

# IT600 & IP600 Pneumatic Indicating Controller (9022)

IT/IP600-2003

A pneumatic indicating controller which can be supplied to provide single-term (P), two-term (P + I or P + D), three-term (P + I + D), on/off or differential-gap control action for the control of temperature, gauge pressure, vacuum, differential pressure or absolute pressure.

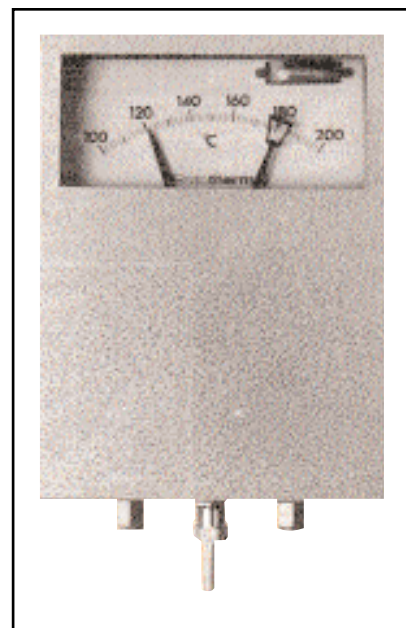
The instrument incorporates a flapper/nozzle type of control mechanism: simple in operation, this unit gives reliable, trouble free service over long periods without attention. A small amplifying relay, which houses the restrictor for the nozzle air supply provides the necessary volume of air required by the control valve.

The two and three term controller generates all terms simultaneously. The proportional band, integral time and derivative time are adjustable over a wide range to enable accurate matching to plant conditions.

On/off instruments have a sensitivity adjustment equivalent to approximately 0.25 to 1% proportional band.

Differential gap instruments switch to a maximum output at one switching point and minimum at the other switching point. The switching gap, which is spaced equally about the desired value index, is adjustable between 5% and 100% of the range.

Change of control action entails reversing a lever on the mechanism. It is not necessary to remove the whole flapper/nozzle assembly.



## Specifications

### General Specification

Accuracy	±1% FSD
Ambient Temperature	-20 to +50°C
Air Supply	1.4 Bar (20 psig)
Output	0.2 to 1 bar (3 to 15 psi) direct acting or 1 to 0.2 Bar (15 to 3 psi) reverse acting
Air consumption	4.5 litres per minute max.
Proportional band	3 to 300%
Integral time	0.5 to 32 minutes (Integral times down to approx. 5 secs are obtainable by removing the capacity chamber.)
Derivative time	0.25 to 12 minutes
Differential gap	5 to 100%
On/Off sensitivity	0.25 to 1%
Pneumatic connections	1/4" BSP female
Scale length	150 mm (6 inches)
Case	Glass filled polyester resin
Mounting	Suitable for surface or flush panel

### IP600 Pressure Specification

Measuring element	Non ferrous box diaphragm assembly, diaphragm stack or bourdon tube depending on pressure range. Stainless steel option available.
Suppressed ranges	Available on request
Pressure connections	3/8" BSP nut and tailpipe suitable for 1" (6.35 mm) diameter or 3/8" (9.5mm) bore tube. Receiver input: 1/4" BSP
Weight (approx.)	4.5 kg. AM panel: 2.0 kg

### IT600 Temperature Specification

Measuring element	Mercury-in-steel or non toxic filled bourdon tube.
Capillary	Microbore steel tube with 3.0 mm (1/8") diameter, stainless steel (Type C1) protection standard. Other protections available.
Bulb	Stainless steel BS970 316 S16. Stem diameter : 12.7 mm Bulb type 301, 302 or 303 Please refer to bulb type drawings
Weight (approx.)	5 kg. AM panel: 2.0 kg The above weight includes 3m (10ft) of capillary. For each additional 3m (10ft) add 0.25kg.

Telephone: +44 (0) 1656.740.551  
Facsimile: +44 (0) 1656.745.915

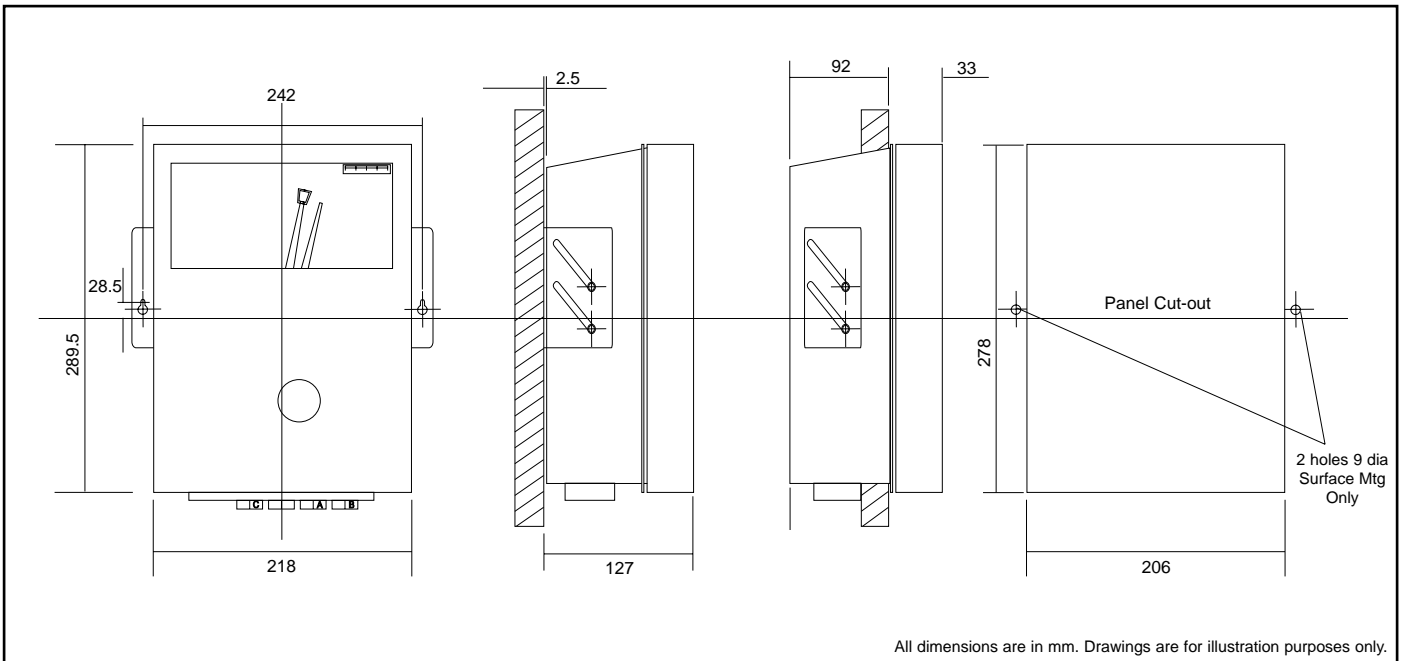
E-mail: [sales@rototherm.co.uk](mailto:sales@rototherm.co.uk)  
Web site: [www.rototherm.co.uk](http://www.rototherm.co.uk)

**Rototherm**  
instrumentation and control

British Rototherm Company Limited, Kenfig Industrial Estate, Margam, Port Talbot, West Glamorgan SA13 2PW United Kingdom

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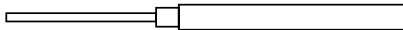
## IT600 and IP600 Dimensions & Fixings



### Bulb Types (IT600 only)

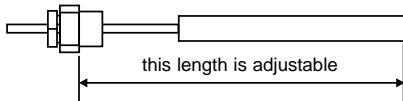
#### Type 301

This bulb is used when no fitting is required. The bulb may be held in place by a bracket or a clip (not supplied by Rototherm).



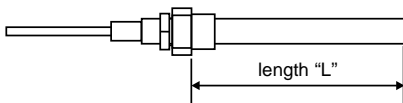
#### Type 302

This bulb has a fitting which slides along the capillary and is tightened into the required position. Bulb length cannot be specified.



#### Type 303

The fitting is located on the bulb. When ordering please confirm immersion length "L".



### Compression Glands/Fittings

Compression glands tighten on stem to provide liquid and gas tight seal. Once fitted the position of the thermometer can only be altered by cutting off the olive and replacing it with a new one.

Add 50mm for BSP threads (75mm for NPT threads) to desired immersion length to obtain minimum "D" dimension).

Compression glands are available on type 302 and 303 bulbs only.



### World-Wide Reliability & Quality

Rototherm's high quality and performance is guaranteed by an uncompromising approach to quality. British Rototherm's policy has always been to maintain a consistently high level of quality and reliability throughout its product range and service to customers. The company has worked energetically towards establishing comprehensive quality controls and has earned a world-wide reputation for product quality.



ISO 9001

### Other Recorders & Controllers Available include:

- Temperature & Pressure Combined
- Temperature & Humidity
- Pressure & Differential Pressure
- Flow
- Level
- Pneumatic Recorder Controllers

Telephone: +44 (0) 1656.740.551  
Facsimile: +44 (0) 1656.745.915

E-mail: [sales@rototherm.co.uk](mailto:sales@rototherm.co.uk)  
Web site: [www.rototherm.co.uk](http://www.rototherm.co.uk)



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