

Mini RTDs for Small Places

APPLICATION

Small locations require small sensors. Freeze dryers, bearings, and motor windings, are just a few of the locations that require a small diameter and short length RTD for a repeatable and stable temperature measurement. These types of applications may also require high accuracy, durable extension cable, and NIST traceable calibration to satisfy requirements.

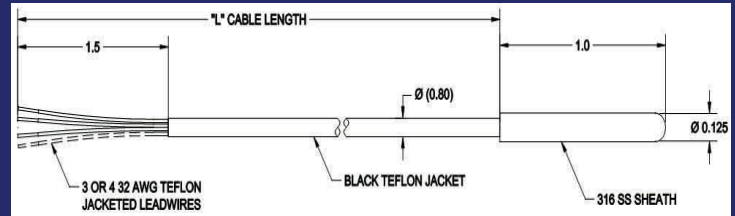


CHALLENGE

Lead wire strain relief, sealing from moisture ingress, and maintaining durability were the major challenges encountered while designing this sensor. Maintaining a moisture seal during pressure changes as encountered in a steam autoclave or freeze dryer was another difficult hurdle to clear.



22104



Mini RTD

SOLUTION

The Burns design group came up with a package that is 1/8" diameter, and just 1" long that has all the features and performance you would expect from a much larger sensor. Temperature range is -196°C to 200°C and the sensing element is completely sealed against moisture and can be completely immersed in water without degradation or loss of accuracy.

The Teflon® encased cable and 316L SS sensor body are compatible with a wide variety of chemicals and other agents. Sensors are available in 0.10% and 0.05% interchangeability and can be matched to a transmitter for even greater accuracy of up to 0.11°C. (See http://www.burnsengineering.com/document/papers/Transmitter_RTDMatched.pdf for more detail on matching an RTD to a transmitter.)