F)	EL6.V.132.02.PF	EL6.VS.132.02.PF
1 x DC 0-32V/5A, DMM incl. power meter (P) + Double function gen. (F)	EL6.V.132.05.PF	EL6.VS.132.05.PF
1 x DC 0-32V/10A, DMM incl. power meter (P) + Double function gen. (F)	EL6.V.132.10.PF	EL6.VS.132.10.PF
1 x DC 0-66V/5A, DMM incl. power meter (P) + Double function gen. (F)	EL6.V.166.05.PF	EL6.VS.166.05.PF
1 x DC 0-66V/10A, DMM incl. power meter (P) + Double function gen. (F)	EL6.V.166.10.PF	EL6.VS.166.10.PF
<b>DC Dual Control Power Supplies, DMM incl. Power Meter (P)</b>		
2 x DC 0-32V/2A, DMM incl. power meter (P)	EL6.V.232.02.P	EL6.VS.232.02.P
2 x DC 0-32V/5A, DMM incl. power meter (P)	EL6.V.232.05.P	EL6.VS.232.05.P
<b>DC Dual Control Power Supplies, DMM incl. Power Meter (P) + Double Function Generator (F)</b>		
2 x DC 0-32V/2A, DMM incl. power meter (P) + Double function gen. (F)	EL6.V.232.02.PF	EL6.VS.232.02.PF
2 x DC 0-32V/5A, DMM incl. power meter (P) + Double function gen. (F)	EL6.V.232.05.PF	EL6.VS.232.05.PF
<b>DC Tripple Control Power Supplies, DMM incl. Power Meter (P)</b>		
3 x DC 0-32V/2A, DMM incl. power meter (P)	EL6.V.332.02.P*	EL6.VS.332.02.P*
<b>DC Tripple Control Power Supplies, DMM incl. Power Meter (P) + Double Function Generator (F)</b>		
3 x DC 0-32V/2A, DMM incl. power meter (P) + Double function gen. (F)	EL6.V.332.02.PF*	EL6.VS.332.02.PF*
<b>DC Quadruple Control Power Supplies, DMM incl. Power Meter (P)</b>		
4 x DC 0-32V/2A, DMM incl. power meter (P)	EL6.V.432.02.P*	EL6.VS.432.02.P*
<b>Options for Dual Control Power Supplies</b>		<b>Order No.</b>
Convenience features for double DC control network units Serial/parallel function, master/slave function, ratio function and tracking function		EL6.CL

\* Overall width for combination units with 3- & 4-fold control power supplies incl. power meter: 77 HP (391 mm) as 19-inch subrack or 420 mm as Stand-alone.

# elneos® six in Stand-alone Case

The *elneos six*, *basic* and *highlab* unit series can be operated anywhere as a desktop unit via a high-quality anodised aluminium extrusion case. By incorporating professional 19-inch mounting technology, 3 U racks can be optimally integrated.



Rear side with interfaces

### Lateral functional handles

The lateral plastic injection-moulded elements with a recess incorporated into them enable good handling and leave a high-quality impression. The functional elements are available in the colours elneos green (RAL design system 1107070) or gray (RAL design system 5500).

### Generous ventilation system

The surface perforations in the graphite-black plastic side panels guarantee a constant air conditioning. When several enclosures, table tops or cockpits are arranged in a row, special recesses open up the supply of fresh air from above and below. Due to the plastic it ensures 100% protection against accidental contact.

### Indication light

All standalone enclosure models can optionally accommodate an LED RGB indication light strip. The indication light is particularly important in conjunction with the *elneos six* series of units. The units of the *elneos six* series have built-in limit value monitoring (limiter) for power supply units, power arbitrary generators, digital multimeters and power meters, which are directly coupled with digital outputs.

These outputs control the indication light and ensure maximum safety at the workplace. Whether in the laboratory for long-term experiments or in training facilities, the indication light increases occupational safety to a considerable extent.

### Highly flexible modular concept

The modular enclosure concept, constructed using multi-profile technology, enables the integration of the different units through two construction depths and any widths. In addition, the extruded profile technology allows the enclosure to be used directly as an equipment support for the laboratory world. In this case, the enclosures are mounted over the entire width of the laboratory table either directly on the table surface or on the 3rd level as a self-supporting unit cockpit.

Depth 1: 185 mm / Depth 2: 360 mm

Widths up to max. 6 m available with almost no restrictions.

### Scope of delivery per enclosure

- Mounting for 19-inch rack units
- Mains connection cable



Illustration shows two construction depths

### Standard scope of delivery

#### for Stand-alone units of the elneos® six series

Outgoing interfaces: LAN, USB A, USB B, 8 digital inputs and 10 digital outputs on SUB-D connector;  
Supplies: USB 2.0 cable type A & B 1.5 m, RJ45 cable 1.5 m.

Stand-alone case with depth 1 = 185 mm			
Order No.	Functional side handles	External dimensions (W x D x H) mm	19-inch size
EL6.SA1.63.1	green RAL DESIGN 1107070	350 x 185 x 170	3 U / 63 HP
EL6.SA1.70.1	green RAL DESIGN 1107071	386 x 185 x 170	3 U / 70 HP
EL6.SA1.77.1	green RAL DESIGN 1107072	420 x 185 x 170	3 U / 77 HP
EL6.SA1.78.1	green RAL DESIGN 1107073	426 x 185 x 170	3 U / 78 HP
EL6.SA1.84.1	green RAL DESIGN 1107074	457 x 185 x 170	3 U / 84 HP
EL6.SA1.63.2	gray RAL DESIGN 5500	350 x 185 x 170	3 U / 63 HP
EL6.SA1.70.2	gray RAL DESIGN 5501	386 x 185 x 170	3 U / 70 HP
EL6.SA1.77.2	gray RAL DESIGN 5502	420 x 185 x 170	3 U / 77 HP
EL6.SA1.78.2	gray RAL DESIGN 5503	426 x 185 x 170	3 U / 78 HP
EL6.SA1.84.2	gray RAL DESIGN 5504	457 x 185 x 170	3 U / 84 HP
Stand-alone case with depth 2 = 360 mm			
Order No.	Functional side handles	External dimensions (W x D x H) mm	19-inch size
EL6.SA2.63.1	green RAL DESIGN 1107070	350 x 360 x 170	3 U / 63 HP
EL6.SA2.70.1	green RAL DESIGN 1107071	386 x 360 x 170	3 U / 70 HP
EL6.SA2.77.1	green RAL DESIGN 1107072	420 x 360 x 170	3 U / 77 HP
EL6.SA2.78.1	green RAL DESIGN 1107073	426 x 360 x 170	3 U / 78 HP
EL6.SA2.84.1	green RAL DESIGN 1107074	457 x 360 x 170	3 U / 84 HP
EL6.SA2.63.2	gray RAL DESIGN 5500	350 x 360 x 170	3 U / 63 HP
EL6.SA2.70.2	gray RAL DESIGN 5501	386 x 360 x 170	3 U / 70 HP
EL6.SA2.77.2	gray RAL DESIGN 5502	420 x 360 x 170	3 U / 77 HP
EL6.SA2.78.2	gray RAL DESIGN 5503	426 x 360 x 170	3 U / 78 HP
EL6.SA2.84.2	gray RAL DESIGN 5504	457 x 360 x 170	3 U / 84 HP
Indication light for Stand-alone case		In top	In front
<ul style="list-style-type: none"> <li>• Independent power supply unit, built into the standalone enclosure</li> <li>• 1 light strip across the entire width of the standalone enclosure, optionally recessed in the top or front panel</li> <li>• 1 high-power RGB LED, invisibly integrated in the desk housing and wired to the digital outputs of <i>elneos six</i></li> </ul>		ELC.2.9.SAI1	ELC.2.9.SAI2

## **Imprint**

erfi Ernst Fischer GmbH + Co.KG  
Alte Poststraße 8, 72250 Freudenstadt, Germany  
Phone +49 (0) 7441 9144-0  
Telefax +49 (0) 7441 9144-477  
erfi@erfi.de  
www.erfi.de

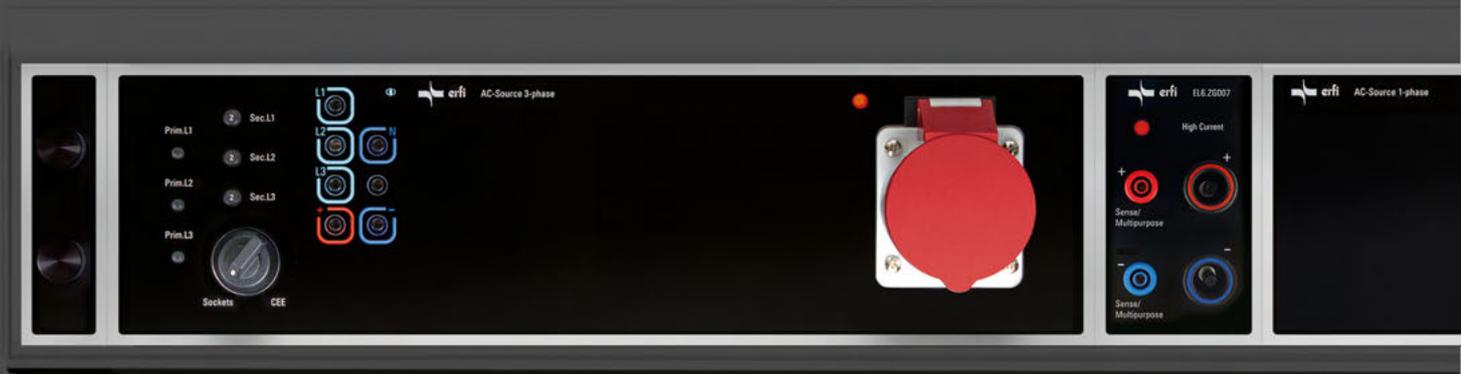
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**erfi** Ernst Fischer GmbH + Co. KG  
Alte Poststrasse 8  
72250 Freudenstadt • Germany  
Phone +49 (0) 7441 9144-0  
erfi@erfi.de • www.erfi.de