

LED Information Displays

GSO

GSO series information displays are digital LED information displays specially designed for public transport stops and terminals. The full matrix LED displays provide a flexible solution for passenger information systems providing up-to-date information to passengers. Designed without front cover glass for maximum colour reproduction. Various mounting options.



Features

LED Technology

LED full-matrix technology allows freely configurable display layout. Full graphical display with fine pixel pitch 1.95, 2.0, 2.5 or 3.9 mm perfectly displays text, graphic symbols, images, videos, websites and live broadcasts.

- High brightness display 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 made of aluminium profiles and laser-cut sheets, frame color on customer's request.
- Without front glass for excellent contrast and color reproduction, complete reduction of reflections, better cooling and lower weight.
- Flexible dimensions.
- Ceiling, wall bracket or wall surface mounting. Customized solution on request.
- Single sided or double sided design.
- Possibility to implement extra digital clock, analogue clock, platform number or fixed description.
- Cooling is ensured by inner temperature active cooling with fans with fault detection.
- Smooth LED surface for GSO.19g and GSO.20g variants.
- Easy access to all internal modules after tilting front panel makes easier to check up and replace internal parts.

Operation

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

Text-to-Speech Module

Specially developed module for visually handicapped person.

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

Various Areas of Use



Public Transport
and Bus Stops



Train Stops
and Stations



Railway Stations



LED
Technology



Full Color
RGB Display



Usage 24/7



Brightness up
to 5 500 cd/m²



Management
and Monitoring System



Integrated Temperature
Control



Option WiFi, LTE
or Fiber Optics



Text-To-Speech
Module



Suitable for
Outdoor Use

Technical Parameters

GSO.		19g	20g	25	25a	39
Module Specifications	pixel pitch [mm]	1.95	2.0	2.5		3.9
	resolution [px]	128 × 128	80 × 180	100 × 100	128 × 64	64 × 64
	size [mm]	250 × 250	160 × 360	250 × 250	320 × 160	250 × 250
	brightness	4 000 cd/m²		4 500 cd/m²	5 000 cd/m²	5 500 cd/m²
	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 and laser-cut sheets				
	glass	without front glass				
	service access	tilting front panel secured by industrial locks				
	cooling	inner temperature-controlled active cooling, fans with fault detection				
	dimensions [mm]	by screen size, see Indicative dimensions table				
	protection degree	IP 54				
	max. size of active display area [m] W × H	2.75 × 1.25	2.72 × 1.08	2.75 × 1.25	1.92 × 0.96	2.75 × 1.25
	noise level	max. 57 dB – at maximum cooling system power				
Temperature Management	temperature	-20 to +40 °C				
	humidity	10 to 90 % (without condensing)				
	max. intensity of solar radiation	1 120 W/m²				
Power	power voltage	100–240 VAC, 50–60 Hz				
	max. power consumption	45 W/ module MAX, 15 W/ module AVG			30 W/ module MAX, 10 W/ module AVG	27 W/ module MAX, 7 W/ module AVG
Mounting	standard	ceiling suspension, wall bracket, wall surface mounting				
	on request	customized solution				

Basic Font Set

GSO.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 characters 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.

GSO.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	9	11	14	16	22
Readability TSI-PRM [m]	4	4	4	6	7	6	7	9	10	14
Number of characters 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

GSO.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	18.8	18.8	18.8	26.3	31.3	28.8	33.8	43.8	48.8	68.8
Readability DIN1450 [m]	8	8	8	12	13	12	14	18	20	28
Readability TSI-PRM [m]	5	5	5	7	8	7	8	11	12	17
Number of characters per line (1 module)	16.7	14.3	20.0	14.3	14.3	12.5	8.3	6.3	5.6	3.8
Max. number of rows per module	10.0	10.0	10.0	7.1	10.0	7.1	5.6	3.7	3.3	2.4

Possibility to add font on customer's request.

GSO.25a										
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	18.8	18.8	18.8	26.3	31.3	28.8	33.8	43.8	48.8	68.8
Readability DIN1450 [m]	8	8	8	12	13	12	14	18	20	28
Readability TSI-PRM [m]	5	5	5	7	8	7	8	11	12	17
Number of characters per line (1 module)	21.3	18.3	25.6	18.3	18.3	16.0	10.7	8.0	7.1	5.0
Max. number of rows per module	6.4	6.4	6.4	4.6	6.4	4.6	3.5	2.4	2.1	1.5

Possibility to add font on customer's request.



Basic Font Set

GSO.39										
Name	Standard 5/7	Bold 6/7	Narrow 4/7	Small 4/6	Standard 6/10	Narrow 6/12	Arial 7/9	Arial 9/11	Arial 15/17	Arial Bold 9/11
Max. character size (including gaps) [px] A × B	6 × 10	7 × 10	5 × 10	5 × 7	7 × 14	7 × 18	8 × 14	10 × 18	16 × 27	10 × 18
Height of capital letter [mm] C	25	25	25	22	37	45	33	41	64	41
Readability DIN1450 [m]	10	10	10	9	15	18	13	16	26	16
Readability TSI-PRM [m]	6	6	6	6	9	11	8	10	16	10
Number of characters per line (1 module)	10.7	9.1	12.8	12.8	9.1	9.1	8.0	6.4	4.0	6.4
Max. number of rows per module	6.4	6.4	6.4	9.1	4.6	3.6	4.6	3.6	2.4	3.6

Possibility to add font on customer's request.



Indicative Dimensions Table

Dimensions are in mm.

GSO.19g		Number of Modules Horizontally / Pixels									
		2 128	3 384	4 512	5 640	6 768	7 896	8 1 024	9 1 152	10 1 280	11 1 408
No. of Modules Vertically / Pixels	1 128	500 250	750 250	1 000 250	1 250 250	1 500 250	1 750 250	2 000 250	2 250 250	2 500 250	2 750 250
	2 256	500 500	750 500	1 000 500	1 250 500	1 500 500	1 750 500	2 000 500	2 250 500	2 500 500	2 750 500
	3 384	500 750	750 750	1 000 750	1 250 750	1 500 750	1 750 750	2 000 750	2 250 750	2 500 750	2 750 750
	4 512	500 1 000	750 1 000	1 000 1 000	1 250 1 000	1 500 1 000	1 750 1 000	2 000 1 000	2 250 1 000	2 500 1 000	2 750 1 000
	5 640	500 1 250	750 1 250	1 000 1 250	1 250 1 250	1 500 1 250	1 750 1 250	2 000 1 250	2 250 1 250	2 500 1 250	2 750 1 250

Dimensions are in mm.

GSO.20g		Number of Modules Horizontally / Pixels													
		4 320	5 400	6 480	7 560	8 640	9 720	10 800	11 880	12 960	13 1 040	14 1 120	15 1 200	16 1 280	17 1 360
No. of Modules Vertically / Pixels	1 180	640 360	800 360	960 360	1 120 360	1 280 360	1 440 360	1 600 360	1 760 360	1 920 360	2 080 360	2 240 360	2 400 360	2 560 360	2 720 360
	2 360	640 720	800 720	960 720	1 120 720	1 280 720	1 440 720	1 600 720	1 760 720	1 920 720	2 080 720	2 240 720	2 400 720	2 560 720	2 720 720
	3 540	640 1 080	800 1 080	960 1 080	1 120 1 080	1 280 1 080	1 440 1 080	1 600 1 080	1 760 1 080	1 920 1 080	2 080 1 080	2 240 1 080	2 400 1 080	2 560 1 080	2 720 1 080

Indicative Dimensions Table

Dimensions are in mm.

GSO.25		Number of Modules Horizontally / Pixels									
		2 200	3 300	4 400	5 500	6 600	7 700	8 800	9 900	10 1 000	11 1 100
No. of Modules Vertically / Pixels	1 100	500 250	750 250	1 000 250	1 250 250	1 500 250	1 750 250	2 000 250	2 250 250	2 500 250	2 750 250
	2 200	500 500	750 500	1 000 500	1 250 500	1 500 500	1 750 500	2 000 500	2 250 500	2 500 500	2 750 500
	3 300	500 750	750 750	1 000 750	1 250 750	1 500 750	1 750 750	2 000 750	2 250 750	2 500 750	2 750 750
	4 400	500 1 000	750 1 000	1 000 1 000	1 250 1 000	1 500 1 000	1 750 1 000	2 000 1 000	2 250 1 000	2 500 1 000	2 750 1 000
	5 500	500 1 250	750 1 250	1 000 1 250	1 250 1 250	1 500 1 250	1 750 1 250	2 000 1 250	2 250 1 250	2 500 1 250	2 750 1 250

Dimensions are in mm.

GSO.25a		Number of Modules Horizontally / Pixels				
		2 256	3 384	4 512	5 640	6 768
No. of Modules Vertically / Pixels	1 64	640 160	960 160	1 280 160	1 600 160	1 920 160
	2 128	640 320	960 320	1 280 320	1 600 320	1 920 320
	3 192	640 480	960 480	1 280 480	1 600 480	1 920 480
	4 256	640 640	960 640	1 280 640	1 600 640	1 920 640
	5 320	640 800	960 800	1 280 800	1 600 800	1 920 800
	6 384	640 960	960 960	1 280 960	1 600 960	1 920 960

Indicative Dimensions Table

Dimensions are in mm.

GSO.39		Number of Modules Horizontally / Pixels									
		2 128	3 192	4 256	5 320	6 384	7 448	8 512	9 576	10 640	11 704
No. of Modules Vertically / Pixels	1 64	500 250	750 250	1 000 250	1 250 250	1 500 250	1 750 250	2 000 250	2 250 250	2 500 250	2 750 250
	2 128	500 500	750 500	1 000 500	1 250 500	1 500 500	1 750 500	2 000 500	2 250 500	2 500 500	2 750 500
	3 192	500 750	750 750	1 000 750	1 250 750	1 500 750	1 750 750	2 000 750	2 250 750	2 500 750	2 750 750
	4 256	500 1 000	750 1 000	1 000 1 000	1 250 1 000	1 500 1 000	1 750 1 000	2 000 1 000	2 250 1 000	2 500 1 000	2 750 1 000
	5 320	500 1 250	750 1 250	1 000 1 250	1 250 1 250	1 500 1 250	1 750 1 250	2 000 1 250	2 250 1 250	2 500 1 250	2 750 1 250

Order Reference

1	Model	
	GSO.19g	19g
	GSO.20g	20g
	GSO.25	25
	GSO.25a	25a
	GSO.39	39

2	Number of Pixels Horizontally	
	GSO.19g (128 px per module)	256–1408
	GSO.20g (80 px per module)	320–1360
	GSO.25 (100 px per module)	200–1100
	GSO.25a (128 px per module)	256–768
	GSO.39 (64 px per module)	128–704

3	Number of Pixels Vertically	
	GSO.19g (128 px per module)	128–640
	GSO.20g (180 px per module)	180–540
	GSO.25 (100 px per module)	100–500
	GSO.25a (64 px per module)	64–384
	GSO.39 (64 px per module)	64–320

4	Display Color	
	Full color RGB display	RGB

5	Design	
	Single sided	N
	Double sided	D

6	Mounting	
	Ceiling suspension	S
	Ceiling suspension with additional fastening on side of the display	SB
	Ceiling suspension with additional fastening on left side of the display	SL
	Ceiling suspension with additional fastening on right side of the display	SR
	Wall surface mounting	N
	Wall bracket	B
	Wall bracket with additional fastening on left side of the display	BL
	Wall bracket with additional fastening on right side of the display	BR
	Customized solution on request	Z

7	Options ¹	
	(if more than one options is selected, include the extension code in order indicated separated by dot)	
	Fixed description (number indicates specific design)	Px
	Digital clock	CLK
	Platform number	Nb
	Text-to-Speech module with 8W speaker and receiver for visually handicapped	TTS
	Interface Ethernet	LAN
	Interface RS 485	RS485
	Interface WiFi	WiFi
	Interface LTE	LTE
	Interface LTE with short-term power backup	LTEB
	Interface fiber optics	FO
	Preparation for interface fiber optics	FOP
	Tamper switch	ST
	Remote device restart trigger option	RR
	Power outage notification	PFN
	Auxiliary security lock	ASL

¹ Some options cannot be combined with each other due to technical reasons. Please contact manufacturer to verify the configuration.

8	Frame Color	
	Matte black	RAL9005
	Light grey	RAL7040
	Blue	RAL5003
	Frame color on request	RALxxxx

Order example:

GSO.25.1000.200.RGB.N.N.CLK.TTS.RS485.RAL5003

	1	2	3	4	5	6	7	8
GSO								
	Model	Number of Pixels Horizontally	Number of Pixels Vertically	Display Color	Design	Mounting	Options	Frame Color

Accessories

Holder:

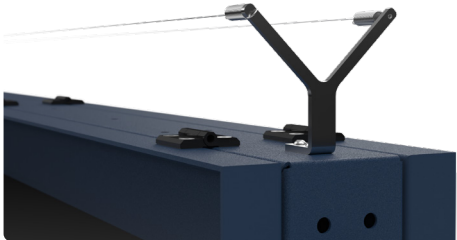
1	Holder	
	Wall holder	WH.F
2	Model	
	GSO.19g	GSO.19g
	GSO.20g	
	GSO.25	GSO.25
	GSO.25a	GSO.25a
	GSO.39	GSO.39
3	Number of Pixels Horizontally	
	GSO.19g (128 px per module)	256–1408
	GSO.20g (80 px per module)	320–1360
	GSO.25 (100 px per module)	200–1100
	GSO.25a (128 px per module)	256–768
	GSO.39 (64 px per module)	128–704

4	Number of Pixels Vertically	
	GSO.19g (128 px per module)	128–640
	GSO.20g (180 px per module)	180–720
	GSO.25 (100 px per module)	100–500
	GSO.25a (64 px per module)	64–384
	GSO.39 (64 px per module)	64–320
5	Options	
	Fixed header (number indicates specific design)	Px
	Digital clock	CLK
	Platform number	Nb
6	Frame Color	
	Matte black	RAL9005
	Light grey	RAL7040
	Blue	RAL5003
	Frame color on request	RALxxxx

Other:

Accessories

Protection against birds GSO.BP



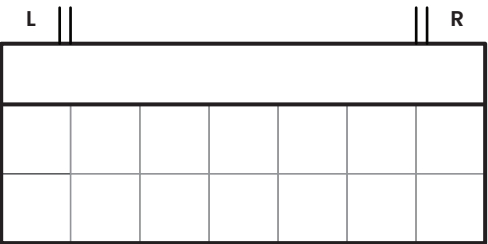
Order example
for display GSO.25.1000.200.RGB.N.N.CLK.TTS.RS485.RAL5003:

WH.F.GSO.25.1000.200.CLK.RAL5003

1	2	3	4	5	6
Holder	Model	Number of Pixels Horizontally	Number of Pixels Vertically	Options	Frame Color

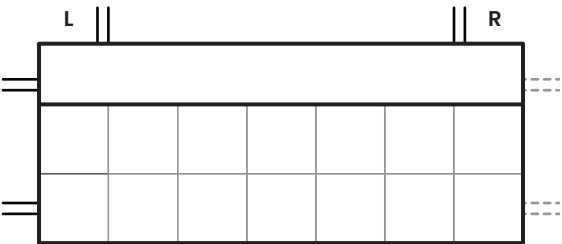
Mounting

Ceiling Suspension



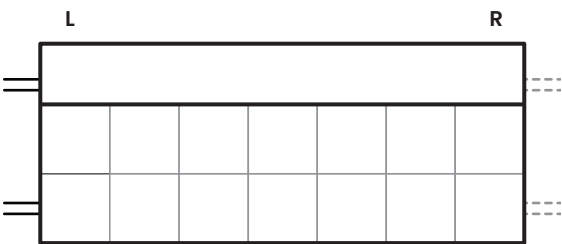
Order reference: **S**

Ceiling Suspension with Additional Fastening on Side of the Display



Order reference for single sided: **SL / SR**
Order reference for double sided: **SB**

Wall Bracket (with Additional Fastening on Side of the Display)



Order reference for single sided: **BL / BR**
Order reference for double sided: **B**

Get in Touch

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LE-801329.14-GS0 Outdoor LED Full Matrix Information Display-260922

Your Partner Across Time...

We are a traditional Czech company operating in the field of timekeeping and display technology. Our success is evidenced by our continuous growth, both in terms of company size and expansion of our product range or export abroad.

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.

