

Product Data

I-BALCO Series

1K Ohm Balco
Temperature Sensor

Product Description

The I-BALCO Series temperature sensors incorporate a thin film RTD sensor, which provides a predictable output over the specified temperature range -40 to 240°F.

These sensors are available in a two-wire configuration incorporating high accuracy and interchangeability throughout a wide operating temperature range.

These units are offered in Room, Room with Set Point, Room with Override, Room with Setpoint and Override, and Room with Setpoint, Override, and RJ11 Jack, Duct and Duct without Box, Immersion, Stainless Plate, Raw, Strap-On, Bullet Probe, Button Sensor, and Outdoor Air Configurations.

All INTEC Room sensors may be ordered with an optional setpoint (see chart on the following page), override, or with a 4 pin RJ11 or 6 pin RJ12 communication jack with terminal blocks, for remote programming.

Product Specifications

Sensor Output	1000 Ohms @ 70°F (21°C)
Temp. Coefficient	2.2 Ohms /deg F
Temp. Operating Range	-40 to 240°F (-40 to 116°C)
Accuracy	+/- 0.1%
For sensors with Display option, see the LCD Series cut sheet	

RTD



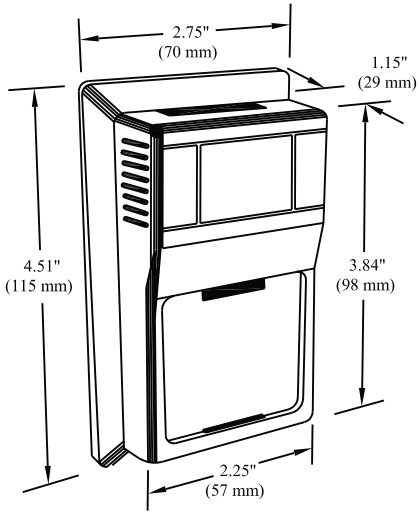
Attributes

- **Specialized Temp. Sensor**
- **Double Potting Process avoids moisture issues**
- **Non-polarity sensitive**

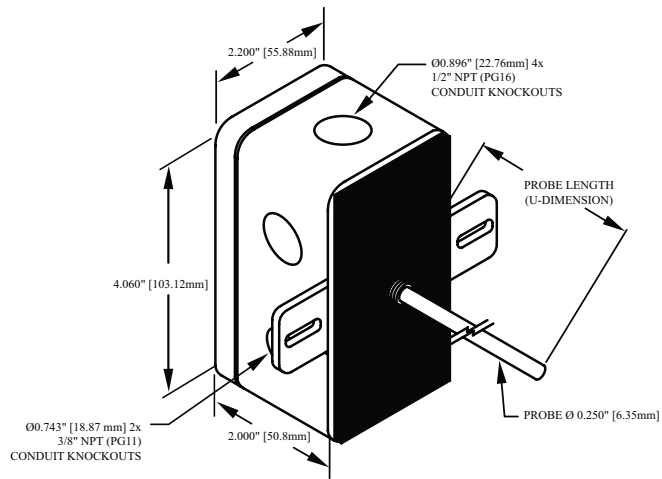
Applications

- **OEM/Industrial**
- **Light Industrial**
- **DDC Systems**

Room

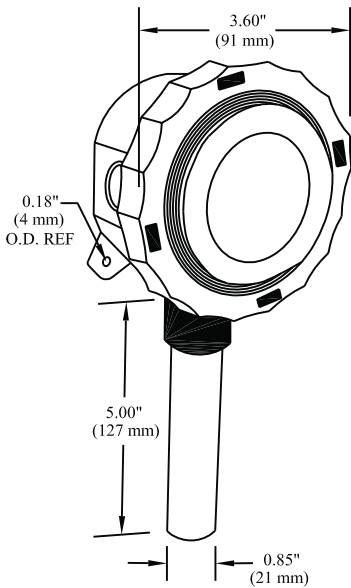


Duct

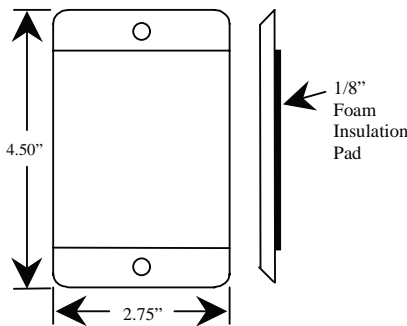


Duct Insertion (U-Dimension)
 5.5" (89 mm)
 7.5" (191 mm)
 11.5" (292 mm)
 17.5" (445 mm)

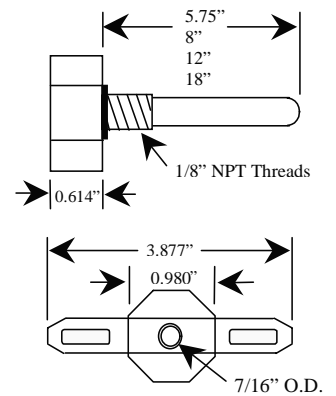
Outside Air



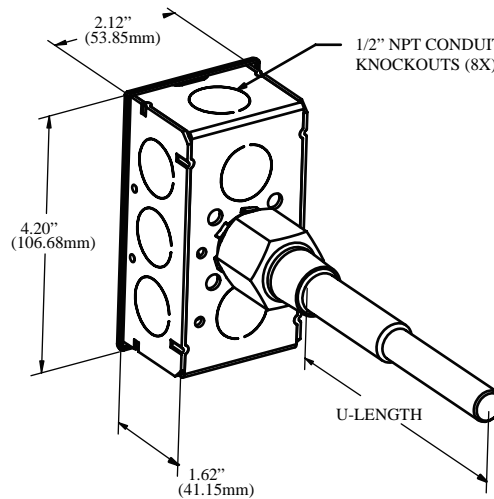
Stainless Plate



Duct without Box

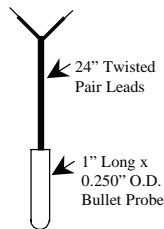


Immersion

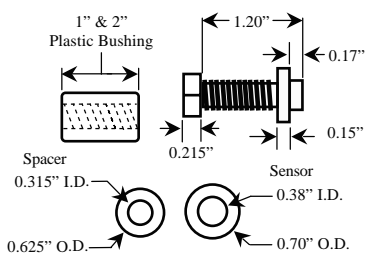


Well Insertion (U-Length)
 2.50" (64 mm)
 4.00" (102 mm)
 6.25" (158.75 mm)

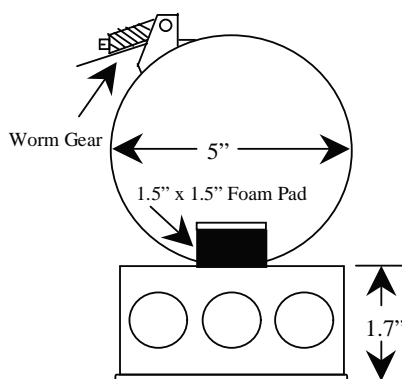
Bullet Probe



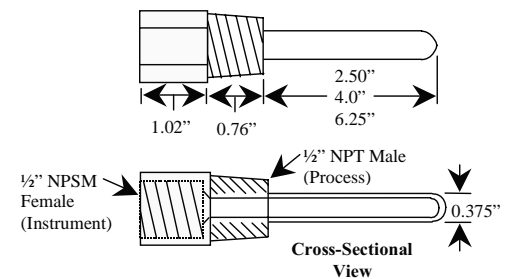
Button Sensor



Strap-On



Thermowell



Ordering Information

Sensor
I- []
↑
1KBAL

Configuration
-[]
↑
R - Room
RS - Room w/ Setpoint ***
RO - Room w/ Override
RSO - Room w/ Setpoint & Override ***
D - Duct 4", 8", 12", 18"
DO -Duct without box 4", 8", 12", 18"
I - Immersion 2.5", 4", 6"
S - Strap On
O - Outdoor Air
SP - Stainless Plate
BP - Bullet Probe
W - Raw
W-6' - Raw Sensor w/6'Leads
BBS - Brass Button Sensor
SBS - Stainless Button Sensor

Communication Jack¹
-[]
↑
J4 (4 Pin RJ11)
J6 (6 Pin RJ12)
S232 (Stereo Jack)

Display¹
-[]
↑
() No Display
(Standard)
(L) LCD Display
(Degrees F)
(LC) LCD Display
(Degrees C)

Housing Type²
-[]
↑
Add-On Options
(BB) NEMA 3R
(4X) NEMA 4X

¹These Options are only available on INTEC's Room Configurations.

²Standard Housing Types:

- Plastic Housing for Duct sensors
- Galvanized Junction Box for Immersion and Strap-On sensors

Add-on option (BB) NEMA 3R housing is not available for Strap-On sensors

RS / RSO *** setpoint adjuster option requires additional ordering decisions for the following:

Pot Value ¹	Setpoint Indicator ¹	Pot Action ¹
-[] ↑	-[] ↑	-[] ↑
400	Cool Warm	DA (Direct)
1K	55 to 85	RA (Reverse)
2K	10 to 30° C	
3K		
5K		
8.5K		
10K		
20K		
100K		

I-1KBAL, BALCO RTD Series' Resistance - Temperature Chart

		I-1KBAL
Temperature		Resistance
°C	°F	Ohms
-40.0	-40	779.0
-37.2	-35	788.2
-34.4	-30	797.5
-31.7	-25	806.8
-28.9	-20	816.3
-26.1	-15	825.8
-23.3	-10	835.4
-20.6	-5	845.1
-17.8	0	854.8
-15.0	5	864.7
-12.2	10	874.6
-9.4	15	884.6
-6.7	20	894.7
-3.9	25	904.9
-1.1	30	915.1
1.7	35	925.4
4.4	40	935.9
7.2	45	946.3
10.0	50	956.9
12.8	55	967.6
15.6	60	978.3
18.3	65	989.1
21.1	70	1,000.0
23.9	75	1,011.0
26.7	80	1,022.0
29.4	85	1,033.2
32.2	90	1,044.4
35.0	95	1,056.7
37.8	100	1,067.0
40.6	105	1,078.5
43.3	110	1,090.0
46.1	115	1,101.6
48.9	120	1,113.3
51.7	125	1,125.1
54.4	130	1,137.0
57.2	135	1,148.9
60.0	140	1,160.9
62.8	145	1,173.0
65.6	150	1,185.2

		I-1KBAL
Temperature		Resistance
°C	°F	Ohms
68.3	155	1,197.5
71.1	160	1,209.5
73.9	165	1,222.2
76.7	170	1,234.7
79.4	175	1,247.3
82.2	180	1,260.0
85.0	185	1,272.7
87.8	190	1,285.6
90.6	195	1,298.5
93.3	200	1,311.4
96.1	205	1,324.5
98.9	210	1,337.7
101.7	215	1,350.9
104.4	220	1,364.2
107.2	225	1,377.6
110.0	230	1,391.0
112.8	235	1,404.6
115.6	240	1,418.2