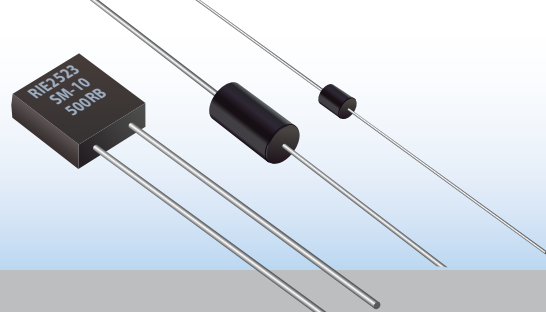


## Riedon™ RTDW Series Resistance Temperature Sensors by Bourns

### NEW PRODUCT BRIEF



#### INTRODUCTION

The Riedon™ RTDW Series Resistance Temperature Detectors (RTDs) by Bourns are engineered to provide long-term stability with high accuracy and enable broad design flexibility. These new temperature sensors are available in 100, 500, and 1000 ohms and feature resistance tolerances as low as  $\pm 1\%$ . Available with selectable TCR options of  $\pm 3500$ ,  $\pm 4500$ , and  $\pm 6000$  PPM/ $^{\circ}\text{C}$ , the series furnishes the flexibility to optimize for accuracy and linearity across a wide range of applications. The features offered in the RTDW Series help minimize electrical noise, provide excellent repeatability, and enable long-term stability across a broad temperature range.

Available in axial lead and rectangular packages, these highly-ruggedized temperature sensors are built with wirewound technology that uses a miniature coil sensing element encased in protective housing material. The miniature coil provides higher stability and lower noise than thin-film RTDs. The non-inductive Multi-Pi cores helps to reduce inductance in the circuit. The protective housing offers enhanced durability and environmental resistance. The wirewound technology is a key optimization benefit for applications that require both high reliability and accuracy.

#### FEATURES

- Resistance tolerance options of  $\pm 1\%$  and  $\pm 5\%$
- Standard Temperature Coefficients (TCR) of  $\pm 3500$ ,  $\pm 4500$ ,  $\pm 6000$  ppm/ $^{\circ}\text{C}$
- Rugged rectangular and axial package options
- Options for customizable package and non-standard resistance values available upon request
- Non-inductive Multi-Pi cores
- Additional resistance values available upon request

#### BENEFITS

- Resistance values available for the most widely-used RTD standards
- Wirewound construction delivers long-term accuracy and reduced drift
- Tight tolerance as low as  $\pm 1\%$  provides accurate measurement
- Low electrical noise and high stability across a broad temperature range
- Rugged housing for high reliability
- Flame and moisture-resistance protective encapsulation
- RoHS compliant\*

#### HOW TO ORDER

**RTDW 1 N - 1K F 1**

Model \_\_\_\_\_

Size \_\_\_\_\_

1  
2  
3

TCR Code (PPM/ $^{\circ}\text{C}$ ) \_\_\_\_\_

N = 6000  
B = 4500  
R = 3500

Resistance Code \_\_\_\_\_

100R = 100 Ohms  
500R = 500 Ohms  
1K = 1K Ohms

Tolerance in Percent \_\_\_\_\_

F =  $\pm 1\%$   
J =  $\pm 5\%$

Internal Use \_\_\_\_\_

#### APPLICATIONS

The Riedon™ RTDW Series Resistance Temperature Sensors by Bourns supply exceptional precision and stability that solve requirements for measuring temperature in sophisticated or sensitive applications. Designers will find these products particularly well-suited for use in environmental temperature sensing devices, HVAC controls, medical diagnostic equipment\*\*, compensation resistors, and process control systems that require high precision and stability. These products are also useful in areas that require high reliability such as industrial probes, aerospace sensors, and rechargeable battery packs.

#### MARKET TRENDS

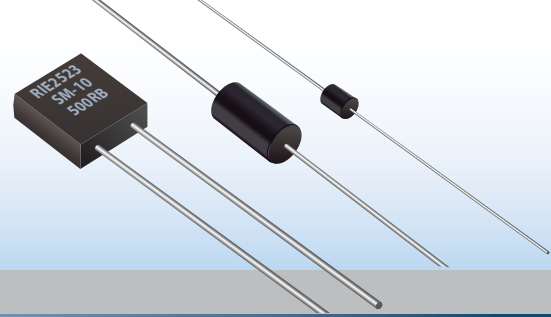
The market demand for higher reliability products is steadily rising. Given the increasing adoption of electric vehicles, green infrastructure, and automation, along with the growing need for accuracy in HVAC controls, medical diagnostic equipment\*\*, compensation resistors, and process control systems, wirewound RTDs are needed for their ability to offer exact measurements and design versatility in robust form factors. Another benefit is that wirewound RTDs offer stability over wide temperature ranges, resulting in their expanded applicability for temperature sensing. The RTDW Series is, therefore, ideal for environmental temperature sensing devices, industrial probes, aerospace sensors, and rechargeable battery packs to increase performance and reliability. As component reliability and accuracy become ever more important in these growing industries, the RTDW Series is and will continue to be superior solutions that enable manufacturers to meet high-end electronic application specifications.

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

\*\*Bourns® products have not been designed for and are not intended for use in "lifesaving," "life-critical" or "life-sustaining" applications nor any other applications where failure or malfunction of the Bourns® product may result in personal injury or death. See Legal Disclaimer Notice: <http://www.bourns.com/docs/legal/disclaimer.pdf>.

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## NEW PRODUCT BRIEF



### ELECTRICAL CHARACTERISTICS

Series	Product Image	Tolerance (%)	Resistance Range (Ω)	Package Type	Temperature Coefficient (TCR) (PPM/°C)	Operating Temperature Range (°C)
RTDW		± 1, ± 5 %	100, 500, 1000	Axial Leads	± 3500, ± 4500, ± 6000	0 to +100

For full characteristics, see data sheet

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In April 2023, BE Services Company, Inc., a subsidiary of Bourns, Inc., purchased certain assets of Riedon, Inc., including its logo and trademarks and the right to continue to manufacture former Riedon™ products. "Riedon Logo" is a registered trademark of BE Services Company, Inc. in the United States. "Riedon" is a trademark of BE Services Company, Inc.