

# LED Information Display

## GMB

GMB series information displays are digital LED information displays specially designed for platforms on railway stations. The full matrix LED displays provide a flexible solution for passenger information systems providing up-to-date information to passengers. Designed without front glass for maximum color reproduction. Various mounting options.



# Features

## LED Technology

LED Full-Matrix technology allows freely configurable display layout. Full graphical display with fine pixel pitch 2.5 mm perfectly displays text, graphic symbols, images, videos, websites and live broadcasts.

- High brightness display and great contrast guarantees excellent readability even in direct sunlight.
- Fully graphic display shows public transport information, train and bus departures, general passenger information as well as advertising messages and other multimedia.

## Information System

Possibility of making the display as an autonomous display element or as part of larger information system.

- Management by an external master computer makes tracking and controlling easier.
- Power and runtime data are automatically monitored.

## Mechanical Design

- Stable frame construction made of aluminium profiles, powder coated finish or stainless steel imitation.
- Without front glass for excellent contrast and color reproduction, complete reduction of reflections, better cooling and lower weight.
- Flexible dimensions – compact sizes for highest categories of stations.
- Ceiling, wall bracket or pole mounting
- Double sided design.
- Possibility to display analogue clock or platform number.
- Maintenance-free design – smooth surface of LED modules ("g" variant), passive cooling without vents and filters.
- Easy access to all internal modules by sliding out the electronics carrier.

## Operation

- The display is designed for reliable usage 24/7 in indoor and outdoor conditions.
- Choose from two types of modes according to displays usage.

## Text-to-Speech Module

Specially developed module for visually handicapped persons.

- The module provides the necessary information via synthetic voice output from 8W speakers.

## Various Areas of Use



Train Stations

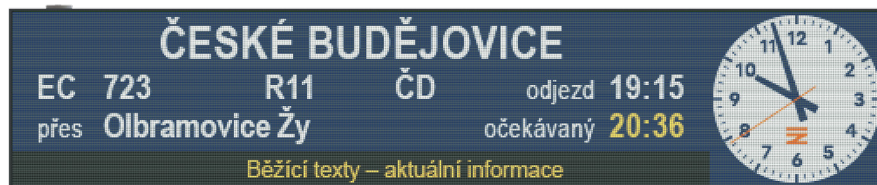


Railway Stations



Metro

GMB.19g / GMB.25



GMB.20g



LED Technology



Full Color RGB Display



Usage 24/7



Brightness up to 4 500 cd/m<sup>2</sup>



Contrast up to 10 000:1



Management and Monitoring System



Passive Cooling



Option WiFi, LTE or Fiber Optics



Text-To-Speech Module



Suitable for Outdoor Use IP 55

# Technical Parameters

GMB.		19g	20g	25
Module Specifications	pixel pitch [mm]	1,95	2,0	2,5
	resolution [px]	128 × 128	80 × 180	100 × 100
	size [mm]	250 × 250	160 × 360	250 × 250
	brightness	4 000 cd/m <sup>2</sup>		4 500 cd/m <sup>2</sup>
	viewing angle	±70° × ±60°		
	frame frequency	50 Hz		
	refresh rate	3 400 Hz	7 700 Hz	1 920 Hz
	color depth	22 bit	24 bit	
	contrast	3 000:1	10 000:1	3 000:1
	life span	≥ 100 000 hours (70% brightness)		
	Mechanical Construction	frame	aluminium profiles	
service access		sliding part secured with industrial locks		
cooling		passive cooling		
dimensions [mm]		by screen size, see Indicative Active Area Dimensions Table		
protection degree		IP 55		
max. size of active display area [m] W × H		2.25 × 0.25	1.92 × 0.36	2.25 × 0.25
noise level		max. 32 dB		
Temperature Management	temperature	-20 to +40 °C		
	humidity	10 to 90 % (without condensing)		
	max. intensity of solar radiation	1 120 W/m <sup>2</sup>		
Power	power voltage	100–240 VAC, 50–60 Hz		
	max. power consumption	45 W/ module MAX, 15 W/ module AVG		
Mounting	ceiling suspension, wall bracket mounting, pole mounting			

## Basic Font Set

### GMB.19g

Name	Standard 5/7	Bold 6/7	Narrow 4/7	Standard 6/10	Narrow 6/12	Arial 9/11	Arial 11/13	Arial 15/17	Arial 17/19	Arial 25/27
Max. character size (including gaps) [px] A × B	6 × 10	7 × 10	5 × 10	7 × 14	7 × 10	8 × 14	12 × 18	16 × 27	18 × 30	26 × 42
Height of capital letter [mm] C	14.6	14.6	14.6	20.4	24.3	22.4	26.3	34.1	38.0	53.6
Readability DIN1450 [m]	6	6	6	9	10	9	11	14	16	22
Readability TSI-PRM [m]	4	4	4	6	7	6	7	9	10	14
Number of character per line (1 module)	21.3	18.2	25.6	18.2	18.2	16.0	10.6	8.0	7.1	4.9
Max. number of rows per module	12.8	12.8	12.8	9.1	12.8	9.1	7.1	4.7	4.2	3.0

Possibility to add font on customer's request.

### GMB.20g

Name	Standard 5/7	Bold 6/7	Narrow 4/7	Standard 6/10	Narrow 6/12	Arial 9/11	Arial 11/13	Arial 15/17	Arial 17/19	Arial 25/27
Max. character size (including gaps) [px] A × B	6 × 10	7 × 10	5 × 10	7 × 14	7 × 10	8 × 14	12 × 18	16 × 27	18 × 30	26 × 42
Height of capital letter [mm] C	15.0	15.0	15.0	21.0	25.0	23.0	27.0	35.0	39.0	55.0
Readability DIN1450 [m]	6	6	6	9	10	10	11	14	16	22
Readability TSI-PRM [m]	4	4	4	6	7	6	7	9	10	14
Number of character per line (1 module)	13.3	11.4	16.0	11.4	11.4	10.0	6.6	5.0	4.4	3.0
Max. number of rows per module	18.0	18.0	18.0	12.8	18.0	12.8	10.0	6.6	6.0	4.2

Possibility to add font on customer's request.



# Basic Font Set

## GMB.25

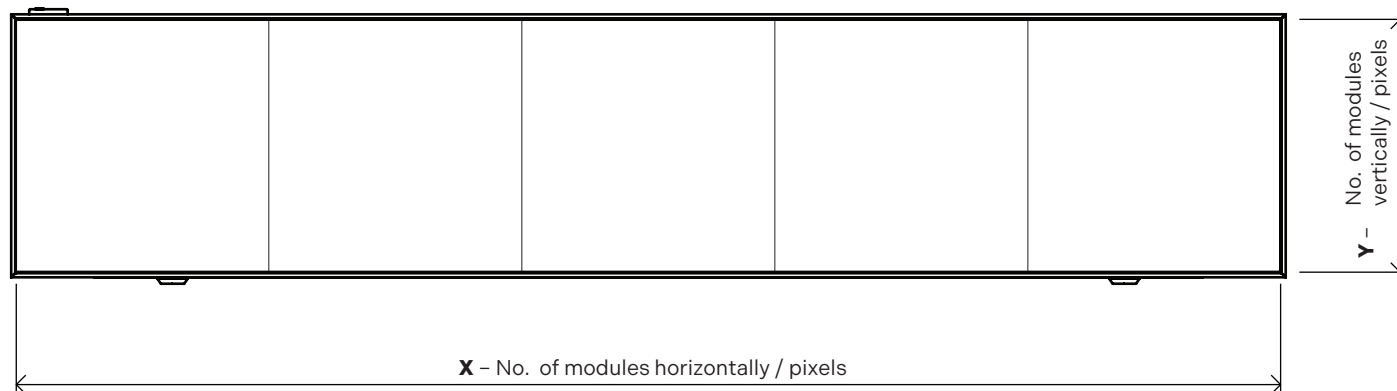
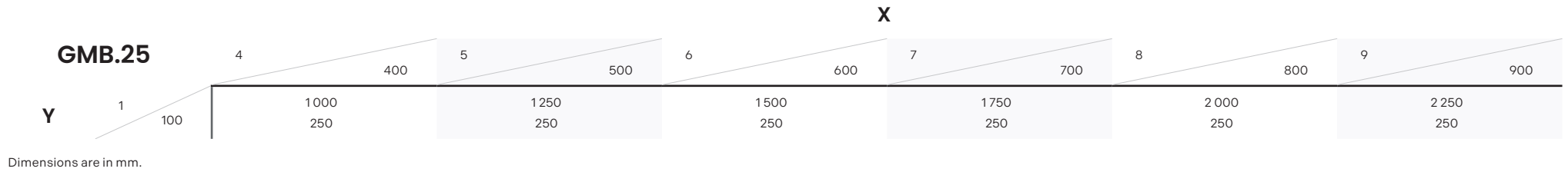
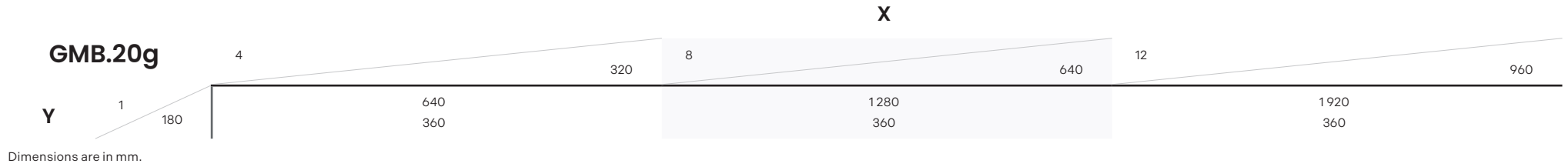
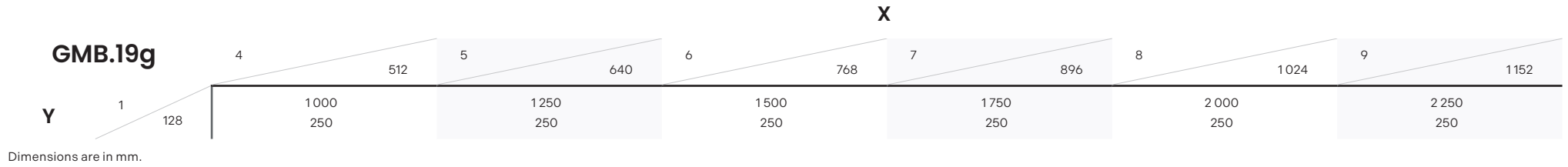
Name	Standard 5/7	Bold 6/7	Narrow 4/7	Standard 6/10	Narrow 6/12	Arial 9/11	Arial 11/13	Arial 15/17	Arial 17/19	Arial 25/27
Max. character size (including gaps) [px] A × B	6 × 10	7 × 10	5 × 10	7 × 14	7 × 10	8 × 14	12 × 18	16 × 27	18 × 30	26 × 42
Height of capital letter [mm] C	18.7	18.7	18.7	26.2	31.2	28.7	33.7	43.7	48.7	68.7
Readability DIN1450 [m]	8	8	8	11	13	12	14	18	20	28
Readability TSI-PRM [m]	5	5	5	7	8	8	9	11	13	18
Number of character per line (1 module)	16.6	14.2	20.0	14.2	14.2	12.5	8.3	6.2	5.5	3.8
Max. number of rows per module	10.0	10.0	10.0	7.1	10.0	7.1	5.5	3.7	3.3	2.3

Possibility to add font on customer's request.



Departure, Öhringen

# Indicative Active Area Dimensions Table



# Order Reference

## 1 Model

GMB.19g	19g
GMB.20g	20g
GMB.25	25

## 2 Number of Pixels Horizontally

GMB.19g (128 px per module)	512-1152
GMB.20g (80 px per module)	320-960
GMB.25 (100 px per module)	400-900

## 3 Number of Pixels Vertically

GMB.19g (128 px per module)	128
GMB.20g (180 px per module)	180
GMB.25 (100 px per module)	100

## 4 Display Color

Full color RGB display	RGB
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## 5 Design

Double sided	D
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## 6 Mounting

Ceiling suspension	S
Pole mounting - "T" type	T
Wall bracket mounting	B

## 7 Options

(if more than one option is selected, include the extension code in order indicated by dot)

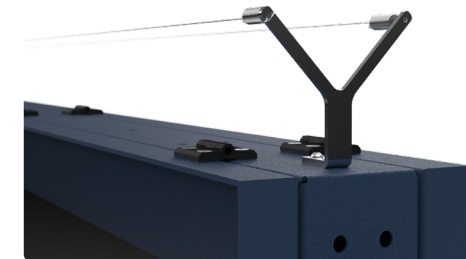
Fixed description (number indicates specific design)	Px
Platform number	Nb
Text-To-Speech module with 8W speaker and receiver for visually handicapped	TTS
Preparation of the camera at the top edge	CT
Preparation for x (max. 3) cameras on the bottom side	Cx
Interface Ethernet	LAN
Interface RS 485	RS485
Interface WiFi	WiFi
Interface LTE	LTE
Interface fiber optics	FO
Preparation for interface fiber optics	FOP

## 8 Frame Color

Matte black	<b>RAL9005</b>
Light grey	<b>RAL7040</b>
Anthracite	<b>RAL7016</b>
Frame color on request	RALxxxx

## Accessory

Protection against birds	GMB.BP
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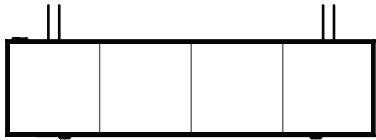
Order example:

**GMB.20g.640.180.RGB.D.B.TTS.LAN.RAL7016**

<b>GMB</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
Model	Number of Pixels Horizontally	Number of Pixels Vertically	Display Color	Design	Mounting	Options	Frame Color	

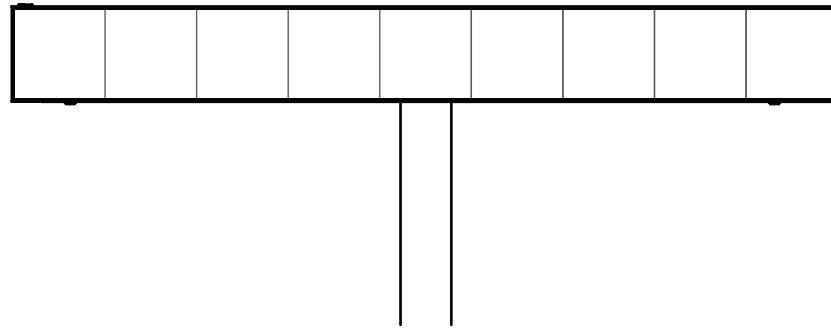
# Mounting

Ceiling Suspension



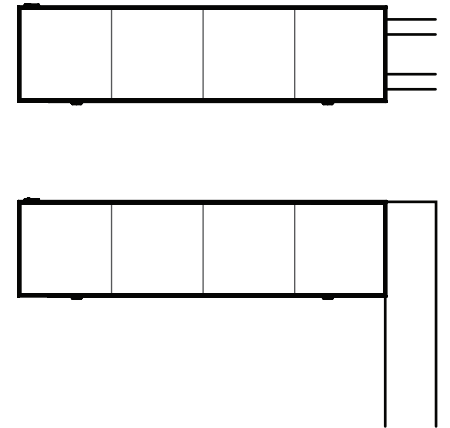
Order reference: **S**

Pole Mounting – "T" Type



Order reference: **T**

Wall Bracket Mounting



Order reference: **B**

# Get in Touch

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LE-801407.06-GMB Outdoor LED Full Matrix Information Display-260423

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Since 1995 we have been a member of the international holding MOSER-BAER AG and our products under the prestigious MOBATIME brand are exported all over the world.

