

Maclaren Products

Type ACS Thermostat Range

Application

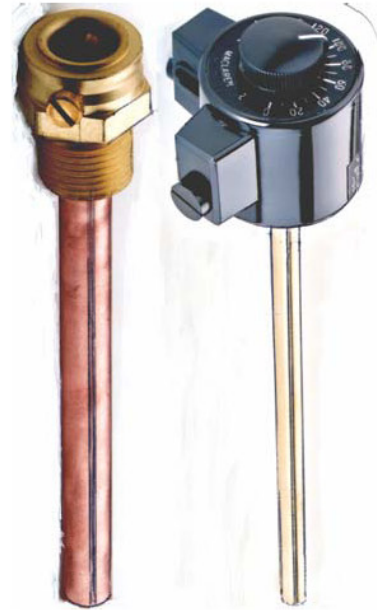
ACS thermostats are designed to control a medium (air/gas or liquid) at a given temperature.

Description

The **operative length** is that portion of the stem that responds to temperature change.

The **inoperative length** (when required) is that portion of the stem that passes through the lagging or a wall thickness so that the operative length is immersed in the medium to be controlled. This inoperative length does not respond to temperature change. (Not available on 7.94 mm dia. Stem models).

A **boss extension** must be fitted when the maximum operating temperature is greater than 150°C. (Not available on 7.94 dia. Stem models).



Optional Extras

- Pockets (for liquid controls)
- Mounting flanges
- Loose Hexagon for mounting
- Watertight cover box to IP 67

Switch Action

The following are available:-

Break on rise (S.P.S.T. B.O.R.)

Break on rise with hand reset (S.P.S.T B.O.R plus H/R)

Changeover (S.P.D.T C/O) i.e. to break one circuit on change of temperature and to immediately make another.

Changeover with hand reset (S.P.D.T. C/O plus H/R).

The **hand reset** facility is provided when the instrument is used as a safety cut-out. Change of temperature will cause the switch to operate and it will not "re-set" until manually tripped.

Electrical Rating

| | Voltage | Break on Rise | Make on Rise |
|------------|-----------|---------------|--------------|
| ACS | 0/250V AC | 15(1)A | 5(1)A |
| | 0/440V AC | 7.5(1)A | 3(1)A |
| | 250V DC | 0.1A | 0.05A |
| ACT | 0/250V AC | 20(1)A | 5(1)A |
| | 0/440V AC | 10(1)A | 3(1)A |
| | 250V DC | 0.1A | 0.05A |

Control of Air/Gas

When used in ovens or air ducts no pocket is required, and the stem diameter is increased to 14.29mm (0.562 ins) to give fast response to temperature change. The thermostat is mounted using a loose flange.

Temperature Settings

On a break circuit on temperature rise (B.O.R.) switch action, the electrical circuit will be open at the dial setting and will close when the temperature falls below the dial setting by an equivalent number of degrees to the total differential (see table). The converse applies on the make on rising temperature circuit in the changeover (C/O) switch.

Basic Thermostats

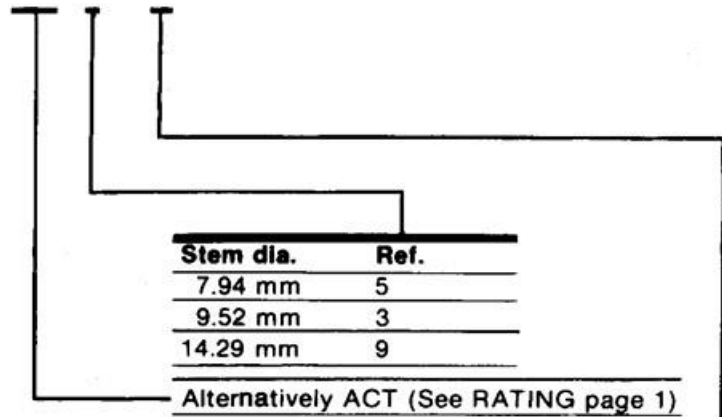
Reference

- ACS/B : S.P.S.T. BOR switch
- ACS/C : SP.D.T. CO switch
- ACS/D : S.P.S.T. BOR HR switch
- ACS/E : S.P.D.T. CO HR switch

When ordering please specify:

Cross References

- 7.94 mm = 5/16 in.
- 9.52 mm = 3/8 in.
- 14.29 mm = 9/16 in.
- 178 mm = 7 in.
- 279 mm = 11 in.
- 457 mm = 18 in.



| Stem O/A | Stem Operative | Temp. Range | Total Test Differential | Reference |
|--------------|----------------|-------------|-------------------------|-----------|
| 178 mm | 178 mm | 0—150°C | 8 K | 71 |
| *178 mm + BE | 178 mm | 0—300°C | 16 K | 72 |
| *279 mm | 178 mm | 0—150°C | 8 K | 13 |
| *279 mm + BE | 178 mm | 0—300°C | 16 K | 14 |
| 279 mm | 279 mm | 0—100°C | 6 K | 15 |
| 279 mm | 279 mm | 20—120°C | 6 K | 16 |
| 279mm | 279 mm | 50—150°C | 6 K | 17 |
| *279 mm + BE | 279 mm | 50—250°C | 12 K | 18 |
| *279 mm + BE | 279 mm | 100—300°C | 12 K | 19 |
| *457 mm | 279 mm | 0—100°C | 6 K | 80 |
| *457 mm | 279 mm | 20—120°C | 6 K | 81 |
| *457 mm | 279 mm | 50—150°C | 6 K | 82 |
| *457 mm + BE | 279 mm | 50—250°C | 12 K | 83 |
| *457 mm + BE | 279 mm | 100—300°C | 12 K | 84 |
| 457 mm | 457 mm | 0— 60°C | 5 K | 85 |
| 457 mm | 457 mm | 40 —100°C | 5 K | 86 |
| 457 mm | 457 mm | 70—130°C | 5 K | 87 |
| 457 mm | 457 mm | 90—150°C | 5 K | 88 |
| *457 mm + BE | 457 mm | 80—200°C | 10 K | 89 |
| *457 mm + BE | 457 mm | 130—250°C | 10 K | 90 |
| *457 mm + BE | 457 mm | 180—300°C | 10 K | 91 |
| 457 mm | 457 mm | 80—140°C | 5 K | 92 |

Note: BE = Boss Extension
 *Not available on 7.94 mm diameter stem models.

Note: K = Celcius degrees

Optional Extra Kits

Select to suit stem diameter. Subject to availability as shown in table

| Optional Extra | REFERENCE DIGITS | | | | | |
|--------------------------------|---------------------------|---------------------------|--------------------------|---------------------------|----------------------------|---------------------------|
| | 7.94 mm (5/16") dia. stem | | 9.52 mm (3/8") dia. stem | | 14.29 mm (9/16") dia. stem | |
| | Basic | Plus Watertight Cover Box | Basic | Plus Watertight Cover Box | Basic | Plus Watertight Cover Box |
| 178 mm (7") Copper pocket | CA5 | — | CA3 | — | — | — |
| 279 mm (11") Copper pocket | CB5 | — | CB3 | — | — | — |
| 457 mm (18") Copper pocket | CC5 | — | CC3 | — | — | — |
| 178 mm (7") Mild steel pocket | — | — | — | — | — | — |
| 279 mm (11") Mild steel pocket | — | — | — | — | — | — |
| 457 mm (18") Mild steel pocket | — | — | — | — | — | — |
| 178 mm (7") S/steel pocket | — | — | — | — | — | — |
| 279 mm (11") S/steel pocket | — | — | — | — | — | — |
| 457 mm (18") S/steel pocket | — | — | — | — | — | — |
| Fixed Flange | FA | — | FA | — | FA | — |
| Loose Flange | — | — | FB | — | FB | — |
| Loose Hex | LA5 | LX5 | LA3 | — | LA9 | — |
| Watertight Cover Box | No longer available | | | | | |

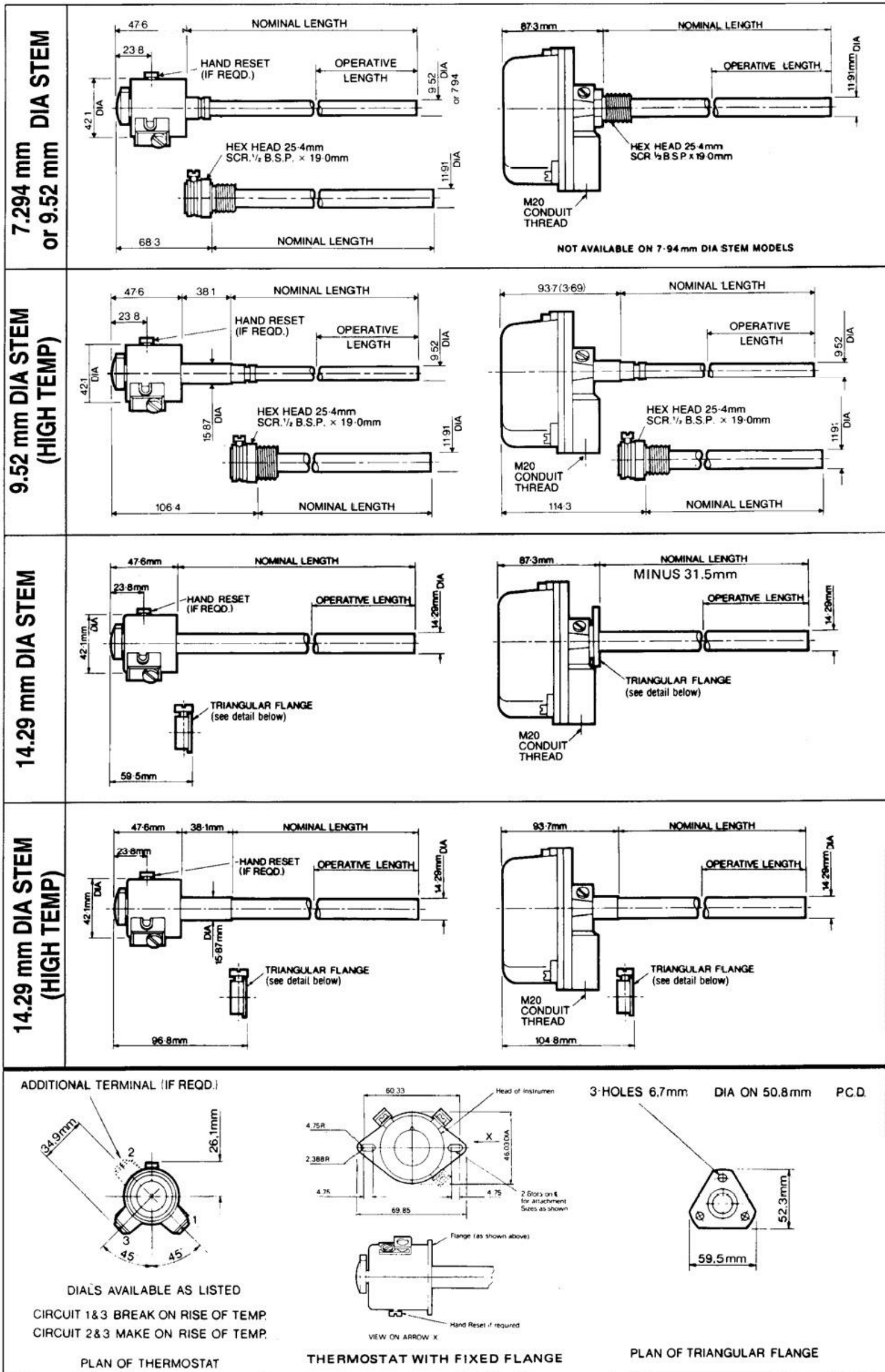
*Pocket Pressure Rating: Copper = 600 psi : Steel = 1000 psi

* Please note - mild steel and stainless steel pockets no longer available

****Please note - watertight cover box is no longer available***

Thermostat Only

Thermostat in Watertight Cover Box



Dimensions (mm)

Loose Flange**Below, Fixed Flange****Loose Hex**

Users are reminded of their responsibility to ensure that all controls are used safely, without risk to health and in compliance with local laws and regulations.

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