

Miniature Sensors

Embedment RTDs

Element	TCR $\Omega/\Omega/^\circ\text{C}$	Case style A		Case style B		Case style C		Case style D	
		Single	Dual	Single	Dual	Single	Dual	Single	Dual
Platinum, 100 $\Omega \pm 0.36\%$ at 0°C	.00392	S325PA S11636PA*	S4026PA	S331PA	S7792PA	S341PA	S14320PA	S12414PA	
Platinum, 100 $\Omega \pm 0.12\%$ at 0°C (Meets EN60751, Class B)	.00385	S304PD	S309PD	S306PD	S14405PD	S308PD	S14455PD	S13282PD	
Platinum, 100 $\Omega \pm 0.36\%$ at 0°C	.00385	S7304PE	S305PE	S7746PE	S307PE	S7908PE	S14456PE	S13282PE	
Platinum, 1000 $\Omega \pm 0.12\%$ at 0°C	.00385	S101907PF	S101911PF	S101908PF	S101912PF	S101909PF	S101913PF	S101910PF	
Copper, 10 $\Omega \pm 0.2\%$ at 25°C	.00427	S324CA	S4026CA	S332CA		S342CA			
Nickel, 120 $\Omega \pm 0.5\%$ at 0°C	.00672	S326NA S11636NA*	S4026NA	S330NA	S7792NA	S340NA			

*MIL-T-24388C qualified models.

Install miniature sensors in or beneath the babbitt layer of bearing shoes. They monitor metal temperature — the most reliable indicator of bearing condition — to give early warning of oil film breakdown. Machines can then be shut down and the problem corrected before catastrophic failure occurs.

While no larger than many bare ceramic elements, these RTDs have metal cases and insulated leads to withstand rough handling and harsh environments. They're easy to install in drilled holes for general purpose sensing.

Specifications

Temperature range:

-50 to 260°C (-58 to 500°F).

Case: Tin plated copper alloy. Models S12414, S13282 and S101910: Stainless steel.

Babbitt tip: Factory applied babbitt tip, available on case style A or B, reduces the danger of overheating the sensor when installed in babbitt layer.

Leads: Stranded copper with PTFE insulation; stainless steel overbraid optional (one sleeve covers all leads). Polyimide insulation on S11636.

Leadwire size (AWG):

Case style	Number of leads			
	2	3	4	6
A	24	24	24	24
B	24	24	28	28
C	24	26	30	30
D	30	30	34	

Time constant: 3.0 seconds (case style A) to 1.5 seconds (case style D), typical value in moving water.

Insulation resistance: 10 megohms min. at 100 VDC, leads to case.

MIL-T-24388C qualified models:

PRT-EM-E2: Order S11636PA3K36B1.

NRT-EM-E1: Order S11636NA3K36B1.

How to order

S325PA	Model number from table
3	Number of leads per sensing element (2 or 3): CA or PD elements must have 3 leads per element
S	Covering over leadwires: T = PTFE only K = Polyimide; available only on S331, S340, S101913, S11636, S13282 and S14455 S = Stainless steel overbraid
36	Lead length in inches (Stop here for case style C or D; no babbitt option)
B0	Optional babbitt tip: B0 = No babbitt metal B1 = Babbitt metal applied

S325PA3S36B0 ← Sample P/N