

CPS™

Car Park System

Gas Monitoring Controller

Fixed Gas Detection for parking facilities and tunnels



- Up to 256 points per system
- Up to 1,000 times faster than a pump system
- Parking facility electricity savings of up to 40%

AVAILABLE FOR ALL VEHICLES

Diesel
Gasoline
LPG
Biofuel
Electrical



The Fixed Gas Detection People

OLDHAM
An Industrial Scientific Company

www.oldhamgas.com

Safe, accurate and reliable

The CPS Car Park System™ provides accurate and reliable monitoring for the highest level of protection in parking facilities and tunnels. The system was designed to comply with the high safety standards enforced in such European countries as Germany, the Netherlands and Belgium.

Economical

Continuous monitoring significantly reduces your operating costs by optimizing the efficiency of ventilation systems and servo controls. Such efficiencies can produce energy savings of up to 40% when used with specific equipment.



8 lines of 32 modules: up to 256 slaves per central

Backlit LCD display showing the gas concentration.

3 operation status LEDs

In alarm conditions, CPS shows real-time gas concentrations for the related zones.



Up to 40% electricity savings per year compared to a conventional system.

Analysis in underground Parkings of Arras, France.

Versatile

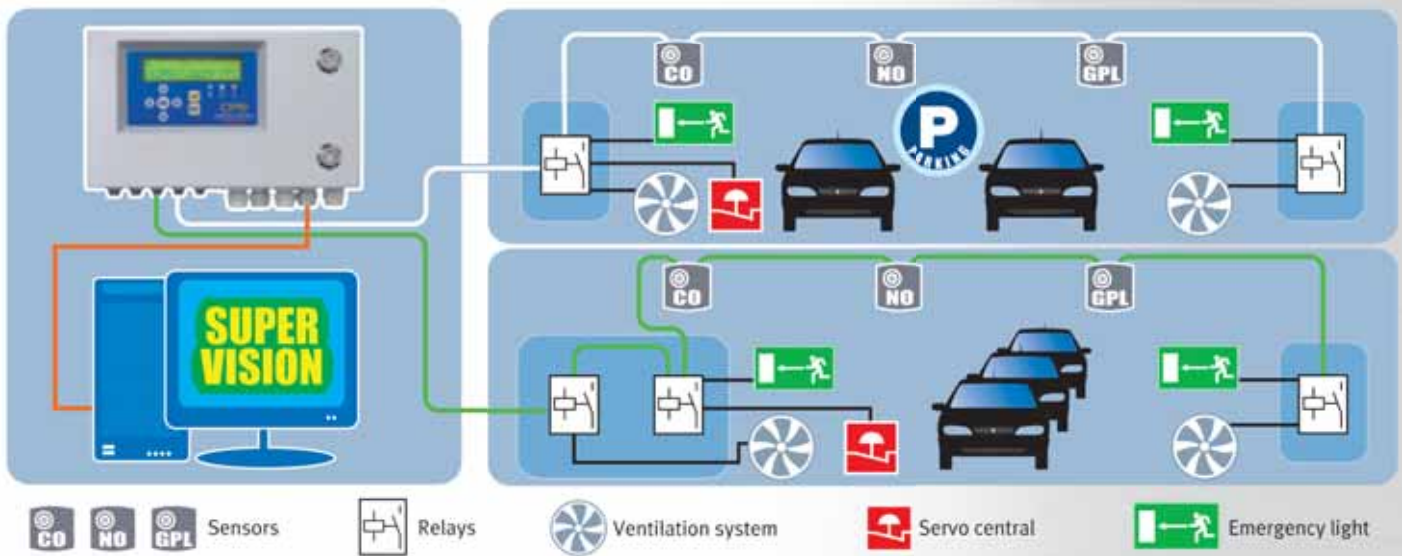
Available in wall- and rack- mounted versions, the CPS™ central controller and its various modules are user-programmable for specific applications. The system's networking technology also enables the Car Park System™ to adapt to any installation up to:

- 256 sensors capable of monitoring 6 different gases
- 256 addressable relays
- 64 logic inputs
- 256 analog outputs.

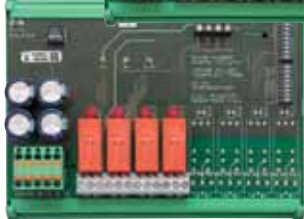
Several servo controls can be used: low speed/high speed, delays, forced operation, night mode, etc.



EXAMPLE OF PARKING FACILITIES APPLICATION



CPS 10
sensor
module



MODULE SPECIFICATIONS

CPS 10 SENSOR MODULE

| | |
|--|---|
| Dimensions | 118 mm x 110 mm x 60 mm (4.65" x 4.35" x 2.36") |
| Degree of protection | IP 54 |
| Cable glands | 2 M16 cable glands 4-8 mm diameter – Power supply / local relays |
| Consumption | 2.5 mA for the toxic sensor (max 4-20 mA) 50 mA expo: max 90.7 mA |
| Status indication after calibration | Red/green electroluminescent diode |
| Calibration | Automatic, non-intrusive |
| Measuring ranges | Carbon Monoxide – 0 to 300 ppm in 1 ppm increments Nitric Oxide – 0 to 100 ppm in 1 ppm increments Nitrogen Dioxide – 0 to 30 ppm in 0.1 ppm increments Methane – 0 to 100% LEL in 1% increments Liquefied Petroleum Gas – 0-100% LEL in 1% increments Hydrogen – 0 to 100% LEL in 1% increments |
| Sensor replacement | Sensor replacement switch on the interior of the CPS 10 case |

CPS RM4 OR RM8 RELAY MODULE

| | |
|--|---|
| Dimensions | 125 mm x 165 mm x 60 mm (4.92" x 6.5" x 2.36") |
| Number of relays | 4 relays (CPS RM4); 8 relays (CPS RM8) – Contacts: RCT-type |
| Contact rating | 2 A / 250 V |
| Consumption | 3.4 mA (max: 5.7 mA) |
| Connection | Screwing Terminals (cable: 1.5 mm ²) |
| Mounting | On DIN rail |
| Configuration of positive or negative relay security with mini switches. Relay modules are equipped with 2 all-or-nothing inputs. | |

CPS DI16 LOGIC INPUT MODULE

| | |
|--|--|
| Dimensions | 125 mm x 165 mm x 60 mm (4.92" x 6.5" x 2.36") |
| Number of all-or-nothing inputs | 16 |
| Consumption | 3.2 mA (max: 5.5 mA) |

CPS A04 ANALOG OUTPUT MODULE

| | |
|---------------------------------|--|
| Dimensions | 125 mm x 165 mm x 60 mm (4.92" x 6.5" x 2.36") |
| Number of analog outputs | 4 |
| Consumption | 130 mA (max: 256 mA) |

CPS™ CENTRAL DETECTION CONTROLLER
Wall-mount dimensions

320 mm x 180 mm x 95 mm (12.6" x 7.09" x 3.74")

Degree of protection

IP 54

Cable Glands

 5 M20 cable glands – Diameter: 5 to 12 mm for power supply and local relays
 9 grommets - Diameter: 5 to 7 mm or PG-9.

Rack-mount dimensions

Length: 19" - Height: 4 U (176 mm)

Degree of protection

IP 31

OPERATING CONDITIONS
Ambient temperature

-10°C to +40°C

Storage temperature

-20°C to +85°C

Humidity

5 to 95% noncondensing

Main power supply

Voltage: 85 to 264 VAC Current: 1.5 A (115 VAC) / 0.8 A (230 VAC)

Internal back-up battery

Optional, 600 mA/h capacity

Consumption

140 mA + 12 mA per measurement line (240 mA max.)

MEASURING LINES
Capacity

8 lines of 32 modules

Cable type

2 shielded twisted pairs RS-485 cable

Module power supply

12 to 30 VCC power supply delivered to modules via the central controller

Digital Module Network

ModBus RS-485, 1-32 addresses selected with mini switches.

Isolation

1500 V between the power supply and the digital network

Display

 Backlit LCD display screen
 (2 lines of 32 characters each – 1 line of pictograms)
 3 operation status LEDs: OK, Fault, Alarms

Keyboard

Intuitive 7-key

Local buzzer

Audible alarm and fault signals

Integrated printer

Optional for rack-mounted version

ALARMS
Number of alarms

6 per sensor (Out of range – Fault)

Programmable thresholds

For instantaneous or averaged values, increasing or decreasing values, and manual or automatic rearming

3 local internal relays

R1 (alarm/fault) – R2 (alarm) – R3 (alarm)

Minimum charge for RCT contacts

2A/250 VAC-30 VCC (resistive charge)

Digital Outputs

 ModBus RS-485 protocol (connection with a centralized supervision device)
 RS-232 or USB: USB protocol priority (permanent connection to system configuration)

APPROVALS
Low Voltage Directive

This device is in compliance with the security requirements of Directive 73/23/EEC, modified by Directive 93/68/EEC, based on standard 61010-1 and its second amendment

Metrology

Underground parking facilities: according to VDI 2053

EMC Electromagnetic compatibility

According to EN 50270



*Excluding batteries, sensors and consumable parts.

