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ON-THE-DOT INFORMATION

PORTFOLIO FOR LED PASSENGER INFORMATION DISPLAYS

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PORTFOLIO FOR LED PASSENGER INFORMATION DISPLAYS



MOFIS, our modular passenger information system, ensures your passengers always have up-to-date arrival and departure times, or information about connecting services, and it also displays important special messages. Passenger information at stations and stops is shown on high-quality LED matrix displays. Whether they are located on short or long platforms, in underground stations, or at central interchanges, our passenger information displays MOFIS@MEDIA.LED are always adapted to the conditions of the environment.



Different custom formats and versions are available to suit your specific needs. On our LED full-matrix displays, static or moving text messages and images can be combined, sized and positioned just as you need them. The elegant yet functional housing is designed to blend in with your corporate image. High-quality materials ensure optimum readability and excellent long-term system availability.

If required, visual displays can also be accompanied by voice announcements (e.g. text-to-speech). Our display units have standardised interfaces for wired connections (e.g. RS-232, RS-485, TTY, Ethernet incl. fibre-optic connections) and also allow wireless data transmission, either digitally or via GPRS.

All components of our MOFIS passenger information system are designed, produced and thoroughly tested on site at BBR, allowing us to guarantee consistently high product quality.

Why not visit our Brunswick site and see for yourself? We'd be delighted to give you a product presentation!



*Hub stations
Cologne*



QUALITY YOU CAN RELY ON

With our wealth of experience in the implementation of state-of-the-art passenger information solutions and our impressive range of products and services, we can provide one-stop custom solutions – which is what our customers want. We value the close collaboration with a number of respected transport operators, who we proudly count among our long-term customers.

- KVB Cologne Transport AG
- BOGESTRA Bochum-Gelsenkirchen Trams AG
- Rheinbahn AG Düsseldorf
- VGF Frankfurt/Main
- HGK Cologne
- REVG Cologne
- üstra, Hanover
- Jungfrau Railways AG, Switzerland
- Gelderland Province, Netherlands



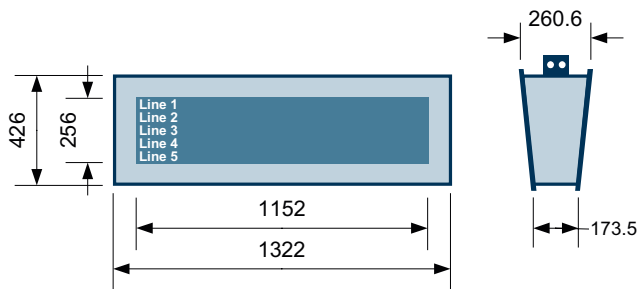
SHORT PLATFORMS

AT BUS STOPS AND LIGHT RAILWAY STATIONS

At small bus stops, light railway stations, or wherever space is limited, display units must be made to specific dimension requirements. A perfect application for units with a 4 mm LED pitch, which can implement the necessary number of pixels for expected departure times.

Our double-sided full-matrix displays can accommodate any text you require: advance notices for buses or trains, moving text or static special messages, and dates and times. Expected departure times are generally sorted chronologically, but custom sorting is also possible.

Using a full-matrix display gives your MOFIS system maximum flexibility, as changes to the display can be implemented quickly and easily.



FIA 2000 5-lines

Housing	
Construction	aluminium, double sided, outdoor suitable
Protection class	IP 54 – splash water protection
Surface	powder coated
Colour	every RAL colour possible
Dimensions (W x H x D)	1322 x 426 x 173.5 / 260.6 mm
Plane	acryl glass 5 mm
Display	
Dimensions	1152 x 256 mm
Inclination	8°
LED colour	yellow
LED pitch	4 mm
Pixels	288 x 64
Font height	9 pixels
Characters per line	approx. 35 (7/9-font)
Luminosity	2400 cd/m ²
Viewing angle	120°
Readability	approx. 18 metres
Further characteristics	
Interfaces	RS-485, RS-232, TTY (20mA), Ethernet
Operating temperature	-25°C bis +70°C
Power consumption	approx. 100 W

Housing

Two types of housing with different screens allow you to tailor the display units perfectly to your needs. In addition to impact-resistant floating screens made from plastic, whose low weight and simple mounting in the housing make them easy to replace, units with specially laminated glass screens, which have an integrated filter layer for better readability, are also available. Both types have anti-glare screens and are perfectly adapted for the LEDs used.

All screens have an imprinted border running all around them, which can contain more images or text (logos, text components). Optional design elements such as coloured side panels can be added if required to fit in with your transport company's corporate design.

For bus stops, special compact display units have been developed, which blend in with the urban environment. They have a side mounting, so they can be attached to either a separate pole or a bus shelter.

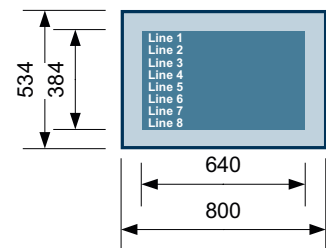
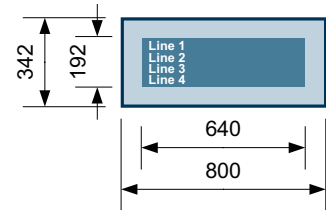
Data transmission

Since there are generally no provisions for wired data transmission along bus routes, data are transmitted digitally or via GPRS; naturally, our display units are prepared for mounting of the required hardware components.



MOFIS bus stop display 4-lines

Housing	
Construction	aluminium, double sided outdoor suitable
Protection class	IP 54 - splash water protection
Surface	powder coated
Colour	every RAL colour possible
Dimensions (W x H x D)	800 x 342 x 166 mm
Pane	LSG (laminated safety glass) 6mm
Display	
Dimensions	640 x 192 mm
LED colour	yellow
LED pitch	4 mm
Pixels	160 x 48
Font height	9 pixels
Characters per line	approx. 28 (7/9-font)
Luminosity	2400 cd/m ²
Viewing angle	120°
Readability	approx. 18 metres
Further characteristics	
Interfaces	RS-485, RS-232, TTY (20mA), Ethernet
Operating temperature	-25°C bis +70°C
Power consumption	approx. 70 W (8-lines: approx. 130 W)



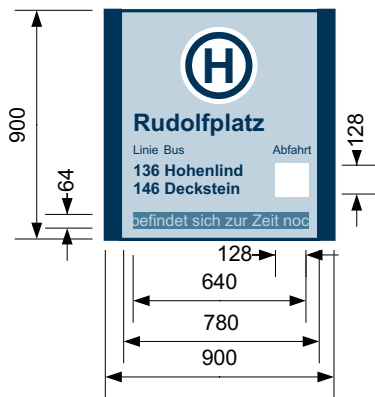
alternative with 8 lines
(160 x 96 pixels)



Different models of
bus stop displays

Solutions for infrequently used bus stops

To save costs, LED segments can replace the full-matrix panel. This solution uses our segment displays, a low-cost alternative to full-matrix LED displays. With this type of unit, only the time display and the moving text window are implemented using LED technology. All additional information, such as the destination, the name of the stop, or the operator's logo, is permanently printed onto the sign. Segment displays can either be attached to a pole or implemented in the form of a display board. Display boards are particularly useful for stops without information panels, as they can include e.g. timetables and network or area maps.



Segment display for bus stop 3-lines

Housing	
Construction	aluminium, double sided outdoor suitable
Protection class	IP 54 - splash water protection
Surface	powder coated
Colour	every RAL colour possible
Dimensions (W x H x D)	780 x 900 x 163 mm
Pane	acryl glass 5mm
Display	
Dimensions	128 x 128 mm
Dimensions moving text window	640 x 64 mm
LED colour	yellow
LED pitch	4 mm
Pixels moving text	160 x 32
Font height	9 pixels
Characters per line (moving text)	approx. 28 (7/9-Font)
Lumionosity	2400 cd/m ²
Viewing angle	120°
Readability	approx. 18 metres
Further characteristics	
Interfaces	RS-485, RS-232, TTY (20mA), Ethernet
Operating temperature	-25°C bis +70°C



Pole-mounted segment display



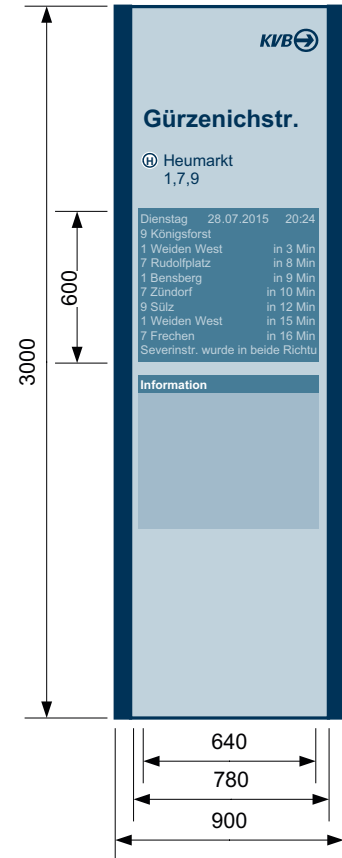
left:
Display stela, 3-lines



right:
10-lines

Segment display stela for bus stop 10-lines

Housing	
Construction	aluminium, double sided, outdoor suitable
Protection class	IP 54 - splash water protection
Surface	powder coated
Colour	every RAL colour possible
Dimensions (W x H x D)	780 x 3000 x 250 mm
Pane	acryl glass 5 mm
Display	
Dimensions	640 x 600 mm
LED colour	yellow
LED pitch	2.5 mm
Pixels	160 x 256
Font hight	9 pixels
Characters per line	approx. 28 (7/9-Font)
Luminosity	2400 cd/m ²
Viewing angle	120°
Readability	approx. 11 metres
Further characteristics	
Interfaces	RS-485, RS-232, TTY (20mA), Ethernet
Operating temperature	-25°C bis +70°C
Power consumption	approx. 50 W

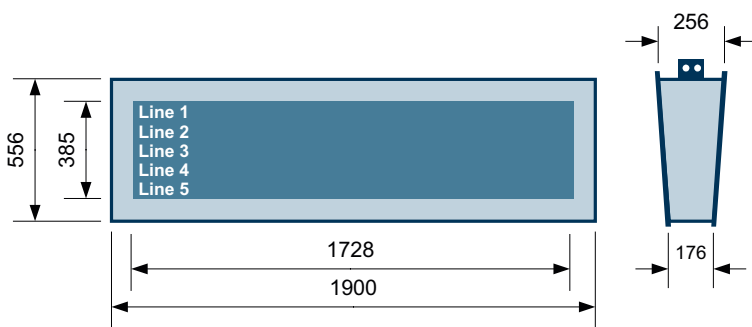


Display boards

Specifically designed for stops without existing installations, we offer display boards with an integrated display unit. They combine dynamic passenger information with static data (e.g. timetables, route maps, tariff information and area maps) in one illuminated display case, so there's no need for a separate display case with its own power supply.

Displays for dynamic passenger information can be customized. Displays we have implemented include 3-line LED displays with 4 mm spacing, and 10-line LED displays with 2.5 mm spacing.

Stadium at Düsseldorf Messe exhibitiongrounds



LONG PLATFORMS

On long platforms, e.g. at major light-rail stations or in underground and main line stations, viewing distances are much longer than at bus stops.

The LED panels used for these passenger information display units have a higher LED pitch of 6 mm.

This combined with the optimum character set and font size allows viewing distances of up to approx. 30 metres. A display that is mounted at the centre of a platform can be used for platforms that are up to 60 metres long.

The integrated brightness control, which is common to all our systems, allows you to adjust the display as required by the environment.

FIA 2000 5-lines

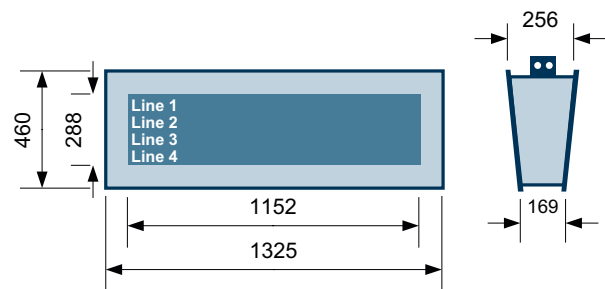
Housing	
Construction	aluminium, double sided, outdoor suitable
Protection class	IP 54 - splash water protection
Surface	powder coated
Colour	every RAL colour possible
Dimensions (W x H x D)	1900 x 556 x 176/256 mm
Pane	acryl glass 5 mm
Display	
Dimensions	1728 x 385 mm
Inclination	8°
LED colour	yellow
LED pitch	6 mm
Pixels	288 x 64
Font height	9 pixels
Characters per line	approx. 35 (7/9-Font)
Luminosity	2400 cd/m ²
Viewing angle	120°
Readability	approx. 27 metres
Further characteristics	
Interfaces	RS-485, RS-232, TTY (20mA), Ethernet
Operating temperature	-25°C bis +70°C
Power consumption	approx. 100 W





FIA 2000 4-lines

Housing	
Construction	aluminium, double sided, outdoor suitable
Protection class	IP 54 – splash water protection
Surface	powder coated
Colour	every RAL colour possible
Dimensions (W x H x D)	1325 x 460 x 169 / 256 mm
Pane	acryl glass 5 mm
Display	
Dimensions	1152 x 288 mm
Inclination	8°
LED colour	yellow
LED pitch	6 mm
Pixels	192 x 48
Font hight	8 pixels + 2 pixels descender
Characters per line	approx. 30 (7/9-Font)
Luminosity	2000 cd/m ²
Viewing angle	120°
Raedability	approx. 24 metres
Further characteristics	
Interfaces	RS-485, RS-232, TTY (20mA), Ethernet
Operating temperature	-25°C bis +70°C
Power consumption	approx. 60 W



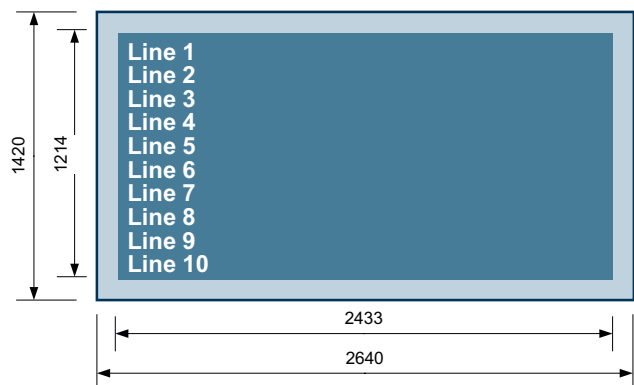
Light railway station at Cologne Neumarkt

LARGE-FORMAT DISPLAYS

Our GFA large-format displays help to considerably enhance customer satisfaction in public passenger transport. At transport interchanges, they provide reliable information about connecting services as well as displaying special information in the form of moving text or complex images. Outdoor display units that are used, for instance, in the approach to event venues (football stadiums) have a 7.62 mm LED pitch to achieve particularly long viewing distances. For indoor applications, e.g. in passageways or on a station concourse, viewing distances are shorter, so the LED pitch can be reduced (to 4 or 6 mm).



Large-format displays: excellent readability at long distances



GFA 4-lines

Housing	
Construction	aluminium, double sided, outdoor suitable
Protection class	IP 54 - splash water protection
Surface	powder coated
Colour	every RAL colour possible
Dimensions (W x H x D)	2640 x 1420 x 250 mm
Pane	LSG (laminated safety glass) 8 mm
Display	
Dimensions	2433 x 1214 mm
LED colour	yellow
LED pitch	7.62 mm
Pixels	320 x 160
Font high	12 pixels + 2 pixels ascender/descender
Characters per line	approx. 35 (7/9-Font)
Luminosity	2000 cd/m ²
Viewing angle	120°
Readability	approx. 45 metres
Further characteristics	
Interfaces	RS-485, RS-232, TTY (20mA), Ethernet
Operating temperature	-25°C bis +70°C
Power consumption	approx. 460 W





Large-format displays: excellent readability at long distances

AN EYE ON ENERGY

Our passenger information displays use high-quality LEDs for an energy-saving design. Multiplex operation of the displays ensures low energy consumption, which is even further reduced by the automatic brightness control. A fan with temperature control keeps the operating temperature at the right level. The function of the fan and the output voltage of the power supply units are constantly monitored by the system.

GUARANTEED SERVICE

The use of special laminated safety glass with an integrated filter layer and anti-glare surface gives our systems high durability and makes them extremely vandal-proof. Impact-resistant plastic screens are available as an alternative (see above). This is also in line with accident prevention regulations.

Should your system ever require repair, our reliable parts management service, remote maintenance, and on-site repair service by our technical staff are available for you. The design of our display units allows one-person maintenance and requires no special tools for a simple replacement of components – enabling you, the transport provider, to react quickly when a repair is required.





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