

# Model RO-215

Ruthenium Oxide Cryogenic Temperature Sensor



RO-215 Ruthenium Oxide sensors are thick-film resistors which adhere to a single resistance-versus-temperature curve. They offer excellent performance characteristics in magnetic field environments. The RO-215 offers similarities physically but possess greater calibration accuracy and are 'expected' to have repeatability greater than 20mK.

## Available RO-215 Models

### Group "A"

+/- 0.1K from 2K to 50K  
+/- 0.75K from 50K to 100K

### Group "B"

+/- 0.2K from 2K to 50K  
+/- 1K from 50K to 100K

### Group "C"

+/- 0.2K from 2K to 50K  
+/- 1.5K from 50K to 100K

### Group "D"

+/- 0.3K from 2K to 50K  
+/- 3K from 50K to 100K

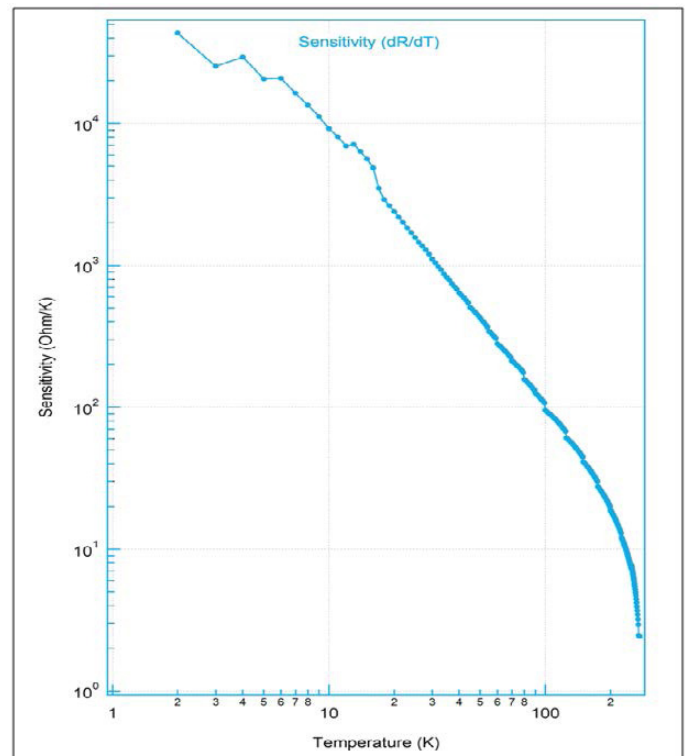
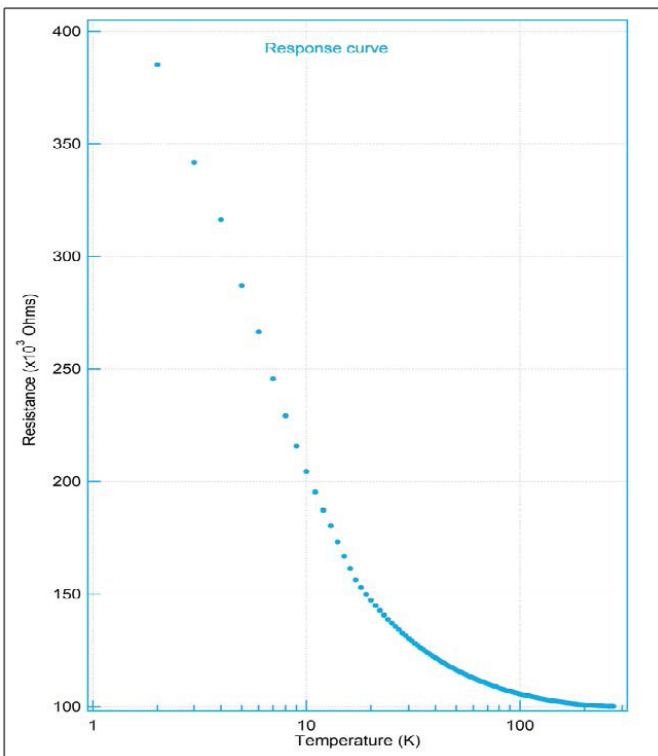
\*Uncalibrated

+/- 0.3K from 2K to 50K

<b>Model</b>	<b>RO-215</b>
<b>Range</b>	2.0K to 100K
<b>Excitation</b>	10uA
<b>Repeatability</b>	+/- 20mK @ 4.2K
<b>Magnetic Field Use</b>	No MR for B<2T; negligible positive MR for B>2T
<b>Mounting Options</b>	Copper Can, Bobbin, Direct FoC (film-on-ceramic)
<b>Interchangeability</b>	Yes
<b>Calibration Options</b>	Yes, +/- 30mK accuracy @ 4.2K
<b>Dimensions (Chip) [mil]</b>	177 x 80 x 15
<b>Dimensions (Chip) [mm]</b>	4.5 x 2.03 x 0.38
<b>Technology</b>	RuO thick film custom ink, direct print with over-glaze, remote solder pads to minimize heat on film

## dT at 4.2K due to magnetic field

Model	2T	8T
RO-215	0.01K	0.1K



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## Two-Wire Options

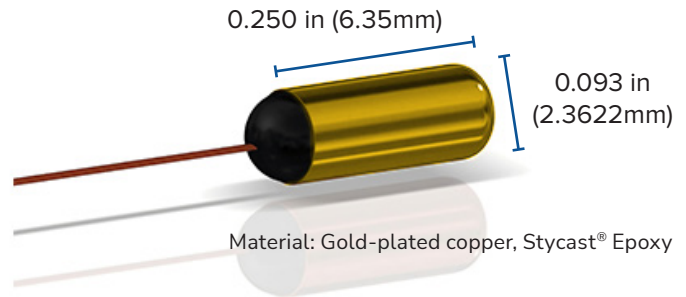
36 AWG Copper, Twisted  
Insulation: Teflon

36 AWG Phosphor-Bronze, Bonded  
Insulation: Polyimide (Recommended)

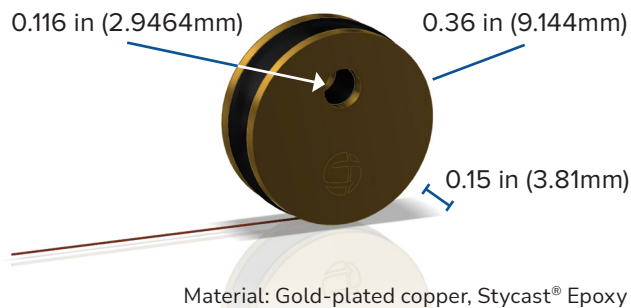
32 AWG Phosphor-Bronze, Bonded  
Insulation: Polyimide

30 AWG Phosphor-Bronze, Bonded  
Insulation: Polyimide

## Canister Package



## Model 22 Bobbin



## Four-Wire Options

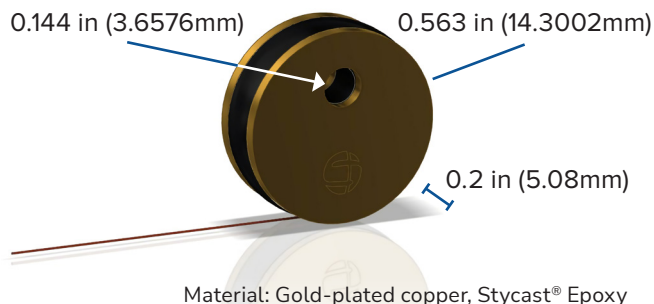
36 AWG Copper, Twisted  
Insulation: Teflon

36 AWG Phosphor-Bronze, Bonded  
Insulation: Polyimide (Recommended)

32 AWG Phosphor-Bronze, Bonded  
Insulation: Polyimide

Available lengths from 6 inches to 15 feet  
Teflon sheathing available

## Model 25 Bobbin



**ISO9001**  
CERTIFIED

\*Custom Configurations Available Upon Request