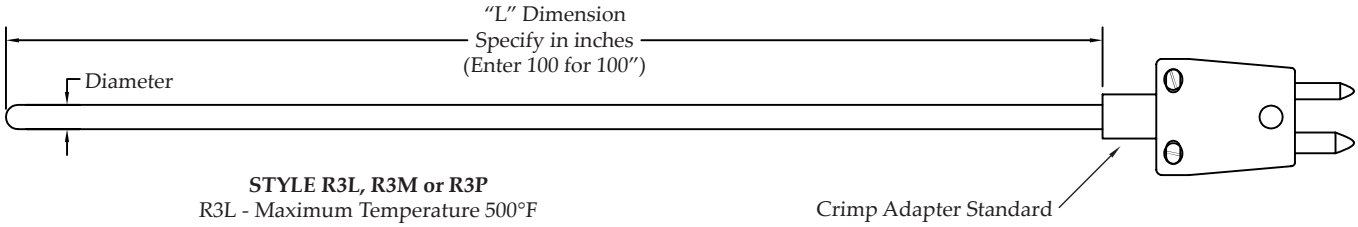
Resistance Temperature Detectors

RTD WITH PLUG



STYLE R3L, R3M or R3P
R3L - Maximum Temperature 500°F
R3M - Maximum Temperature 900°F
R3P - Maximum Temperature 1200°F

Code	Table 1: Element Type
A	100 ohm .00385 Curve Class B Platinum
B	100 ohm .00385 Curve Class A Platinum
D	500 ohm .00385 Curve Class B Platinum
E	1000 ohm .00385 Curve Class B Platinum
G	100 ohm .00392 Curve Class B Platinum
J	120 ohm .00672 Curve Nickel (R3L Only)
K	604 ohm .00520 Curve Nickel Iron (R3L Only)

Code	Table 2: Wiring Configuration
A	Single, 2 Wire
B	Single, 3 Wire (Minimum sheath diameter .156")
C	Single, 4 Wire (Minimum sheath diameter .188")
D	Dual, 4 Wire (Minimum sheath diameter .188")
E	Dual, 6 Wire (Minimum sheath diameter .250")

Code	Table 3: Sheath Material
4	304 Stainless Steel
6	316 Stainless Steel
8	Inconel 600

Code	Table 4: Sheath Diameter
B	.125" or 1/8" O.D.
V	.156" or 5/32" O.D.
C	.188" or 3/16" O.D.
D	.250" or 1/4" O.D.
F	.375" or 3/8" O.D.

Code	Table 5: Sheath Length ("L" Dimension)
	Specify in inches. See table on page 4 for codes.

Code	Table 6: Terminations
5	Standard Plug with Crimp Connector
7	Standard Plug with Tube Adapter
J	Open Disk Block, Ceramic
K	Open Disk Block, Glass Fiber
M	Mini Plug with Crimp Adapter
X	Special, Specify

Sensors

Part Number Sequence

R3L-BB-6F100-5

R3L	-	B	B	-	6	F	100	-	5
R3L, R3M, R3P		Table 1	Table 2		Table 3	Table 4	Table 5		Table 6
Sensor Type & Style No.		Element Type	Wiring Configuration		Sheath Material	Sheath Diameter	"L" Sheath Length		Terminations

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DUREX INDUSTRIES
closing the loop on thermal solutions

Resistance Temperature Detectors

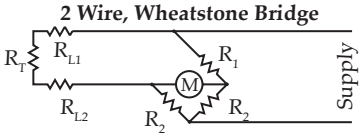
SPECIFICATIONS

Available RTD Elements

Code	Element Type	Temperature Coefficient	Tolerance at 0°C
A	100 ohm Platinum	.00385	.1%
B	100 ohm Platinum	.00385	.06%
C	100 ohm Platinum	.00385	.03%
D	500 ohm Platinum	.00385	.1%
E	1000 ohm Platinum	.00385	.1%
F	2000 ohm Platinum	.00385	.1%
G	100 ohm Platinum	.00392	.1%
H	100 ohm Platinum	.00392	.03%
J	120 ohm Nickel	.00672	.5%
K	604 ohm Nickel Iron	.00520	.5%

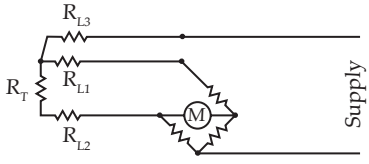
Wiring Diagrams

2 Wire, Wheatstone Bridge



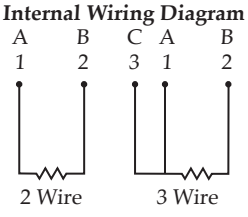
The meter reads R_T + the two lead resistances R_{L1} and R_{L2}

3 Wire, Wheatstone Bridge

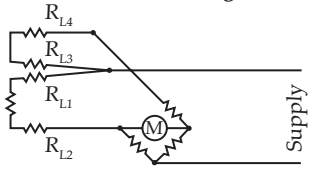


One lead resistance is included in each of the two arms of the bridge. The errors reduce to R_{L1} - R_{L2}

Internal Wiring Diagram

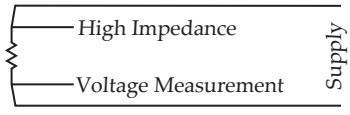


4 Wire, Compensated Wheatstone Bridge

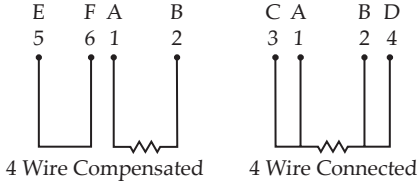


In this type R_{L3} and R_{L4} appear in one arm of the bridge. R_{L1} and R_{L2} appear in the other. Errors are R_{L1}+R_{L2}-R_{L3}-R_{L4}

4 Wire, Connected



Errors can be made negligible by having a very high input impedance amplifier.



Code Definitions

"L" Dimensions				"B" Dimensions				"A" Dimensions		Fractional Dimension Letter Code			
"L" dimensions are specified in whole inches and a single alpha character which represents a fraction. Enter the three digit code as follows:				"B" dimensions are specified in fractions from ⅛" to 1". Use the single alpha character to indicate the tip length. Enter the code as follows:				"A" dimensions are specified in whole inches only. Enter the three digit code as follows:		1/16"	A	11/16"	L
										⅛"	B	¾"	M
										3/16"	C	13/16"	N
										¼"	D	7/8"	P
										5/16"	E	15/16"	R
3"	030	10 5/8"	10K							⅜"	F	1"	S
4 ½"	04H	12"	120	⅛"	B	⅝"	K	9"	009	7/16"	G	0	No
6 ¼"	06D	15 ⅜"	15F	¼"	D	¾"	M	12"	012	½"	H	Fraction	
7 7/8"	07P	17 ¾"	17M	⅜"	F	7/8"	P	36"	036	9/16"	J		
9 5/8"	09K	22 ⅛"	22B	½"	H	1"	S	144"	144	5/8"	K		

Sensors

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