# PARKING GUIDANCE SYSTEM

## **COMPONENTS:**

TZC-100 Zone Controller TUS-100 Single Space Sensor QLD-RGB11.55-\*\*x12 Info Display







CE

Efficient use of large multi-level parking garages or huge in level parking lots can not be achieved without a system of user guidance toward available parking spaces. Parking Guidance System consists of three main components (devices) necessary for providing, collecting, processing and displaying useful information for efficient free space finding.

Single space TUS-100 Ultrasonic Sensors are device responsible for reliable detecting and providing information of availability status for each parking position within parking facility. Sensor is positioned on lightweight carrying structure or at low ceiling above each parking space, for reliable determinating whether position is occupied with parked vehicle. At the same time the sensors are mounted in such position that driver can easily observe the row of sensors during his driving along parking approaching track. Depending of parking position status, sensor emits green (meaning available), red (occupied) or blue light (special user space), so the driver can notice available "green" position from comfortable distance.

TZC-100 Zone Controller is control device for collecting and further processing information from up to 96 single parking positions (3 sets of 32 single space sensors). All parking positions controlled by one Zone controller belong to the same part of the parking facility (e.g. floor or chamber of parking garage), so the balance of free parking spaces is information useful and ready for including in Parking guidance strategy, presenting drivers which way to take for quick access to free parking position.

Parking QLD info displays through graphical and textual/ numeric messages, supported with the appropriate chromatic code, provide users with the useful information and direct them towards free parking positions within facility. Displays are positioned in front of locations where different options/ directions for continuing movement within facility exist. Real-time information is provided through a centralized management system on the basis of information from individual parking place detectors.

The main features of QLD displays:

- Full color LED matrix concept provides endless colors in combination with free tex/ graphict context,
- LED type: super-bright, wide viewing angle, OSRAM SMD RGB,
- Resolution: 11.55 mm providing a good appearance and readability of content from a distance of several tens metres,
- Arrow for any direction (left, straight, right), wheelchair or any other required pictogram or animation...



### **TECHNICAL FEATURES**

# PARKING GUIDANCE SYSTEM

#### **TUS-100 SINGLE SPACE SENSOR**

- Connection: 18 aWg 4-conductor Shelded Wire,
- Type: Ultrasonic Distance Measurement,
- Voltage: Low voltage 24 VDC,
- Data Transfer: RS-485,

#### **TZC-100 ZONE CONTROLLER**

- Configured to manage inputs from all facility single space sensors,
- Monitors single space sensors, maximum 96 single space sensors per area controlled (3 bus lines),
- Bus line maximum cable lenght 100 meters,
- Offline operation if communication to served fals,

#### QLD-RGB11.55-\*\*x12 PARKING GUIDANCE DISPLAY

- Body: Extruded aluminium,
- Dimensions: 233/ 325/ 418/ 510/ 602/ 788 x 187 x 65 mm (W x H x D), different models-different display width,
- Protection class: IP65,
- Type: LED Full color matrix,
- Dimensions: 16/ 24/ 32/ 40/ 48/ 64 x 12 pixels; 185/ 277/ 370/ 462/ 554/ 740 x 138 mm,
- Resolution (pitch): 11.55 mm,
- LED type: OSRAM RGB SMD,
- Luminosity: 22,950 cd/m<sup>2</sup>
- Viewing angle  $2\Theta_{_{1/2}}$ : horizontal and vertical - class B6 (EN 12966),

#### PGS ELECTRICAL FEATURES

In accordance to EN 12966-1:2005, paragraph 8.4

- Voltage: 5/ 24/ 48 VDC, 110/220 VAC
- Power consumption: nominal in use (approx.) 8/ 12/ 15/ 19/ 23/ 29 W, maximal 20/ 30/ 40/ 50/ 60/ 80 W,
- Insulation: Class 2,

#### **TEMPERATURE RANGE**

From -40° to +60° C
Class T3 minimal temperature (EN 12368),
Class T1 maximal temperature (EN 12368),

#### **REMOTE CONTROL**

Serial communication RS 485 - TCS protocol

#### CERTIFICATION

- EN 60950-1:2006+AC:2011+A2:2013,
- EN 50293:2012,
- CE mark approved to declare (TUV Rheinland).



Specifications are subject to change without prior notice. For more information contact office@elcombgd.rs Copyright® ElcomBgd 2018. All rights reserved.

