INTEC CONTROLS

Product Data

I-100-LT I-TT100-LT
I-1K-LT I-TT1K-LT
I-100-HT I-TT100-HT
I-1K-HT I-TT1K-HT

Product Description

IN*TEC* has a full line of high and low temperature sensors that are available as stand alone sensors or sensor/transmitter combinations. The transmitters come standard with 100 or 1,000 Ohm platinum RTD's and provide a linear 4 to 20 mA output signal.

IN*TEC* High Temperature sensors are air encapsulated. This allows the sensor to have a more stable output since the sensing element isn't subjected to the constant expansion and contraction of the encapsulated materials. The sensors are mounted in a 1/4" diameter stainless steel probe with Nickel Plated Fiberglass lead wires.

IN*TEC* Low Temperature sensor use a strain-free element. This allows the sensor to have a more stable output, since the sensing element is not subjected to the constant expansion and contraction of the encapsulation materials. The sensors are mounted in a 1/4" diameter stainless steel probe with Teflon lead wires.

Both the IN*TEC* High and Low Temperature sensors are available in duct, immersion, and remote probe configurations. All of the units come with a five year factory warranty.

Product Specifications

Supply Voltage	8 to 35 VDC, No Polarity Sensitivity 249 Ohm Load: +12 to 35VDC 499 Ohm Load: +17 to 35VDC
Sensor Output	3-wire Platinum 100/1000 Ohm RTD
Sensor Accuracy	+/- 0.012% @ 32°F (0°C)
Sensor Temperature Coefficient	0.00385 Ohms/ Ohms /°C
Transmitter Output	2-wire, Linear 4 to 20 mA DC Current
Transmitter Accuracy	+/- 1.0% of span
Sensor Operating Range	Low Temp: -328 to 392°F (-200 to 200°C) High Temp: -40 to 743°F (-40 to 395°C)
Transmitter Operating Range	32 to 158°F (0 to 70°C)

High and Low Temp

Attributes:

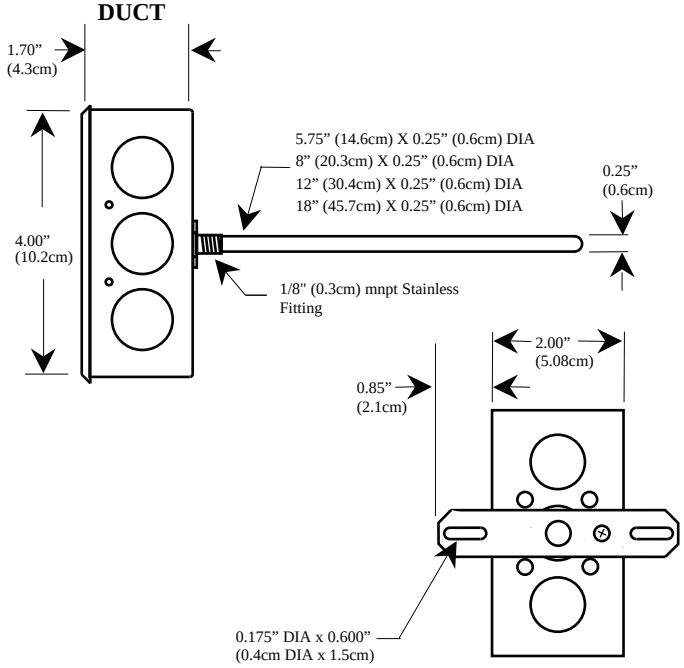
- **100/1000 Ohm RTD**
- **Stable outputs in extreme Temperature Environments**
- **3-Wire Sensors w/ 8 foot Nickel Fiberglass or Teflon lead wires.**

Applications:

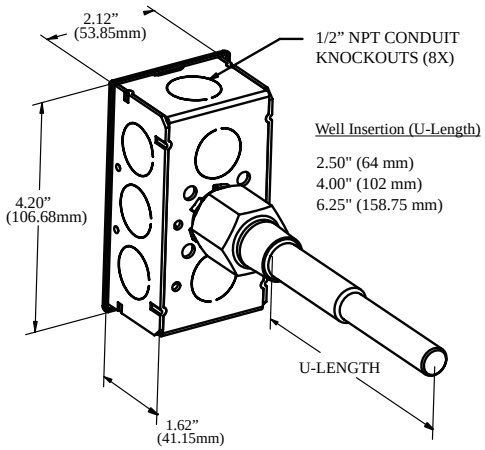
- **High Temp: Stacks, Boilers, Commercial Ovens**
- **Low Temp: Freezers, Meat Packing Plants, Laboratories**

Dimensions

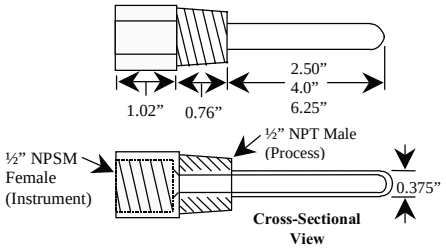
DUCT



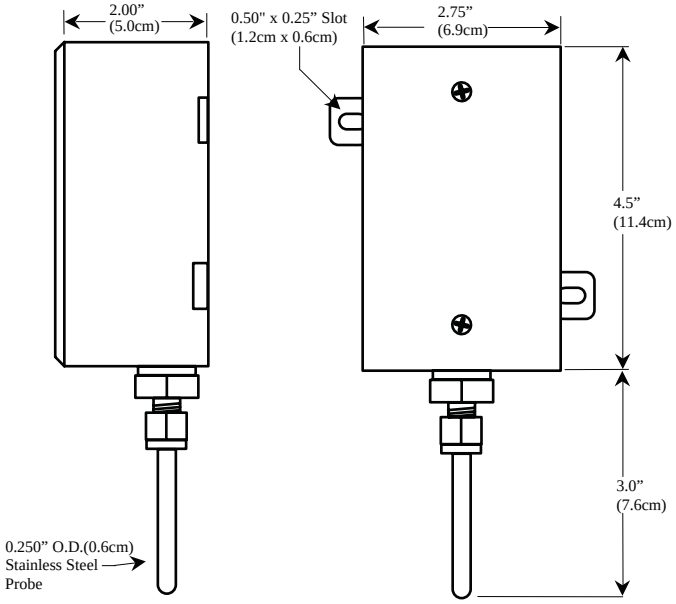
IMMERSION



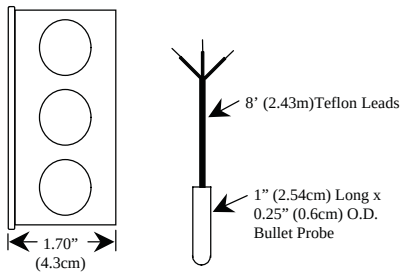
THERMOWELL

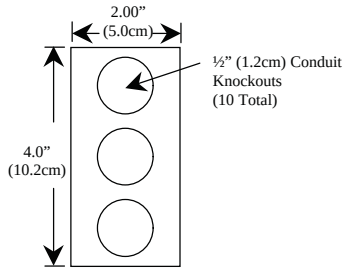


OUTDOOR AIR



REMOTE PROBE





Ordering Information

I - [ ] [ ] -[ ]

Sensor

- **100-LT**
- **1K-LT**
- **100-HT**
- **1K-HT**
- **TT100-LT***
- **TT1K-LT***
- **TT100-HT***
- **TT1K-HT***

Span*

- ( ) Specify

Configuration

- **D** - Duct 4", 8", 12", 18"
- **DO** - Duct without Box 4",8",12",18"
- **I** - Immersion 2.5", 4", 6"
- **RP** - Remote Probe (8' leads)
- **O** - Outside Air - Only Available for Low Temperature Sensors.

Output*

- **(1)** 1 to 5 VDC
- **(2)** 2 to 10 VDC
- **(4)** 4 to 20 mA

Housing Type

- Add-On Options
- **(BB)** NEMA 3R
- **(4X)** NEMA 4X***

Span* & Output*:
Only for sensors with a transmitter, part number selection, i.e.,
I-TT100-LT, I-TT1K-LT,
I-TT100-HT, I-TT1K-HT

***** Add-on Option (4X): NEMA 4X housing is not available for High Temperature sensors or sensors/transmitters; i.e., I-100-HT, I-1K-HT, I-TT100-HT, I-TT1K-HT**

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I-100-LT and I-1K-LT Ohm Platinum RTD Resistance - Temperature Chart

Temperature		I-100-LT	I-1K-LT
		Resistance	
°C	°F	Ohms	Ohms
-200	**-328**	18.52	185.20
-195	**-319**	20.68	206.77
-190	**-310**	22.83	228.26
-185	**-301**	24.97	249.65
-180	**-292**	27.10	270.96
-175	**-283**	29.22	292.20
-170	**-274**	31.34	313.35
-165	**-265**	33.44	334.43
-160	**-256**	35.54	355.43
-155	**-247**	37.64	376.37
-150	**-238**	39.72	397.23
-145	**-229**	41.80	418.03
-140	**-220**	43.88	438.76
-135	**-211**	45.94	459.44
-130	**-202**	48.01	480.05
-125	**-193**	50.06	500.60
-120	**-184**	52.11	521.10
-115	**-175**	54.15	541.54
-110	**-166**	56.19	561.93
-105	**-157**	58.23	582.27
-100	**-148**	60.26	602.56
-95	**-139**	62.28	622.80
-90	**-130**	64.30	643.00
-85	**-121**	66.32	663.15
-80	**-112**	68.33	683.25
-75	**-103**	70.33	703.32
-70	**-94**	72.34	723.35
-65	**-85**	74.33	743.33
-60	**-76**	76.33	763.28
-55	**-67**	78.32	783.19
-50	**-58**	80.31	803.06
-45	**-49**	82.29	822.90
-40	**-40**	84.27	842.71
-35	**-31**	86.25	862.48
-30	**-22**	88.22	882.22
-25	**-13**	90.19	901.92
-20	**-4**	92.16	921.60
-15	**5**	94.12	941.24
-10	**14**	96.09	960.86
-5	**23**	98.04	980.44
0	**32**	100.00	1,000.00
5	**41**	101.95	1,019.53
10	**50**	103.90	1,039.03
15	**59**	105.85	1,058.49
20	**68**	107.79	1,077.94

Temperature		I-100-LT	I-1K-LT
		Resistance	
°C	°F	Ohms	Ohms
25	**77**	109.74	1,097.35
30	**86**	111.67	1,116.73
35	**95**	113.61	1,136.08
40	**104**	115.54	1,155.41
45	**113**	117.47	1,174.70
50	**122**	119.40	1,193.97
55	**131**	121.32	1,213.21
60	**140**	123.24	1,232.42
65	**149**	125.16	1,251.60
70	**158**	127.08	1,270.75
75	**167**	128.99	1,289.87
80	**176**	130.90	1,308.97
85	**185**	132.80	1,328.03
90	**194**	134.71	1,347.07
95	**203**	136.61	1,366.08
100	**212**	138.51	1,385.05
105	**221**	140.40	1,404.00
110	**230**	142.29	1,422.93
115	**239**	144.18	1,441.82
120	**248**	146.07	1,460.68
125	**257**	147.95	1,479.51
130	**266**	149.83	1,498.32
135	**275**	151.71	1,517.10
140	**284**	153.58	1,535.84
145	**293**	155.46	1,554.56
150	**302**	157.33	1,573.25
155	**311**	159.19	1,591.91
160	**320**	161.05	1,610.54
165	**329**	162.92	1,629.15
170	**338**	164.77	1,647.72
175	**347**	166.63	1,666.27
180	**356**	168.48	1,684.78
185	**365**	170.33	1,703.27
190	**374**	172.17	1,721.73
195	**383**	174.02	1,740.16
200	**392**	175.86	1,758.56

I-100-HT and I-1K-HT Ohm Platinum RTD Resistance - Temperature Chart

Temperature		I-100-HT	I-1K-HT
		Resistance	
°C	°F	Ohms	Ohms
-40	**-40**	84.27	842.71
-35	**-31**	86.25	862.48
-30	**-22**	88.22	882.22
-25	**-13**	90.19	901.92
-20	**-4**	92.16	921.60
-15	**5**	94.12	941.24
-10	**14**	96.09	960.86
-5	**23**	98.04	980.44
0	**32**	100.00	1,000.00
5	**41**	101.95	1,019.53
10	**50**	103.90	1,039.03
15	**59**	105.85	1,058.49
20	**68**	107.79	1,077.94
25	**77**	109.74	1,097.35
30	**86**	111.67	1,116.73
35	**95**	113.61	1,136.08
40	**104**	115.54	1,155.41
45	**113**	117.47	1,174.70
50	**122**	119.40	1,193.97
55	**131**	121.32	1,213.21
60	**140**	123.24	1,232.42
65	**149**	125.16	1,251.60
70	**158**	127.08	1,270.75
75	**167**	128.99	1,289.87
80	**176**	130.90	1,308.97
85	**185**	132.80	1,328.03
90	**194**	134.71	1,347.07
95	**203**	136.61	1,366.08
100	**212**	138.51	1,385.05
105	**221**	140.40	1,404.00
110	**230**	142.29	1,422.93
115	**239**	144.18	1,441.82
120	**248**	146.07	1,460.68
125	**257**	147.95	1,479.51
130	**266**	149.83	1,498.32
135	**275**	151.71	1,517.10
140	**284**	153.58	1,535.84
145	**293**	155.46	1,554.56
150	**302**	157.33	1,573.25
155	**311**	159.19	1,591.91
160	**320**	161.05	1,610.54
165	**329**	162.92	1,629.15
170	**338**	164.77	1,647.72
175	**347**	166.63	1,666.27

Temperature		I-100-HT	I-1K-HT
		Resistance	
°C	°F	Ohms	Ohms
180	**356**	168.48	1,684.78
185	**365**	170.33	1,703.27
190	**374**	172.17	1,721.73
195	**383**	174.02	1,740.16
200	**392**	175.86	1,758.56
205	**401**	177.69	1,776.93
210	**410**	179.53	1,795.28
215	**419**	181.36	1,813.59
220	**428**	183.19	1,831.88
225	**437**	185.01	1,850.13
230	**446**	186.84	1,868.36
235	**455**	188.66	1,886.56
240	**464**	190.47	1,904.73
245	**473**	192.29	1,922.87
250	**482**	194.10	1,940.98
255	**491**	195.91	1,959.06
260	**500**	197.71	1,977.12
265	**509**	199.51	1,995.14
270	**518**	201.31	2,013.14
275	**527**	203.11	2,031.11
280	**536**	204.91	2,049.05
285	**545**	206.70	2,066.96
290	**554**	208.48	2,084.84
295	**563**	210.27	2,102.69
300	**572**	212.05	2,120.52
305	**581**	213.83	2,138.31
310	**590**	215.61	2,156.08
315	**599**	217.38	2,173.81
320	**608**	219.15	2,191.52
325	**617**	220.92	2,209.20
330	**626**	222.69	2,226.85
335	**635**	224.45	2,244.47
340	**644**	226.21	2,262.06
345	**653**	227.96	2,279.63
350	**662**	229.72	2,297.16
355	**671**	231.47	2,314.67
360	**680**	233.21	2,332.14
365	**689**	234.96	2,349.59
370	**698**	236.70	2,367.01
375	**707**	238.44	2,384.40
380	**716**	240.18	2,401.76
385	**725**	241.91	2,419.10
390	**734**	243.64	2,436.40
395	**743**	245.37	2,453.67

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