PC Application Terminal

ID30

ID30 sets new standards, even for highly complex weighing operations. A perfect combination of PC and scale – elegantly industrial!

Set sail for new horizons
in your industrial weighing processes

METTLER TOLEDO

Pioneering technology,
flexible and fit for industry!

Here's how you benefit
- ■ **Ergonomic workplace layout increases efficiency**
- ■ **Provides the exact solution to your specific task**
- ■ **Open interfaces, e.g. USB**
- ■ **Leading software technologies**
- ■ **Powerful, dependable, industrial quality**
- ■ **All-round IP69k protection**
- ■ **Suitable for all industries**

HMI box

The human/machine interface (HMI) box is the interface to the user. The extremely clear TFT display can be read easily and distinctly from any angle, no matter how extreme. To protect it against knocks and water, the display is protected with industrial-grade safety glass. For even greater con-venience, a touch-screen version is available as an option.

An unbeatable duo!

The ID30 PC application terminal comprises an elegantly slim flat screen and a separate computer. The two components are connected only by a single cable. This allows a highly flexible and ergonomic workplace design, free of trouble-some cables.

ELO box

The electronics box contains all the weighing and PC technology. This is where instruments such as scales, printers, etc. or your in-house network are connected. The ELO box can be located away from the actual workplace. The user display can be as far as five meters from the ELO box.

The working position you want – on bench or wall, always ergono-mically tiltable.
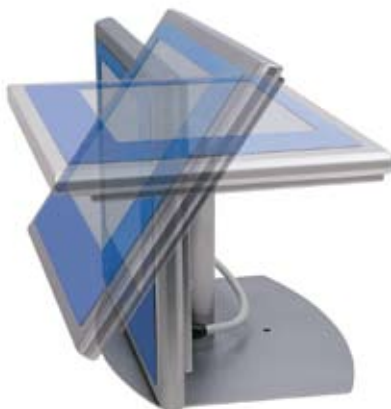
One for all – a single design for use everywhere!

In new industrial plants, instruments are designed to be optimally suited to their use. If production or organizational procedures change, the weighing equipment also has to be modified. The powerful ID30 terminal provides the flexibility you need for weighing station layout with just one single design.

Combined with a range of stands and fastening elements, the ID30 can be mounted on a bench or wall, stand alone on the floor, or be built into a control cabinet.

Full attention to ergonomics!

At the touch of a button, the HMI box can be tilted to 6 different angles from the vertical in steps of 15°, to suit the individual working position. This ensures convenient operation and certain reading. Optional adapters, for example in conjunction with wall mounting, also allow horizontal swiveling.

All clear for individual software
and limitless communication!

ScaleXPlorer standard application included

The ScaleXPlorer software is a universal weighing and service program for solving fundamental weighing tasks. This multilingual basis program not only provides a first weighing solution for customers, but also supports weights-and-measures inspectors and METTLER TOLEDO service technicians.

ScaleXPlorer also manages the alibi memory and verifies the reliability of authorized software components.

Additional features of ScaleXPlorer:
– DeltaTrac for dispensing, classifying, or check weighing
– Fixed-value memory for tare values, texts, DeltaTrac

Worldwide connectivity

Use of the latest Windows operating systems allows remote configuration and maintenance of your application on the ID30. Software updates and e-mail services are provided on the Internet.
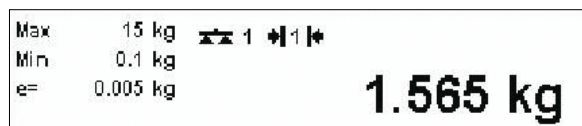
Demanding solutions – easy implementation

When an off-the-shelf application solution is no longer adequate, you can create your own. Microsoft ActiveX® technology is always available to provide software developers with an ideal tool for rapidly and efficiently implementing a tailored solution.
Irrespective of your development environment, you have easy drag-and-drop access to a multitude of system and weighing functions.

Key information at a glance

All scale data and weight values are clearly displayed in a certifiable software window. This window is always visible adjacent to the current application, allowing constant monitoring of the data processed in the application.
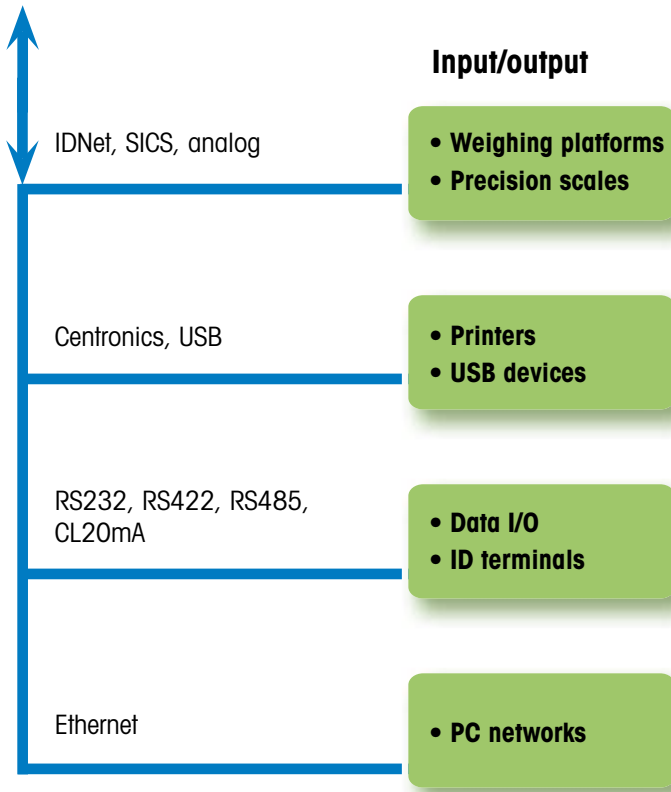
Note: Microsoft®, Windows®, and ActiveX® are registered trade marks of Microsoft Corporation. Pentium® and Celeron® are registered trade marks of the Intel® Corporation

- **Barcode reader**
- **Keypad**

System integration

Input/output

IDNet, SICS, analog

- **Weighing platforms**
- **Precision scales**

Centronics, USB

- **Printers**
- **USB devices**

RS232, RS422, RS485, CL20mA

- **Data I/O**
- **ID terminals**

Ethernet

- **PC networks**

Scalable performance protects your investments

Modularity is the basic principle of ID30. This applies especially to electronic components such as the processor, RAM, display, etc., which can be selected based on performance and price to meet the specified requirements. If your requirements change over time, these components can be easily replaced with more powerful ones. This ensures the long-term value and functionality of your investment.

A large range of interfaces allows you to choose your own communications solution. The network interface integrates the ID30 homogeneously into your EDP landscape.

Input and output devices can be connected using all the usual connection standards – connectivity unlimited!

Real-time core for time-critical control operations

The enhanced scale processor (ESP) contained in the ID30 can take over autonomous control of weight-dependent operations, i.e. independent of the PC side of the weighing terminal. A connected dispensing system still turns off correctly, even if the operating system has to handle another task just at that moment. This is especially beneficial in fast or automated processes where safety is paramount. In some cases, this functionality can even eliminate the need for connection to an SPC.

ID30 close up – the technical data.

General system

Basic functions

- Weighing functions:
  activation of most important functions of the connected scales and interfaces via keypad or software commands

- Weight determination:
  continuous gross/net/tare weight values with stability detection

- Autotare:
  automatic taring, with on/off switch

- Zero setting:
  automatic or manual

- Stability detection:
  adjustable in 4 steps

- Weighing process adapter:
  adapts the scale to the weighing process, adjustable in 3 steps

- Vibration adapter:
  damps the effect of vibrations, adjustable in 3 steps

- Restart function:
  for uninterruptible storage of zero point and tare

- Input/output:
  an input/output of signals via parallel I/O interface relay box 4 or relay box 8

- Alibi storage:
  All data relevant for calibration is stored on the local hard disk or on a network drive

Software

- Command library:
  Extensive list of software commands for easy use of scale and interface functions.

- Operating principle:
  Client-server principle, ActiveX® technology. Therefore supports practically all modern programming languages.

- Application program:
  ScaleXPlorer: Multilingual scale and service program for execution of all important scale functions and alibi storage. Numerous functions for service purposes (terminal and weighing platforms) as well as for self-diagnosis. Verification of certifiable software components and the alibi memory.

General data

- Power supply requirements:
  Voltage 100 … 240 V AC, +10/-15%, 50/60 Hz
  Power consumption approx. 50 VA
  Power cable country-specific, length approx. 2.5m

- Packaging (L x W x H):
  HMI box (12,1″): carton, 550 x 440 x 370mm
  HMI box (17″): carton, 630 x 430 x 580mm
  ELO box: carton, 550 x 440 x 270mm

- Weight:
  HMI box (12.1″): gross approx. 8.8kg, net approx. 6.3kg
  HMI box (17″): gross approx. 14.6kg, net approx. 11.5kg
  ELO box: gross approx. 7kg, net approx. 4.5kg

- Documentation included with delivery:
  Installation and operating instructions

Housing/environmental conditions

- Material:
  chrome-nickel steel DIN X5 CrNi1810

- IP rating:
  IP69k (DIN 40050): protected against dust and water spray, suitable for high- or steam-pressure cleaning

- Admissible environmental temperature:
  In operation: -10 … +40°C at certification class III,
  0 … +40°C at certification class II
  For storage: -25 …+60°C
  Rel. air humidity: 20 … 80%, non-condensing

Approvals and standards

- EU conformity:
  CE marking with declaration of conformity

- Certification:
  EU directives 90/384/EC; 93/68/EC; EN 45501;
  OIML R76

- Electrical safety:
  EU directives 73/23/EC; 93/68/EC; EN 60 950

- Electromagnetic compatibility:
  EU directives 89/336/EC; 92/31/EC; 93/68/EC;
  EN 50 081-1; EN 50 082-2

HMI box

Equipment

– Active TFT color graphics display
– Display cover of non-reflecting, scratch-resistant, hardened safety glass
  (USA and UK models: polycarbonate)
– Housing of chrome-nickel steel provides IP69k protection
– Action-point membrane keypad
– 1.5 m cable for connection of HMI box to ELO box
– 2 additional USB interfaces
– Bench stand

The HMI box (with the above equipment) is available with five different displays:
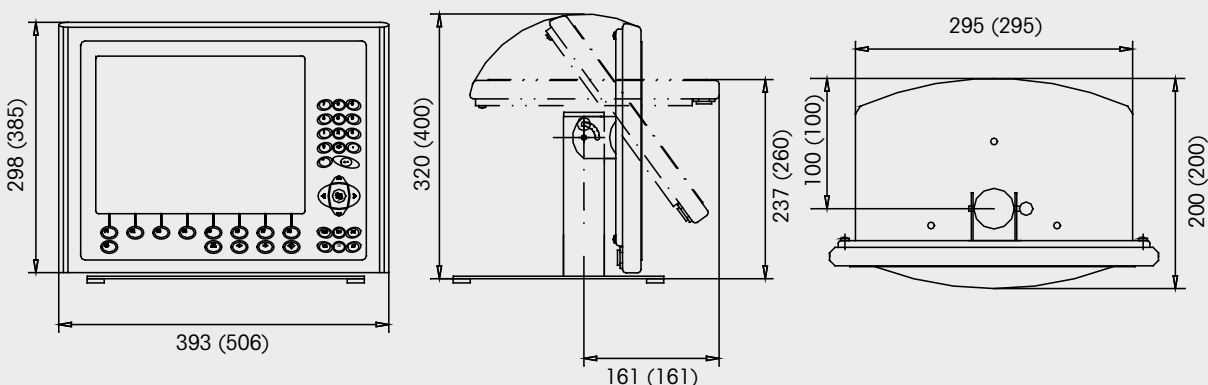
HMI box 2:	12.1" display (approx. 246 x 184 mm), resolution 800 x 600 pixels
HMI box 3:	12.1" touch-screen display, (approx. 246 x 184 m), resolution 800 x 600 pixels
HMI box 4	12.1" touch-screen display, (approx. 246 x 184 m), resolution 1024 x 768 pixels (XGA)
HMI box 5	12.1" touch-screen display, (approx. 246 x 184 m), resolution 1024 x 768 pixels (XGA)
HMI box 6	17" touch-screen display (approx. 341 x 247 mm)., resolution 1280 x 1024 pixels (SXGA), separate power supply 100-240 V AC (50/60 Hz)

For connection to the ELO box, the HMI box can be ordered with either a 1.5 m, 2.5 m, or 5 m cable.

Keypad

• Technology:
  action-point membrane keypad with tactile keystroke
• Surface:
  enclosed, smooth surface of durable polyester, with non-slip, raised-embossed key markings
• Inscriptions:
  scratch-resistant, 3-color text/symbol inscriptions
• Key functions:
– Numeric keypad 0 … 9, clear, enter, and space keys
– 4 cursor keys, tab key
– 8 function keys F1 … F8 below the display
– Windows-specific keys (shift, Ctrl, Alt, Del, Esc, Windows key)
– 4 weighing-specific keys (zero, tare, tare preset, scale switchover)
– On/Off switch, Auto Adjust (only with 17" HMI box 6)
• Service life:
  > 1 million keystrokes

HMI box with bench/wall stand (HMI Box 12"(17"), (all dimensions in mm)

ELO box

Standard equipment

(for other options see alternative equipment)

- Processor: ETX-CPU Intel Pentium M 600 MHz
- RAM: Memory module with 256 MB RAM
- Hard disk: 2.5", 60 GB
- Operating system: Microsoft Windows XP Professional (in the desired language version, see ordering information)
- Interfaces for communication with HMI box:
  12.1": LVDS interface
  17": VGA interface

Alternative equipment

(options for inclusion in the ELO box at the factory)

- Processor:
  - ETX-CPU Intel Pentium M 800 MHz
  - ETX-CPU Intel Pentium M 1.4 GHz
- RAM:
  - Memory module with 512 MB RAM
  - Memory module with 1 GB RAM
- Operating system: Microsoft Windows 2000 Professional (in the desired language version, see Ordering Information)
- PCI expansion: Expansion board for a PCI card (only PCI cards that support PCI standard 2.1)
- Interfaces: For communication with the PC electronics (top row of connectors on the ELO box, interfaces X1 … X5).

  Up to 5 of the following interfaces can be built into the ELO box; the maximum number in each case is shown in parentheses.
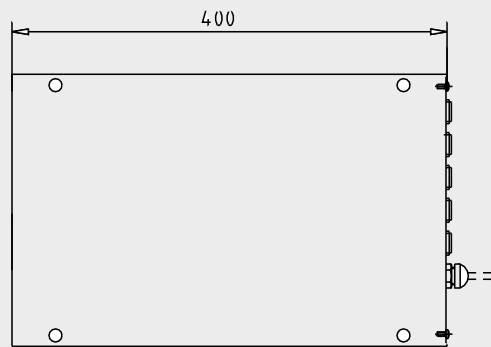
Display interfaces	VGA module (1)
	To connect an additional monitor
Serial interfaces	CL20mA (3)
	RS232 (3)
	RS422/485, optoisolated (3)
	USB (1)
Parallel data interfaces	Centronics (1)
Network interfaces	Ethernet (1)
	10/100 Base-T Twisted pair
	Wireless LAN 54 Mbps / 2.4 GHz / 802.11b / 802.11g

- Interfaces:
  for communication with the weighing electronics (bottom row of connectors, interfaces X6 … X10). Up to 5 of the following interfaces can be built into the ELO box; the maximum number in each case is shown in parentheses.

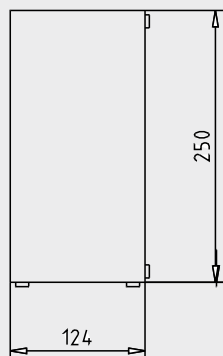| Scale interfaces	IDNet(3)
	Analog scale (2)
	SICS scale (3)
Serial interfaces	CL20mA (5)
	RS232 (5)
	RS422/485, optoisolated (5)
Digital input/ output interfaces	4 Input / 4 Output (2)
	8 Input / 8 Output (8) connectable extern.

ELO box (all dimensions in mm)

ID30 Ordering Information

Notes on the scale connections

Up to 3 scales (of which up to 2 can be analog scales) can be connected to the ELO box. The scales can be combined in any manner desired, and several scales of one type can be used.

The following scale types can be used:

- IDNet scales:
  – All balances with IDNet interface
  – Load mounts with Point system solution

- Analog scales:
  – Analogue weighing platforms of types D…T, N…T
  – Spider
  – Load mounts of type RWM with analogue system solution
  – Other balances with 1-4 load cells (350 Ohm cells) or 1-12 cells (1000 Ohm cells), sensitivity: 0.4- 3 mV/V

- SICS scales:
  – Analytical and precision balances with RS232 serial interface
  – Industrial scales of type BBA/BBK

Designation	Part number

HMI box (Human/machine interface box)

- **ID30 HMI box 2** — 22 007 174
  Active TFT color graphics display, 12.1" display, resolution 800 x 600 pixels, membrane keypad, chrome-nickel steel housing, IP67k protection, 1.5 m connection cable to ELO box, 2 USB interfaces, bench stand

- **ID30 HMI box 3** — 22 007 172
  Same as ID30 HMI box 2, but with touch screen

- **ID30 HMI box 4** — 22 005 580
  Same as ID30 HMI box 2, but with 1024 x 768 pixel resolution

- **ID30 HMI box 5** — 22 005 581
  Same as ID30 HMI box 2, but with 1024 x 768 pixel resolution, and touch screen

- **ID30 HMI box 6** — 22 015 237
  Active TFT colour display, 17″ display, resolution 1280 x 1024 pixels, membrane keypad, touch screen, chrome-nickel steel housing, IP69k protection, 1.5 m connection cable to ELO box, 2 USB interfaces, bench stand, 100-240 V AC (50/60 Hz) power supply

Instead of 1.5 m connection cable:
- **Connection cable HMI/ELO box 12.1″**
  – 2.5 m — 22 007 700
  – 5 m — 22 007 701
- **Connection cable HMI/ELO box 17″**
  – 2.5 m — 22 015 238
  – 5 m — 22 015 239

ELO box (Electronics box)

- **ID30 ELO box** — 22 007 173
  Chrome-nickel steel housing, IP67k protection, power supply 100-240V AC (50/60 Hz), LVDS interface for connection to HMI box, CPU Intel Pentium M 600 MHz, 256 MB RAM, 60 GB hard disk

  Microsoft Windows XP Professional operating system is included. The language version required should be specified according to the following list.

Language version:		
	German	22 008 151
	English	22 008 152
	French	22 008 153
	Dutch	22 008 154
	Italian	22 008 155
	Spanish	22 008 156

The following languages can be set in the multilingual version of Windows 2000: Arabic, Bulgarian, Chinese (simplified), Chinese (traditional), Croatian, Czech, Danish, Dutch, German, English, Estonian, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Latvian, Lithuanian, Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Romanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Thai, Turkish. For languages that we do not supply ex works, we recommend that you order the English version and set the required language before installing the device.

250

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Designation	Part number

Optional electronics for installation in the ELO box

Processor
(instead of CPU Intel Pentium M 600 MHz)

• ETX-CPU Intel Pentium M 800 MHz	22 018 906
• ETX-CPU Intel Pentium M 1.4 GHz	22 017 706

RAM (instead of 256 MB RAM)

• 512 MB RAM memory module	22 017 708
• 1 GB RAM memory module	22 017 709

Operating system
Microsoft Windows 2000 in the desired language version selected from the following deliverable versions:

– German	22 008 161
– English	22 008 162
– French	22 008 163
– Dutch	22 008 164
– Italian	22 008 165
– Spanish	22 008 166

The following languages can be set in the multilingual version of Windows 2000: Arabic, Bulgarian, Chinese (simplified), Chinese (traditional), Croatian, Czech, Danish, Dutch, German, English, Estonian, Finnish, French, German, Greek, Hebrew, Hungarian, Italian, Japanese, Korean, Latvian, Lithuanian, Norwegian, Polish, Portuguese (Brazil), Portuguese (Portugal), Romanian, Russian, Slovakian, Slovenian, Spanish, Swedish, Thai, Turkish. For languages that we do not supply ex works, we recommend that you order the English version and set the required language before installing the device.

PCI expansion

• Expansion board to take a PCI card (only PCI cards that support PCI standard 2.1)	22 007 721

Interfaces for communication with the PC electronics

• **Display interfaces**	
VGA, for connection of an additional monitor	22 007 706
17″ VGA for connecting the 17″ HMI box 6	22 015 242
• **Serial interfaces**	
CL20mA	22 007 709
RS232	22 007 710
RS422/485, optoisolated	22 007 711
USB	22 007 712
• **Parallel interfaces**	
Centronics	22 007 714
• **Network interfaces**	
Ethernet-10/100 Base-T twisted pair	22 007 715
Wireless LAN 54 Mbps / 2.4 GHz / 802.11b / 802.11g	22 011 646

Designation	Part number

Interfaces for communication with the weighing electronics

• **Interfaces for connecting scales**	
Interface for connection of an IDNet scale	22 007 707
Interface for connection of an analog scale	22 007 708
• **Serial interfaces**	
CL20mA	22 007 725
RS232	22 007 726
RS422/485, optoisolated	22 007 727
• **Digital input/output interfaces**	
4-input/4-output	22 007 717

Accessories for subsequent installation in the ID30

Electrical accessories

Processor

ETX-CPU Intel Pentium M 600 MHz	22 018 904
ETX-CPU Intel Pentium M 800 MHz	22 018 905
ETX-CPU Intel Pentium M1.4 GHz	22 017 715

RAM

256 MB RAM memory module	22 017 717
512 MB RAM memory module	22 017 718
1 GB RAM memory module	22 017 719

PCI expansion

Expansion board to take a PCI card (only PCI cards that support PCI standard 2.1)	22 007 630

GA46 printers

GA46 thermal printer for ID30, connection to RS232 interface, incl. 2.5 m cable	00 505 471
GA46 thermal printer for ID30, connection to RS232 interface, incl. 0.4 m cable	00 507 229
GA46-W thermal printer for ID30, with take-up device, connection for RS232 interface, incl. 2.5 m cable	00 505 799
GA46-W thermal printer for ID30, with take-up device, connection for RS232 interface, incl. 0.4 m cable	00 507 230
Adapter for mounting GA46/GA46-W thermal printer on floor stand of ID30	22 007 722
Protective cover for GA46 thermal printer	00 507 224

Designation	Part number
Interfaces	
Display interfaces	
VGA for connection of an additional monitor	22 007 642
VGA cable, 3 m, 15-pin, D-sub	00 506 797
17″ VGA for connecting the 17″ HMI box	22 015 246
Serial interfaces	
CL20mA	
CL20mA	22 007 635
CL cable, 3 m	00 503 749
Connector plug, 7-pin	00 503 745
RS232	
RS232 interface	22 007 633
RS232 cable DTE, 3 m	00 503 754
RS232 cable DCE, 3 m	00 503 755
RS232 cable PC, 3 m	00 504 374
RS232 cable 9-pin, 3 m	00 504 376
Connector plug, 8-pin	00 503 756
RS422/485	
RS422/485, optoisolated	22 007 634
RS422/485 cable, 3 m, 6-pin, open end	00 204 933
10 m extension for RS422/485	00 204 847
Connector plug, 6-pin	00 204 866
USB	
USB interface	22 007 641
USB adapter cable, 0.3 m	22 006 268
USB adapter cable, 3 m	22 007 713
Parallel interfaces	
Centronics	
Centronics interface	22 007 637
Centronics cable, 3 m, 36-pin Centronics	22 002 886
Centronics cable, 3 m, 25-pin, D-sub	00 205 682
Network interfaces	
Ethernet	
Ethernet -10/100 Base-T twisted pair	22 007 640
Twisted pair cable 5 m, 8-pin, RJ45	00 205 247
Twisted pair cable 20 m, 8-pin, RJ45	00 208 152
Wireless LAN 54 Mbps / 2.4 GHz / 802.11b / 802.11g	22 011 647
Interfaces for connection of scales	
Interface for connection of an IDNet scale	22 007 632
Interface for connection of an analog scale	22 007 631

Designation	Part number
Digital input/output interfaces	
4 I/O	
4-input/4-output	22 007 638
Relay box 4	
Relay box for 4 input/4 output	22 007 718
Cable for 4 input/4 output to relay box 4	00 504 458
Connector plug, 19-pin, for relay box 4	00 504 461
Relay box 8	
Relay box with 8 input/8 output	
for connection to RS485	22 007 719
RS422/485 cable, 3 m, 6-pin, open end	22 204 933
Extension, 10 m, for RS422/485	00 204 847
Power supply unit 240 V to 24 V DC	
for relay box 8	00 505 544
Power supply unit 110 V to 24 V DC	
for relay box 8	22 003 712
Fastening modules and stands	
Constructed entirely from chrome-nickel steel	
Horizontally and vertically swiveling	
wall adapter for 12.1″ HMI box	22 007 731
Horizontally and vertically swiveling	
wall adapter for 17″ HMI box	22 015 247
Wall mount for ELO box	22 007 729
Floor stand for ID30	22 007 723
Baseplate for floor stand	22 007 730
Keyboard support for floor stand	22 007 734
Panel mount kit for 12.1″ HMI box	22 007 724
Panel mount kit for 17″ HMI box	22 016 113
Cables	
Connector cable for connection between ELO box and 12.1″ HMI box:	
– 1.5 m	22 006 261
– 2.5 m	22 006 262
– 5 m	22 006 263
Connector cable for connection between ELO box and 17″ HMI box:	
– 1.5 m	22 015 248
– 2.5 m	22 015 249
– 5 m	22 015 250
Connector cable for connection between PC and 17″ HMI box, Y cable (for VGA and USB):	
– 3 m	22 008159

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