

# Parking Guidance System

## JPSM

Parking Guidance System Software Module



## SP-AD12E

Car Detection Ultrasonic Sensor



## PCB-xx

Capacity Counter Display



## JPZ-A120, JPZ-A240

Parking Zone Controller Unit



## JPI-SP

External LED Indicator for SP series



## PLB-xx

Level Guidance Sign Panel



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# General Description

Parking Guidance System is comprised of the following components:

- **Car Detection Ultrasonic Sensor:** It is one of the main parts of parking guidance system that uses ultrasonic signal to detect the occupancy status of each individual parking space. At regular intervals, the sensor emits an ultrasonic pulse and measures the time delay until the echo pulse is received. If the echo time deviates from the floor echo time measured during calibration, the sensor will assume a car is present. Multiple sensors can be calibrated simultaneously by issuing a calibration command via the network. The sensor is available with built-in 2-colour LED's for indication of the space status, but in many cases it is a better solution in terms of visibility to use external LED indicators. This device communicates to Parking Zone Control Unit, through data network using Modbus+9 protocol (free protocol) over RS-485 physical layer.
- **External Indicator:** With the external 3-colour LED-indicator it is possible to indicate 3 different states for each space, green for available, red for occupied and yellow for reserved space, so drivers can quickly and easily identify open spaces.
- **Parking Zone Controller Unit:** The Parking area will be divided into zones. Each zone has a zone controller that is linked via RS 485 bus to all the sensors in that zone. The Zone Controller communicates real time with all the sensors in that zone. The zone controller polls each sensor individually for its current state and be able to report this state, including sensor failure to the Central Control system when it in turn is polled.
- **Software Module:** With Software Module it is possible to monitor and control the parking system from one or several central locations. Features include monitoring of real-time status based on graphical images and key figures for the various floors and areas, monitoring of alarms, and the possibility to book places in the parking system. In order to provide useful statistical information, all parking events are stored in a database. Based on this it is possible to obtain historical reports e.g. for occupancy rates, place rotation frequencies, place popularity rates and alarms.
- **Level Guidance Sign Panel**

## Applications

Covered parking lots include:

- Regional, National, and International Airports
  - Public and Private Universities, Large or Small
  - Indoor or Outdoor Malls, Retail Venues
  - Hospitals, Medical Centers, University Campus, and more...
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# Main Features

- **Managed Network Structure**  
Networked feature allows you to install and manage up to 240 car detection sensors per each JPZ-A240.
- **High Security Mode**  
In high security mode, defined spaces will lock when a vehicle parks. To release a locked park space, an unlock process shall be launch by security man. If the vehicle go out of the locked park space without unlock process, system will close all the gate barriers and the alarm will be enabled automatically.
- **Internal and External Indicator**  
SP-xxx has an internal indicator to show space vacancy status. It also supports an external indicator when the internal indicator is not visible or environmental light is high.

# Specifications

- SP-AD12E

Electrical	Mechanical	General	Communication
<b>Power</b> 15V AC, 50 Hz, 69mA	<b>Operating Temperature</b> -10 to +60 °C	<b>Principle</b> Ultrasonic	<b>Protocol</b> Modbus +9 (A free protocol)
	<b>Storage Temperature</b> -10 to +75 °C	<b>Best Detecting Range</b> 121cm ~ 312cm	<b>Transmission</b> RS-485
	<b>Mounting</b> Ceil Mount	<b>Max Error</b> 6cm	<b>Allowed Cable Distance</b> <1000m
	<b>Dimension</b> 80mm x 75mm x 28.5mm	<b>Management</b> Central Management Server (Win and Web based)	
	<b>Weight</b> 93g	<b>Material</b> ABS	
		<b>Color</b> White	

# Ordering Guide

Part Number	Description
JPSM	Parking Guidance System Software Module
JPZ-A120	Parking Zone Controller Unit for Maximum 120 Car Space
JPZ-A240	Parking Zone Controller Unit for Maximum 240 Car Space
SP-AD12E	Car Detection Ultrasonic Sensor
JPI-SP	External LED Indicator for SP series
PCB-xx	Capacity Counter Display
PLB-xx	Level Guidance Sign Panel
TAP-P003	Passive TAP Terminal

