Passenger information systems
The company

With our German partner is one of the pioneers in manufacturing information systems and electronic displays, one of the few to offer all the technologies currently available, a global innovator in technology development to meet all customer requirements and passenger transport.

All products are exclusively subject to the strict requirements of DIN ISO 9001: 2000 from the Federal Office for the movement of motor vehicles and environmental standards.

We propose a solution for every need. Our range includes all products used to inform your passengers, either in hardware or software.

Planning, design, installation, commissioning and monitoring systems for passenger information complete.

LED technology, liquid crystal, or in films-Dot Filip in different sizes and versions.

Onboard computer and control software, including control of traffic lights (LSA) and operating points
The services offered by EPI LAWO are as diverse as the requirements placed on contemporary passenger information systems. We are constantly aware of our customers’ needs and know how varied these can be. Therefore our products have the very properties which allow them to be used in nearly every environment. They are also designed in such a way that they can be equipped with functions so that the most powerful and cost-effective system for the client can be assembled.

This means that our customers can specify the properties and functions of the various components in the planning phase and adjust their budget accordingly. The various modules can be equipped with all necessary interfaces, protocols, standards and connections, and meet all international standards specified in the bus and train vehicle construction. This makes it every bit as easy to expand an existing information system using EPI LAWO products as to integrate a complete system.
EPI LAWQ offers you everything you could possibly need. Our product range covers the entire information cycle for your passengers, including hard and software components for central control:

- Planning, designing, installing, commissioning and looking after complete passenger information systems
- Mobile LED, LCD, roller blind and Flip-Dot display technology in different sizes and designs
- In vehicles: on-board computers and software for control purposes, including traffic light preemption and switch control
- Digital voice announcement systems
To find out which solution is the correct one for you, it’s best to meet us in person. This catalogue offers you an overview of our product range and can help you find your way through all that EPI LAWO can offer you and your passengers. You are safe in our hands!
System integration

Interior displays

External displays

Control units

INFOtainment System

Digital announcement units

Detailed information is available by calling: Tel. +33-1-30-75-11-67
A long service life and optimum legibility – BENEFIT(-F) offers you both, wherever you happen to be with your vehicle. Because the display has been equipped with a special pane of glass which expands the reading angle considerably, improves the active text format and also protects the LEDs from external influences. The glass is also fitted with a “Solar control” layer which reflects heat radiation. This ensures low temperatures behind the pane of glass and increases the service life of the LEDs.

A sensor-controlled brightness regulator automatically adjusts the light intensity to the visibility conditions. Excellent readability of the destination texts in bright sunlight is ensured by louvers across each row, which shelter it from direct sunlight. High-quality electronic components guarantee a very low energy consumption, and the light aluminum profile housing is very easy to assemble.

BENEFIT(-F) is compatible with existing devices and texts and data already available can be transferred easily. Scrolling texts in different speeds can be easily created with the EPI LAWO TED®plus Editor. This can be downloaded to your vehicle or using a PCMCIA SRAM or Flash card (e.g. MS Windows operating systems WIN95; WIN XP; WIN Vista).

- “Solar Control” glass pane
- Optimum legibility provided by louvers in combination with “Solar Control”, particularly when exposed to direct sunlight
- Sensor-controlled brightness adjustment
- Long-life, modern LED technology
- Scrolling in a freely definable area together with static or cyclical texts
- Easy to program
- Super-thin, slim-line design in the light alu-profile housing
- Compatible with all interfaces and data protocols
## Technical data BENEFIT (-F)

<table>
<thead>
<tr>
<th>Technology</th>
<th>LED display, with scrolling possibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>amber / yellow</td>
</tr>
<tr>
<td>Angle of reflection</td>
<td>BENEFIT: horizontal 110° / vertical 55°</td>
</tr>
<tr>
<td></td>
<td>BENEFIT(-F): horizontal 140° / vertical 70°</td>
</tr>
<tr>
<td>Resolution</td>
<td>high: 8 - 24</td>
</tr>
<tr>
<td></td>
<td>wide: 28 - 196</td>
</tr>
<tr>
<td></td>
<td>(other resolutions available on request)</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>24 V-DC (16.8 - 32 V)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>max. 0.3 A - 5.5 A (depending on resolution and brightness)</td>
</tr>
<tr>
<td>Operating/storage temperature</td>
<td>- 40 °C to +80 °C / - 40 °C to +100 °C</td>
</tr>
<tr>
<td>Service life</td>
<td>approx. 100 000 hours (depending on temperature and amperage)</td>
</tr>
<tr>
<td>Interfaces</td>
<td>- superordinate data bus: VDV300 (IBIS), Ethernet, RS232, (optional CAN)</td>
</tr>
<tr>
<td></td>
<td>- subordinate data bus: EPI LAWO-MONO, RS485/422</td>
</tr>
<tr>
<td>Software</td>
<td>TED®plus (MS-operating systems WIN95 - WIN XP WIN Vista)</td>
</tr>
<tr>
<td>Loading of operating data</td>
<td>- manually with PC-Card (PCMCIA - SRAM or Flash)</td>
</tr>
<tr>
<td></td>
<td>- automatically via Ethernet-Interface (WLAN, FTP service)*</td>
</tr>
<tr>
<td>Standards and directives</td>
<td>VDV 300 (IBIS)</td>
</tr>
</tbody>
</table>

### Bus
- **Type approval number:** e1*72/245*2006/28*5058*00 035058
- **Regulation ECE-R10 Approval number:** E1 10 R - 025058

### Burning Behavior
- **Directive 95/28/EG**
- **EMC:** EN 50155
- **Fire:** DIN 5510

*optional

Detailled finformation fis avaiifiable by callifying: Tefl. +33-1-30-75-11-67
Three lines can say more than one. But only if they are clearly legible and comprehensible as soon as you look at them. The high-resolution LED display HIGHLED offers all these things. With a resolution of 26 pixels vertical and a comprehensive series of special features, HIGHLED is the ideal display where multi-line texts and graphics of high quality are required. The side and line number displays are fitted with a special, non-reflective contrast filter disc made from polycarbonate. In combination with modern, powerful SMD-LEDs, it is extremely easy to read these displays – even from an extremely wide reading angle and in direct light. A fully-automatic brightness regulator ensures that the luminous intensity of the displays is individually adjusted to the ambient lighting conditions.

HIGHLED is compatible with existing systems such as BENEFIT (LED), CRYSTAL (LCD) and ALUMA (Flip-Dot), and can easily be integrated into existing destination texts from a central or decentral data storage unit. The display is fitted with the EPI LAWO MONO bus which makes operation in the master-slave system possible. The super-flat and extremely light slim-line design makes for easy installation, while ultra-modern electronic components ensure very low power consumption. In addition, scrolling in various fonts, speeds and processes can be created using the Windows-based EPI LAWO destination editor, TED®plus. Properties which make the HIGHLED displays not only easy to read, but also compatible, service-friendly, cost-effective and future proof.

- High-resolution LED display with up to three lines of text
- Reading angle of 120° (horizontal and vertical)
- Very easy to read, even in direct sunlight
- Sensor-controlled brightness regulator
- Easy editing
- Many text options
- Long service life of around 100,000 h
- Rapid assembly thanks to light slim-line design, even if installation depths are small
## Technical data HIGHLED

<table>
<thead>
<tr>
<th><strong>Technology</strong></th>
<th>SMD-LED</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color</strong></td>
<td>amber / yellow</td>
</tr>
<tr>
<td><strong>Angle of reflection</strong></td>
<td>horizontal 120° / vertical 120°</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>high: 26&lt;br&gt;wide: 48 - 216 (other resolutions available on request)</td>
</tr>
<tr>
<td><strong>Operating voltage</strong></td>
<td>24 V-DC (16,8 - 32V)</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>max. 0,2 A - 4,5 A (depending on resolution and brightness)</td>
</tr>
<tr>
<td><strong>Operating/storage temperature</strong></td>
<td>-40 °C to +100 °C / -40 °C to +100 °C</td>
</tr>
<tr>
<td><strong>Service life</strong></td>
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<td><strong>Interfaces</strong></td>
<td>- superordinate data bus: VDV300 (IBIS), Ethernet, RS232, (optional CAN)&lt;br&gt;- subordinate data bus: EPI LAWO-MONO, RS485/422</td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td>TED®plus (MS-operating systems WIN95 - WIN XP, WIN Vista)</td>
</tr>
<tr>
<td><strong>Loading of operating data</strong></td>
<td>- manually with PC-Card (PCMCIA - SRAM or Flash)&lt;br&gt;- automatically via Ethernet-Interface (WLAN, FTP service) *optional</td>
</tr>
<tr>
<td><strong>Standards and directives</strong></td>
<td>VDV 300 (IBIS)</td>
</tr>
</tbody>
</table>

**Bus:** EMC<br><br>**Directive:** 2006/28/EG<br><br>**Type approval number:** e1*72/245*2006/28*5058*00 035058<br><br>**Regulation ECE-R10**<br><br>**Approval number:** E1 10 R - 025058<br><br>**Burning Behavior:** Directive 95/28/EG<br><br>**Train:** EN 50155<br><br>**EMC:** EN 50121-3.2<br><br>**Fire:** DIN 5510

Detaylı bilgi almak için lütfen 33-1-30-75-11-67 ile iletişime geçin.
More colorful is not only more beautiful but also better. After all, colors in local public transportation are an important navigation aid for the passenger. Thanks to the PRISMA displays, this opportunity can also be used for the displays in buses and trains. Because PRISMA can be easily integrated into monochrome display systems and combined with other resolutions such as 24-dot LED, flipdot or LCD displays. In the 24 x 40 resolution with RGB color LEDs, PRISMA can show 4096 different colors and allows texts and backgrounds to be designed in numerous different ways.

A further benefit: the displays can be fitted with a “solar control” safety screen which reflects most of the sunlight. This prevents the LEDs from heating up even more, and increases their service life. Light sensors ensure that the display adapts to the ambient lighting conditions, and adjusts the brightness individually to the situation in question. And that’s not all: through the use of modern, powerful LEDs, the display is easily legible from a wide reading angle.

The display data are updated in the same way as in monochrome EPI LAWO displays. The texts and pictures are created on the PC using the TED®plus software and then transferred to the on-board computer with a PCMCIA card.

- 32k colors
- Various text and background designs possible
- Almost unlimited combinations with other displays possible
- “Solar control” sunlight safety screen
- Maintenance-free LEDs with long service life
- Automatic brightness regulator
Technical data PRISMA

Technology RGB-SMD-LED
Color Full-Colour
Angle of reflection horizontal 120° / vertical 120°
Resolution high: 19 - 24
wide: 32 - 200
(Other resolutions available on request)
Operating voltage 24 V-DC (16,8 - 32V)
Power consumption with input voltage 24 V DC: 1,5 A - 12 A depending on resolution (white)
Operating/storage temperature - 40 °C to +100 °C / - 40 °C to +100 °C
Service life approx. 100 000 hours (depending on temperature and amperage)
Interfaces - superordinate data bus: VDV300 (IBIS), Ethernet, RS232, (optional CAN)
- subordinate data bus: EPI LAWO-MONO, RS485/422
Software TED®plus (MS-operating systems WIN95 - WIN XP, WIN Vista)
Loading of operating data - manually with PC-Card (PCMCIA - SRAM or Flash)
- automatically via Ethernet-Interface (WLAN, FTP service)*
Standards and directives VDV 300 (IBIS)
Bus: EMC Directive 2006/28/EG
Regulation ECE-R10 Approval number: E1 10 R - 035660
Burning Behavior Directive 95/28/EG
Train: EN 50155
EMC EN 50121-3.2
Fire DIN 5510

Detailed information is available by calling: Tel. +33-1-30-75-11-67
SICMA-Flex / MINI-Flex

The external display for which space can always be found.

It is no coincidence that "Flex" stands for flexible: SICMA-Flex / MINI-Flex requires little space, little energy and does not even need a separate control unit in order to do what a LED display is supposed to do, namely display information for passengers. And SICMA-Flex / MINI-Flex can do that extremely well. After all, the tried-and-tested LED technology of EPI LAWO BENEFIT external displays is used here. A dark background, which is shadowed in lines by louvers, and a bright LED matrix ensure a high-contrast display which is easily legible even in heavy sunlight and from a wide reading angle. An automatic brightness regulator individually adjusts the displays to the ambient lighting conditions. The extraordinary light weight, rounded housing can easily be assembled directly behind the windscreen. As a result, the integrated control unit is easily accessible.

Equally easy is the assembly and programming of the texts. The windows-based EPI LAWO destination editor TED®plus is used for this purpose. The scrolling processes are created on the PC, and loaded into the SICMA-Flex / MINI-Flex control unit using the PCMCIA card. The text can scroll over the display surface in user-defined areas and at different speeds, and flow in timed or static passages or in combinations of both.

SICMA-Flex / MINI-Flex, the compact display for all vehicles for which no display in the past has been compact enough.

- Space-saving, compact design, easy assembly
- Attractive, stable housing, painted in line with the vehicle
- Self-sufficient operation thanks to integrated control unit
- First-class LED technology with outstanding legibility
- Low power consumption
- Scrolling in many different flows, speeds and modes possible
- Easy programming via TED®plus software (Windows PC)
- PCMCIA card slot to load the data
- Integrated master-slave bus (EPI LAWO MONO bus) to control the on-board system
- Automatic brightness regulation, depending on the prevailing light conditions
## Technical data SICMA-Flex / MINI-Flex

### Technology
- **LED / SMD-LED**

### Color
- **amber / yellow**

### Angle of reflection
- **SICMA-Flex:** horizontal 130° / vertical 60°
- **MINI-Flex:** horizontal 120° / vertical 120°

### Resolution
- **SICMA-Flex:** high: 8, 16 wide: 84, 112
- **MINI-Flex:** high: 8, 16 wide: 96, 128 (Font size 48mm, 80 mm)

### Operating voltage
- **SICMA-Flex:** 24 V-DC (16.8 - 32 V) max. 2 A
- **MINI-Flex:** 12 or 24 V DC (9 V-32 V) max. 1 A

### Power consumption
- **SICMA-Flex:** max. 2 A
- **MINI-Flex:** max. 1 - 2 A (depending on resolution and brightness)

### Operating/storage temperature
- **SICMA-Flex:** -40 °C to +80 °C / -40 °C to +100 °C
- **MINI-Flex:** -40 °C to +100 °C / -40 °C to +100 °C

### Service life
- approx. 100 000 hours (depending on temperature and amperage)

### Interfaces
- **superordinate data bus:** VDV300 (IBIS), Ethernet, RS232, (optional CAN)
- **subordinate data bus:** EPI LAWO-MONO, RS485/422

### Software
- **TED®plus** (MS-operating systems WIN95 - WIN XP, WIN Vista)

### Loading of operating data
- manually with PC-Card (PCMCIA - SRAM or Flash)
- automatically via Ethernet-Interface (WLAN, FTP service)*

### Standards and directives
- **VDV 300 (IBIS)**

<table>
<thead>
<tr>
<th>Bus</th>
<th>EMC</th>
<th>Directive 2006/28/EG</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Type approval number:</td>
</tr>
<tr>
<td></td>
<td></td>
<td>e1<em>72/245</em>2006/28<em>4651</em>01 034651</td>
</tr>
</tbody>
</table>

| Regulation ECE-R10 |
| Approval number: |
| $E_1$ 10 R - 024651 |

<table>
<thead>
<tr>
<th>Burning Behavior</th>
<th>Directive 95/28/EG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Train:</td>
<td>EN 50155</td>
</tr>
<tr>
<td>EMC</td>
<td>EN 50121-3.2</td>
</tr>
<tr>
<td>Fire</td>
<td>DIN 5510</td>
</tr>
</tbody>
</table>

Detailed information is available by calling: Telf. +33-1-30-75-11-67
CRYSTAL-Prisma

Always have a clear view.

Far distances, high vehicle speed, poor weather, heavy sunlight, changing exposure to light, diffuse daylight, acute inspection angles. The list of difficult viewing conditions which CRYSTAL-Prisma can master is every bit as long as the list of its possible uses: regional buses, city buses, subways and trams in different vehicle sizes and installation dimensions.

This is made possible by the large selection of resolutions and display formats in connection with the high-end LCD technology from EPI LAWO. With a pixel size of 6 or 9 mm, a resolution of 16 - 32 pixels vertically and 28 - 216 pixels horizontally and up to 3 lines of text, CRYSTAL-Prisma can be specially adjusted to suit the purpose for which it is being used. It is also available with 8 instead of 4-cornered pixels on request. This generates an even better typeface. Naturally, the displays are fitted with a sensor-controlled brightness control which automatically adjusts to suit the visibility conditions.

CRYSTAL-Prisma is very durable. Extremely thin joints between the various modules (glasses) create a homogenous typeface without disturbing bars. It is controlled by external control units. In addition, the display can be fitted with all necessary displays and interfaces. In short, the road or rail, which is not suitable for CRYSTAL-Prisma has not yet been invented. And if it ever is invented, there are EPI LAWO LED, flip-dot and rollerblind displays which will naturally allow you to view every display text as well.

- The right configuration of pixel size and shape, resolution and housing dimensions for every purpose
- Outstanding legibility
- Background lighting is automatically adjusted to suit the ambient brightness
- All interfaces available
- Easy editing using TED®plus display editor
- Proportional texts with upper and lower-case letters, including descenders, numbers, pictograms and logos (user can create these himself)
- Stable metal housing, service-friendly structure
- Compatible with all EPI LAWO peripheral devices and other display technologies
Technical data CRYSTAL - Prisma

Technology
LCD; transflective, negative LED-Backlight

Color
yellow against a dark background, Full-colour (other colors available on request)

Angle of reflection
horizontal 60° / vertical 170°

Resolution
high: 13 - 32
wide: 28 - 216
(other resolutions available on request)

Operating voltage
24 V-DC (16,8 - 32 V-DC)

Power consumption
Display and electronics approx. ca. 0,3 A
Illumination depending on size 1 - 12 A

Operating/storage temperature
- 40 °C to +85 °C / - 40 °C to +85 °C

Service life
approx. 100 000 hours (depending on temperature and amperage)

Interfaces
- superordinate data bus: VDV300 (IBIS), Ethernet, RS232, (optional CAN)
- subordinate data bus: EPI LAWO-MONO, RS485/422

Software
TED® plus (MS-operating systems WIN95 - WIN XP, WIN Vista)

Loading of operating data
- manually with PC-Card (PCMCIA - SRAM or Flash)
- automatically via Ethernet-Interface (WLAN, FTP service) *optional

Standards and directives
VDV 300 (IBIS)

Bus: EMC
Directive 2006/28/EG
Type approval number: e1*72/245*2006/28*5212*00 035212
Regulation ECE-R10
Approval number: E1 10 R - 025212

Burning Behavior
Directive 95/28/EG

Train:
EN 50155
EMC EN 50121-3.2
Fire DIN 5510

Detected information is available by calling: Tefl. +33-1-30-75-11-67
ALUMA – the state-of-the-art full matrix display. In this way you can utilize the tried-and-tested flip dot elements with octagonal dots and the most up-to-date LED technology at the same time. This is because with ALUMA an LED is allocated to each OPTIMA flip dot element, achieving optimum illumination over the whole viewing area. All the dots have the same brightness, regardless of which display is visible at any given time. And this is true at any resolution.

Another advantage of the LEDs used in the ALUMA series is their service life. The ideal scenario is that they will outlast the vehicle and the high-quality LEDs will last for up to 30 years without the need to be replaced. It is no longer necessary to service delicate fluorescent tubes and the adapting equipment. The extremely light and resistant aluminum profile housing can withstand impacts and ensures easy assembly. A modern destination display can offer no more.

- Maintenance-friendly, extremely durable flip-dot with LED lighting technology
- Very robust and insusceptible to shocks
- Active text with intensified contrast and excellent readability
- Improved viewing angle due to slimline design
- Long LED service life of up to 100,000 hours
- Simple assembly due to light aluminum profile housing
## Technical data ALUMA

### Technology
Individually illuminated dots with flip dot elements

### Color
yellow / black

### Angle of reflection
horizontal 120° / vertical 120°

### Resolution
- **high**: 7 - 28
- **wide**: 28 - 196

(Other resolutions available on request)

### Operating voltage
24 V-DC (16,8-32V)

### Power consumption
max. 0,1 A - 5,5 A (depending on resolution and brightness)

### Operating/storage temperature
- 40 °C to +70 °C / - 40 °C to +85 °C

### Service life
- **Flip dot elements**: approx. 100 000 000
- **illumination**: approx. 100 000 hours

### Interfaces
- **superordinate data bus**: VDV300 (IBIS), Ethernet, RS232, (optional CAN)
- **subordinate data bus**: EPI LAW-MONO, RS485/422

### Software
TED®plus (MS-operating systems WIN95 - WIN XP, WIN Vista)

### Loading of operating data
- **manually** with PC-Card (PCMCIA - SRAM or Flash)
- **automatically** via Ethernet-Interface (WLAN, FTP service)* *optional

### Standards and directives
- **Bus**: EMC
- **Directive**: 2006/28/EG
- **Type approval number**: e1*72/245*2006/28*5147*00 035147
- **Regulation ECE-R10**
- **Approval number**: E1 10 R - 025147
- **Burning Behavior**: Directive 95/28/EG
- **Train**: EN 50155
- **EMC**: EN 50121-3.2
- **Fire**: DIN 5510

Detailed information is available by calling: Tepl. +33-1-30-75-11-67
Roller blind

The display which can show almost everything.

Roller blind is the display technology for individualists: regardless of the type of character style, graphics or pictograms which are to be displayed, the design of the roller blinds can be chosen freely according to your specifications with the advantage of electronic control.

The films are manufactured specifically according to your requirements and can be supplied in numerous colors and color combinations. The system is modular so that each destination display or line number works independently. The correct depiction is ensured by the connection to the display computer. Exactly as with LED, LCD or flip dot technology from EPI LAWO, the roller blind displays can be supplemented at any time with new displays and peripherals. The EPI LAWO product maintenance guarantees that materials and servicing will continue to be available. Other features of the roller blind displays from EPI LAWO are durability and a minimum of maintenance. This also applies to the mechanical parts. The displays are equipped with a specially developed and patented spring tension system which guarantees optimum tension of the roller blind at all times. All this makes the roller blind displays from EPI LAWO markedly efficient in operation – regardless of your requirements for the display design of your buses.

The best example is London. EPI LAWO is planning, constructing, supplying and maintaining the display information system for the famous fleet of London buses. The customer attaches considerable importance on continuing to maintain and develop the traditional image of the London buses, while the electronic control unit always represents state-of-the-art technology. If the image of your London buses is an important factor for you, then the roller blind displays from EPI LAWO provide all options.

- Individual design of the displays by individual manufacture of the roller blind films according to the requirements of the customer
- IBIS data bus
- Separate control of individual display elements possible (e.g. line number, destination) by means of different control codes
- Integration in a complete passenger information system via the EPI LAWO PREMIUM control unit
- The current roller blind position is shown on the control unit
- Display memory with double sensor system, assuring that the roller blinds recapture the desired position even after a power failure
- Rear-lit roller blinds (maintenance-free, durable LED) for good readability at night
- Short service times due to the modular construction: the complete roller blind unit can be replaced easily
# Technical data roller blind display

<table>
<thead>
<tr>
<th><strong>Technology</strong></th>
<th>Roller blind, rear-lit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Color</strong></td>
<td>yellow / black</td>
</tr>
<tr>
<td><strong>Dimensions</strong></td>
<td>In accordance with customer and vehicle-specific requirements. Example: Front display 2,030 x 480 x 118.5 mm</td>
</tr>
<tr>
<td><strong>Operating voltage</strong></td>
<td>24 V-DC (18 - 32V)</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>0.5 A (motor during positioning), 2 A (illumination of front display)</td>
</tr>
<tr>
<td><strong>Operating/storage temperature</strong></td>
<td>-25 °C to +85 °C / - 40 °C to +100 °C</td>
</tr>
<tr>
<td><strong>Service life</strong></td>
<td>illumination: approx. 100 000 operating hours</td>
</tr>
<tr>
<td><strong>Interfaces</strong></td>
<td>VDV 300 (IBIS), (other interfaces available on request)</td>
</tr>
<tr>
<td><strong>Standards and directives</strong></td>
<td>VDV 300 (IBIS)</td>
</tr>
<tr>
<td><strong>Bus</strong></td>
<td>EMC Directive 95/54/EG</td>
</tr>
<tr>
<td><strong>Type approval number:</strong></td>
<td>e1<em>72/245</em>95/54<em>3245</em>00</td>
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<tr>
<td><strong>Burning Behavior</strong></td>
<td>Directive 95/28/EG</td>
</tr>
</tbody>
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Detailed information is available by calling: Tel. +33-1-30-75-11-67
Light-emitting diode technology has improved substantially in recent years. LEDs seem to be the electric light source of the future in many areas of life. They are already used in many applications of information displays in public transportation: Long service life, low current consumption and maintenance-free, these represent ideal requirements for the development of cost-effective and optically high-quality vehicle information systems. Such as with LED display systems from EPI LAWO.

Depending on the resolution, EPI LAWO LED displays can depict at least 20 or 24 characters in proportional text. Words and text can be written not only in capitals and also in large and small letters including undercasts. As an active, electronically controlled light source, LEDs are easy to read by day and night as the brightness of the LEDs is automatically adjusted to the ambient brightness. The font size of 48 mm also guarantees optimum readability from further away, such as in articulated buses or light rail vehicles. The writing „Vehicle stopping” appears either alternately with the name of the stop on the LED display or as a separate rear-lit display to the right or left.

The displays are mounted either in the vehicle on the roof or in the so-called „tunnel”. Apart from the name of the stops, destination, direction, line number and time can also be displayed depending on the software. The display is controlled via the IBIS interface from the on-board computer or ticket printer and can also be integrated subsequently into existing passenger information systems. The answer is the same wherever supplements or alternatives to LCD, flip dot, or roller blind displays are required: LED displays from EPI LAWO.

- Durable, maintenance-friendly LED technology
- Good readability, even at night (automatic brightness regulation)
- Can be used as an addition to existing systems or as a complete system
- At least 20 (112 dots) or 24 (144 dots) characters per line (standard)
- Proportional writing with upper case and lower case letters, including short lengths, digits, pictograms
- IBIS interface for the connection to current on-board data and/or to the centralized or decentralized control unit
- Double tone gong when the name of the stop changes (can be switched off) or when „Vehicle stopping” is required (optional)
- Light aluminum profile housing painted in the same color as the vehicle
## Technical data iLED-uni

<table>
<thead>
<tr>
<th>Feature</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Technology</strong></td>
<td>SMD-LED</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>red, yellow or green</td>
</tr>
<tr>
<td><strong>Angle of reflection</strong></td>
<td>horizontal 120° / vertical 120°</td>
</tr>
<tr>
<td><strong>Resolution</strong></td>
<td>high: 8 - 16; wide: 112 - 144; font size: maximum 48 mm (other sizes on request)</td>
</tr>
<tr>
<td><strong>Operating voltage</strong></td>
<td>24 V-DC (16.8 - 32V)</td>
</tr>
<tr>
<td><strong>Power consumption</strong></td>
<td>max. 0.25 A - 1.5 A (depending on the number of points controlled)</td>
</tr>
<tr>
<td><strong>Operating/storage temperature</strong></td>
<td>-40 °C to +100 °C / -40 °C to +100 °C</td>
</tr>
<tr>
<td><strong>Service life</strong></td>
<td>approx. 100 000 hours (depending on temperature and amperage)</td>
</tr>
<tr>
<td><strong>Interfaces</strong></td>
<td>- superordinate data bus: VDV300 (IBIS), Ethernet, RS232, (optional CAN)</td>
</tr>
<tr>
<td></td>
<td>- subordinate data bus: EPI LAWO-MONO., RS485/422</td>
</tr>
<tr>
<td><strong>Software</strong></td>
<td>TED®plus (MS-operating systems WIN95 - WIN XP, WIN Vista)</td>
</tr>
<tr>
<td><strong>Loading of operating data</strong></td>
<td>- manually with PC-Card (PCMCIA - SRAM or Flash)</td>
</tr>
<tr>
<td></td>
<td>- automatically via Ethernet-Interface (WLAN, FTP service)*</td>
</tr>
<tr>
<td></td>
<td>*optional</td>
</tr>
<tr>
<td><strong>Standards and directives</strong></td>
<td>VDV 300 (IBIS)</td>
</tr>
<tr>
<td><strong>Bus</strong></td>
<td>EMC</td>
</tr>
<tr>
<td><strong>Directive 2006/28/EG</strong></td>
<td>Type approval number: e1<em>72/245</em>2006/28<em>5158</em>00 e1 035158</td>
</tr>
<tr>
<td></td>
<td>Regulation ECE-R10 Approval number: E1 10 R - 025158</td>
</tr>
<tr>
<td><strong>Burning Behavior</strong></td>
<td>Directive 95/28/EG</td>
</tr>
<tr>
<td><strong>Tran:</strong></td>
<td>EN 50155</td>
</tr>
<tr>
<td></td>
<td>EMC EN 50121-3.2</td>
</tr>
<tr>
<td></td>
<td>Fire DIN 5510</td>
</tr>
</tbody>
</table>

Detailed information is available by calling: Telf. +33-1-30-75-11-67
**LCD CRYSTAL-in**

As much information as possible, as small a display as necessary.

CRYSTAL-in was developed for the widest variety of uses in public transportation. After all, it is not always enough to simply display „Next stop“: Additional information is often required for passengers, such as transfer information and graphics. CRYSTAL-in is available in three models with different resolutions: Classic, Premium and Eco.

In addition, you can choose between different housing colors, with or without the „Vehicle stopping“ display, a 1 or 2-sided design and in a cover or „tunnel“ assembly. You can also request that the double-tone gong of the displays can be switched off. It sounds when the stop display changes and brings the change to the attention of the passengers. Special LCD glasses and high-contrast writing ensure excellent readability from any angle of view and from any direction. This is also the case from far away and in fluctuating light conditions, such as with articulated buses and streetcars.

As with all EPI LAWO displays, CRYSTAL-in also complies with the VDV 300 guideline and integrating it into new or existing passenger information systems presents no problems. It is controlled via the IBIS on-board computer (e.g. EPI LAWO PREMIUM control, model L86xx) or via the ticket printer. CRYSTAL-in: the LCD interior display – fulfills all your requirements.

- Excellent readability
- Different designs for every area of use and every budget
- Individual configuration of the equipment
- Can be easily integrated into existing systems or as part of a complete information systems
- Compatible with all interfaces and standards
- „Vehicle stopping“ display in separate display with LED rear illumination or alternatively with the names of the stop in the main display

**„Classic“**: Mosaic text with special LCD lenses with a type face similar to print, i.e. both proportional writing and large and small letters (including short lengths) are possible - the display with excellent readability

**„Premium“**: Display with special high-resolution full matrix LCD lenses. They are used everywhere where passengers need to be given detailed information. Graphics and symbols can be depicted easily.

**„Eco“**: Equipped with low resolution full matrix LCD lenses, with which simple graphics and symbols can also be depicted. A reliable variant which is suited to many areas of use.
## Technical data LCD CRYSTAL-in

| **Technology** | Full matrix or mosaic LCD; negative transflective |
| **Color** | yellow against a dark background, blue / white (other colors available on request) |
| **Angle of reflection** | horizontal 60° / vertical 170° |
| **Resolution** | high: 8 - 24  
wide: 96 - 184 (each at least 24 characters)  
font size: maximum 40 mm (other sizes on request) |
| **Operating voltage** | 24 V-DC (16,8 - 32V) |
| **Power consumption** | Display (controller and rear illumination): 1,0 A; „Vehicle stopping“ display: 0,1 A |
| **Operating/storage temperature** | -40 °C to +70 °C / -40 °C to +85 °C |
| **Service life** | illumination: approx. 100 000 operating hours |
| **Interfaces** | - superordinate data bus: VDV300 (IBIS), Ethernet, RS232, (optional CAN)  
- subordinate data bus: EPI LAWO-MONO., RS485/422 |
| **Software** | TED®plus (MS-operating systems WIN95 - WIN XP, WIN Vista) |
| **Loading of operating data** | - manually with PC-Card (PCMCIA - SRAM or Flash)  
- automatically via Ethernet-Interface (WLAN, FTP service)*  
  *optional |
| **Standards and directives** | VDV 300 (IBIS) |
| **Bus: EMC** | Directive 2006/28/EG |
| **Type approval number:** | e1*72/245*2006/28*5204*00  
035204 |
| **Regulation ECE-R10** | Approval number: |
| **Burning Behavior: EN 50155** | Directive 95/28/EG |
| **Tran: EMC** | EN 50121-3.2 |
| **Fire** | DIN 5510 |
INFOtainment Compact Multimedia

The information system which pays for itself.

Modern information systems have more to say than just "Vehicle Stopping": With a fully graphic INFOtainment system, line operators can provide their passengers with comprehensive, varied and entertaining route, connection and up-to-date information. In this way some content pays for itself in advertising revenue. The EPI LAWO INFOtainment System Compact offers both: easy-to-operate information display and multimedia advertising presentation. It can even be distributed onto one or more screens if so desired.

In addition to combined presentation of advertisement and on-board information on a display, EPI LAWO now offers the possibility of separating the two from one another: with the new super-clear 2 x 15 or 2 x 19 inch double TFT screens, passenger information and advertising can now be presented independently of one another. This means that advertising customers can book 100% of the advertising time. The value of the advertising in buses and trains is thereby increased and makes them a full-fledged advertising medium. The system functions as a normal PC with monitor: either as a "compact" version with a built-in computer in the single or double TFT housing or with an external computer which supplies numerous single or double displays (e.g. in trains).

The operator composes the INFOtainment content very easily on his desktop PC, assisted by the InfoTED software. It enables the display on the screen to be comfortably arranged, while helpful software tools make it easier to compose the INFOtainment content. Regardless of whether this means pictures or graphics, commercials or text advertising slogans, the advertising can be programmed for specific times, at specific locations and for specific lines and routes – with sound as well if requested. The complete INFOtainment program is loaded into the onboard PC by means of a USB stick or compact flash card and can be connected with all current, real time, remote or centrally controlled passenger information systems, as the system is activated via IBIS, RS485, RS422 and RS232, USB or Ethernet interfaces. Once on board the vehicle, the EPI LAWO INFOtainment Compact pays off in just a short period of time.

- Complete, user-friendly system comprising displays, a computer and InfoTED software with all the required interfaces and connections
- Separate presentation of advertising and passenger information is possible, e.g. next to one another on 15”- or 19” TFT double monitors
- TFT monitors in many different designs: e.g. as 15”- or 19” individual or double screens, double-sided screens (front and rear)
- Individual, self-configurable presentation of all content
- Fully-graphic multimedia presentation of continuous advertising in different formats, such as films, animations, pictures, current text
- The advertising can, as with the rest of the content, be specifically combined and shown with selected lines, destinations, routes, stops, times or LBA data
- Easy configuration of passenger information with its own fonts, colors, texts and pictures, such as stop sequence, transfer information and line sequence at freely selectable positions on the screen
- Software tools for easy configuration of the INFOtainment content: e.g. schedule target/actual comparison, content summary in an entry list, picture preview and multifarious import options for external formats, e.g. from schedule programs (on request)
- IBIS interface (or other): supplies the system with centralized data management from the on-board computer or ticket printer with current information and allows it to be shown on the display
# Technical data INFOtainment

<table>
<thead>
<tr>
<th><strong>Operating voltage</strong></th>
<th>24 V-DC (16.8 to 32 V)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power consumption</strong></td>
<td>max. 2.5 A per display</td>
</tr>
<tr>
<td><strong>Operating-/storage temperature</strong></td>
<td></td>
</tr>
</tbody>
</table>
  *operating temperature*: 0 °C to +50 °C  
  (out of this range the backlight won’t be switched on or will be switched off)  
  *storage temperature*: -20 °C to +60 °C |
| **Service life** | CCFL-Backlight: about 50 000 hours |
| **Interfaces** | Ethernet, USB 2.0, VDV 300 (IBIS) with buffer-CPU for accelerate-start, floating output, AF-output (0 dB, 775 mV, 600 Ω), Mini PCI Slot, Mini PCI WLAN (optional) card 54Mbit/s on RP-SMA connector, 3x floating inputs |
| **Software** | InfoTED® (MS- operating system WIN 95- WIN XP, Vista) |
| **Loading of operating data** |  
  - manually by USB-Stick  
  - automatically by Ethernet-Interface (W-LAN, FTP-Service, a.o.) |
| **Display** |  
  **15**: format 4:3; 1024 x 768 (XGA); brightness 350 cd/m²; contrast 700:1; 16.7 million colours; viewing angle 170º/170º; controlling LVDS  
  **19**: format 16:10; 1440 x 900 (WXGA); brightness 400 cd/m²; contrast 1000:1; 16.7 million colours; viewing angle 170º/160º; controlling LVDS |
| **Computer** | Embedded Intel® ULV Celeron® M 1.0 GHz, 512 MB SDRAM |
| **Memory** | HDD 80 GB (alternative 40 GB), Flash 8 GB (6 GB for user data) |
| **Operating system** | LINUX (SUSE) |
| **Data formats** | MPEG, MOV, AVI, BMP, JPG, PNG, GIF *specific formats and codecs to be defined |
| **Housing** | brushed aluminium EL 25.3 or painted, depends on type |
| **Standards and directives** | VDV 300 (IBIS) |
| **Bus**: EMC Directive 2006/28/EG  
  *Type approval number*: E1*72/245*2006/28*5374*00  
  *Regulation ECE-R10 Approval number*: E1  
  *Burning Behavior Directive 95/28/EG*  
  *Train*: EN 50155  
  *EMC*: EN 50121-3.2  
  *Fire*: DIN 5510 |

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SICMA-Control

Everything under control.

Many forms of technology, one control unit. SICMA Control combines all the functions required for the control of passenger information displays: Display control unit, line display controller, IBIS interface and master-slave technology. SICMA Control also complies with the latest developments of EPI LAWO display technology: Many new-generation EPI LAWO displays are equipped with mini electronics and can partially function „intelligent“. In connection with SICMA Control as master, these displays can then be used as slave display controllers.

Another feature is the flexible connectivity. Instead of having equipped it with all possible connections, SICMA Control can be configured according to your requirements and can be specifically integrated into your existing system or form part of a completely new system. This means that you only select the connections that you really need. Every device has the IBIS vehicle bus and the EPI LAWO mono bus/alphabus (master-slave interface). A PC card slot is provided for rapid data updating.

SICMA Control is exactly big enough (or rather, small enough) to fit into the standardized radio slot. And operation is as simple as the assembly: a rear-lit display and ten keys are enough. SICMA Control, there is no better control available.

- All technologies controlled by one unit
- Different versions and equipment can be configured
- IBIS interface, master-slave interface (other interfaces according to requirements)
- 32 x 122 pixels graphic display for pictograms, special characters or foreign characters (Japanese, Chinese etc.)
- Simple operation via TED®plus destination editor and InfoTED route editor
## Technical data SICMA-Control

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>24 V-DC (16,8 - 32 V)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>max. 1,5 A</td>
</tr>
<tr>
<td>Operating/storage temperature</td>
<td>- 40 °C to +70 °C / - 40 °C to +80 °C</td>
</tr>
<tr>
<td>Display</td>
<td>graphic display with 32 x 122 pixels, rear lit</td>
</tr>
<tr>
<td>Dimensions</td>
<td>(H x W x D) approx. 51 x 180 x 140 mm</td>
</tr>
<tr>
<td>Interfaces</td>
<td>IBIS vehicle bus (VDV300) (master-slave-interface), EPI LAWO mono bus / alphabus optional: Ethernet 10/100 BaseT RS232 RS485/RS422/CAN</td>
</tr>
<tr>
<td>Software</td>
<td>TED®plus, InfoTED® (MS-operating systems WIN95 - WIN XP, WIN Vista)</td>
</tr>
<tr>
<td>Loading of operating data</td>
<td>- manually with PC-Card (PCMCIA - SRAM or Flash)</td>
</tr>
<tr>
<td></td>
<td>- automatically via Ethernet-Interface (WLAN, FTP service) * depending on version</td>
</tr>
<tr>
<td>Standards and directives</td>
<td>VDV 300 (IBIS)</td>
</tr>
<tr>
<td>Bus:  EMC</td>
<td>Directive 2005/83/EG</td>
</tr>
<tr>
<td>Type approval number:</td>
<td>e1<em>72/245</em>2005/83<em>4652</em>00</td>
</tr>
<tr>
<td>Regulation ECE-R10</td>
<td>Approval number:</td>
</tr>
<tr>
<td></td>
<td>10 R - 024652</td>
</tr>
<tr>
<td>Burning Behavior</td>
<td>Directive 95/28/EG</td>
</tr>
</tbody>
</table>

Detaylı bilgiler için lütfen 33-1-30-75-11-67'de telefonla.
PREMIUM-Control

Control is good,
Premium Control is better.

As the central component of the passenger information system, the IBIS on-board computer PREMIUM-Control controls all the functions required in vehicles for modern passenger transportation: exterior and interior displays with flip dot, LCD, LED technology or roller blind technology digital stop announcement systems and electronic line displays as well as ticket validators, ticket printers (in the slave operation), ticket vending machines, passenger counters and all other VÖV/VDV-compatible peripherals.

Another option is to equip the IBIS control unit with radio bus as well and for it to take over control of the radio unit for LSA override, including automatic fault correction (with vehicle-autonomous location fixing). Already integrated in the IBIS train bus is the option of taking control of the respective devices even with multi-traction operation. Nor does the master-slave operation on bi-directional vehicles present a problem.

The compact design means that it is easy to assemble, regardless of whether the driver’s cab is equipped with an information panel or installation at another location is intended. It is the sum of all the equipment features which makes PREMIUM-Control an all rounder, but what it really must be able to do is specified by our customers: they tell us the interfaces, equipment features, functionalities and lettering their on-board computer must have. No other control system is as universal and at the same time as specific as PREMIUM-Control.

- Complete IBIS vehicle bus control system for all display technologies and functions
- All standard IBIS inputs and outputs are implemented, including distance pulse and door criteria
- IBIS radio bus with integrated modem function (optional), other interfaces on request
- Special configuration and equipment according to requirements
- Operating software can be adapted to the customers’ requirements
- Colors and lettering of the keypad can be freely selected
- Overhead assembly, in the console or in the information panel
- Synchronization of date and time by the quartzcontrolled and battery-backed radio clock
- All data can be loaded via a PC card or laptop
- Schedule target/actual comparison with time indication on the LC display
- For trains: Master (L86xx) - slave (L86xx) - operation in bi-directional vehicles
# Technical data PREMIUM-Control

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>24 V-DC (16.8 - 32 V)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>max. 2 A</td>
</tr>
<tr>
<td>Operating/storage temperature</td>
<td>-25 °C to +70 °C / -25 °C to +70 °C</td>
</tr>
<tr>
<td>Display</td>
<td>graphic display with 2 x 20 characters, rear lit</td>
</tr>
<tr>
<td>Dimensions</td>
<td>(W x H x D) 230 x 100 x 55 mm (assembly in the information panel)</td>
</tr>
<tr>
<td></td>
<td>245 x 130 x 55 mm (assembly in the console)</td>
</tr>
<tr>
<td>Interfaces</td>
<td>IBIS vehicle bus</td>
</tr>
<tr>
<td></td>
<td>optional: IBIS radio bus, IBIS train bus</td>
</tr>
<tr>
<td></td>
<td>RS 232, RS 485/422 und CAN bus on request</td>
</tr>
<tr>
<td>Software</td>
<td>customized</td>
</tr>
<tr>
<td>Loading of operating data</td>
<td>manually with PC-Card (PCMCIA - SRAM)</td>
</tr>
<tr>
<td>Standards and directives</td>
<td>VDV 300 (IBIS)</td>
</tr>
<tr>
<td>Bus:</td>
<td>EMC</td>
</tr>
<tr>
<td>Directive</td>
<td>2006/28/EG</td>
</tr>
<tr>
<td>Type approval number:</td>
<td>e1<em>72/245</em>2006/28<em>1968</em>01</td>
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<td>Approval number:</td>
<td>031968</td>
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<td>Regulation ECE-R10</td>
<td>10 R - 021968</td>
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<tr>
<td>Burning Behavior</td>
<td>Directive 95/28/EG</td>
</tr>
<tr>
<td>Train:</td>
<td>EN 50155</td>
</tr>
<tr>
<td></td>
<td>EMC</td>
</tr>
<tr>
<td></td>
<td>EN 50121-3.2</td>
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<tr>
<td></td>
<td>Fire</td>
</tr>
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<td></td>
<td>DIN 5510</td>
</tr>
</tbody>
</table>

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The digital announcement system DiVA 2000 was specially developed for use in public passenger transport vehicles. It serves the purpose of announcing the name of the next stop acoustically to passengers in buses and trains before the vehicle makes its next stop.

In addition to the actual announcement device, the system includes a power amplifier and an acoustic control for operation in a computerized traffic control system. If necessary, external loudspeakers can also be incorporated. An automatic volume control which increases the volume of the announcements (while the vehicle is travelling) or decreases it (at the stops) depending on the ambient noise level (engine noise etc.) ensures the optimum reproduction of the announcements.

The names of the stops, which have been prerecorded by professional announcers, are stored in the digital speakers system along with other important texts (such as information on connections) and even music. Changes to the announcement texts can be loaded easily into the digital announcement system per laptop. The memory capacity is 64 MB standard. The texts can be called up fully automatically or manually (by pressing a button) via an IBIS onboard computer or automatic ticket printer, and played through the on-board loudspeakers.

- Integrated power amplifier
- Numerous audio connections
- Automatic volume adaptation
- Various interfaces
- Quick configuration and administration via PC
- Simple data updating via Smart Media Card
- TTS (Text To Speech) for simple generation of high-quality synthetic speech
- IBIS / ticket printer connectivity for announcements at the appropriate time (RS 485 / RS 232)
## Technical data DiVA 2000

<table>
<thead>
<tr>
<th>Category</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>24 V-DC (18 - 35 V)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>including amplifier approximately 0.2 A closed current; maximum 2 A when announcement is being made</td>
</tr>
<tr>
<td>Operating/storage temperature</td>
<td>-20 °C to +60 °C / -20 °C to +60 °C</td>
</tr>
<tr>
<td>Dimensions</td>
<td>(W x D x H) 70,8 x 167 x 128,4 mm 19&quot;, 14 TE-cassette</td>
</tr>
<tr>
<td></td>
<td>Bracket available for installation without 19” rack</td>
</tr>
<tr>
<td>Data formats</td>
<td>MP3</td>
</tr>
<tr>
<td>Audio connections</td>
<td>NF Input 1 (Microphone 1) 0,5 - 50 mV adjustable on 600 ohms</td>
</tr>
<tr>
<td></td>
<td>NF Input 1 (Radio Unit) 0,5 - 50 mV adjustable on 600 ohms</td>
</tr>
<tr>
<td></td>
<td>NF Output 1 (Passenger Area) 20 W on 4 - 8 ohms</td>
</tr>
<tr>
<td></td>
<td>NF Output 2 (Control Loudspeaker) 3 W on 4 - 8 ohms</td>
</tr>
<tr>
<td>Interfaces</td>
<td>IBIS vehicle bus (VDV300); RS485, RS232</td>
</tr>
<tr>
<td>Software</td>
<td>Voice Software</td>
</tr>
<tr>
<td>Loading of operating data</td>
<td>Smart Media Card 64 MB</td>
</tr>
<tr>
<td>Standards and directives</td>
<td>VDV 300 (IBIS)</td>
</tr>
<tr>
<td>Bus:</td>
<td>EMC</td>
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<tr>
<td>Regulation ECE-R10</td>
<td></td>
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<tr>
<td>Approval number:</td>
<td>E1 10 R - 022704</td>
</tr>
</tbody>
</table>

Detailed information is available by calling: Tefl. +33-1-30-75-11-67
DiVA 3000

That sounds good.

Let a diva take care of the voice announcements in your buses and trains: DiVA3000 from EPI LAWO. It fits comfortably in the vehicle console and the in-built amplifier supplies power to interior, exterior and driver control loudspeakers. The voice can be recorded in a studio by professional announcers or can be generated with high-quality synthetic language tools. The audio data are then loading easily by USB stick or by radio (W-LAN) in the 64 Mbyte compact flash card into the device (other options are 128 Mbyte / 512 Mbyte). The announcement is then selected at the appropriate time via the IBIS control unit or ticket printer.

The system adapts the volume automatically to the current ambient noise in the vehicle. Of course, you can also adjust the basic volume yourself with the EPI LAWO Windows program Win-DiVA3000, likewise the tone settings and the data administration. It is easy to control exterior devices such as microphones, radio telephones and data radio devices. The same applies for data updating by means of a USB stick (with adapter) or by means of a laptop (via Ethernet, Win-DiVA3000 or W-LAN system). The only thing that’s missing now is the audience.

- Standard radio size, easy to install
- Integrated power amplifier
- Numerous audio connections
- Automatic volume adaptation
- Various interfaces
- Quick configuration and administration via PC and Win-DiVA3000 software
- Simple data updating via USB (USB stick, adapter, laptop, W-LAN)
- TTS (Text To Speech) for simple generation of high quality synthetic speech
- IBIS / ticket printer connectivity for announcements at the appropriate time
# Technical data DiVA 3000

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating voltage</td>
<td>24 V-DC (16.8 - 34 V)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>including amplifier approximately 0.35 A closed current; maximum 3 A when announcement is being made</td>
</tr>
<tr>
<td>Operating/storage temperature</td>
<td>- 25 °C to +70 °C / - 25 °C to +70 °C</td>
</tr>
<tr>
<td>Dimensions</td>
<td>(B x T x H) 187 x 182 x 58 mm (radio slot)</td>
</tr>
<tr>
<td>Data formats</td>
<td>MP3 or WAV</td>
</tr>
<tr>
<td>Audio connections</td>
<td>1x microphone-in; 1x line-in (mono)</td>
</tr>
<tr>
<td></td>
<td>1x interior loudspeaker -out: 32 W, 4...8 Ohm</td>
</tr>
<tr>
<td></td>
<td>1x exterior loudspeaker-out: 32 W, 4...8 Ohm</td>
</tr>
<tr>
<td></td>
<td>1x control loudspeaker out (driver): 14 W, 4...8 Ohm</td>
</tr>
<tr>
<td>Interfaces</td>
<td>IBIS vehicle bus (VDV300); RS485, RS232; USB1.1; Ethernet: 10 Base T</td>
</tr>
<tr>
<td>Software</td>
<td>Win-DiVA3000</td>
</tr>
<tr>
<td>TTS</td>
<td>(Text To Speech) synthetic speech (different voices and foreign languages)</td>
</tr>
<tr>
<td>Loading of operating data</td>
<td>USB stick/-adaptor</td>
</tr>
<tr>
<td></td>
<td>ethernet: laptop with terminal program (Win-DiVA3000)</td>
</tr>
<tr>
<td>Standards and directives</td>
<td>VDV 300 (IBIS)</td>
</tr>
<tr>
<td>Bus: Directive</td>
<td>2006/28/EG\nType approval number: e1<em>72/245</em>2006/28<em>04017</em>02 [e2] 034017</td>
</tr>
<tr>
<td>Burning Behavior: Directive</td>
<td>95/28/EG</td>
</tr>
<tr>
<td>Train:</td>
<td>EN 50155</td>
</tr>
<tr>
<td>EMC</td>
<td>EN 50121-3.2</td>
</tr>
<tr>
<td>Fire</td>
<td>DIN 5510</td>
</tr>
</tbody>
</table>

Detailed information is available by calling: Tel. +33-1-30-75-11-67
TED®plus

Achieve your aims simply and quickly - the same goes for editing.

This is what ease of operation can mean with a destination editor: a few clicks when inputting and numerous arrangement options. Precisely what is offered by EPI LAWO TED®plus. The simple and clearly arranged Windows user interface provides you with all the required assistance to edit destinations, line numbers and messages, as well as for the creation and changing of fonts, symbols, pictograms and logos. The convenient character set editor makes it easy to create your own character sets, pictures and graphics.

Destination data and content already in the TED900 can of course be imported and processed further by TED®plus. Transferring data into the information system of your vehicle is also straightforward, such as onto the on-board computer or the display control unit; this is because TED®plus also controls the USB interface, such as the PC card drive or the download device. It runs like clockwork not just on road and rail, but also with editing work on the PC.

• Already existing destination data (TED900) accepted
• Simple processing of display data, entries, entry areas and synchronization
• Character set editor for the loading and/or redesign of character sets, pictograms, logos and text
• Multilingual (language versions on request)
• Scaleable printing of all destination entries
• Complete copying of all vehicle data
• Data export via ASCII
• Simple data transmission via SRAM card, download device or USB omnidrive
• Generation of scrolling text for LED exterior displays
System requirements for TED®plus

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating system</strong></td>
<td>Microsoft Windows 9x, Windows NT, Windows 2000, Windows XP, WIN Vista 32-bit, WIN 7 64-bit</td>
</tr>
<tr>
<td><strong>Minimum requirements</strong></td>
<td>300 MHz Pentium processor</td>
</tr>
<tr>
<td><strong>Graphics card</strong></td>
<td>65.536 colors, resolution 1024 x 768 pix</td>
</tr>
<tr>
<td><strong>Drives</strong></td>
<td>CD ROM or DVD drive</td>
</tr>
<tr>
<td><strong>Ports</strong></td>
<td>Parallel port when using the PC card drive</td>
</tr>
<tr>
<td></td>
<td>serial port when using the download device</td>
</tr>
<tr>
<td></td>
<td>USB interface when using the USB omnidrive</td>
</tr>
<tr>
<td><strong>Main memory</strong></td>
<td>64 MB RAM</td>
</tr>
</tbody>
</table>
The INFOtainment System from EPI LAWO is the result of the consistent further development of the systems typically currently in use to deliver route and next stop information to passengers during travel. It informs passengers not only about the next stop, transfer information and route traveled, but can also be employed by the operator to insert advertisements.

Passengers receive actual information while the bus operator generates additional income through advertising. Such a system pays for itself within a short period of time. In addition to route information, general information, such as pictures of the next stop and time and position-dependent advertising inserts, can be displayed. The organization of the on-screen presentation (e.g. fonts, colors, type of information or object position on the screen) can be freely configured. InfoTED was developed for this purpose. It is compatible with all Windows variations (Windows 7 version on request). InfoTED makes the precise combination of routes, destinations and stops with advertising inserts in picture-form possible in a simple and straightforward manner.

The advertising inserts can either always be displayed or, dependant on time, day of the week and date, be assigned specific routes, destinations or stops. The picture preview feature makes the selection of graphics easier.

- Insertion of advertising dependant on:
  destinations (all or selected ones), routes (all or selected ones), stops (all or selected ones), time (always or dependant on date, day of the week, time of day and length of advertisement in seconds), Timetable

- Sequence overview as an entry list

- Import possibilities from third-party timetable programs upon request

- Insertion of graphics in the following formats:
  *.bmp, *.jpg, *.png, *.gif

- Insertion of advertising movies in formats: *.avi, *.mpeg
  Codex list available from us

- Picture preview feature

- Data can be loaded onto SRAM card

- Language German / English (other languages on request)
System requirements for InfoTED

<table>
<thead>
<tr>
<th>Operating system</th>
<th>Microsoft Windows NT, Windows 2000, Windows XP, WIN Vista</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum requirements</td>
<td>800 MHz Pentium processor</td>
</tr>
<tr>
<td>Graphics card</td>
<td>65,536 colors, resolution 1024 x 768 pix</td>
</tr>
<tr>
<td>Drives</td>
<td>CD ROM or DVD drive</td>
</tr>
</tbody>
</table>
| Ports | Parallel port when using the PC card drive  
Serial port when using the download device  
USB interface when using the USB omnidrive |
| Main memory | 128 MB RAM |

Detailed information is available by calling: Tel. +33-1-30-75-11-67
References

(extract)

Buses

**Germany:**

Bochum Gelsenkirchen streetcars
Bus transportation Rhineland BVR RVE RVN
BVG Berlin
Deutsche Bahn AG
Dresden bus companies
Esslingen bus company
Frankfurt am Main
FVAG Freiburg
Heidelberg
HHA Hamburg
Rhein-Sieg transportation company
Singen city transportation
SSB Stuttgart
Tübingen
UESTRA Hannover

**International:**

Arriva / Netherlands
City transportation Athens / Greece
Connexxion / Netherlands
Geneva city transportation / Switzerland
Kuala Lumpur / Malaysia
Lisbon / Portugal
London / UK
Luxembourg / Luxembourg
ÖBB-Postbus GmbH / Austria
Palma de Majorca / Spain
Porto / Portugal
Posen / Poland
Post / Switzerland
RTA / Dubai
Salzburg / Austria
SMRT + SBS Singapore
STI Thun / Switzerland
Stockholm / Sweden
Veolia / Netherlands
Wiener Linien / Austria
Zugerland city transportation / Switzerland

Trains

**Germany:**

AKN Eisenbahn AG Hamburg
BVG Berlin
DB diesel rail cars
Deutsche Bahn AG
Dortmund metropolitan railway
Dresden metropolitan railway
Erfurt metropolitan railway
Frankfurt
Freiburg metropolitan railway
Heidelberg metropolitan railway
Jena metropolitan railway
Kassel transportation company
Karlsruhe
Mannheim OEG
RNK
SSB Stuttgart

**International:**

Brussels / Belgium
Centovalli railway / Tessin Switzerland
Croatian rail / Croatia
GMML Manchester / Great Britain
HTM / Netherlands
Marseille / France
Marta Atlanta / USA
Mercy Rail / Great Britain
Metropolitan railway POZNAŃ / Poland
Randstadrail / Netherlands
RET Rotterdam / Netherlands
Zagreb / Croatia