INTELLIGAS®

Gas leak detectors

for residential and similar use

In conformity with Standard EN50194

LYA14..

Electronic gas leak detectors with one threshold for residential use. 230VAC power supply, SPDT relay output suitable for 230VAC solenoid valve or other signalling or activating devices.

Use

The LYA14.. detectors have been engineered to provide both optical and acoustical alarm and activate a solenoid valve for shutting off the gas flow (or other auxiliary devices) in presence of dangerous concentration of:

- methane (CH4)
- LPG

Operation

When the detector is supplied with 230VAC, it runs a preheating phase that lasts about 60s. During this period the detector is inactive. After the preheating phase the detector enters in normal operating condition. In case of a gas leak, when the gas concentration in the air exceeds the preset threshold, the detector signals the alarm condition lighting on the red LED, activates the buzzer and energises the internal relay for closing the manual reset solenoid valve in order to cut the flow of gas. When the cause of alarm has been removed, the detector returns to normal operation. To re-establish the normal gas supply condition it is necessary to open manually the solenoid valve acting on its appropriate reset device.

Available models

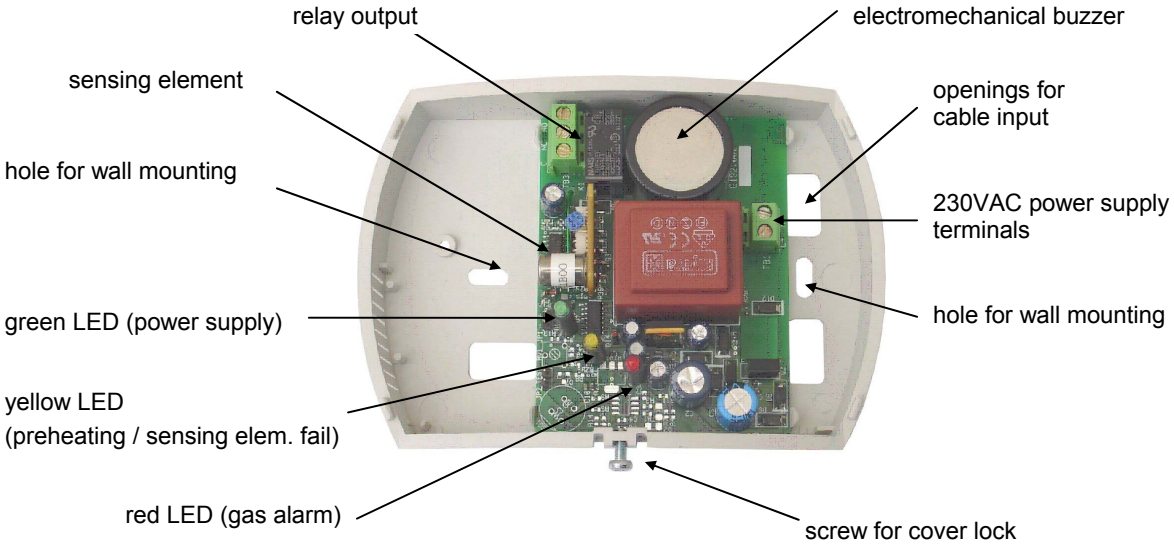
Description :	Type :
Methane gas (CH4) detector	LYA14.G
LPG detector	LYA14.P

Functional table

Outputs / Detector	GREEN LED	YELLOW LED	RED LED	RELAY	BUZZER
OFF (no power supply)	OFF	OFF	OFF	OFF	OFF
Preheating (60s)	ON	ON	OFF	OFF	OFF
Normal operation	ON	OFF	OFF	OFF	OFF
Gas alarm	ON	OFF	ON	ON	ON
Sensing element fault	ON	ON	OFF	OFF	OFF

ON = lit / activated

OFF = off / deactivated



Features

The LYA14... detectors consist of two parts: an ABS self-extinguishing housing with a removable cover and a part containing the electronic circuit, terminals and sensing element. There are three LEDs on the cover: green, yellow and red for indicating normal operation, preheating/sensor failure and gas alarm, respectively. The detectors are factory-calibrated to assure intervention at gas concentrations below the dangerous limit.

Installation recommendations

The installer must respect the existing standards concerning the electrical connections. The detector must be directly connected to the mains (without any switches) and be permanently powered on.

The detectors must be replaced after 5 years from the date of installation.

Ordering

Indicate the complete item code of the detector (see also “AVAILABLE MODELS”).

LYA14.G

LYA14.P

Commissioning

Read carefully the instructions provided with the detector. Keep it in a safe place for future use. Respect all the existing regulations concerning the installation of electrical equipment.

Environmental compatibility and disposal

This product was developed and manufactured using materials and processes which take full account of environmental issues and which comply with our environmental standards. Please note the following for disposal at the end of the product life, or in the event of its replacement:

- For disposal, this product is defined as waste from electrical and electronic equipment ("electronic waste"); do not dispose of it as household waste. This applies particularly to the PCB assembly.
- Always use the most environmentally compatible method of disposal, in line with the state-of-the-art technology in environmental protection, recycling, and waste management..

  Observe all local and applicable laws.
- Always aim for maximum re-use of the basic materials at minimum environmental stress. Observe any notes on materials and disposal that may be attached to individual components.
- Use local depots and waste management companies, or refer to your supplier or manufacturer to return used products or to obtain further information on environmental compatibility and waste disposal.

Packaging

The LYA14.. is delivered in re-usable packaging. Please retain the packaging for later use or in case you need to return the product to the manufacturer.

Technical data

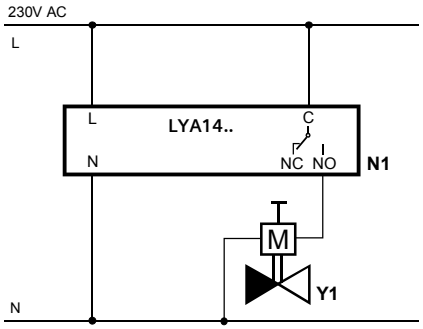
Power supply	230VAC +10/-15%
Frequency	50/60 Hz
Consumption	4 VA
Output signal	SPDT relay 250V 5(3)A
Type of solenoid valve (see data sheet n° 7684)	N.O. type E..E-AC (230VAC) or N.C. type E..D-AC (230VAC)
Alarm threshold	
LYA14.G	9 % LEL of methane (*)
LYA14.P	9 % LEL di LPG (*)
Lifetime (average)	5 years from installation date
Max surface covered	about 40 m^2 (indicative)
Optical signals	green LED (power supply on) yellow LED (preheating / sensor failure) red LED (gas alarm)
Acoustic signal	electromechanical buzzer 85dB at 1m
Protection degree	IP42 when correctly installed
Product standard	EN50194
CE - conformity	
Electromagnetic compatibility EMC Low voltage directive LVD	89/336/EEC – EN50270 73/23/EEC – EN60335-1
Admissible room temperature	0...+40 °C
Admissible room humidity	30... 90% U.R. without condensation
Dimensions	139mm x 98mm x 40mm
Housing	ABS/PC UL94-V0 self-extinguishing

(*) LEL= Lower Explosivity Limit

Connection diagrams

Diagram 1:

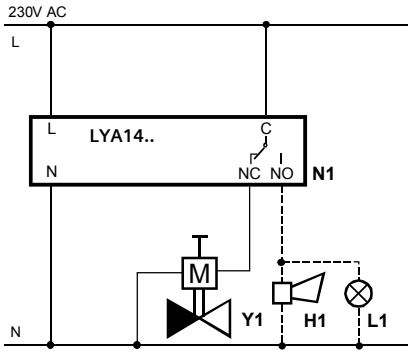
LYA14.. detector with 230VAC N.O. solenoid valve type E..EAC



N1 = LYA14..
Y1 = 230VAC N.O. solenoid valve type E..EAC

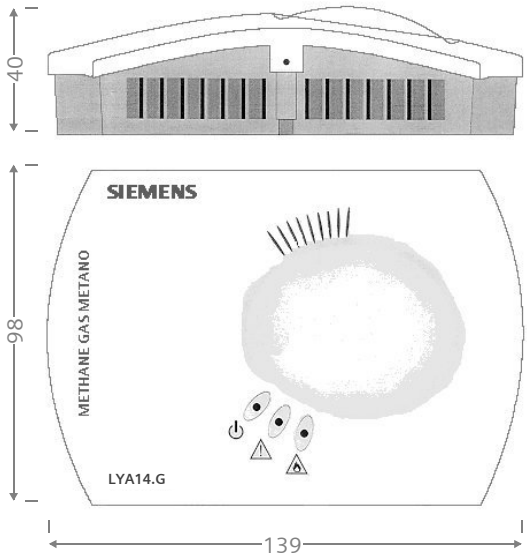
Diagram 2:

LYA14.. detector with 230VAC N.C. solenoid valve type E..DAC
Optional buzzer or signalling lamps.



N1 = LYA14
Y1 = 230VAC N.C. solenoid valve type E..DAC
L1 = 230VAC signalling lamp
H1 = 230VAC buzzer

Dimensions



Dimensions in mm

Subject to modification