



Product Overview

The AX-GLD-P82 Gas Leak Detection system is suitable for use in Boiler Rooms and other Commercial applications to provide safety and shut down facilities in the event of gas leakage. The Control unit has upto 4 zones for connecting upto 4 remote sensors. They are mounted in DIN rail housings

The units come complete with output relays to operate auxiliary devices such as Gas Solenoid Valves or sirens and fault remote signalling are fitted to all units.

Features

- 12Vac/dc supply
- Upto Four Zones
- Audio and Visual Alarm
- Adjustable Alarm Sensitivity
- Relay output for Gas Valves and Remote Alarms
- Auto or Manual Reset

Product Specifications

Power Supply:		12Vac/dc +/- 10%
Power Consumption:	1 sensor	160mA (max 320mA)
	4 sensors	280mA (max 920mA)
Relay Contact Rating:		2 x SPDT 8(1)A@250Vac
Alarm Thresholds:		well below the Gas LEL 16%
Audible Alarm:		Approx 60db @1m
Ambient Temp. Range:		-10 deg C to + 50degC
LED Indication:	Control Unit	Red Power on Yellow General Failure Yellow 4 x sensor fault Red 4 x gas alarm
Maximum Distance Control to Sensor:		50m
Dimensions:		158 x 90 x 58mm (9 DIN)
Weight:	Control Unit	0.25 kgs
	Sensors	0.18kgs
Protection:	Control Unit	IP40
	Sensor	IP54
Conformity:		CE marked, EN61779-1-4; CEI 216-5/1; EMC 89/336/CEE; EN 50270
Country of Origin:		Italy

Order Codes

AX-GLD-P82	Four Channel Gas Leak Alarm Control Unit -DIN Rail mount
AX-GS-S81	LNG Sensor (Methane)
AX-GS-S82	LPG Sensor (Propane)
AX-GS-S83	Carbon Monoxide Sensor (CO)

ATEX versions also available

Installation

- 1) The sensor must be sited in a dry space where the ambient conditions are met. If sited in a space classified as 'Dangerous' it must be installed in a cabinet for electrical devices, constructed according to regulations in force for the danger class involved.
- 2) The controller can be installed either on a DIN rail or in a DIN modular enclosure.

Sensor location:

Natural gas	10 to 50cm from the ceiling
LPG	10 to 50cm from the floor
CO	150 to 200cm from the floor

It is advisable to position sensors at a certain distance from the gas appliances, so as to avoid nuisance triggering.

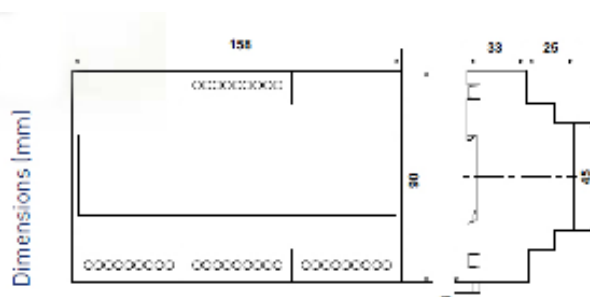
Boilers & DHW	1 to 2 metres
Gas cookers	2 to 3 metres

Gas shut-off valve:

This must be installed on the gas feed pipe, possibly outside the space controlled, in a place which is easily accessible and is protected from bad weather.

NB In LPG installations the valve must be installed downstream of the pressure reducing valve.

Dimensions



OPERATION

P82 control unit allows you to connect up to 4 probes of model SB1 B2 B3 or ALEX SB4, SB5, SB6 probes for the construction of gas detection systems in environments such as boiler rooms, garages, warehouses, workshops, etc. with the possibility to control a solenoid valve or an auxiliary device (siren, flashing light, extractor, etc.) through inside alarm relay.

The installation of a gas leak detection system or the presence of carbon monoxide, do not exempt from compliance with all rules for installation and use of gas appliances and from the corresponding safety standards and law in force for this type of systems.

The control unit must be powered at 12 Vac/dc.

To connect the relay outputs use cables with a minimum section of 1,5 mm²

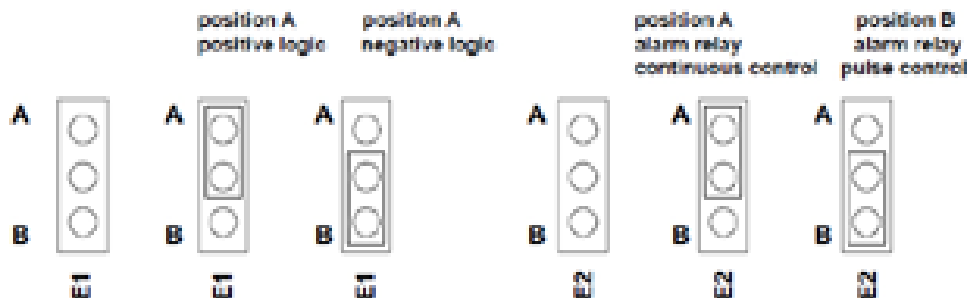
The operation logic, selected by means of jumper E1, can be either positive or negative.

The device reports its operation status through the LED.

According to the selected logic through the jumper E1, in normal situation (no alarm), the led, the failure signaling output and the relay, are:

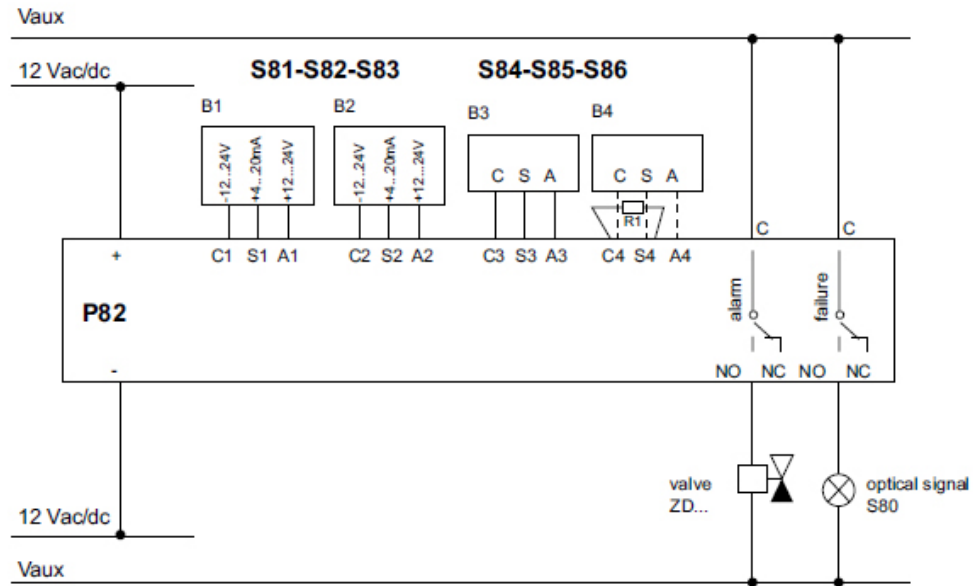
- positive logic: led switched on, relays energized,
- negative logic: led switched off, relays not energized.

In case was selected the negative operation logic, the alarm relay can be controlled continuously or pulsed, depending on Jumper F2 position



Every effort has been taken in the production of this data sheet to ensure it's accuracy. Axio can not, however, accept responsibility for any damage, expense, injury, loss or consequential loss resulting from any errors or omissions. Axio has a policy of continuous improvement and reserves the right to change this specification without notice.

Connections



Functional Test

During normal operation of the control unit is activated the gas alarm monitoring, as well the self-diagnoses for installation failures (probes) and of the system (control units). In this phase and in the absence of the alarm and the anomaly, the control unit is presented as shown in the table on the right.

INTERFACE		POSITIVE LOGIC	NEGATIVE LOGIC
power supply led	green	switched on	switched on
general anomaly led	yellow	switched on	switched off
probe anomaly led	yellow	switched on	switched off
alarm and faulty line led	red	switched on	switched off
alarm buzzer		no sound	no sound
alarm relay		energized	not energized
anomaly relay		energized	not energized

In the presence of dangerous gas concentrations, the unit enters in gas alarm phase and performs the following operations, indicated in the table on the right.

INTERFACE		POSITIVE LOGIC	NEGATIVE LOGIC
alarm led for interested probe	green	switched off	switched on
alarm buzzer	yellow	continuous sound	continuous sound
alarm relay	yellow	not energized	energized (continuously or pulsed according to E2)

Once the gas alarm condition was surmounted is necessary to bring the control unit in normal operation condition. For this purpose must be pressed the "RESET/TEST" button, situated on the front.

In the presence of a failure (probes and/or control units) the control units will be represented like in the table on the right.

INTERFACE		POSITIVE LOGIC	NEGATIVE LOGIC
general anomaly led (for the faulty control unit)	yellow	switched off	switched on
probe anomaly led (for the faulty probe)	yellow	continuous sound	continuous sound
alarm buzzer	yellow	intermittent sound	intermittent sound
anomaly relay		not energized	energized

Once the possible failure was eliminated, is necessary to bring the control unit in normal operation condition.

For this purpose must be pressed the "RESET/TEST" button, situated on the device front.

It is recommended to repeat the procedure of operation verification at least once a year, or after a prolonged shutdown period, and anytime when is replaced the probe.

The average life time of S81-S82-S83 probes and S84-S85-S86 is 5 years from date of installation. It is mandatory to replace them before the expiry of 5 years of use.

ACCESSORIES



S81
Sensor for methane gas detection.



S84
Probe for methane gas detection, certified with ATEX II 2G Ex d IIC T6.



S82
Sensor for LPG gas detection.



S85
Probe for LPG gas detection, certified with ATEX II 2G Ex d IIC T6.



S83
Sensor for carbon monoxide detection.



S86
Probe for carbon monoxide detection, certified with ATEX II 2G Ex d IIC T6.



S80
Emergency signaling device with fixed light and continuous sound.



ZD...
Normally closed electromagnetic valves, with quick closing and opening, class A with approval.