



TECHNICAL CATALOGUE

GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

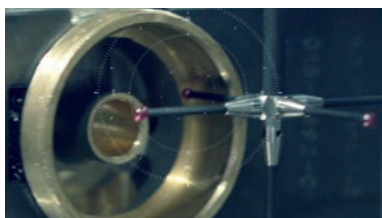
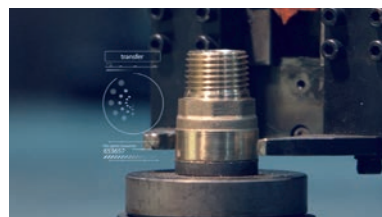
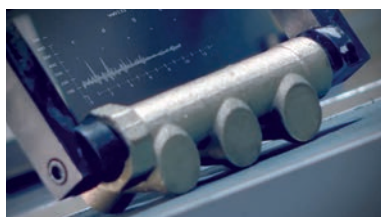


> THE COMPANY

ITAP SpA, founded in Lumezzane (Brescia) in 1972, is currently one of the leading production companies in Italy of **valves, fittings and distribution manifolds** for plumbing and heating systems.

Thanks to a fully automated production process, with 85 transfer machines and 55 assembly lines, it is capable of producing 400,000 pieces per day.

Our innate pursuit for innovation and observance of technical regulations is supported by the company certification ISO 9001. The company has always considered its focus on quality as the main tool to obtain significant business results: today ITAP SpA is proud to offer products bearing the approval of numerous international certifying bodies.



> ITAP products have obtained approvals by more than 30 certification bodies from all over the world.





GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

992 Gas leak detector with optical-acoustic alarm and relay control



992M

METHANE GAS

MEASURE	CODE	PACKING
-	992M	1/12

992G

LPG

MEASURE	CODE	PACKING
-	992G	1/12

CERTIFICATIONS



TECHNICAL SPECIFICATIONS

AVAILABLE FOR METHANE GAS AND LPG.

Leds: power supply (green), failure (yellow), alarm (red).

Optical (red led) and acoustic (internal buzzer 87dBA) alarms.

Provided with realy output.

Power supply voltage: 230V.

Max electrical input: 20mA 230Vac.

Max relay contact load: 8A 250Vac/30Vcc.

Class of protection: IP42.

Working temperature: -10°C, 40°C.

Working relative humidity: 30%, 90%.

Alarm level: gas concentration equal to 10% of L.E.L. (Low Exposition Limit).

4 years after installation date the device must be put out of order and replaced with a new unit.

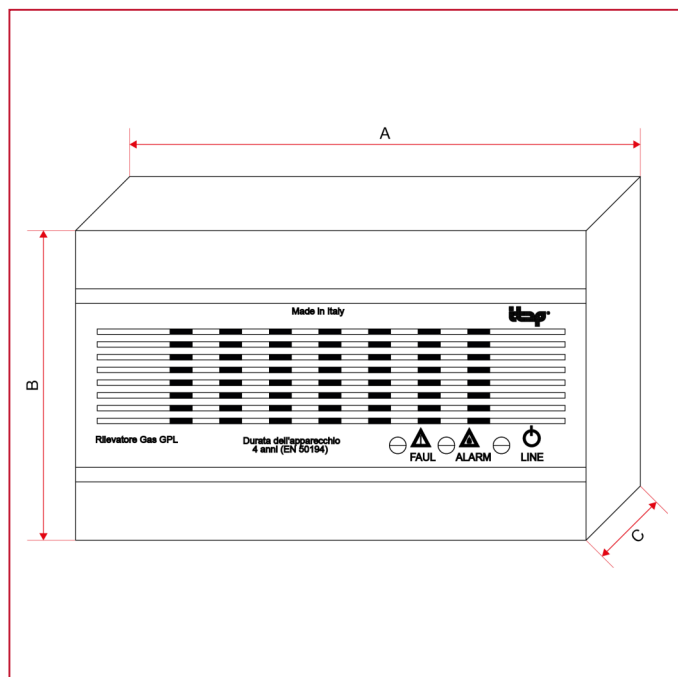
Dimension: 138x85x44 mm.

Compliant with CEI UNI EN 50194 standard.



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

OVERALL DIMENSIONS



992M

	-
A	119
B	82
C	32,5

992G

	-
A	119
B	82
C	32,5



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

INSTRUCTIONS

Art.992M: Power supply 230Vac-50/60Hz. Gas detected METHANE.

Art.992G: Power supply 230Vac-50/60Hz. Gas detected LPG.

GENERAL DESCRIPTION

The 992 detectors are gas detector of methane and LPG gas, that warns with an optical and acoustic signal, the presence of gas in the environment.

They are planned to be functioning as detected gas with relay exit.

The detectors are calibrated to detect gas up to 10% of the L.E.L. (Low Explosion Limit), this threshold can change in base of the environmental conditions but it will not gets over during the first 4 years working, the 15% LEL, after that period the instrument have to be put out of order or re-send to ITAP S.p.a. for a complete substitution of the device.

With that aim, the package is provided with a printed label on which have to be indicated the maturity of correct working period (4 years from installing date); this printed label have to be compiled by who makes the installation.

LUMINOUS AND ACOUSTIC SIGNALISATIONS

These gas detectors are provided, on the front panel, by three luminous signalisations:



- GREEN LED (ON): indicates that the instruments is powered.

- YELLOW LED (FAULT): Indicates that the gas sensor is damaged.

- RED LED (ALARM): Indicates that the gas concentration measured in the air exceeds the alarm threshold.

In case of damage, the gas detector is able to signals the malfunction, illuminating in fixed way the yellow led and activating a sound alarm with two seconds' of intermittence.

In case of alarm the detector illuminating the red led and after 20 seconds the buzzer emits a sound alarm and the relay activates.

LIGHTING DELAYS

The catalytic sensor presents in the gas detector, needs to be heated for about one minute to working in a correct way and for that reason when the detector is lighted on the green led will lighten to indicated that the sensor is in the heating phase.

During this time, all the detection functions will be inhibited.

INSTALLATION

Attention: the installation and the out of service of the instrument must be done by skilled personnel only.

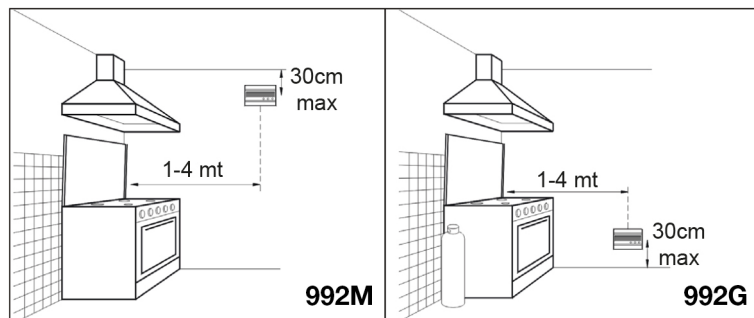
The installation of gas and the possible stopping device must be in according to the national and in force prescriptions law.

The instrument have to be installed:

- the 992M gas detector for methane should be fixed at a maximum distance of 30 cm from the ceiling; 992G the gas detector for LPG should be fixed at a maximum distance of 30 cm from the floor.

- They should be fixed at a distance comprises from 1 meter and 4 meters by the gas device (kitchen, boiler room, etc...).

- Possibly in every room in which there is a gas device and, in the residences with more that one floor, at least one for each floor.





GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

Avoid installing:

- Directly over the sink or the gas device.
- In little locals where can be utilised alcohol, ammonia, spray bottles of gas or other substances with flying solvents.
- In low ventilated environments.
- Near to walls or obstacles that can stop the gas flow from the user to the detector, or near to exhausters or fans that can divert the air flow.
- In environment in which the temperature can arrive over 40°C or under -10°C.
- In environment with a lot of humidity or vapours.

INSTALLATION PROCEDURES

By using a screwdriver unscrew on the right hand side the instrument and uncover it. (Fig.1)

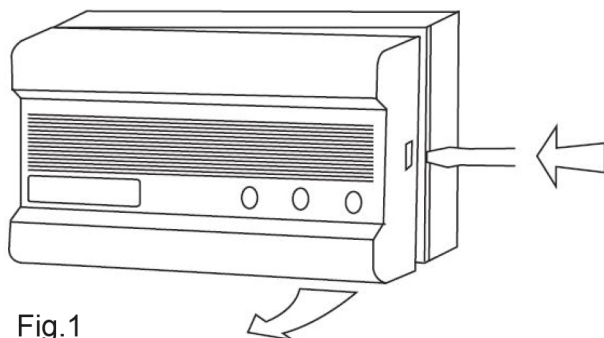


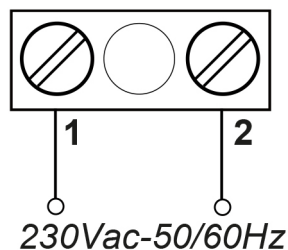
Fig.1

The box cover has to be positioned on the three form point or on the wall, by using the screws and plugs available.
For fixing the dowels, pierce the wall with a tip of 5 mm diameter.

ELECTRICAL CONNECTION - POWER SUPPLY

Attention: the electrical connection has to be done with an under track cable. The gas detector have to be powered at 230Vac-50/60Hz by the terminals 1 and 2 (Fig. 2). It has to be provided with an device, to be disowned from the detector and the feeding net, with minimum 3 mm contact distance in accordance wit has written in the European Standard EN 60335-1.

Fig.2



CHARACTERISTICS OF THE EXIT-SIGNAL

The detector is provided with an external relay with free tension contacts, capacity of connection 8A 250Vac / 30Vdc.

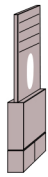
ELECTRO-VALVES CONNECTION

The gas detector has inside a jumper that permits to select the type of electro-valve to connect that can be Normally Opened type (Fig. 3) or Normally Closed type (Fig. 4).

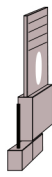
We remind that the valve should be installed on the gas pipes outside the room under control, since protection is useless if a gas leak occurs at the beginning of the gas pipe.



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES



N.A.



N.C.

Positioning N.O.: proper for normally opened valves.

Positioning N.C.: proper for normally closed valves or for the contemporaneously check of both electrovalve and an external electrical charge.

OPERATIONAL WITH NORMALLY OPENED VALVE (N.O.)

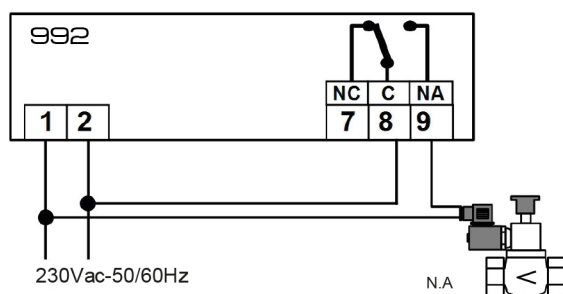


FIG. 3

OPERATIONAL WITH NORMALLY CLOSED VALVE (N.C.)

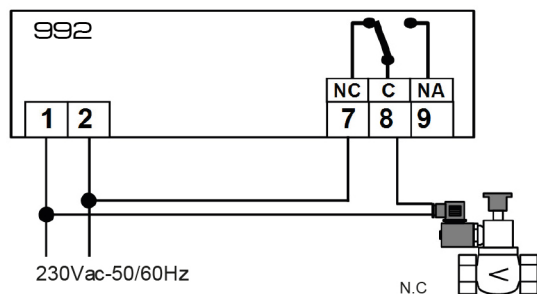


FIG. 4

PERIODICAL TESTING

We recommend to contact the installer at least once a year for a general inspection.

IMPORTANT: do not use pure gas, such as a lighter directly on the sensor since the sensor could be damaged.

OPERATIONAL CHECK

After the installation it is possible to check the correct operational of the instrument by pushing for at least 2 seconds the TEST button on the board, in this way all the leds will be alight, the acoustic alarm and both relays will be on for 5 second.

At this point it will be necessary to rearm the electro valve connected.

WARNINGS

For the cleaning, use an cloth on the top. Not be opened, it could cause damage.

Note that the sensor employed has a good resistance towards products such as sprays, detergents, alcohol, glues and paints. However, these products could contain substances which, if in great quantity, could interfere with the sensor and cause false alarms. We recommend to ventilate the room should products like these be used.

Note that the detector is not able to detect gas leaks occurring outside the room where it is installed, neither inside walls nor



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

under the floor. To make gas (methane and L.P.G.) nose identifiable, gas is added with a particularly disturbing smelling substance.

Small gas quantities coming out from left open cookers for some minutes do not cause the gas detector alarm signalling even if it is clearly nose perceptible; in fact the quantity of gas presents in the environment can be under the alarm threshold.

Please remember that the gas detector cannot work without power supply.

In case of alarm:

1. extinguish all naked flames.
2. turn off the gas supply at the gas emergency control and/or, with a L.P.G. supply, the storage tank.
3. do not switch on or off any electrical lights. Do not activate any electrically powered devices.
4. Open both doors and windows to increase room ventilation. If the alarm stops, it is necessary to identify the alarm reason and act accordingly.

If the alarm condition continues and the cause of the leak is not apparent and/or cannot be corrected, vacate the premises and immediately notify the gas emergency service.



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

993M Solenoid safety valve, normally open



MEASURE	PRESSURE	CODE	PACKING
1/2" (DN 15)	550mbar/8psi	9930012M	1/17
3/4" (DN 20)	550mbar/8psi	9930034M	1/0
1" (DN 25)	550mbar/8psi	9930100M	1/0
1"1/4 (DN 32)	550mbar/8psi	9930114M	1/0
1"1/2 (DN 40)	550mbar/8psi	9930112M	1/0
2" (DN 50)	550mbar/8psi	9930200M	1/0

CERTIFICATIONS



TECHNICAL SPECIFICATIONS

Body in brass.

Class of protection: IP65.

Female threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

Power supply voltage: 230V.

Power input: 17 VA and 19 W.

Working temperature: -15°C, 70°C.

Closing time:

Maximum working pressure: 550mbar.

Manual reset in compliance with CEI UNI EN 50194 regulation.

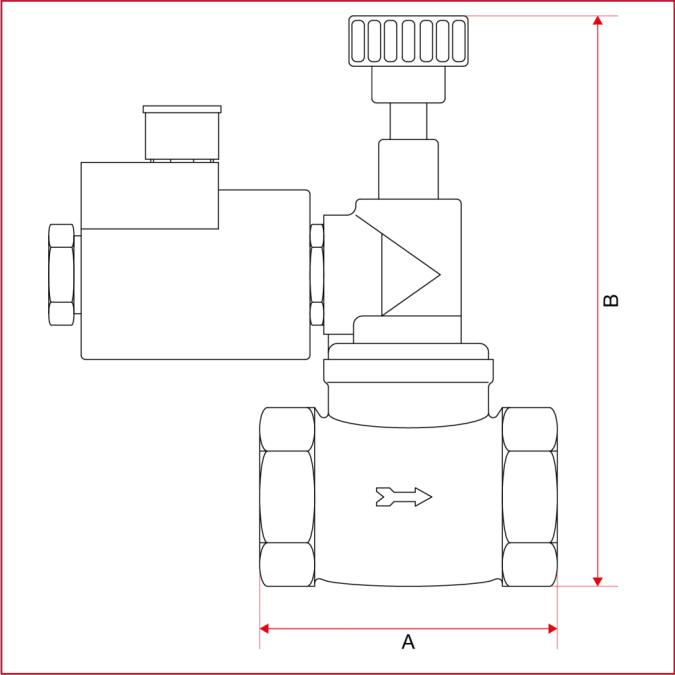
Compliant with CEI UNI EN 50194 standard.

Approved according to Directive 2014/68/EU (CE 0496 and CE 0497).



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

OVERALL DIMENSIONS



	1/2"	3/4"	1"	1"1/4	1"1/2	2"
A	65	65	78	114	114	139
B	125	125	130	174	174	182
LBS - psi	8	8	8	8	8	8



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

MATERIALS

POS.	DESCRIPTION	N.	MATERIAL
1	Connector for electrical connection	-	-
2	Reset handle	-	-
3	Spring mechanism	-	-
4	Valve body	-	-
5	Nut for fixing the coil	-	-
6	Coil	-	-



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

INSTRUCTIONS

993 Solenoid valves have been designed to be combined with any gas detection system which sets off a warning signal to shut off the main delivery when an emergency situation is detected.

All solenoid valves are reset manually in compliance with european standard EN50194 governing gas detection system.

OPERATING PRINCIPLE

Normally Open (N.O.)

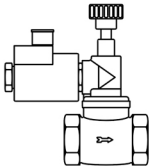
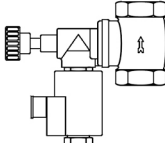
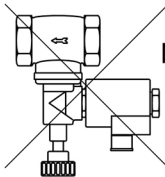
There is no electrical absorption during normal operation and so no part of the system undergoes wear; there is no annoying buzzing or vibrations, and energy is saved. However, when voltage is applied to the electromagnetic coil, the closure mechanism is released.

To reset the 993 solenoid valve, check that the coil is not receiving current. For the valves 550mbar (from DN15 to DN50) pull the "Reset knob", for the valves 6bar (from DN15 to DN 50) push upward the "Reset knob".

INSTALLATION AND POSITIONING

Read instructions before use. This control must be installed in accordance with the rules in force. The solenoid valve must be positioned with the arrow stamped on the body turned towards the user appliance. The valve must be positioned upstream of the regulation apparatus and preferably outside the measurement zone.

N.B. Please install the valve sheltered from the atmospheres agent.

Size	Horizontal position	Vertical position	Overturned position
From 1/2" to 2"			

MAINTENANCE

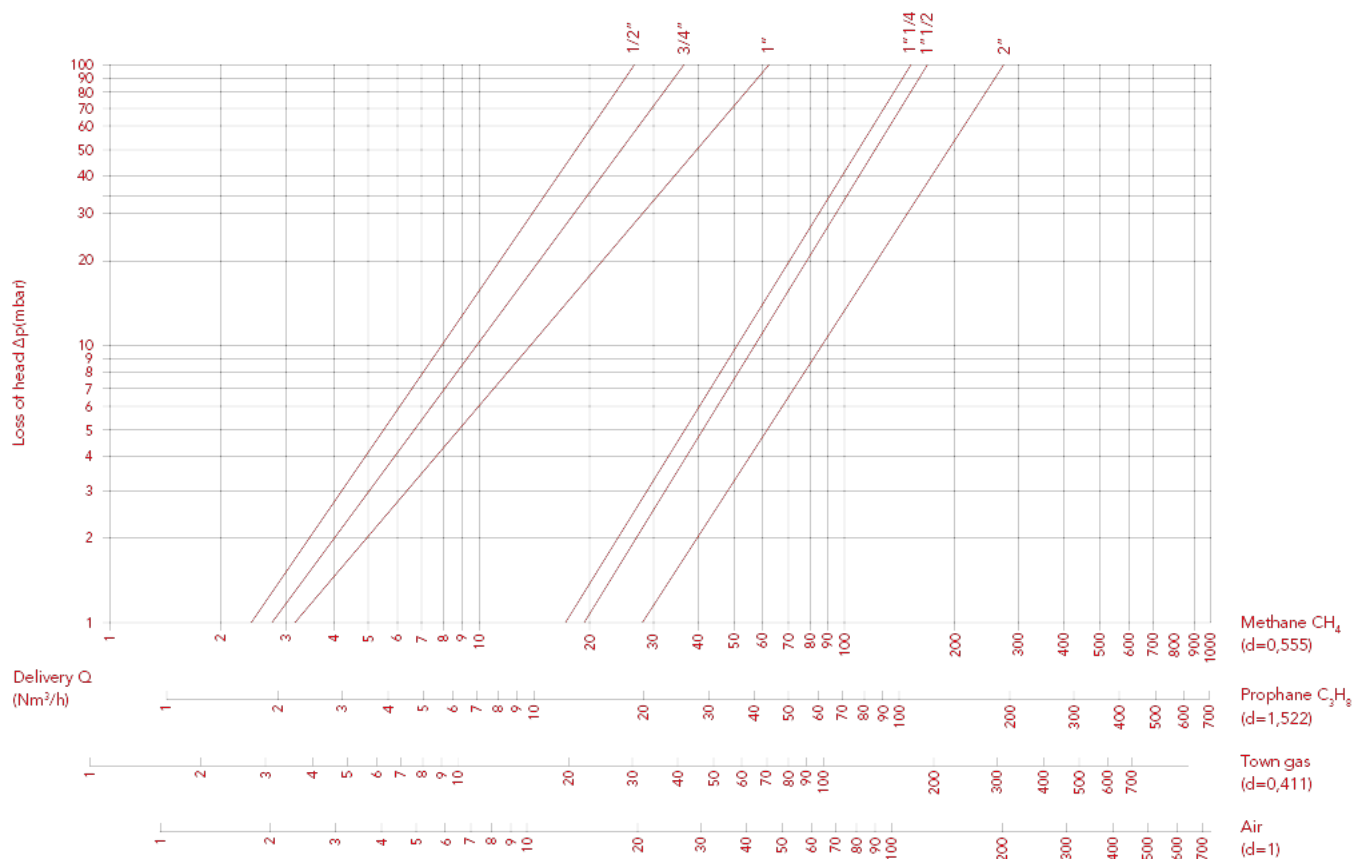
The solenoid valve's intervention should be checked periodically. Should disassembly be necessary, make sure there is no gas under pressure inside the valve and that is not connected to the power supply before starting.

All maintenance operations should be carried out by qualified personnel.



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

LOSS DIAGRAM





GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

993G Solenoid safety valve, normally open



MEASURE	PRESSURE	CODE	PACKING
1/2" (DN 15)	6bar/87psi	9930012G	1/17
3/4" (DN 20)	6bar/87psi	9930034G	1/0
1" (DN 25)	6bar/87psi	9930100G	1/0
1"1/4 (DN 32)	6bar/87psi	9930114G	1/0
1"1/2 (DN 40)	6bar/87psi	9930112G	1/0
2" (DN 50)	6bar/87psi	9930200G	1/0

CERTIFICATIONS



TECHNICAL SPECIFICATIONS

Body in brass.

Class of protection: IP65.

Female threads: ISO228 (equivalent to DIN EN ISO 228 and BS EN ISO 228).

Power supply voltage: 230V.

Power input: 17 VA and 19 W.

Working temperature: -15°C, 70°C.

Closing time:

Maximum working pressure: 6bar.

Manual reset in compliance with CEI UNI EN 50194 regulation.

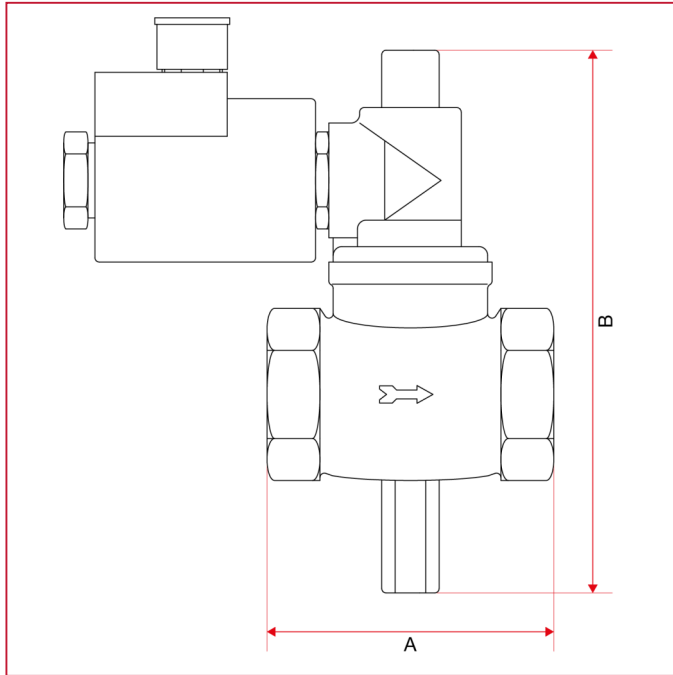
Compliant with CEI UNI EN 50194 standard.

Approved according to Directive 2014/68/EU (CE 0496 and CE 0497).



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

OVERALL DIMENSIONS



	1/2"	3/4"	1"	1"1/4	1"1/2	2"
A	65	65	78	114	114	139
B	165	165	170	195	195	200
Kg/cm ² bar	6	6	6	6	6	6
LBS - psi	87	87	87	87	87	87



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

MATERIALS

POS.	DESCRIPTION	N.	MATERIAL
1	Connector for electrical connection	-	-
2	Reset handle	-	-
3	Spring mechanism	-	-
4	Valve body	-	-
5	Nut for fixing the coil	-	-
6	Coil	-	-



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

INSTRUCTIONS

993 Solenoid valves have been designed to be combined with any gas detection system which sets off a warning signal to shut off the main delivery when an emergency situation is detected.

All solenoid valves are reset manually in compliance with european standard EN50194 governing gas detection system.

OPERATING PRINCIPLE

Normally Open (N.O.)

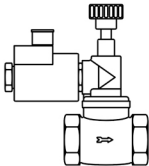
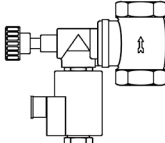
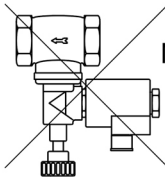
There is no electrical absorption during normal operation and so no part of the system undergoes wear; there is no annoying buzzing or vibrations, and energy is saved. However, when voltage is applied to the electromagnetic coil, the closure mechanism is released.

To reset the 993 solenoid valve, check that the coil is not receiving current. For the valves 550mbar (from DN15 to DN50) pull the "Reset knob", for the valves 6bar (from DN15 to DN 50) push upward the "Reset knob".

INSTALLATION AND POSITIONING

Read instructions before use. This control must be installed in accordance with the rules in force. The solenoid valve must be positioned with the arrow stamped on the body turned towards the user appliance. The valve must be positioned upstream of the regulation apparatus and preferably outside the measurement zone.

N.B. Please install the valve sheltered from the atmospheres agent.

Size	Horizontal position	Vertical position	Overturned position
From 1/2" to 2"			

MAINTENANCE

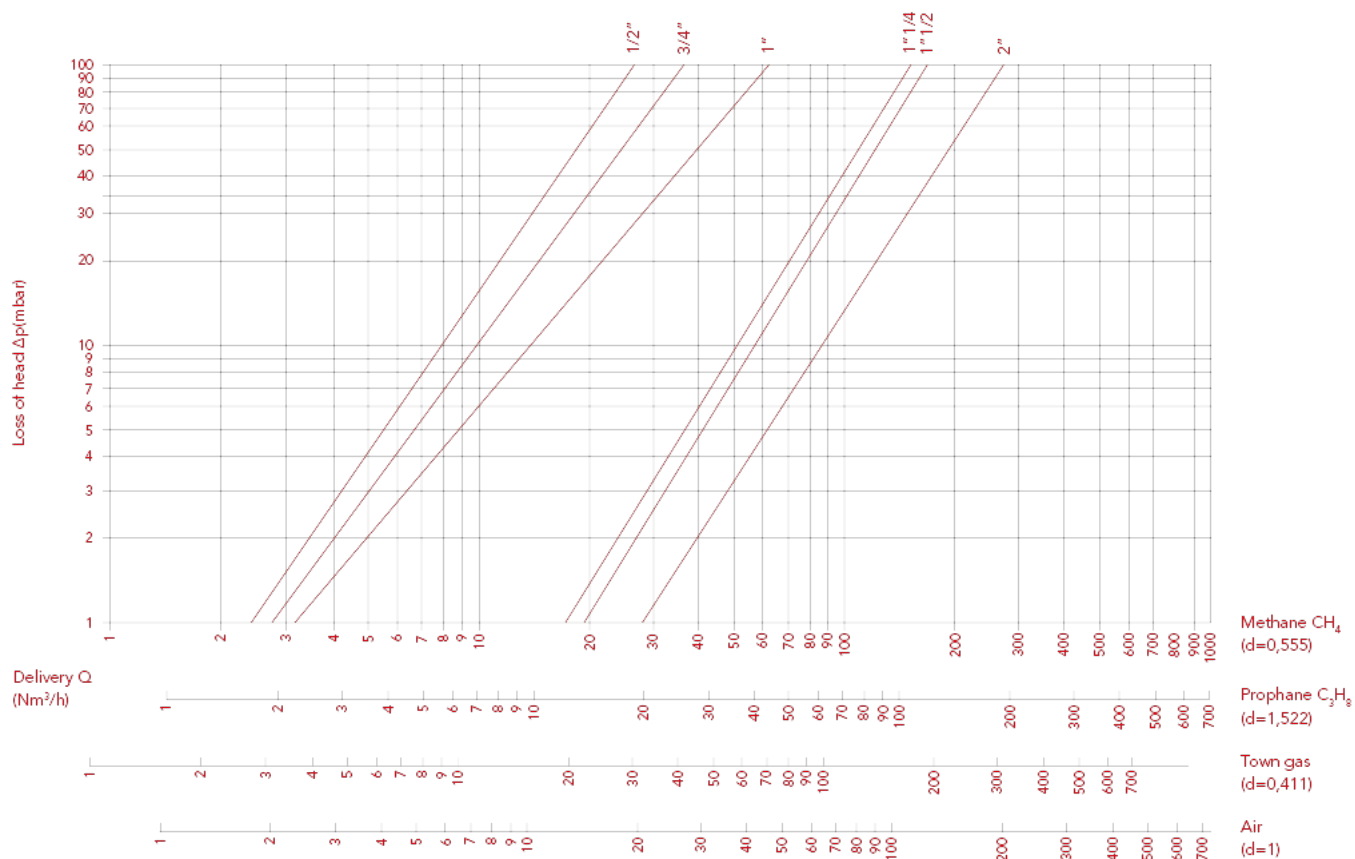
The solenoid valve's intervention should be checked periodically. Should disassembly be necessary, make sure there is no gas under pressure inside the valve and that is not connected to the power supply before starting.

All maintenance operations should be carried out by qualified personnel.



GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

LOSS DIAGRAM





GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

998 Gas safety kit



998M

METHANE GAS

MEASURE	PRESSURE	CODE	PACKING
1/2" (DN 15)	550mbar/8psi	9980012M	1/5
3/4" (DN 20)	550mbar/8psi	9980034M	1/5

998G

LPG

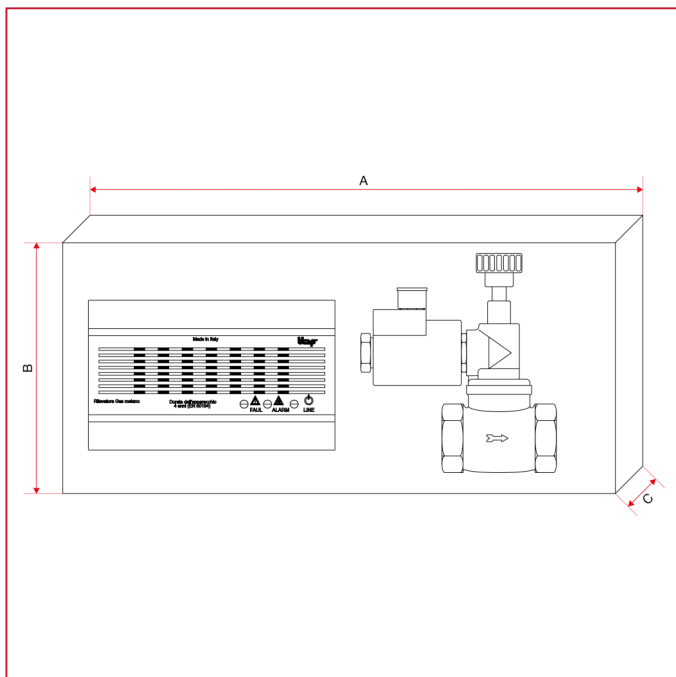
MEASURE	PRESSURE	CODE	PACKING
1/2" (DN 15)	6bar/87psi	9980012G	1/5
3/4" (DN 20)	6bar/87psi	9980034G	1/5

TECHNICAL SPECIFICATIONS

AVAILABLE FOR METHANE GAS AND LPG.

Consisting of a gas leak detector (Art. 992),
and a solenoid safety valve - normally open, 230 Vac (Art. 993M or Art. 993G).

OVERALL DIMENSIONS





GAS LEAK DETECTORS AND SOLENOID SAFETY VALVES

998M

	1/2"	3/4"
A	300	300
B	150	150
C	50	50

998G

	1/2"	3/4"
A	300	300
B	150	150
C	50	50



ITAP S.p.A.
Via Ruca 19
25065 Lumezzane
Brescia (ITALY)
Tel 030 8927011
Fax 030 8921990
www.itap.it - info@itap.it

We reserve the right to make improvements and changes to the products described herein and to the relative technical data, at any time and without forewarning.

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