



935

Semi Standard Platinum Resistance  
Thermometer, -200°C to 670°C

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.

## Description

These industrial platinum resistance thermometers are working standards 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 909 range of true Standard Platinum Resistance Thermometers used in 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.

### Key features:

- High stability reference probes
- High stability Platinum coil element
- Wide operating range

# Specifications

## General specifications

R0	100 $\Omega$ $\pm$ 0.05 $\Omega$		
Alpha	0.003850 $\pm$ 0.000005		
Standard	IEC 60751		
Stability	0.010 $\Omega$ / year		
Recommended current	1 mA		
Self heating at 1 mA	0.004°C		
Connection	Four wire		
Max handle temperature	80°C		
Calibration	Optional UKAS calibration at extra cost		

## General purpose probes

Reference	Temperature range	Diameter	Length (A)	Sensing length (B)	Handle (C)	Cable	Application
935-14-112	-50 to 250°C	3 mm	225 mm	6 mm	No handle	2 m PTFE	General purpose With TTI-10
935-14-61	-50 to 250°C	4 mm	300 mm	6 mm	19 x 120 mm	2 m PTFE	Fast response time Low stem conduction
935-14-13	-196 to 250°C	6 mm	350 mm	25 mm	25 x 115 mm	2 m PTFE	Low temperature
935-14-113	-100 to 250°C	6 mm	350 mm	25 mm	19 x 120 mm	2 m PTFE	General purpose
935-14-16	-100 to 450°C	6 mm	450 mm	25 mm	19 x 120 mm	2 m PTFE	General purpose
935-14-116	-100 to 450°C	6 mm	350 mm	25 mm	19 x 120 mm	2 m PTFE	General purpose With MilliK
935-14-72	-50 to 670°C	6 mm	375 mm	25 mm	No handle	2 m PTFE	With Jupiter / Gemini
935-14-98	-50 to	4 mm	300 mm	8 mm	No handle	2 m PTFE	Low stem

	350°C						conduction
--	-------	--	--	--	--	--	------------

## Angled probes

(Angled head provides maximum clearance at top of calibration bath)

Reference	Temperature range	Diameter	Length (A)	Sensing length (B)	Handle (C)	Cable	Application
935-14-82	-50 to 250°C	4 mm	165 mm	6 mm	50 mm	1.5 m PTFE	With Europa / Venus / Calisto
935-14-85	-50 to 250°C	6 mm	385 mm	25 mm	35 mm	0.54 m PTFE	With Oceanus 6

## Working industrial standards

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

## Typical uncertainties of 935 PRTs with UKAS calibration

Temperature °C	935-14-95L	935-14-61 935-14-13	935-14-13	935-14-95H 935-14-72 935-14-16	935-14-95H 935-14-72
-196	25 mK		25 mK		
-80	20 mK		20 mK	25 mK	25 mK
-50	15 mK	15 mK	15 mK	20 mK	20 mK
0	10 mK	10 mK	10 mK	15 mK	15 mK
50	10 mK	10 mK	10 mK	15 mK	15 mK
156	10 mK	10 mK	10 mK	15 mK	20 mK
232		15 mK	15 mK	20 mK	25 mK
420				40 mK	40 mK
550					50 mK
660					50 mK

## Models and accessories

935 Working Standard Platinum Resistance Thermometers, -200°C to 670°C  
Delivered in standard with:

- Carrying case

### General purpose probes:

935-14-112	Semi standard Pt100 (-50°C to 250°C), with carrying case
935-14-61	Semi standard Pt100 (-50°C to 250°C), with carrying case
935-14-13	Semi standard Pt100 (-196°C to 250°C), with carrying case
935-14-113	Semi standard Pt100 (-196°C to 250°C), with carrying case
935-14-16	Semi standard Pt100 (-100°C to 450°C), with carrying case
935-14-116	Semi standard Pt100 (-100°C to 450°C), with carrying case
935-14-72	Semi standard Pt100 (-50°C to 670°C), with carrying case
935-14-98	Semi standard Pt100 (-50°C to 350°C), with carrying case

### Angled probes:

*(Angled head provides maximum clearance at top of calibration bath)*

935-14-82	Semi standard Pt100 (-50°C to 250°C), with carrying case
935-14-85	Semi standard Pt100 (-50°C to 250°C), with carrying case

### Working industrial standards:

935-14-95L	Semi standard Pt100 (-200°C to 165°C), with carrying case
935-14-95H	Semi standard Pt100 (-80°C to 670°C), with carrying case

### Connexion options:

Ordering code example: 935-xx-xx/BW

BW	Bare wires (will be supplied unless otherwise specified)
TTI	LEMO connector for milliK, TTI-1 to TTI 7
TTI-b	LEMO connector for TTI 22
DB	Connector for dry block calibrators model SITE