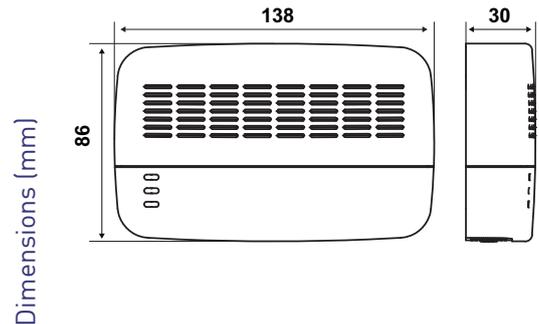


Sicurgas P21-P22

Gas leak detectors for methane gas and LPG for civil environments with catalytic sensor and pre-alarm

Sicurgas is a device that through a sensitive sensor, detects methane gas concentration (P21) and LPG concentration (P22) in domestic environments.



	Gas type	Power supply	Contacts rating	Silencer button	Operating ambient temperature	Protection degree
P21	METHANE	230Vac - 50Hz	6(2)A - 250Vac	YES (pull cord)	-10 ÷ 40 °C	IP42
P22	LPG	230Vac - 50Hz	6(2)A - 250Vac	YES	-10 ÷ 40 °C	IP42

ELECTRICAL CHARACTERISTICS

Power supply: 230Vac 50Hz.

Consumption: 4 VA.

Output through 2 electromagnetic relays.

Contacts rating: 6(2)A - 250Vac.

Maximum power of the controlled valve: 450VA.

STANDARDS AND APPROVALS

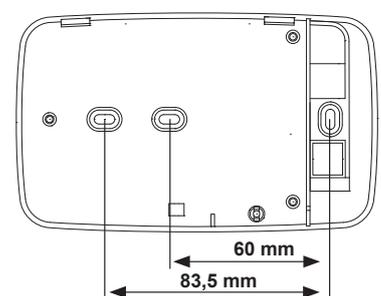
Complies with EN 50194, EN 60730-1 standards.

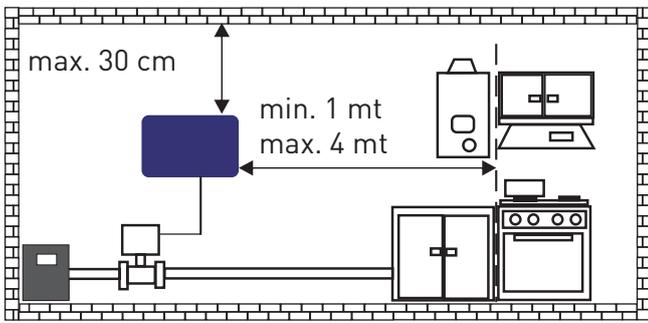


INSTALLATION

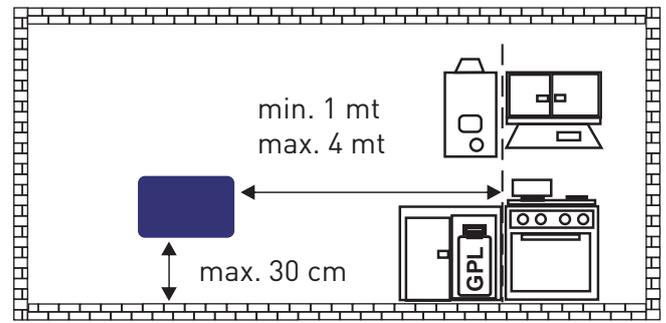
Mounting in built-in 3-module boxes, on the wall or in round boxes.

Mounting hole suitable for built-in 3-module boxes.





METHANE is a gas lighter than air, the maximum concentration is located near the ceiling.
Install the unit on the wall, about 30 cm from the ceiling and at a distance from gas using device, between a minimum of 1 meter and a maximum of 4 meters.



LPG is a gas heavier than air; the maximum concentration is located near the floor.
Install the unit approximately 2 meters (minimum 1m, maximum 4m) from the gas using device and about 30 cm from the floor.

OPERATION

SICURGAS is a device that through a sensitive sensor, detects methane gas concentration (P21) and LPG concentration (P22) in domestic environments.
Sicurgas is equipped with two internal alarms: one visible and one acoustic.

Sicurgas operates a PRE-ALARM when the gas concentration in the air is much under the lower explosion limit (L.E.L.), immediately turning on the red light and activating a possible signaling device (eg.: modem).

If the pre-alarm status persists and consequently the concentration increases depending of the L.E.L. an alarm occurs, in addition to visual signaling also it is activated an acoustic signal that warns the danger, simultaneously Sicurgas is making the relay to interfere in order to control the gas interception valve.

Sicurgas sensor, as all available on the market sensors, while being very selective can also participate for other substances, for example: alcohol vapors, wine etc.

For example, during the use of wine while preparing food is possible, that the detector will enter in alarm situation. To avoid this inconvenience, Sicurgas is equipped with an alarm silencing key, operated with:

- pull cord for Sicurgas P21 for methane gas (mounted up on the wall, 30 cm from ceiling);
- key under Sicurgas P22 body for LPG (mounted down on the wall, 30 cm from the floor).

N.B. silencing key must be pressed for at least 1 second.

After having pressed the silencing key, for 10 minutes we will have a non-alarm situation: the buzzer does not emits acoustic signaling, the relay returns in non-alarm position and the red and yellow leds are flashing alternately to indicate the silence period; acting again on the switch during 10 minutes of the silence period, the detector will immediately resume the normal operation.

After 10 minutes, the detector automatically resumes the normal operation.

Here is possible, knowing that can be used substances which can cause a false alarm, to reduce in advance detector's sound to prevent the signalizations and gas shut off of the stoves (due to gas valve intervention).

SOME OF THE MOST COMMON SUBSTANCES THAT CAN CAUSE A FALSE ALARM ARE THE FOLLOWING:

wine, liquors, alcohol, deodorants, stain-removers, varnish thinners, hair spray, excessive steam.

The internal relay of Sicurgas P21-P22 can control all kind of valves with manual reset:

- normally closed (NC), always power supplied, which require a commutating stable relay;
- normally open (NO), which require an impulse relay.
- it is recommended to use a valve with manual reset to stop the gas supply when there is an alarm situation.

The operating mode of the relay is selected during installation, by moving a switch on the printed circuit, usually provided:

- for operation with stable relay for NC valves (switch in down position);
- for operation with impulse relay for NO valves (switch in up position).

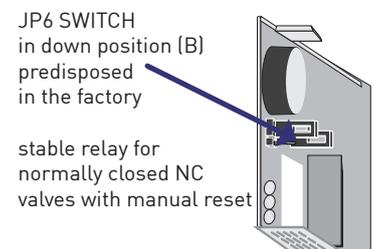
With normally closed valves, always power supplied, the system guarantees maximum safety, the gas inflow will be stopped in case of:

- gas concentration threshold exceeding;
- power supply lack of the valve only or of the detector;
- connection breakdown between the detector and valve.



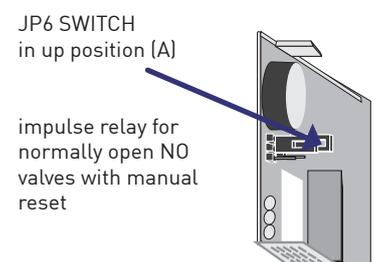
SILENCING KEY
Sicurgas P22

PULL CORD
Sicurgas P21



JP6 SWITCH
in down position (B)
predisposed
in the factory

stable relay for
normally closed NC
valves with manual reset



JP6 SWITCH
in up position (A)

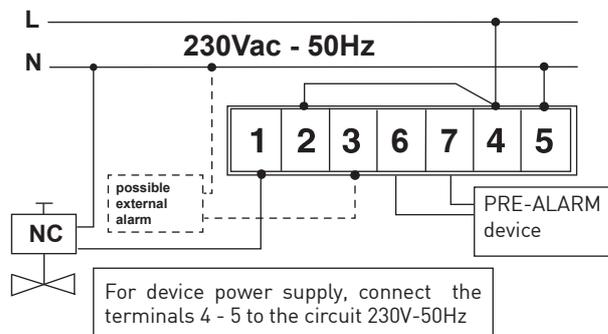
impulse relay for
normally open NO
valves with manual
reset

EXAMPLE OF CONNECTION of Sicurgas P21 with STABLE RELAY, to control a normally closed NC valve with manual reset (down switch).

With normally closed valves, always power supplied, the system guarantees maximum safety, the gas inflow will be interrupted in case of:

- gas concentration threshold exceeding;
- power supply lack of the valve only or of the detector;
- connection breakdown between the detector and valve.

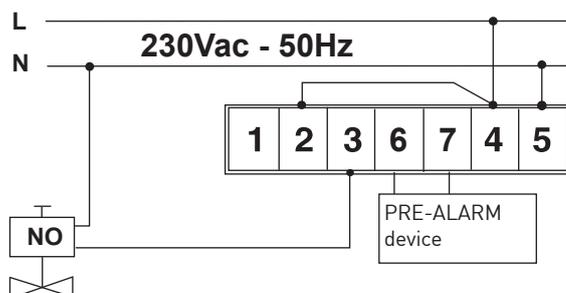
EXAMPLES OF CONNECTION



EXAMPLE OF CONNECTION of Sicurgas P21 with IMPULSE RELAY, with current activation, to control a normally open NO valve with manual reset (switch in up position).

With normally open valves, with current activation, the system guarantees the gas inflow interruption in case of:

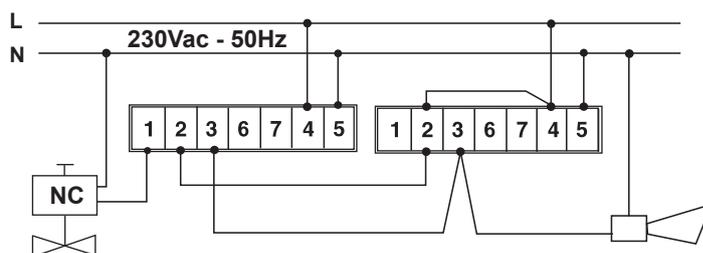
- gas concentration threshold exceeding.



Using more Sicurgas P21- P22 units to control several rooms with one gas valve.

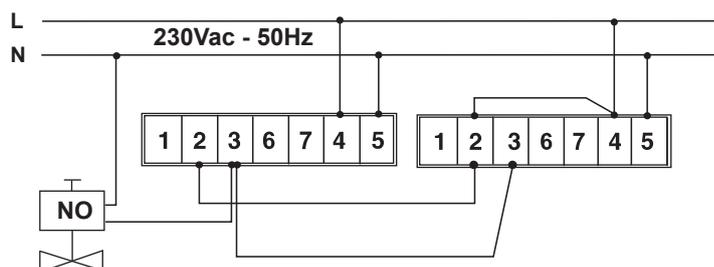
Example of connection for several Sicurgas detectors with stable relay that control the same normally closed valve NC and an additional external alarm.

The contacts must be connected in series.



Example of connection for several Sicurgas detectors with impulse relay which control the same normally open valve NO.

The contacts must be connected in parallel.



TECHNICAL FEATURES

Catalytic sensor for gas detection (can be replaced).

Shockproof insulating material casing.

Internal visual and acoustic alarms.

Sicurgas has three warning lights:

- green LED - indicates that the detector works properly;
- yellow LED - indicates detector failure;
- red LED - indicates the gas presence in the environment (ALARM).

Sensor life time approximately 5 years (in clean air) from installation.

The used relay is sealed and filled with inert gas, which ensures in any case the absolute absence of sparks during switching phases.

Internal switch for choosing the functioning mode of the relay: stable or impulse.

ACCESSORIES



EP21
Replacement sensor for P21 - methane.



EP22
Replacement sensor for P22 - LPG.



S80
Emergency signaling device
with fixed light and continuous
sound.