



# LED Information Display GTO

The GTO 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 information systems that provide passengers not only with up-to-date data, but also with various images, videos, web pages, informative text and graphic symbols. Thanks to a special Text-to-Speech module, our information systems can also be used by the visually handicapped person. The necessary traffic information is provided to them via synthetic voice output. The GTO series information displays are available in various sizes and designs.



# Features

## LED Technology

LED full-matrix technology allows freely configurable display layout. Full graphical display with fine pixel pitch 1.8 / 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 construction made of laser-cut and bent aluminium sheets and profiles, frame color on customer's request.
- Single layer (ESG) or double layer laminated safety glass (LSG), anti-reflective coating.
- 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.
- 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/m<sup>2</sup>



Management and Monitoring System



Integrated Temperature Control



Option WiFi, LTE or Fiber Optics



Text-To-Speech Module



Suitable for Outdoor use

# Technical Parameters

GTO.		18s	25	25a	39		
Module Specifications	pixel pitch [mm]	1.8		2.5		3.9	
	resolution [px]	135 × 135		100 × 100		128 × 64	64 × 64
	size [mm]		250 × 250		320 × 160		250 × 250
	brightness	3 500 cd/m <sup>2</sup>		4 500 cd/m <sup>2</sup>		5 000 cd/m <sup>2</sup>	5 500 cd/m <sup>2</sup>
	viewing angle			±70° × ±60°			
	frame frequency			50 Hz			
	refresh rate			1 920 Hz			
	color depth			24 bit			
	contrast	5 000:1		3 000:1			
	life span			≥ 100 000 hours (70% brightness)			
	Mechanical Construction	frame		laser-cut and bent aluminium profiles			
front glass			single layer glass or double layer laminated safety glass, with anti-reflective coating				
service access			cover with front glass				
cooling			inner temperature-controlled active cooling, fans with fault detection				
dimensions [mm]			by screen size, see Indicative Dimensions Table				
protection degree			IP 54				
max. site of active display area [m] W × H			2.25 × 1		2.24 × 0.96		2.25 × 1
noise level			max. 67 dB – at maximum cooling system power				
Temperature Management	temperature		-20 to +40 °C				
	humidity		10 to 90 % (without condensing)				
	max. intensity of solar radiation		1120 W/m <sup>2</sup>				
Power	power voltage		100–240 VAC, 50–60 Hz				
	power consumption	38 W/ module MAX, 11 W/ module AVG		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

### GTO.18s

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	13.5	13.5	13.5	18.9	22.5	20.7	24.3	31.5	35.1	49.5
Readability DIN1450 [m]	5	5	5	8	9	8	10	13	14	20
Readability TSI-PRM [m]	3	3	3	5	6	5	6	8	9	12
Number of characters per line (1 module)	22.5	19.3	27.0	19.3	19.3	16.9	11.3	8.4	7.5	5.2
Max. number of rows per module	13.5	13.5	13.5	9.6	13.5	9.6	7.5	5.0	4.5	3.2

Possibility to add font on customer's request

### GTO.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



# Basic Font Set

## GTO.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

## GTO.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







# Order Reference

## 1 Model

GTO.18s	18s
GTO.25	25
GTO.25a	25a
GTO.39	39

## 2 Number of Pixels Horizontally

GTO.18s (135 px per module)	270–1215
GTO.25 (100 px per module)	200–900
GTO.25a (128 px per module)	256–896
GTO.39 (64 px per module)	128–576

## 3 Number of Pixels Vertically

GTO.18s (135 px per module)	135–540
GTO.25 (100 px per module)	100–400
GTO.25a (64 px per module)	64–384
GTO.39 (64 px per module)	64–256

## 4 Display Color

Full color RGB display	RGB
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## 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 Cover Glass

Anti-reflective single layer tempered glass (ESG)	A
Anti-reflective double layer laminated safety glass (LSG)	L

## 8 Options

(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
Analogue clock	ACLK
Analogue clock with seconds hand	ACLKS
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
Variant without supply terminal block for combination with standard panel on common clock part	SLAVE
Tamper switch	ST

## 9 Frame Color

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

Order example:

# GTO.25.600.200.RGB.N.N.A.CLK.TTS.RS485.RAL5003

GTO	.	1	.	2	.	3	.	4	.	5	.	6	.	7	.	8	.	9
		Model		Number of Pixels Horizontally		Number of Pixels Vertically		Display Color		Design		Mounting		Cover Glass		Options		Frame Color

# Order Reference of Clock Part

**1 Model**

Analogue clock	ACLK
Analogue clock with seconds hand	ACLKS

**2 Dial Diameter**

250 mm	250
500 mm	500

**3 Dial Type**

Standard design	C11
Custom design on request	CSP

**4 Design**

Single sided	N
Double sided	D

**5 Mounting**

Assembly T	T
Assembly L	L
Assembly L with fastening on left side of clock part	LL
Assembly L with fastening on right side of clock part	LR
Ceiling suspension with additional fastening on side	SB
Ceiling suspension with additional fastening on left side	SL
Ceiling suspension with additional fastening on right side	SR
Wall bracket	B
Side mounting between display and frame	BB
Side mounting with fastening on left side	BL
Side mounting with fastening on right side	BR
Customized solution on request	Z

**6 Cover Glass**

Anti-reflective single layer tempered glass (ESG)	A
Anti-reflective double layer laminated safety glass (LSG)	L

**7 Synchronization**

NTP synchronization via LAN	LAN
Synchronization via RS-485	RS485

**8 Frame Color**

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

Order example:

**GTO.ACLKS.500.C11.D.T.A.RS485.RAL5003**

<b>GTO</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	Dial Diameter	dial type	Design	Mounting	Cover Glass	Synchronization	Frame Color

# Accessories

## Holders:

- 1 Holder**

Wall holder	WH.F
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- 2 Model**

GTO.18s	GTO.18s
GTO.25	GTO.25
GTO.25a	GTO.25a
GTO.39	GTO.39
  
- 3 Number of Pixels Horizontally**

GTO.18s (135 px per module)	270-1215
GTO.25 (100 px per module)	200-900
GTO.25a (128 px per module)	256-896
GTO.39 (64 px per module)	128-576
  
- 4 Number of Pixels Vertically**

GTO.18s (135 px per module)	135-540
GTO.25 (100 px per module)	100-400
GTO.25a (64 px per module)	64-384
GTO.39 (64 px per module)	64-256

- 5 Options**

Fixed header (number indicates specific design)	Px
Digital clock	CLK
Analogue clock	ACLK
Analogue clock with seconds hand	ACLKS
Platform number	Nb

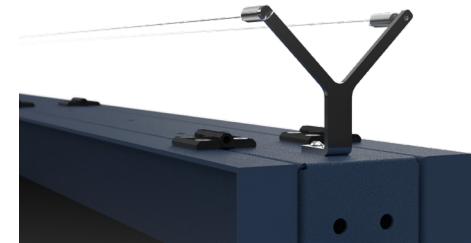
- 6 Frame Color**

Matte black	RAL9005
Light grey	RAL7040
Blue	RAL5003
Frame color on request	RALxxx

## Other:

- Accessories**

Protection against birds	GTO.BP
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Order example  
for display GTO.25.600.200.RGB.N.N.A.CLK.TTS.RS485.RAL5003:

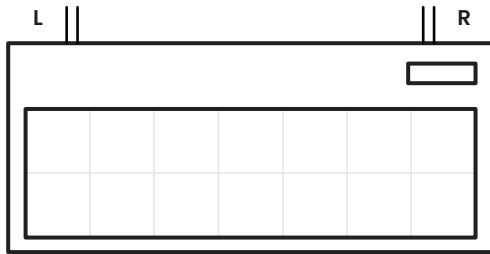
**WH.F.GTO.25.600.200.CLK.RAL5003**



# Mounting

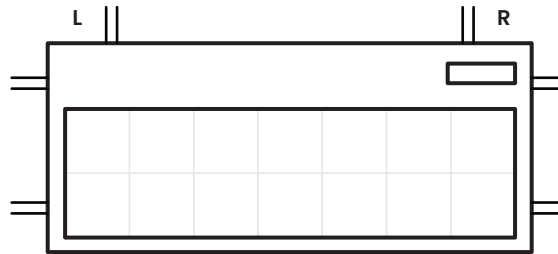
## Display Part

Ceiling Suspension



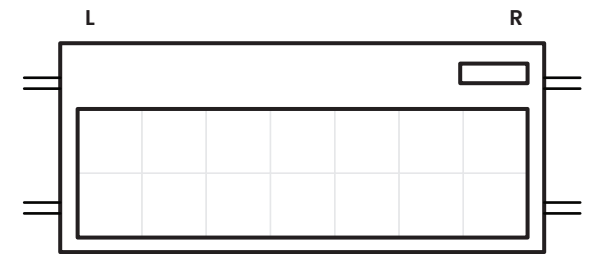
Order reference: **S**

Ceiling Suspension  
with Additional Fastening on Side of the Panel



Order reference for Single Sided: **SL / SR**  
Order reference for Double Sided: **SB**

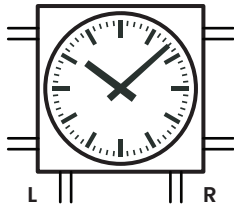
Wall Bracket  
(with Additional Fastening on Side of the Panel)



Order reference for Single Sided: **BL / BR**  
Order reference for Double Sided: **B**

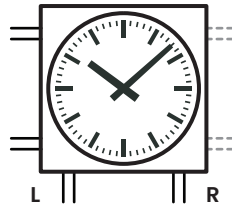
## Clock Part

Assembly T



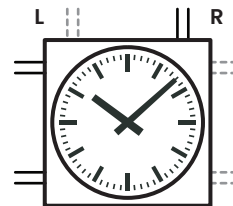
Order reference: **T**

Assembly L



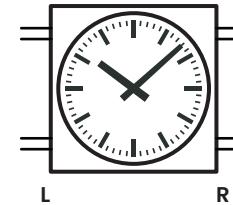
Order reference for Single Sided: **LL / LR**  
Order reference for Double Sided: **L**

Ceiling Suspension



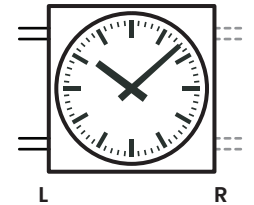
Order reference for Single Sided: **SL / SR**  
Order reference for Double Sided: **SB**

Side Mounting Between  
Display and Frame



Order reference: **BB**

Wall Bracket



Order reference for Single Sided: **BL / BR**  
Order reference for Double Sided: **B**

# Get in Touch

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LE-801330.09-GTO Outdoor LED Full Matrix Information Display-260423

## 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.

