



SIT Group

# 810 ELETTROSIT

MULTIFUNCTIONAL GAS CONTROL



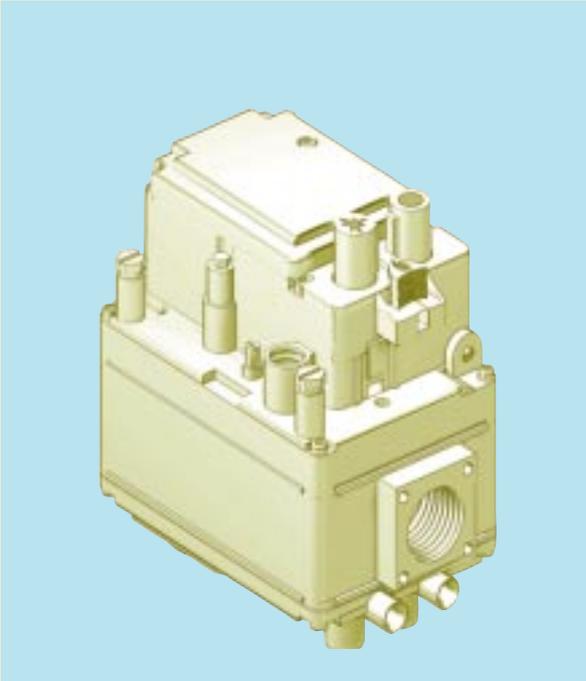
**PUSH-BUTTON CONTROL**  
**ALL ADJUSTMENTS ACCESSIBLE FROM ABOVE**

**THERMOELECTRIC SAFETY DEVICE**

**ON-OFF SOLENOID VALVE**



## ELECTRICAL MULTIFUNCTIONAL CONTROL



**High-flow multifunctional control complete with: push-button control (off, pilot, on), thermoelectric safety device for protection against improper operation, main burner ignition enabling button, pressure regulator, on-off solenoid valve with gas flow on-off control. On request, a step ignition device can be fitted.**

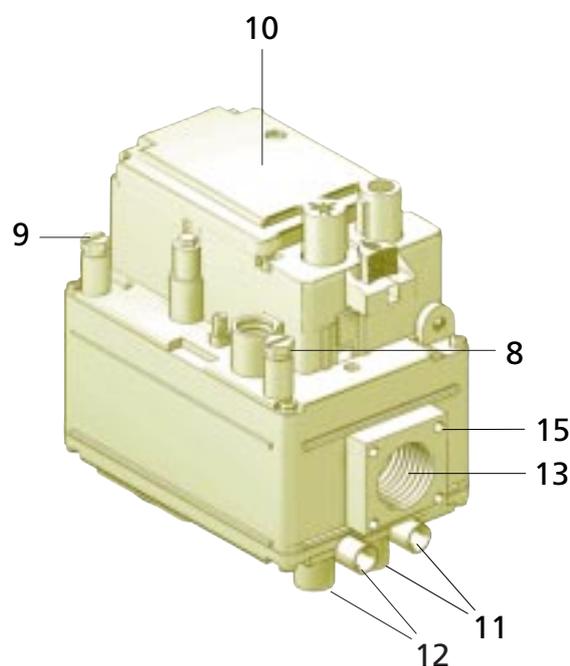
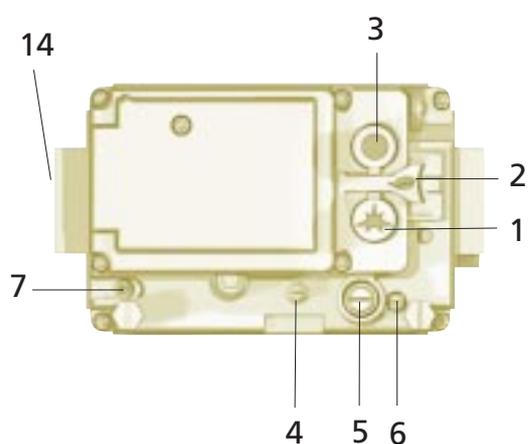
*810 ELETROSIT is suitable for use  
with gas heating appliances  
(boilers, hot air generators, etc.).*

### MAIN FEATURES

- Ignition button (pilot position) ✱ .
  - Main burner ignition enabling button ☞ (manual or automatic version).
  - Shutdown button ● .
  - Thermoelectric flame failure device with reset interlock.
  - Near-silent automatic on-off solenoid valve.
  - Pressure regulator.
  - Adjuster for gas flow to the pilot burner.
  - Step ignition device (optional).
  - Inlet and pilot filters.
  - Inlet and outlet pressure test points.
  - Threaded gas inlet and outlet ready for flanged connection.
-

## DESCRIPTION

- |   |                                      |
|---|--------------------------------------|
| 1 Ignition button (pilot position)      | 7 Pressure regulator override device |
| 2 Main burner ignition enabling button  | 8 Inlet pressure test point          |
| 3 Shutdown button                       | 9 Outlet pressure test point         |
| 4 Pressure regulator setting device     | 10 On-off solenoid valve             |
| 5 Pilot gas flow adjusting screw        | 11 Thermocouple connections          |
| 6 Step ignition device adjustment screw | 12 Pilot outlets                     |
|   | 13 Main gas inlet                    |
|   | 14 Main gas outlet                   |
|   | 15 Holes (M5) for fixing flanges     |



## TECHNICAL DATA

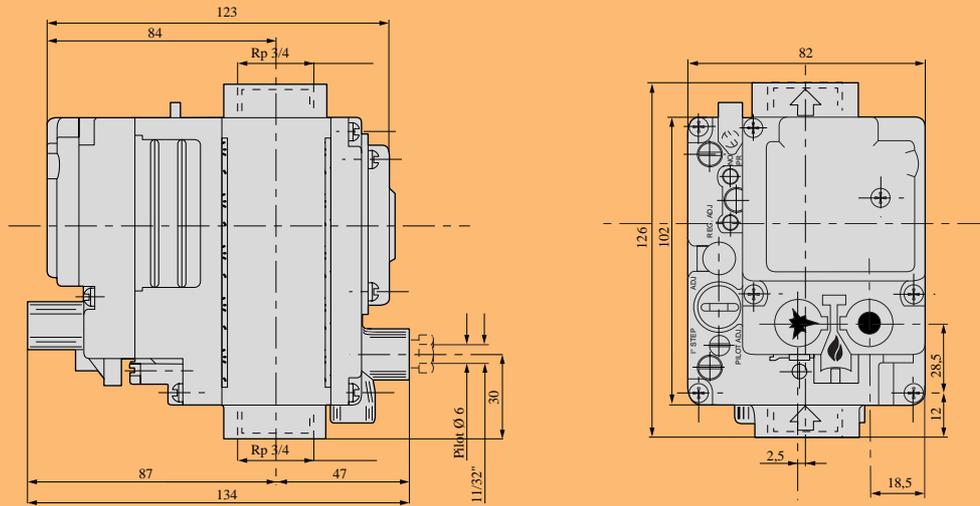
- Gas connections: Rp 1/2 ISO 7 (Rp 3/4 on request)
- Installation position: any position
- Gas families: I, II and III
- Maximum gas inlet pressure: 50 mbar
- Outlet pressure setting range: 3...18 mbar (on request 15...30)
- Working temperature range: 0...60 °C
- Pressure regulator: Class C
- Automatic solenoid valve: Class D

### POWER SUPPLY

Voltage (AC)	Consumption (mA)
230 V 50 Hz	75
24 V 50 Hz	650

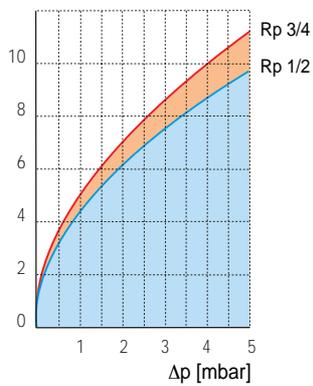
Data refer to EN 126

## DIMENSIONS



## FLOW RATE AS A FUNCTION OF PRESSURE DROP

Q [m<sup>3</sup>/h, d=0.6]



	Rp 1/2	Rp 3/4	
I Family (d = 0.45)	Q = 11.2 m <sup>3</sup> /h	Q = 12.9 m <sup>3</sup> /h	Δp = 5 mbar
II Family (d = 0.6)	Q = 9.8 m <sup>3</sup> /h	Q = 11.2 m <sup>3</sup> /h	Δp = 5 mbar
III Family (d = 1.7)	Q = 6.0 kg/h	Q = 6.9 m <sup>3</sup> /h	Δp = 5 mbar

## **Pilot flame ignition**

Depress the button ✱ and ignite the pilot flame, keeping the button fully depressed for a few seconds (fig.1). In controls with enabling for electrical ignition, the pilot can be ignited automatically by depressing the button ✱. Release the knob ✱ and check that the pilot flame stays lit. If it goes out, repeat the ignition operation.

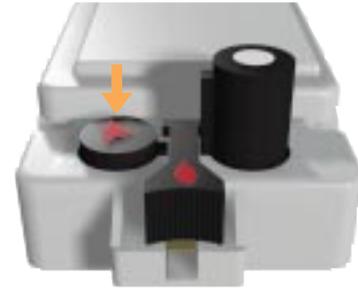


fig. 1

## **Main burner ignition**

Depress the transverse button ◀ (fig.2) (manual versions).

The gas passage to the main burner is opened by powering the automatic solenoid valve.

The valve with step ignition device reaches the maximum flow after about 10 seconds.

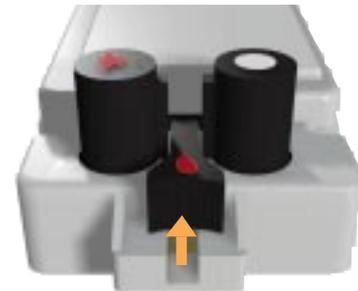


fig. 2

## **Pilot flame ignition**

Fully depress the knob ✱ (fig.1) to keep the main burner closed and the pilot flame lit.

## **Shutdown**

Fully depress the knob ● (fig.3).

**CAUTION:** the restart interlock device prevents ignition of the appliance until the flame failure device has stopped gas flow. At the end of this period (after closing the magnet unit) it is possible to carry out the re-ignition operation.

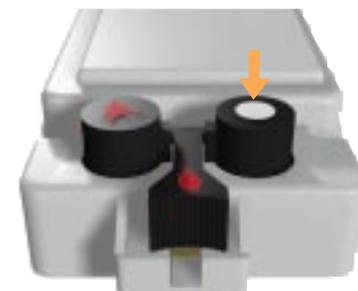


fig. 3

## INSTALLATION

### **Main gas connection**

The connection is made using gas pipes with Rp 1/2 ISO 7 (or Rp 3/4) threading. Torque: 25 Nm. If, alternatively, flanges (available on request) are used, first screw the pipes onto the flanges and then the flanges to the control. Recommended torque for the flange fixing screws: 3 Nm.

### **Connection to the pilot burner**

Pipes with a 4 mm, 6 mm or 1/4 diameter can be used. Use a nut and olive of appropriate dimensions. Tighten to 7 Nm torque.

### **Electrical connections**

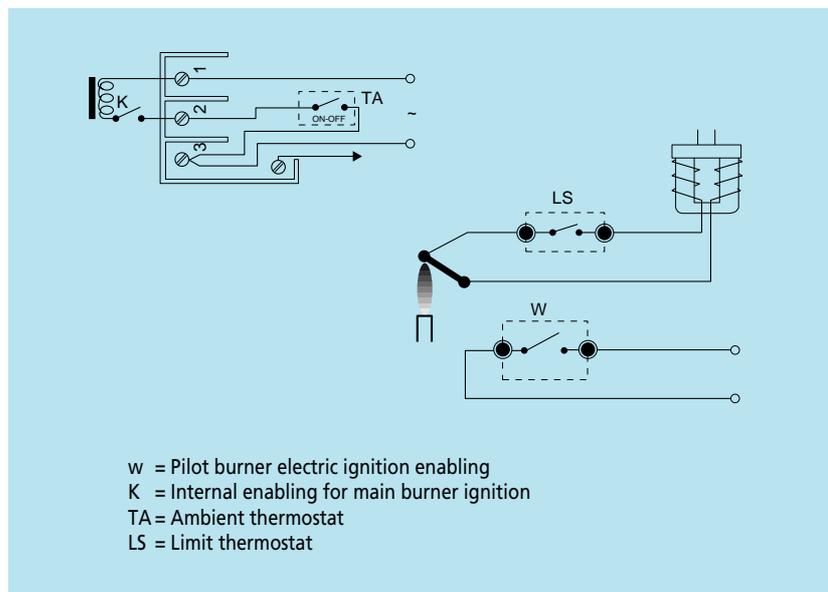
All the electrical connections should be made in compliance with the provisions of the electrical standards in force. Check that the voltage and frequency of the coils, indicated on the control, are correct. Check that all the connections, in particular the earth, are carried out to industry standards.

The 24Vac versions must be powered by an isolating transformer (with very low safety voltage). Carry out the connections in accordance with the rules for the appliance.

To access the supply  $\sim$  and earth  $\equiv$  terminals, unscrew the screw and remove the cover. To access the electric ignition enabling terminals "W" (where applicable), unscrew the screw "M" and remove the enabling device. The limit thermostat "LS" should be inserted into the thermo-electric circuit.

**CAUTION:** after making the connections, check gas tightness and electrical insulation.

### WIRING PLANS



### **Measurement of the inlet and outlet pressure**

The inlet and outlet pressures of the gas can be measured by unscrewing the provided test point sealing screws.

Replace screws with 2.5 Nm torque.

### **Gas flow-rate adjustment to the pilot**

Adjustment screw (PILOT ADJ.).

Screw in the screw to reduce the flow, or unscrew it to increase flow.

### **Outlet pressure adjustment**

Adjustment screw (REG. ADJ.).

Remove the protective cap, screw in the adjustment screw (REG. ADJ.) to increase the outlet pressure, or unscrew it to decrease flow.

### **Adjustment of the step ignition minimum flow with natural gas**

Adjustment screw (1<sup>st</sup> STEP ADJ.)

With the screw (1<sup>st</sup> STEP ADJ.) in combination with the screw (REG ADJ.), or with the buttons ✱ and ✎, it is possible to adjust the step ignition device so that the burner goes on gradually and silently.

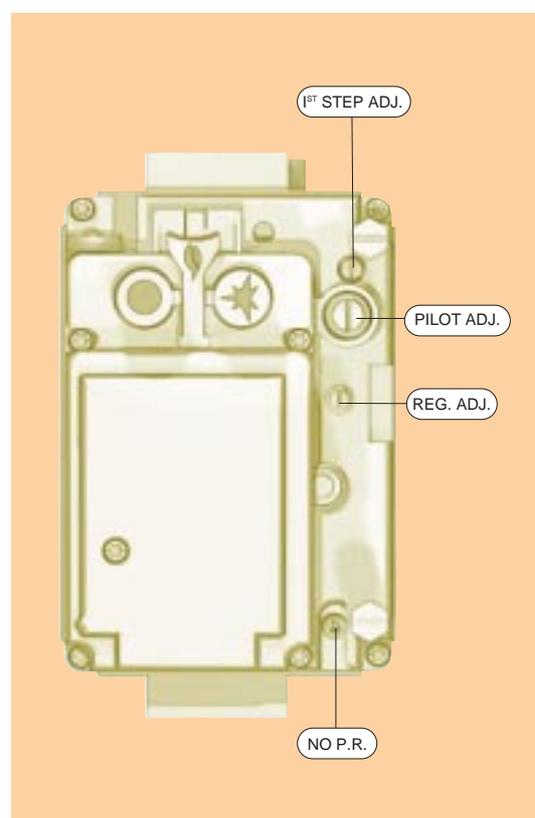
### **Adjustment of the step ignition minimum flow with third family gases**

By completely unscrewing the screw (NO P.R.) and adjusting the screws (REG ADJ.) and (PILOT ADJ.), it is possible to obtain gradual and silent ignition with third family (LPG) gases too.

### **CAUTION:**

See the use and installation manual for a detailed description of the adjustment systems described above (footnote).

Check tightness and efficiency and seal the adjustment devices.



Implement the provisions in the Use and Maintenance manual - code 9.956.810 - for installation, adjustment and use.

# 810 ELETTROSIT



**High flow multifunctional  
control for gas appliances  
with electrical power  
supply.**

