Displays for the photovoltaics
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Solar energy made visible
With future-orientated technology you invest in renewable energies. But how does the public becomes aware of your commitment to the environment if the photovoltaic system is not visible on the roof?

With Siebert digital displays you make your solar system and its performance visible – in the foyer, in the entrance hall or public appeal outdoors, and you have the efficiency of your solar system at a glance.

For photovoltaic systems in public buildings or solar systems for commercial use, the visualization of the performance makes sense anyway: purpose and ecological benefits of the investment become transparent and the information about the avoided carbon dioxide levels (CO₂) provides valuable educational work.

For each photovoltaic system
Siebert digital displays are suitable for any photovoltaic system and can also be connected subsequently to existing systems.

The following connections are available as standard:
- Impulses of an electric meter (S0 Interface)
- Serial interface of the inverter or data logger (RS232 or RS485)
- Ethernet interface
- WLAN

LED technology
The latest LED technology is used in Siebert digital displays. LED displays distinguish themselves through their high luminous power and durability. Their big viewing angle allows convenient and reliable reading even when looked at from the side.

The LED digits light actively and draw spontaneously – differently acting to passive LCD displays – the attention of the viewer.

Easy parameterization
An intuitively software allows easy and fast parameterization of the displays. Furthermore the series XC440/XC450, XC460/XC470, XC480 and XC445/XC455 can be parameterized via Bluetooth.

Innovative technology
Siebert digital displays are based on decades of experience in the development and manufacturing of digital information systems. The systems are continuously developed further, new technical standards are implemented as close as possible to the products. Downward compatibility is always a target.
Series XC410

Elegance in glass and stainless steel

The displays of the XC410 series are representative objects with a clear design language. Glass and stainless steel emphasize the high standard. The frameless and flat design, together with white LEDs, gives off a special elegance.
Our photovoltaic system generates

ENERGY FROM SUNLIGHT

Current performance: 3627 W
Total energy: 29002 kWh
CO₂ reduction: 16107 kg
Different graphic designs

The illustrated graphic designs of the XC410 series are offered as standard designs. It’s also possible to integrate a logo of the investor, the planner, the sponsors or a photo of the building into the graphics. Individually designed graphics are also possible. For this, our own design studio is your competent partner.

Labeling variants

You can choose between five labeling variants — page 34.
Technical data

Type code: XC410-SAW-N-01
LED display character height: 25 mm
LED color: white
Upper LED display: 4 digits
Middle LED display: 6 digits
Lower LED display: 6 digits
Measures W x H x D: 420 x 297 x 33 (41) mm
Material: glass/stainless steel, basic body sheet varnished
Power supply: 100…240 V AC, 50…60 Hz
Protection type: IP40
Weight: approx. 4 kg

Values in () are valid for devices with Ethernet or WLAN interface

Options

Ethernet interface: XC410-xxx-x-05
WLAN: XC410-xxx-x-07
1 customer logo on standard design
2 or 3 customer logos on standard design
Individual graphic design

Our photovoltaic system generates:

Energy from Sunlight

Current performance: 3527 W
Total energy: 23002 kWh
CO₂ reduction: 16101 kg
Series

XC420

Compact digital displays with innovative technology

A special feature of the XC420 series is the compact design: with a housing, even smaller than the size of a sheet A3 format, it finds the right place everywhere.
Innovative technology
Control is possible via the digital interface of the inverter or a data logger, as well as with the pulses of an electric meter. Despite the power supply unit integrated in the display the dimensions of the display are very compact.

Suitable for outdoor use
Devices which are used outdoors have screwed housing frames and offer protection against vandalism.

Different graphic designs
The illustrated graphic designs of the XC420 series are offered as standard designs. It’s also possible to integrate a logo of the investor, the planner, the sponsors or a photo of the building into the graphics. Individually designed graphics are also possible. For this, our own design studio is your competent partner.

Labeling variants
You can choose between five labeling variants — page 34.
### Technical data

<table>
<thead>
<tr>
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<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type code</td>
<td>XC420-SAR-N-01</td>
</tr>
<tr>
<td>LED display character height</td>
<td>25 mm</td>
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<td>LED color</td>
<td>red</td>
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<tr>
<td>Upper LED display</td>
<td>4 digits</td>
</tr>
<tr>
<td>Middle LED display</td>
<td>6 digits</td>
</tr>
<tr>
<td>Lower LED display</td>
<td>6 digits</td>
</tr>
<tr>
<td>Measures W x H x D</td>
<td>400 x 280 x 62 mm</td>
</tr>
<tr>
<td>Material</td>
<td>aluminum, front acrylic glass</td>
</tr>
<tr>
<td>Power supply</td>
<td>100...240 V AC, 50...60 Hz</td>
</tr>
<tr>
<td>Protection type</td>
<td>IP40 (IP54)</td>
</tr>
<tr>
<td>Weight</td>
<td>approx. 3 kg</td>
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*Values in ( ) are valid for devices with the option ‘equipment package for outdoor use’*

### Options

<table>
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<tr>
<th>Option</th>
<th>Specification</th>
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<tr>
<td>Ethernet interface</td>
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<td>WLAN</td>
<td>XC420-xxx-x-07</td>
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<tr>
<td>LED color white</td>
<td>XC420-SAW-N-01</td>
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<td>Equipment package for outdoor use</td>
<td>XC420-xxx-A-xx</td>
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<tr>
<td>1 customer logo on standard design</td>
<td>✔</td>
</tr>
<tr>
<td>2 or 3 customer logos on standard design</td>
<td>✔</td>
</tr>
<tr>
<td>Individual graphic design</td>
<td>✔</td>
</tr>
</tbody>
</table>
Series

XC440
XC450

Representative digital displays with a clear design language

With their exclusive design Siebert digital displays of the XC440/XC450 series awake the interest of the public to communicate the commitment of the investor. Together with the slim aluminum housings the graphically sophisticated designs form an object which adapts itself harmoniously in the respective ambience.

An innovative feature is the LED display in modern SMD technology. With white luminous digits, an elegant typeface and extremely high brightness, it defines a new standard. The super bright digits are very well readable in the sunlight. An automatic brightness control adjusts the brightness to the ambient light.
Series XC440 Linea | Galeria | Quadro

The displays of the XC440 series are offered in 3 different designs — either designed as Linea with its classical horizontal format, Galeria with its dynamic vertical format or Quadro with its square design which offers a wide scope for individual design.

The XC440 series uses 25 mm high LED digits and allows reading distances up to 10 m.

**Standard designs Galeria**

![GT1](Image1)  ![GT2](Image2)  ![GT3](Image3)

**Standard designs Linea**

![LT1](Image4)  ![LT2](Image5)  ![LT3](Image6)

**Standard designs Quadro**

![QT1](Image7)  ![QT2](Image8)  ![QT3](Image9)

**Automatic brightness control**

An automatic brightness control adjusts the brightness to the ambient light.

**Housings for outdoor use**

Devices which are used outdoors, have screwed housing frames and offer protection against vandalism.

**Different graphic designs**

The illustrated graphic designs of the XC440 series are offered as standard designs. It’s also possible to integrate a logo of the investor, the planner, the sponsors or a photo of the building into the graphics. Individually designed graphics are also possible. For this, our own design studio is your competent partner.

**Labeling variants**

You can choose between five labeling variants — page 34.
**Technical data**

<table>
<thead>
<tr>
<th>Type code - Linea</th>
<th>XC440-LCW-N-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type code - Galeria</td>
<td>XC440-GCW-N-01</td>
</tr>
<tr>
<td>Type code - Quadro</td>
<td>XC440-QFW-N-01</td>
</tr>
<tr>
<td>LED display character height</td>
<td>25 mm</td>
</tr>
<tr>
<td>LED color</td>
<td>white</td>
</tr>
<tr>
<td>LED display</td>
<td>3 x 6 digits</td>
</tr>
<tr>
<td>Measures W x H x D - Linea</td>
<td>800 x 450 x 62 mm</td>
</tr>
<tr>
<td>Measures W x H x D - Galeria</td>
<td>450 x 800 x 62 mm</td>
</tr>
<tr>
<td>Measures W x H x D - Quadro</td>
<td>800 x 800 x 62 mm</td>
</tr>
<tr>
<td>Material</td>
<td>aluminum, front acrylic glass</td>
</tr>
<tr>
<td>Power supply</td>
<td>100...240 V AC, 50...60 Hz</td>
</tr>
<tr>
<td>Protection type</td>
<td>IP40 (IP54)</td>
</tr>
<tr>
<td>Weight - Linea / Galeria</td>
<td>approx. 7 kg</td>
</tr>
<tr>
<td>Weight - Quadro</td>
<td>approx. 11 kg</td>
</tr>
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Values in ( ) are valid for devices with the option 'equipment package for outdoor use'.

**Options**

<table>
<thead>
<tr>
<th>Ethernet interface</th>
<th>XC440-xxx-x-05</th>
</tr>
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<tbody>
<tr>
<td>WLAN</td>
<td>XC440-xxx-x-07</td>
</tr>
<tr>
<td>LED color red</td>
<td>XC440-xxR-x-xx</td>
</tr>
<tr>
<td>Equipment package for outdoor use</td>
<td>XC440-xxx-A-xx</td>
</tr>
<tr>
<td>1 customer logo on standard design</td>
<td>✔</td>
</tr>
<tr>
<td>2 or 3 customer logos on standard design</td>
<td>✔</td>
</tr>
<tr>
<td>Individual graphic design</td>
<td>✔</td>
</tr>
</tbody>
</table>
The XC450 series uses 55 mm high LED digits. They are readable up to a distance of 20 m, but achieve even with a smaller viewing distance and in the outdoor application a higher grade of attention.

**Standard designs Linea**

**Standard designs Galeria**

**Standard designs Quadro**

**Housings for outdoor use**

Devices which are used outdoors, have screwed housing frames and offer protection against vandalism.

**Different graphic designs**

The illustrated graphic designs of the XC450 series are offered as standard designs. It’s also possible to integrate a logo of the investor, the planner, the sponsors or a photo of the building into the graphics. Individually designed graphics are also possible. For this, our own design studio is your competent partner.

**Automatic brightness control**

An automatic brightness control optimally adjusts the brightness to the ambient light.

**Labeling variants**

You can choose between five labeling variants — page 34.
Technical data

**Type code - Linea**
XC450-LCW-N-01

**Type code - Galeria**
XC450-GCW-N-01

**Type v - Quadro**
XC450-QFW-N-01

**LED display character height**
55 mm

**LED color**
white

**LED display**
3 x 6 digits

**Measures W x H x D - Linea**
1000 x 560 x 62 mm

**Measures W x H x D - Galeria**
560 x 1000 x 62 mm

**Measures W x H x D - Quadro**
1000 x 1000 x 62 mm

**Material**
aluminum, front acrylic glass

**Power supply**
100...240 V AC, 50...60 Hz

**Protection type**
IP40 (IP54)

**Weight - Linea / Galeria**
approx. 11 kg

**Weight - Quadro**
approx. 16 kg

Values in ( ) are valid for devices with the option ‘equipment package for outdoor use’

Options

- **Ethernet interface**
  XC450-xxx-x-05

- **WLAN**
  XC450-xxx-x-07

- **LED color red**
  XC450-xxR-x-xx

- **Equipment package for outdoor use**
  XC450-xxx-A-xx

- **1 customer logo on standard design**
  ✔

- **2 or 3 customer logos on standard design**
  ✔

- **Individual graphic design**
  ✔
Series

XC460
XC470

Robust displays for public areas

The digital displays of the XC460/XC470 series are especially suitable for sites in public areas or in harsh environments. Their robust steel sheet housings offer a wide protection against external influences on the display.
Series XC460 | XC470

The XC460 series uses 25 mm high LED digits and allows reading distances up to 10 m. The XC470 series uses 55 mm high digits. They are readable up to a distance of 20 m but achieve, even with a smaller viewing distance and in the outdoor application, a higher grade of attention.

Super bright LED display

An innovative feature is the LED display in modern SMD technology. With white luminous digits, an elegant typeface and extremely high brightness, they define a new standard.

The super bright digits are very well readable in the sunlight. An automatic brightness control optimally adjusts the brightness to the ambient light.
Technical data

Type code
XC460-SBW-N-01
XC470-SBW-N-01

LED display character height
25 mm
55 mm

LED colour
white
white

LED display
3 x 6 digits
3 x 6 digits

Measures B x H x T
800 x 500 x 70 mm
1000 x 800 x 70 mm

Material
steel sheet varnished, front foil coated

Power supply
100...240 V AC, 50...60 Hz
100...240 V AC, 50...60 Hz

Protection type
IP54 (IP65)
IP54 (IP65)

Weight
approx. 18 kg
approx. 32 kg

Values in () are valid for devices with the option ‘equipment package for outdoor use’

Options

Ethernet interface
XC460-xxx-x-05
XC470-xxx-x-05

WLAN
XC460-xxx-x-07
XC470-xxx-x-07

LED colour red
XC460-xxR-x-xx
XC470-xxR-x-xx

Equipment package for outdoor use
XC460-xxx-A-xx
XC470-xxx-A-xx

1 customer logo on standard design ✔ ✔

2 or 3 customer logos on standard design ✔ ✔

Individual graphic design ✔ ✔

Different graphic designs

The illustrated graphic designs of the XC460/XC470 series are offered as standard designs. It’s also possible to integrate a logo of the investor, the planner, the sponsors or a photo of the building into the graphics. Individually designed graphics are also possible. For this, our own design studio is your competent partner.

You can choose between five labeling variants — page 34.

Standard designs XC460

ST1

ST2

ST3

ST4

Standard designs XC470

ST1

ST2

ST3

ST4
The XC480 series combines a representative large size and individual design. The 100 mm high digits are especially suitable for long reading distances up to 40 meters.
Series XC480

Super bright LED display
The 100 mm high digits are especially suitable for long reading distances up to 40 meters. The super bright digits are very well readable in the sunlight. Thus the devices also arouse the interest of the passers-by at longer reading distances.

Automatic brightness control
An automatic brightness control optimally adjusts the brightness to the ambient light.

Housings for outdoor use
Devices which are used outdoors have screwed housing frames and offer protection against vandalism.

Different graphic designs
The illustrated graphic designs, shown on the right, of the XC480 series are offered as standard designs. It’s also possible to integrate a logo of the investor, the planner, the sponsors or a photo of the building into the graphics. Individually designed graphics are also possible. For this, our own design studio is your competent partner.
Technical data

Type code XG480-SAW-N-01
LED display character height 100 mm
LED color white
LED display 3 x 6 digits
Measures W x H x D 1100 x 800 x 70 mm
Material aluminum, front acrylic glass
Power supply 100…240 V AC, 50…60 Hz
Protection type IP40 (IP54)
Weight approx. 18 kg

Values in ( ) are valid for devices with the option 'equipment package for outdoor use'.

Options

Ethernet interface XG480-xxx-x-05
WLAN XG480-xxx-x-07
LED color red XG480-xxR-x-xx
Equipment package for outdoor use XG480-xxx-A-xx
1 customer logo on standard design ✔
2 or 3 customer logos on standard design ✔
Individual graphic design ✔

Standard designs

You can choose between five labeling variants — page 34.
Series

XC490

Digital displays with additional text display

Besides the visualization of yield data the XC490 series offers to illustrate individual information and texts. Whether marquee, blinking, two-lined with a character height of 50 mm or single-lined with a character height of 100 resp. 120 mm any desired text can be illustrated in different formatting.
Energy from sunlight

Current performance | KW | 5233
Total energy | MWh | 23343
CO₂ reduction | t | 14435

6592 households/year use our green energy
Series XC490

Integrated text display
The additional text display allows the presentation of individual information and draws the attention to the display.

Robust housings
The digital displays of the XC490 series are especially suitable for sites in public areas or in harsh environments. The robust steel sheet housings offer a wide protection against external influences on the display.

Different graphic designs
The illustrated graphic designs, shown on the right, of the XC490 series are offered as standard designs.
It’s also possible to integrate a logo of the investor, the planner, the sponsors or a photo of the building into the graphics.
Individually designed graphics are also possible. For this, our own design studio is your competent partner.
Technical data

Type code: XC490-SCR-N-01
LED display: 3 x 6 digits
Character height - LED digits: 55 mm
LED – text display: 2 x 20 digits - applies to character set Acala 7
LED text display - character height: 50/100/120 mm switchable
LED color: white
Measures W x H x D: 1100 x 800 x 70 mm
Material: steel sheet, varnished, front film coated
Power supply: 100…240 V AC, 50…60 Hz
Protection type: IP40 (IP54)
Weight: approx. 36 kg

Values in ( ) are valid for devices with the option ‘equipment package for outdoor use’.

Options

Ethernet interface: XC490-xxx-x-05
WLAN: XC490-xxx-x-07
LED color red: XC490-xxR-x-xx
Equipment package for outdoor use: XC490-xxx-A-xx
1 customer logo on standard design: ✔
2 or 3 customer logos on standard design: ✔
Individual graphic design: ✔

Standard designs

You can choose between five labeling variants — page 34.
Series

XC445
XC455

Display systems with backlit graphics

The devices with backlit graphics awake special attention. A homogeneous backlighting sets your graphics perfectly in scene, even in poor lighting conditions.
Our photovoltaic system generates

Energy from sunlight

Energy from sunlight
Series XC445|XC455

**Backlit graphics**
With exclusive design, bright shining LED digits in modern SMD technology and effectively backlit graphic design the devices of the XC445/XC455 series awake the interest of the audience. A homogeneous backlighting sets your graphics perfectly in scene, even in poor lighting conditions.

**Reading distances**
The XC445 series has 25 mm high LED digits and allows reading distances up to 10 m. The XC455 series has 55 mm high digits; they are still readable from a distance of 20 m, but achieve even with a smaller viewing distance and in the outdoor application, a higher grade of attention.

**Individuality as standard**
Our own design studio designs the graphics individually in direct consultation with the customer. The large surface provides plenty of scope for design. It’s also possible to integrate a logo of the investor, the planner, the sponsors or a photo of the building into the graphics.

**Labeling variants**
You can choose between five labeling variants — page 34.
### Technical data

<table>
<thead>
<tr>
<th>Series</th>
<th>XC445</th>
<th>XC455</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type code</td>
<td>XC445-SAW-N-01</td>
<td>XC455-SAW-N-01</td>
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<td>LED display character height</td>
<td>25 mm</td>
<td>55 mm</td>
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<tr>
<td>LED colour</td>
<td>white</td>
<td>white</td>
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<tr>
<td>Measures W x H x D</td>
<td>650 x 450 x 88 mm</td>
<td>1150 x 800 x 88 mm</td>
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<tr>
<td>Material</td>
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<tr>
<td>Protection type</td>
<td>IP40 (IP54)</td>
<td>IP40 (IP54)</td>
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<tr>
<td>Weight</td>
<td>approx. 10 kg</td>
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Values in ( ) are valid for devices with the option ‘equipment package for outdoor use’

### Options

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<thead>
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<th>Options</th>
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<th>XC455-xxx-x-05</th>
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<td>XC455-xxx-x-05</td>
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<tr>
<td>WLAN</td>
<td>XC445-xxx-x-07</td>
<td>XC455-xxx-x-07</td>
</tr>
<tr>
<td>LED colour red</td>
<td>XC445-xxR-x-xx</td>
<td>XC455-xxR-x-xx</td>
</tr>
</tbody>
</table>
Labeling of the photovoltaic display

The devices are available with various labeling variants — depending on the plant performance and the information to be shown.
| XC4XX − | − | − | − | − |

<table>
<thead>
<tr>
<th>Graphic design (see respective series)</th>
<th>X</th>
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</thead>
<tbody>
<tr>
<td>Lettering German</td>
<td>D</td>
<td>E</td>
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<tr>
<td>Lettering English</td>
<td>E</td>
<td>N</td>
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</tr>
<tr>
<td>Lettering Spanish</td>
<td>E</td>
<td>S</td>
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<td>Lettering French</td>
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<td>Lettering Dutch</td>
<td>N</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Current performance in W</th>
<th>Total energy in kWh</th>
<th>CO₂ reduction in kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current performance in kW</td>
<td>Total energy in MWh</td>
<td>CO₂ reduction in t</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Current performance in W</td>
<td>Daily energy in kWh</td>
<td>Total energy in kWh</td>
</tr>
<tr>
<td>3</td>
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<tr>
<td>Current performance in kW</td>
<td>Daily energy in kWh</td>
<td>Total energy in MWh</td>
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<tr>
<td>4</td>
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<tr>
<td>Current performance in kW</td>
<td>Total energy in kWh</td>
<td>CO₂ reduction in kg</td>
</tr>
<tr>
<td>5</td>
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</tbody>
</table>
XC-Boards®

Individual solutions for demanding applications

XC-Boards® are customized display systems - from compact systems up to large-sized displays with reading distances up to 300 m.
Our photovoltaic system generates energy from sunlight.

Current performance / kW: 0.82
Total energy / MWh: 0.32
CO₂ reduction / t: 0.22
Displaying information

- for the photovoltaic
- for wind energy
- for thermal energy
- for energy generation from biogas plants
- for building technology

XC-Boards® are based on proven components of the serial devices. They are designed in close consultation with the customer and tailored to individual needs. Our extensive experience in the development and the realization of digital displays results in professional solutions which have been proving themselves in worldwide use even under rough and difficult conditions.

Design

- Customized: readable one- or double-sided
- LED character height: 25, 55, 100, 160, 250, 350 and 700 mm
- Character display: numeric or alphanumeric
- Housings: aluminum, steel sheet varnished or stainless steel
- Protection type: IP65, IP54, IP40 depending on housing type
- Mounting: wall mounting, pendant mounting and free-standing
- Interface: serial, Ethernet, WLAN, Bluetooth, …
- Power supply: 230 V AC, 115 V AC
Siebert Group

Founded in 1972 as an engineering office today Siebert Group is a leading and global provider for digital information systems. The products are sold worldwide to demanding and market leading customers.
Research and development
All products are the result of our own research and development. Our engineers continuously create new innovations and with most modern facilities the products are manufactured in the factory in Eppelborn-Wiesbach.

International presence
Customer orientation also means presence in international markets. With own companies and agencies Siebert Group is represented in many countries worldwide.

Innovation
Market research and constant investments in research and development consequently leads to new products. With innovative solutions many products have set standards in specific market segments. Our customers can choose from a broad range of products which, in its consistency, is trend-setting.