



**SIT**Group

## PROFLAME



## MULTIFUNCTIONAL CONTROL FOR GAS BURNING APPLIANCES

### Application

Domestic gas appliances: room heaters and fireplaces.

### Normative reference

ANSI Z21.78,  
ANSI Z21.20.

### Main Features

Automatic ignition gas control system that includes a user selectable intermittent or standing pilot

Twin safety system with true flame detection for enhanced safety and reliability

On/Off, manual High/Low, and remote modulation valve configurations

Integrated for use with the Proflame Remote Control family GT, GTS, GTM, GTMS, GTMF, GTMFS

Operable from a wall switch or a remote control

Low power consumption design provides a choice of AC operation, battery operation or AC power with battery backup.

### Approvals

CSA international.

# VALVE DESCRIPTION

It consists of two automatic shut-off valves and a servo pressure regulator in series in the main gas path.

With reference to the schematic block in Fig. 1:

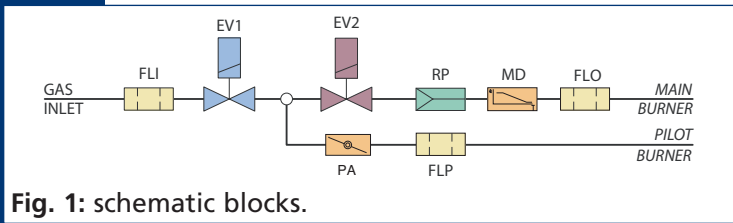


Fig. 1: schematic blocks.

- FLI is the inlet filter.
- EV1 is the first automatic shut-off valve.
- EV2 is the second automatic shut-off valve.
- RP is a pressure regulator.
- MD is a pressure modulator device.
- FLO is the outlet filter.
- PA is the pilot adjustment screw.
- FLP is the pilot filter.

1	ON-OFF solenoid EV1 terminals	7	Pilot adjusting screw
2	ON-OFF solenoid EV2 terminals	8	Pilot outlet
3	Inlet pressure test point	9	Gas inlet with protective seal
4	Outlet pressure test point	10	Gas outlet with protective seal
5-a	Pressure modulator device	11	Ground connection
5-b	HI-LO pressure modulator device	12	Dead mounting holes
5-c	Electrical pressure modulator device	13	Through mounting holes
6	Pressure modulator device terminal		

Fig. 2: valve description.

# VALVE GENERAL DATA

## CONSTRUCTION CHARACTERISTICS

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- Aluminium alloy body
- Inline inlet and outlet
- Available bottom inlet and bottom outlet
- Pilot outlet
- Inlet filter
- Inlet pressure test point
- Outlet pressure test point
- Two mounting through holes on the side
- Two mounting holes on the gas inlet and outlet

## USE SPECIFICATIONS

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- Installation position Upright,  $\leq 90^\circ$  from upright ( Never upside down )
- Gas families Natural Gas ,LPG
- Ambient operating temperature range 32 to 175 °F
- Maximum inlet pressure 1/2 psi
- NOT for direct burner ignition appliances

## MECHANICAL CONNECTIONS

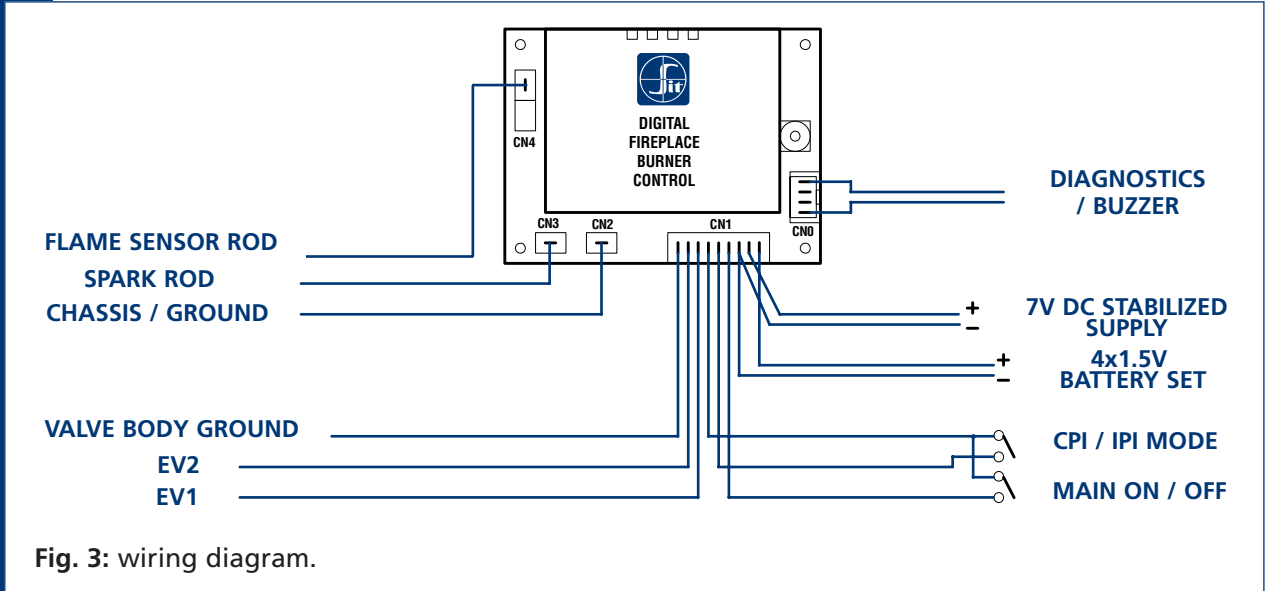
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- Gas inlet and outlet connections
  - 3/8" - 18 NPT ANSI B 1.20.1
  - 5/8" - 18 SAE J512
  - 9/16" - 24 UNEF ANSI B 1.1
- Pilot outlet 7/16" - 24 UNS - 2B ANSI
- Pressure test points  $\varnothing 9$  mm



# ELECTRONIC DIGITAL FIREPLACE BURNER CONTROL DESCRIPTION

It consists of a digital board that operates the solenoids of the shut-off valves.  
It controls the ignition of the pilot flame and the main burner flame.



# ELECTRONIC DIGITAL FIREPLACE BURNER CONTROL GENERAL DATA

## CONSTRUCTION CHARACTERISTICS

- Plastic box protection degree: IP00

## USE SPECIFICATIONS

- Installation position: any
- Ambient operating temperature range: 0 to 175 °F

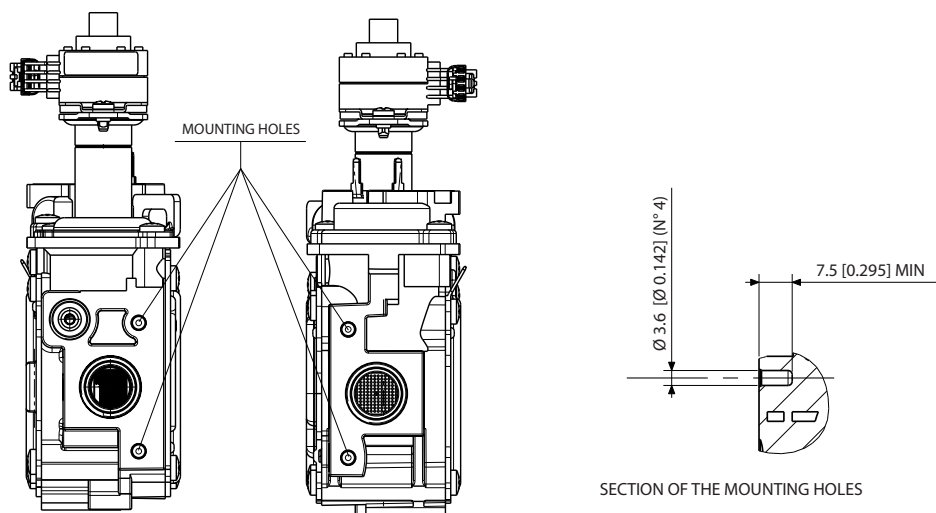
## MECHANICAL CONNECTIONS

- Fixing points: 4 dead holes  $\varnothing$  4 mm diameter and 8 mm depth or, optionally, 4 dead holes M5 threaded and 8 mm depth  
2 through holes  $\varnothing$  4 mm diameter

### WARNING



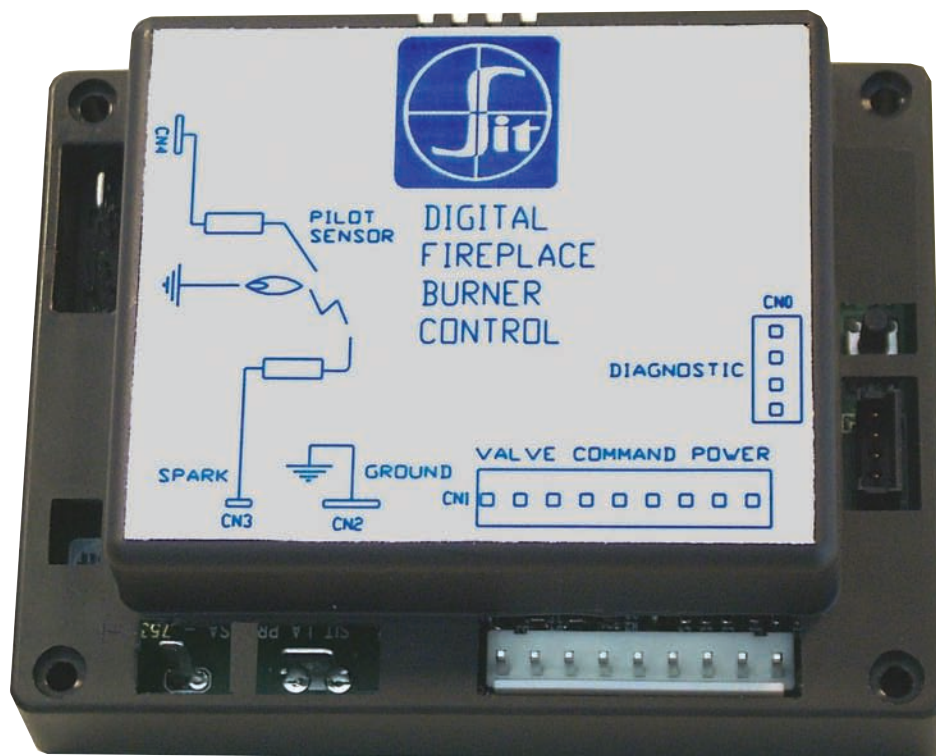
THE MOUNTING DEAD HOLES DEPTH IS SHOWN IN FIG. 4. MAKE SURE TO USE SCREWS OF APPROPRIATE LENGTH. THE SCREWS MUST NOT PUSH THE BOTTOM OF THE MOUNTING HOLES.



**Fig. 4** Dimensions are in millimeters. Dimensions between [...] are in inches

## ELECTRICAL CONNECTIONS

- CN0 connector: Molex 4 way male
- CN1 connector: Molex 9 way male
- CN2 connector: 6.3x0.8 mm male faston
- CN3 connector: 2.8x0.5 mm male faston
- CN4 connector: 4.8x0.5 mm male faston





## VALVE CAPACITY

### FLOW RATE Q AS A FUNCTION OF PRESSURE DROP $\Delta P$

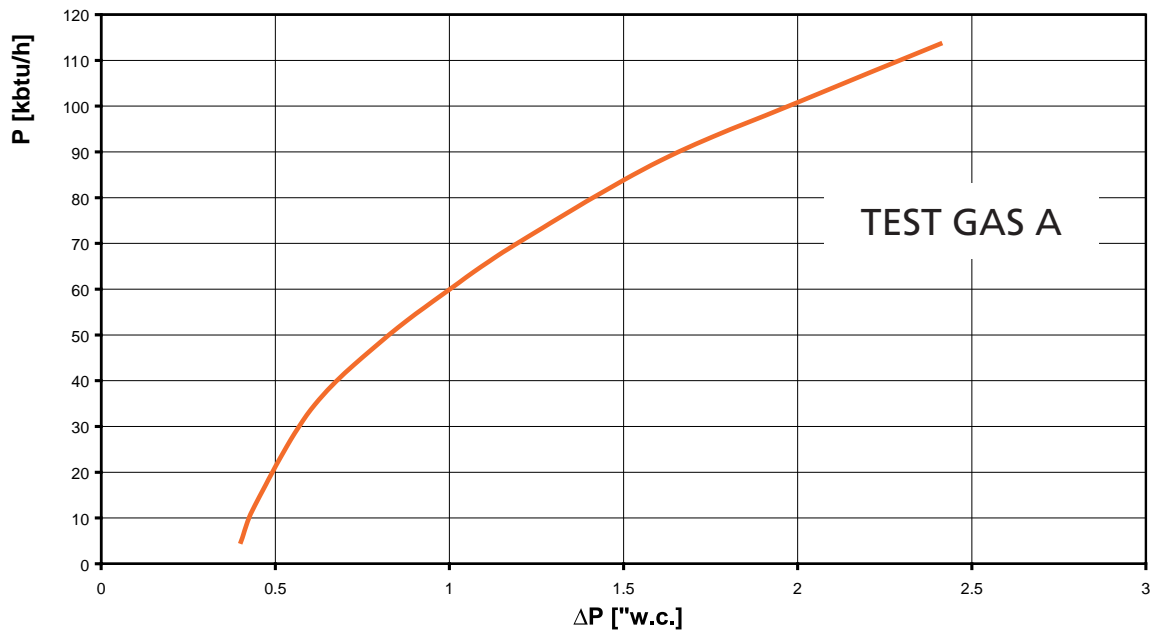


Fig. 5: Flow rate vs. drop pressure.

## VALVE FUNCTIONAL DESCRIPTION

The Proflame control is equipped with two automatic shut-off valves. It is possible to read the inlet pressure when both valves are de-energized (OFF in Fig. 6).

When the solenoid EV1 is energized the first gas valve opens. The pilot outlet is enabled (PILOT in Fig. 6).

When EV2 is energized the second valve opens and gas flows through the main outlet (OPEN in Fig. 6).

It is possible to measure the outlet pressure on the outlet pressure test point.

The servo pressure regulator system provides superior performance of outlet pressure regulation. The outlet pressure can be adjusted by a knob (Manual HI-LO version) or by a electrical modulator device.

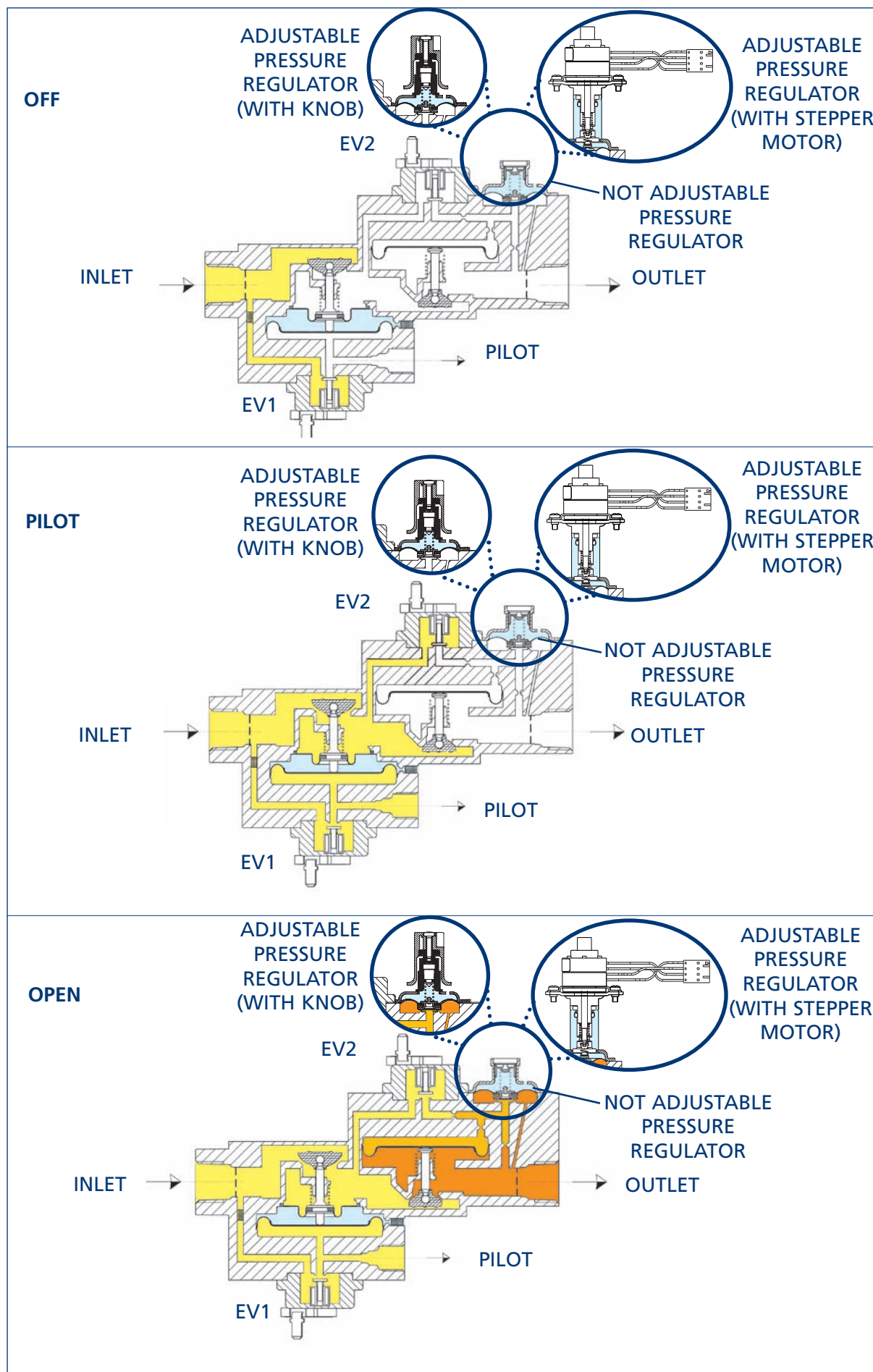
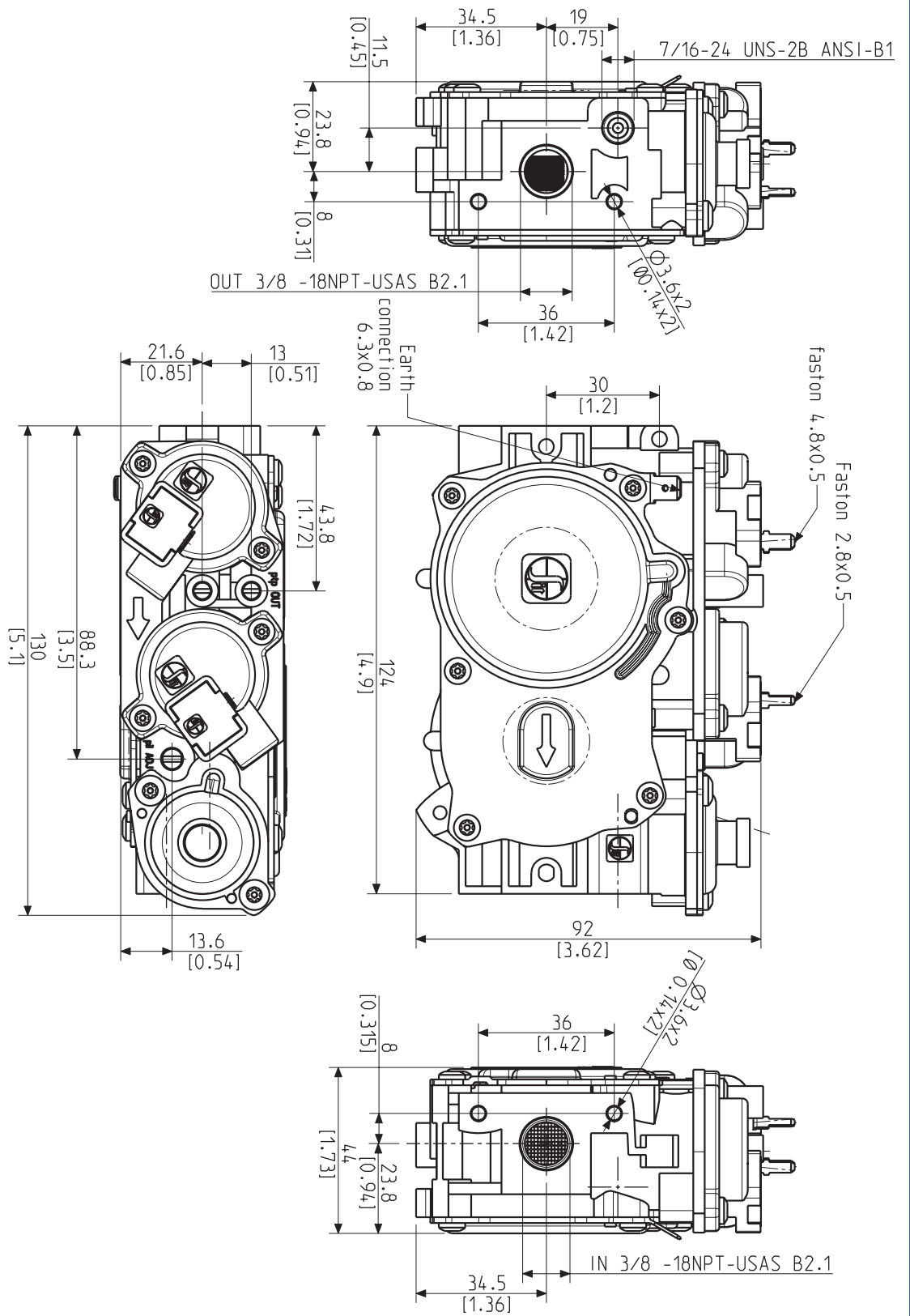


Fig. 6: On/Off, Manual HI-LO, Electronic Modulation functional description



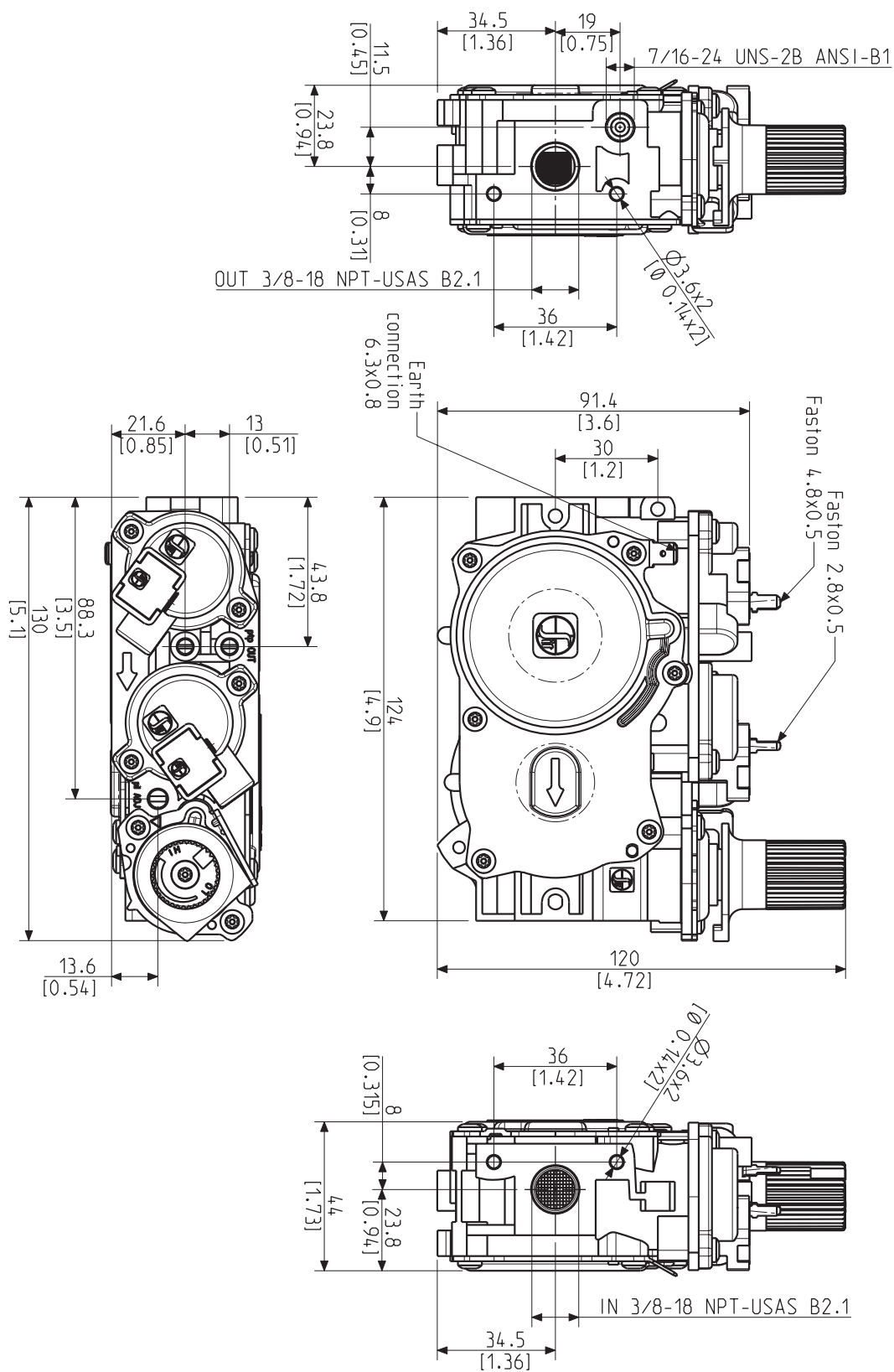
# VALVE DIMENSIONAL DRAWING



NOTE: All the dimensions are expressed in millimeters [inches].



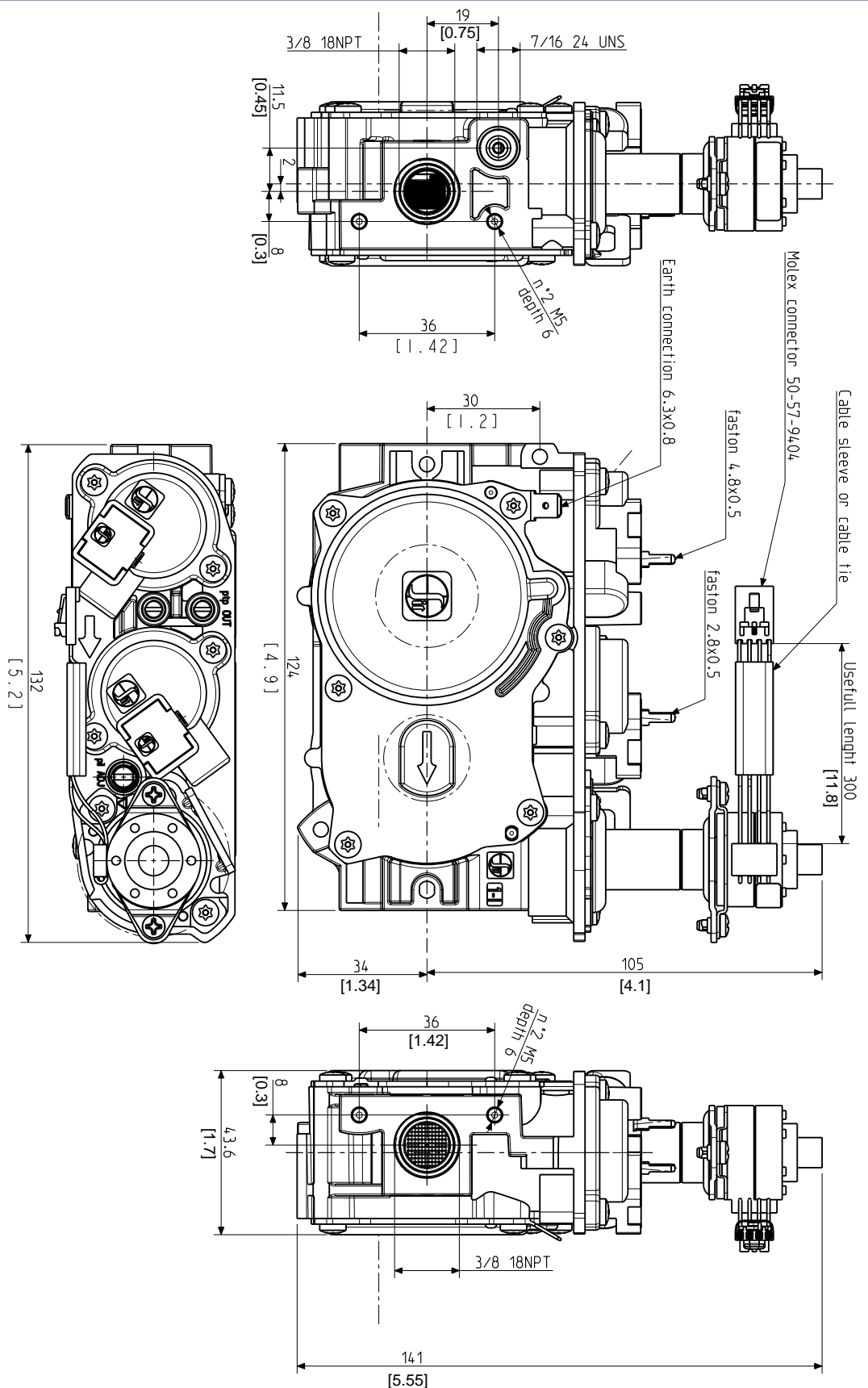
# VALVE DIMENSIONAL DRAWING



NOTE: All the dimensions are expressed in millimeters [inches].

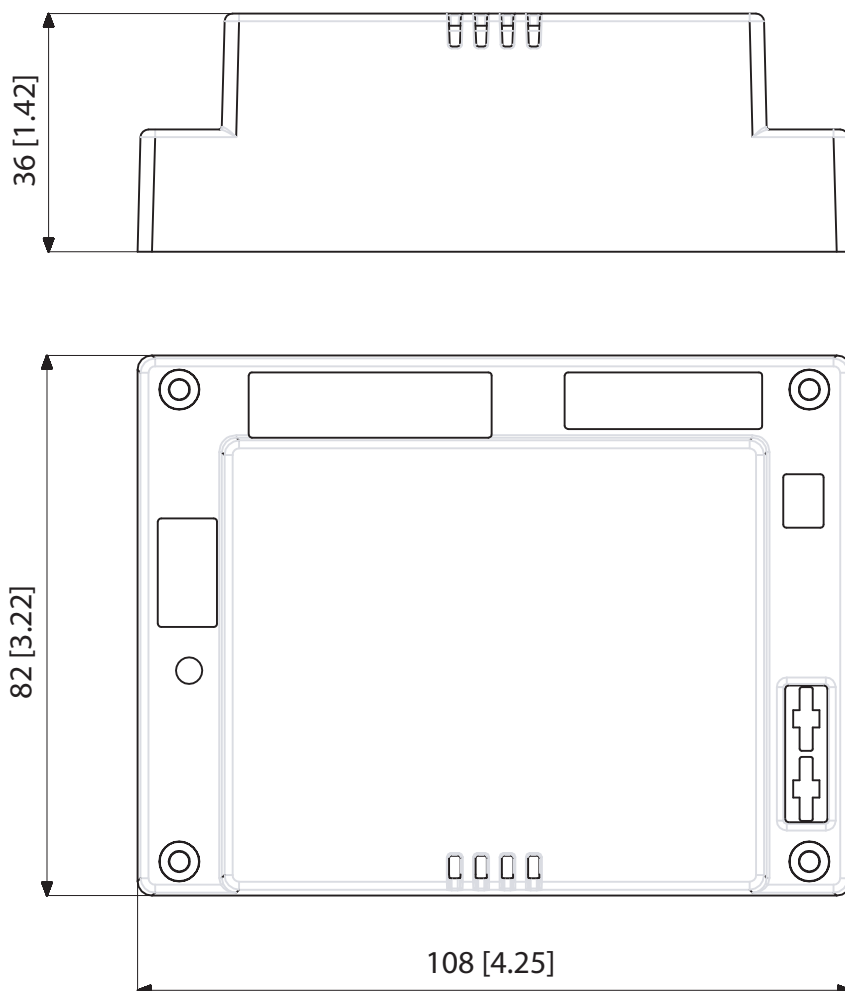


# VALVE DIMENSIONAL DRAWING



NOTE: All the dimensions are expressed in millimeters [inches].

# DIGITAL FIREPLACE BURNER CONTROL DIMENSIONAL DRAWING



NOTE: All the dimensions are expressed in millimeters [inches]



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