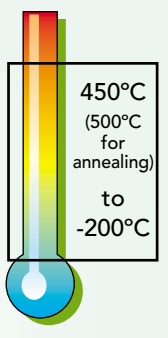


# Meyers Thermometer



In Isotech's "Realizing ITS-90" collection of products we have tried to build respectfully on those foundations that were already in place - more specifically those products of Henry Sostmann and Jim Cross. There is another product that we strongly believe deserves inclusion in our collection, the Standard Platinum Resistance Thermometer of C. H. Meyers. This product is currently in production at YSI Inc. in Ohio and we have arranged with them that their SPRT be included in Databook 1.

This thermometer is the direct descendent of those developed by C. H. Meyers at the NBS in the early 1930's. Meyers' paper, Coiled Filament Platinum Resistance Thermometers, is reprinted in the Isotech Journal of Thermometry along with an informative introduction by Henry Sostmann.

Meyers produced some number of these as a home business and then it was transferred to Leeds and Northrup. L&N produced them for many years. In early 1981, the product was acquired by YSI and transferred by Henry Sostmann. In this transfer every effort was made to preserve its history and excellent performance. The goal was to change nothing. Nearly 20 years later, it indeed appears that this was successful.

This thermometer was the ideal interpolation device for the IPTS-68, however the ITS-90 offers temperature ranges where the mica construction of these thermometers is not suitable. It can give excellent performance over the range Argon through Zinc.

There are two forms of the YSI SPRT. In one, the 8163, the sensor element consists of a bifilar coiled coil of platinum. The 8167 consists of a simple bifilar solenoid type coil of platinum. In this design the platinum wire is all very close to the inside surface of the quartz tube giving a shorter time constant. In actual use, there is virtually no difference in performance, the choice is only one of personal preference.

As a result of the evolution of calibration requirements, due in part to ITS-90, YSI introduced another model of each type with a sheath length of 560mm in addition to those with the traditional 470mm length. These longer types with the model number suffixed L, are otherwise identical.

### Two Types of Thermometers

ITL 8163 and 8167 SPRTs are designed for measurements from -200 to +500°C. Both have protection tubes of fused quartz. The only difference between them is the time constant: 6 seconds for the ITL 8163, 3.5 seconds for the 8167. Your preference is the only basis for the choice. We supply each thermometer with a protective case for storage and shipping. RTPW and WGA are also included.

### Calibration Reports

With each SPRT, you may order a UKAS calibration report, relating temperature to resistance. Standard calibration ranges are listed in Databook 5.

	8163	8163L	8167	8167L
Useable range	-200°C to +500°C			
Calibration range	-196°C to +420°C			
Ro	25.5Ω			
Sheath material	Quartz			
Filled with	dry air			
Time constant*	6 secs			3.5 secs
Length under handle	470mm	560mm	470mm	560mm
Immersion	7" min to 14" max			
Sensing length	33mm			
Lead wires	4 lead flexible copper cable 2.4m long with gold plated connector lugs			
* to 63% of final value in water moving at 1fps				

### How to order

- ITL-M-8163
- ITL-M-8163L
- ITL-M-8167
- ITL-M-1867L
- With or without UKAS Calibration
- State range - see Databook 5

