

-196 to 670°C

# Reference Probes - Semi Standards Platinum Resistance Thermometers

- High Stability Reference Probes
- Wide Temperature Ranges
- High Stability Platinum Coil Elements

These industrial platinum resistance thermometers are ideal for field and lab use. Suitable for use as working standards in Dry Blocks and Liquid Baths or as high accuracy probes for our range of True Temperature Indicators.

All the thermometers are metal sheathed and both less fragile and more affordable than the Isotech range of true Standard Platinum Resistance Thermometers that are used in laboratories and are found in our publication "*Solutions for Primary and Secondary Laboratories*".

All the thermometers use handmade coil wound platinum sensing elements to give high accuracy and low drift. Isotech's UKAS accredited lab can calibrate to the smallest of uncertainties.

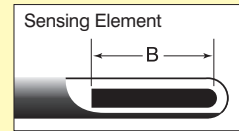
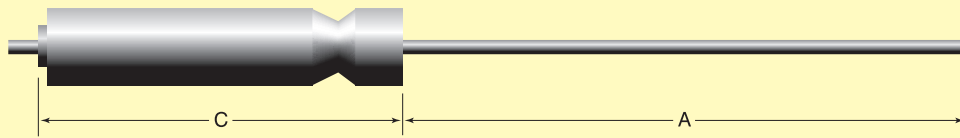
Calibration should be specified to suit the particular operating range and application. Isotech can advise on which service is appropriate to match the temperature range and application.



## Universal Specifications

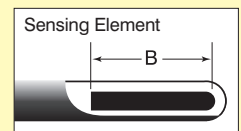
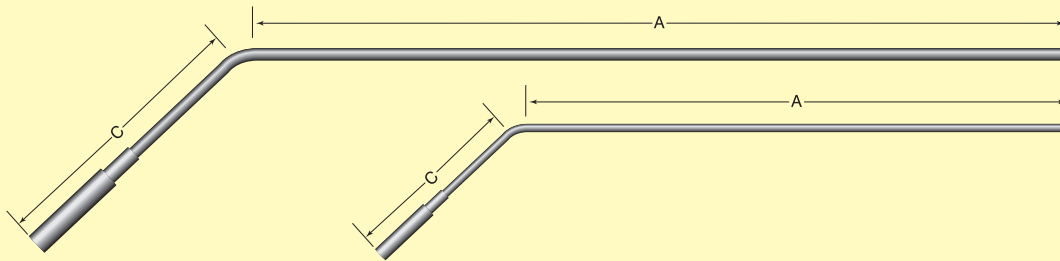
|                         |   |
|-------------------------|---|
| Ro                      | 100Ω ± 0.05 Ω   |
| Alpha                   | 0.003850 ± 0.000005   |
| Standard                | IEC 60751   |
| Stability               | 0.010 Ω/year  |
| Recommended Current     | 1mA   |
| Self Heating at 1mA     | 0.004°C   |
| Calibration             | Optional UKAS Calibration at extra cost.<br>See table for typical uncertainties |
| Connection              | Four Wire   |
| Max. Handle Temperature | 80°C  |

*After manufacture all Isotech Semi Standard PRTs are thermally pre-conditioned to provide optimal stability.*



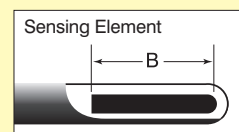
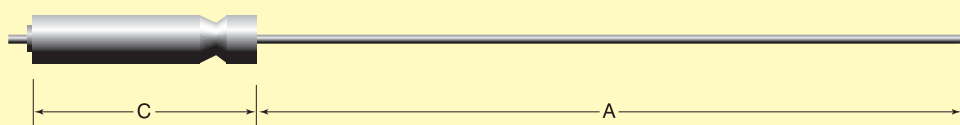
### ■ General Purpose Probes

| Model      | Range           | Diameter | Length (A) | Sensing Length (B) | Handle (C) | Cable   | Application                        |
|------------|-----------------|----------|------------|--------------------|------------|---------|------------------------------------|
| 935-14-112 | -50°C to 250°C  | 3mm      | 225mm      | 6mm                | No Handle  | 2m PTFE | General Purpose/TTI-10             |
| 935-14-61  | -50°C to 250°C  | 4mm      | 300mm      | 6mm                | 19 x 120mm | 2m PTFE | Fast Response, Low Stem Conduction |
| 935-14-13  | -196°C to 250°C | 6mm      | 350mm      | 25mm               | 25 x 115mm | 2m PTFE | Low Temperature                    |
| 935-14-113 | -100°C to 250°C | 6mm      | 350mm      | 25mm               | 19 x 120mm | 2m PTFE | General Purpose                    |
| 935-14-16  | -100°C to 450°C | 6mm      | 450mm      | 25mm               | 19 x 120mm | 2m PTFE | General Purpose                    |
| 935-14-116 | -100°C to 450°C | 6mm      | 350mm      | 25mm               | 19 x 120mm | 2m PTFE | General Purpose/Fits milliK Case   |
| 935-14-72  | -50°C to 670°C  | 6mm      | 375mm      | 25mm               | No Handle  | 2m PTFE | Fits Jupiter / Gemini Carry Case   |
| 935-14-98  | -50°C to 350°C  | 4mm      | 300mm      | 8mm                | No Handle  | 2m PTFE | Low Stem Conduction                |



### ■ Angled Probes - angled head provides maximum clearance at top of calibration bath

| Model     | Range          | Diameter | Length (A) | Sensing Length (B) | (C)  | Cable       | Application              |
|-----------|----------------|----------|------------|--------------------|------|-------------|--------------------------|
| 935-14-82 | -50°C to 250°C | 4mm      | 210mm      | 6mm                | 50mm | 1.5m PTFE   | Europa - Venus - Calisto |
| 935-14-85 | -50°C to 250°C | 6mm      | 420mm      | 25mm               | 35mm | 0.54 m PTFE | Oceanus-6                |



### ■ Working Industrial Standards

These thermometers use premium grade wire wound elements to IEC-751 and the same internal construction as our working Standard SPRTs. The 95L is optimised for low temperature with minimum stem conduction. The 95H is optimised for high temperature operation. Both models employ strain free construction.

| Model      | Range           | Diameter | Length (A) | Sensing Length (B) | Handle (C) | Cable   |
|------------|-----------------|----------|------------|--------------------|------------|---------|
| 935-14-95L | -200°C to 165°C | 6mm      | 480mm      | 25mm               | 25 x 115mm | 2m PTFE |
| 935-14-95H | -80°C to 670°C  | 6mm      | 480mm      | 25mm               | 19 x 120mm | 2m PTFE |

### Termination Options

Bare Wire (BW)  
 TTI suits milliK and TTI-1 to TTI-7, TTI-b – suits TTI-22  
 DB Connector for Dry Block Calibrator Site Indicator

### How to Order

Please Specify Model Type and Termination Option  
 (for example 935-14-13/BW)  
 Please state whether UKAS Certification is required

