

Park2000/5000 NCO100 CO Detection



General description

Park Series Control Panels

The carbon monoxide detection control panels in the Park series are specially designed for the use in garages, in compliance with the rules and regulations relating to the installation of safety systems in buildings.

Each zone supports a maximum number of 16 NCO100 detectors, distributed along a line of up to 1000 m in length, consisting of a shielded twisted cable with a minimum 1.5 sqm cross-section. The control panel features an LCD control module which indicates the alarm levels and malfunctions in each zone, allowing the sequential reading of the CO concentration in each zone. The Park system allows the reading of the CO concentration and ambient temperature for each detector and the identification of connection errors caused by the loss of address or line failure.

The control panel includes direct user functions, which can be accessed by typing a numeric code. These allow the events to be identified, the audible alarm to be turned off, and the ventilation / exhaust system to be activated, if the manual mode has been configured.

All important programming functions can be accessed from the unit's keypad.

NCO100 Detectors

The CO detector is an electrochemical sensor that essentially consists of two electrodes: the "sensing" electrode and the "counter" electrode, separated by a thin electrolytic layer.

The electrolytic layer can be in liquid, gel or, more recently, solid form.

The electrolyte is isolated from the outer environment by a gas-permeable membrane. The gas enters the sensor by diffusion, crosses the membrane and, if an oxidation reaction occurs, a polarisation voltage will be generated and applied to the electrodes, resulting in a variation of the electrical current that is directly proportional to the gas concentration. This type of sensor provides very high resolution and sensitivity and has been developed to ensure the selective detection of a certain gas.

However, the detector may be able to detect certain concentrations of other gases. The characteristics of the so-called "cross-reference" are provided in the manufacturer's documentation, defined by the relevant standard and attested by the corresponding certificate issued by the testing laboratory.

The typical lifespan of the electrochemical sensor is 4 years. However, the actual duration depends on the concentration of gas in the environment, on the chemical reaction causing the consumption of the electrode, and on the electrolyte.

Technical specifications - Park series control panels

Supply voltage	230 V AC \pm 10%
Zone module supply voltage	24 V DC
Maximum power / zone module P100	8.4 W to 24V.
CO concentration measurement range	0 ppm to 300 ppm.
Reading modes	Maximum reading value
Operating temperature	-10°C to 50°C.
Zone connection	Shielded twisted pair cable, 1.5 sqm cross-section
Maximum length of line / zone	1000 m
Maximum no. of detectors / zone	16 detectors.
Control outlets for ventilation / P100 module	2 dry contacts, switching max. 250 V AC / 10 A
Alarm output / P100 module	1 dry contact, switching max. 120 V AC / 1 A, 30 V DC / 1 A
Fault output	1 dry contact, switching max. 120 V AC / 1 A, 30 V DC / 1 A
Ventilation activation levels	Configurable

Alarm activation level	Configurable
Operating modes	Four modes. Economic mode, automatic mode, manual mode and test mode.
Keypad	Six multifunctional keys.
Indicators and display elements	2x16-character LCD. 10 LEDs (alarm, fault, powersave mode, automatic mode, manual mode, testing mode, ventilation activated 1, ventilation activated 2, operation, selection)
Certification:	LOM08MOGA3658

Mechanical specifications for the Park2000 control panel

Size (L x l x G):	272 x 228 x 94 (mm)
Weight:	3.4 kg

Mechanical specifications for the Park5000 control panel

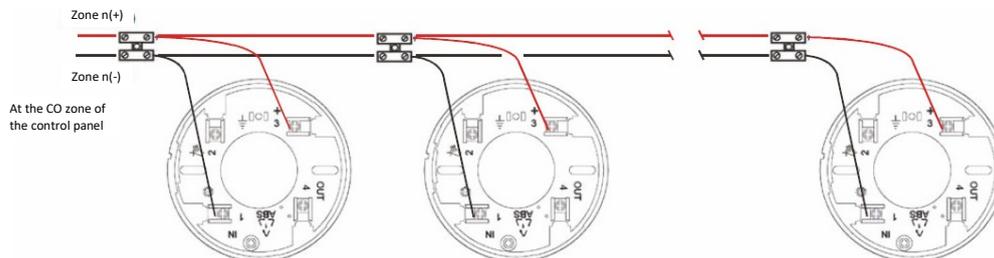
Size (L x l x G):	357 x 382 x 94 (mm)
Weight:	5.6 kg

Mechanical specifications for the NCO100 detector

Size:	\varnothing 100 x 70 (mm) including socket
Weight:	100 g

Parallel connection of NCO100 detectors (optimal configuration)

The detectors are connected at the terminal corresponding to the line (zone). When one detector is removed, the other detectors remain connected; the control panel will indicate the corresponding failure in the zone, due to the loss of equipment.



Serial connection of NCO100 detectors

Each detector is connected to the output of the previous one. If one detector is removed, the next detectors on the line will be disconnected. The control panel will indicate the corresponding failure in the zone and the open line. The Park2000 / Park5000 control panels use an addressable digital communication system, for which this type of connection is not recommended.

