

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/m²



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/m²	4 500 cd/m²	5 000 cd/m²	5 500 cd/m²
	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	1 120 W/m²			
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 x 10	7 x 10	5 x 10	7 x 14	7 x 10	8 x 14	12 x 18	16 x 27	18 x 30	26 x 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 x 10	7 x 10	5 x 10	7 x 14	7 x 10	8 x 14	12 x 18	16 x 27	18 x 30	26 x 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



Departure, Öhringen

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 x 10	7 x 10	5 x 10	7 x 14	7 x 10	8 x 14	12 x 18	16 x 27	18 x 30	26 x 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 x 10	7 x 10	5 x 10	5 x 7	7 x 14	7 x 18	8 x 14	10 x 18	16 x 27	10 x 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



Departure, Öhringen

Indicative Dimensions Table

GTO.18s

		Number of Modules Horizontally / Pixels							
		2	3	4	5	6	7	8	9
		270	405	540	675	810	945	1080	1215
		Number of Characters Per Line (Font Standard 5/7)							
No. of Modules Vertically / Pixels	1	45	67.5	90	112.5	135	157.5	180	202.5
	2	500	750	1000	1250	1500	1750	2000	2250
	3	250	250	250	250	250	250	250	250
	4	500	750	1000	1250	1500	1750	2000	2250
No. of Lines (Font Standard 5/7)	13.5	500	750	1000	1250	1500	1750	2000	2250
	27.0	250	250	250	250	250	250	250	250
	40.5	500	750	1000	1250	1500	1750	2000	2250
	54.0	750	750	750	750	750	750	750	750
	1	500	750	1000	1250	1500	1750	2000	2250
	2	1000	1000	1000	1000	1000	1000	1000	1000
	3								
	4								

GTO.25

		Number of Modules Horizontally / Pixels							
		2	3	4	5	6	7	8	9
		200	300	400	500	600	700	800	900
		Number of Characters Per Line (Font Standard 5/7)							
No. of Modules Vertically / Pixels	1	33.3	50	66.7	83.3	100	116.7	133.3	150
	2	500	750	1000	1250	1500	1750	2000	2250
	3	250	250	250	250	250	250	250	250
	4	500	750	1000	1250	1500	1750	2000	2250
No. of Lines (Font Standard 5/7)	10.0	500	750	1000	1250	1500	1750	2000	2250
	20.0	250	250	250	250	250	250	250	250
	30.0	500	750	1000	1250	1500	1750	2000	2250
	40.0	750	750	750	750	750	750	750	750
	1	500	750	1000	1250	1500	1750	2000	2250
	2	1000	1000	1000	1000	1000	1000	1000	1000
	3								
	4								

Indicative Dimensions Table

GTO.25a

Number of Modules Horizontally / Pixels

2	256	3	384	4	512	5	640	6	768	7	896
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Number of Characters Per Line (Font Standard 5/7)

No. of Modules Vertically / Pixels		No. of Lines (Font Standard 5/7)	Number of Characters Per Line (Font Standard 5/7)					
			42,6	63,9	85,2	106,5	127,8	149,1
1	64	6.4	640	960	1280	1600	1920	2 240
2	128	12.8	160	160	160	160	160	160
3	192	19.2	640	960	1280	1600	1920	2 240
4	256	25.6	320	320	320	320	320	320
5	320	32.0	640	960	1280	1600	1920	2 240
6	384	38.4	480	480	480	480	480	480
			640	960	1280	1600	1920	2 240
			640	640	640	640	640	640
			640	960	1280	1600	1920	2 240
			800	800	800	800	800	800
			640	960	1280	1600	1920	2 240
			960	960	960	960	960	960

GTO.39

Number of Modules Horizontally / Pixels

2	128	3	192	4	256	5	320	6	384	7	448	8	512	9	576
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Number of Characters Per Line (Font Standard 5/7)

No. of Modules Vertically / Pixels		No. of Lines (Font Standard 5/7)	Number of Characters Per Line (Font Standard 5/7)					
			21.4	32.1	42.8	53.5	64.2	74.9
1	64	6.4	500	750	1000	1250	1500	1750
2	128	12.8	250	250	250	250	250	250
3	192	19.2	500	750	1000	1250	1500	1750
4	256	25.6	750	750	750	750	750	750
			500	750	1000	1250	1500	1750
			1000	1000	1000	1000	1000	1000
			500	750	1000	1250	1500	1750
			1000	1000	1000	1000	1000	1000
			500	750	1000	1250	1500	1750
			1000	1000	1000	1000	1000	1000

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
Remote device restart trigger option	RR
Power outage notification	PFN
Auxiliary security lock	ASL

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

	1	2	3	4	5	6	7	8	9
GTO									
	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

GTO	1	2	3	4	5	6	7	8
	Model	Dial Diameter	dial type	Design	Mounting	Cover Glass	Synchronization	Frame Color

Accessories

Holders:

1 Holder

Wall holder

WH.F

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

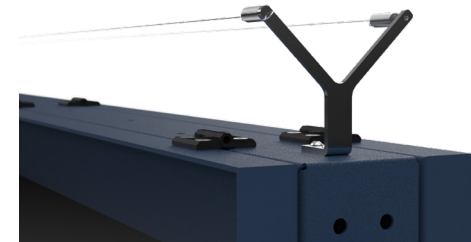
RALxxxx

Other:

Accessories

Protection against birds

GTO.BP



Order example
for display GTO.25.600.200.RGB.N.N.A.CLK.TTS.RS485.RAL5003:

WH.F.GTO.25.600.200.CLK.RAL5003

1

2

3

4

5

6

Holder

Model

Number of Pixels Horizontally

Number of Pixels Vertically

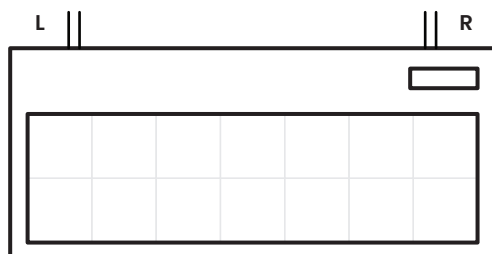
Options

Frame Color

Mounting

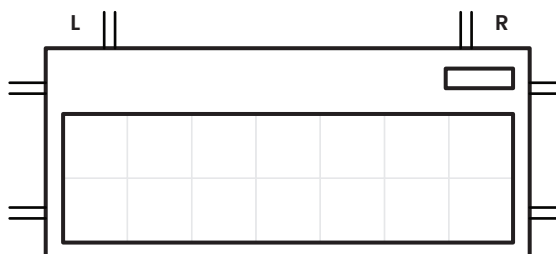
Display Part

Ceiling Suspension



Order reference: **S**

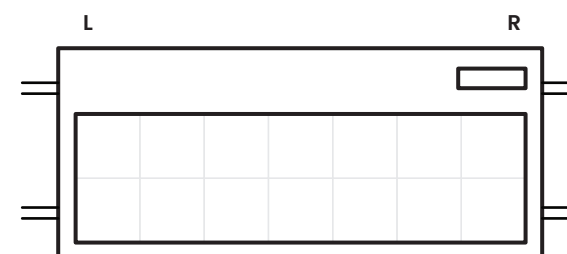
Ceiling Suspension
with Additional Fastening on Side of the Panel



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

Order reference for Double Sided: **SB**

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

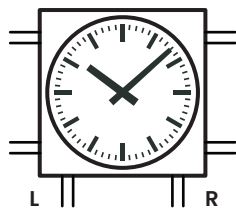


Order reference for Single Sided: **BL / BR**

Order reference for Double Sided: **B**

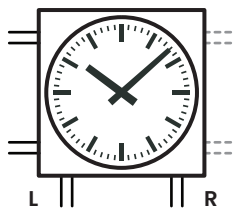
Clock Part

Assembly T



Order reference: **T**

Assembly L



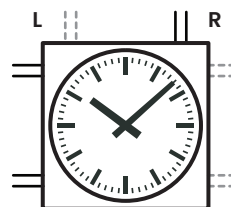
Order reference for Single Sided:

LL / LR

Order reference for Double Sided:

L

Ceiling Suspension



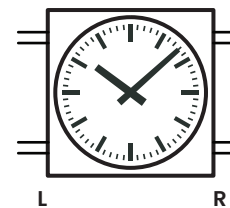
Order reference for Single Sided:

SL / SR

Order reference for Double Sided:

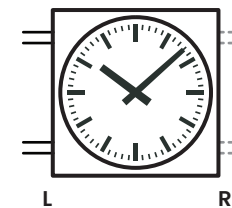
SB

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-801330.11-GTO Outdoor LED Full Matrix Information Display-260723

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