GazDetect

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www.gazdetect.com
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▶ CPS

Parking gas detection unit

Technical specifications

Power supply: 85 to 264 Vac / Consumption: 1.5 A
Internal backup battery: Optional, capacity 600 mA / h
Capacity: 8 lines of 32 modules or 256 gas sensors
Cable type: 2 shielded twisted pairs RS485
Module power supply: 12 to 30Vdc delivered by the control panel
Digital network of modules: RS485 Modbus, addresses 1 to 32 selectable by mini-switches
Isolation: 1500 V between power supply and digital network
Display: Backlit LCD display (2 lines of 32 characters, 1 line of pictograms, 3 LEDs for operating status)
Keyboard: Intuitive 7 keys
Local buzzer: Audible alarm and fault signal
Alarms: 6 alarms per sensor (programmable thresholds on instantaneous or average values, by increasing or decreasing value, with manual or automatic reset)
Relay output: 3 internal local relays
Digital outputs:
● RS485 Modbus Protocol (connection with centralized supervision equipment)
● RS232 or USB for connection to a printer
Dimensions: 320 x 180 x 95 mm (wall version) or 19"4 U (rack)
Protection: IP54 (wall version) or IP31 (rack version)
Cable inputs / outputs: 5 M20 cable glands for local power supply and relays / 9 wire pass or PG 9
Operating conditions:
● Temperature: -10 to +40 ° C
● Humidity: 5 to 95% RH (non-condensing)
Certifications:
● Low Voltage Directive: The device complies with the safety requirements of directive 2014/35 / EU
● Metrology: Underground car parks: according to VDI 2053
● EMC electromagnetic: According to EN 50270

Product description

The **CPS** (Car Park System) has been specially developed for the measurement and control of pollutants in parking lots and tunnels. This continuous monitoring system significantly reduces operating costs by optimizing the efficiency of ventilation and smoke extraction systems.

Available in a 19 " wall or rack version, the **CPS** control panel and its various alarm modules can manage up to 256 gas sensors distributed over 8 lines. Several ventilation run orders are available such as low or high speed, timed run, forced run, night mode, etc..

▶ Parking gas detection

The presence of gas detection systems in parking lots is a necessity for the safety of users. Car parks are confined spaces and exhaust fumes emitted by vehicles' combustion engines can be dangerous to health.

The main harmful gases present in car parks and tunnels are carbon monoxide (CO) and nitrogen oxides (NOx). Other gases are also present, in lower concentrations such as LPG (liquefied petroleum gas) and recently hydrogen (H2) emitted when charging electric vehicles.

▶ Real energy savings

In order to minimize risks associated to the presence of combustion gases, most car parks are equipped with air extractors. These devices, although effective, are very expensive in energy because the ventilation systems operate at fixed times or randomly unrelated to toxic gases concentrations…

The technology used by the **CPS** unit allows continuous air control. The direct consequence is a significant and immediate reduction in operating costs in addition to the safety aspect of air quality control. This device will allow proper management of ventilation systems and other controls that will be optimally operating based on the exact gas concentrations.

▶ The main advantages of the CPS
● Continuous air quality control with significant reduction in operating costs by optimum ventilation system operation.
● A flexible and scalable system up to 256 gas sensors including CO, NO, NO2, LPG and H2
● Several operating orders available such as low or high speed, timed work, forced work, night mode, etc.
● 6 programmable alarm thresholds by detectors for better management of servos and smoke extraction
● Suitable for most car parks, from small 1,500 m2 car parks to larger car parks

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# Modules specifications

▶ CPS10 sensor module

Detected gases: CO, NO, NO2, GPL, H2
Dimensions: 118 mm x 110 mm x 60 mm – IP rating: IP 65
Inputs/Outputs: 2 M16 cable glands (cable Ø 4 to 8 mm)
Sensor consumption: 2.5 mA (CO, NO, NO2) – 50 mA (GPL and H2)
Status indication during calibration: Red/green LED
Calibration: Automatic, without sensor opening

▶ CPS RM4 & RM8 relay module
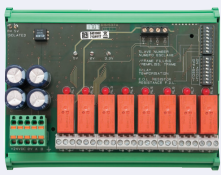
Dimensions: 125 x 165 x 60 mm
Mounting: Snap-on DIN rail, box mounting
2 available relay modules: CPS RM4 (4 relay outputs) or CPS RM8 (8 relay outputs)
Contact types: NO/NF potential free, nominal contact load: 2A/250 V on resistive load
Connection: Screw terminals (cable: 1,5 mm² maximum**)**
Consumption: 3,5 mA in normal operation (maximum 5,7 mA)

▶ CPS DI16 logic input module
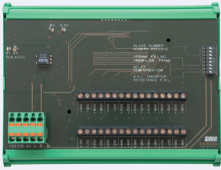
Function: Emergency stop management, forced operation or emergency box for example
Dimensions: 125 x 165 x 60 mm
Mounting: Snap-on DIN rail, box mounting
Number of digital inputs: 16
Connection: Screw terminals (cable: 1,5 mm² maximum)
Consumption: 3,2 mA in normal operation (maximum 5,5 mA)

▶ CPS analog output module

Function: Copying channel or channels average measurement
Dimensions: 125 x 165 x 60 mm
Mounting: Snap-on DIN rail, box mounting
Number of analog outputs: 4
Connection: Screw terminals (cable: 1,5 mm² maximum)
Consumption: 130 mA in normal operation (maximum 256 mA)

▶ CPS DI16 logic input module

CO | NO | GPL Sensors — Relays — Ventilation system — Server — Emergency light