

SPECIFICATION FOR SENSOR:

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1. TEMPERATURE SENSOR ELEMENT: PT 1000 CLASS AA - ACCORDING TO IEC 60751 F0.1

2. ACCURACY TABLE ELEMENT:

D

С

В

А

0°C TO 85°C	CLASS AA	ACCORDING TO IEC 60751 F0.1
-30°C TO 0°C	CLASS A	ACCORDING TO IEC 60751 F0.1
-40°C TO -30°C	CLASS B	ACCORDING TO IEC 60751 F0.1

 SENSOR SHOULD HAVE LESS THAN 300 MICRO AMPS OF CURRENT APPLIED TO AVOID SELF HEATING OF THE SENSE ELEMENT.
INSULATION RESISTANCE BETWEEN BOTH LEADS AND THE CASE SHALL EXCEED 1000 MΩ AT ROOM

TEMPERATURE WITH A MEGGER AT 500VDC.

5. OPERATING TEMPERATURE RANGE WILL BE: -40°C TO +85°C.

6. STORAGE TEMPERATURE RANGE WILL BE: -40°C TO +100°C.

7. RELATIVE HUMIDITY: 0% TO 100% CONDENSING.

8. BODY MATERIAL: BRASS

9. ELECTRICAL COMPONENTS SHALL BE ROHS COMPLIANT.

10. TEMPERATURE VS RESISTANCE RELATION: (REFER TABLE 1 AND PT 1000-RESISTANCE VS TEMPERATURE CURVE)

FOR RANGE -50°C - 0°C: $R(T) = R(0)[1+At+Bt^{2}+C(t-100)*t^{3}]$

FOR RANGE 0°C - 300°C: $R(T) = R(0)(1+At+Bt^{2})$

A = 0.00391

B = -0.00000578

C = -0.0000000000418

R(0) = 1000

R(T) = RESISTANCE AT TEMPERATURE

t = TEMPERATURE IN °C

11. CAPACITOR CAPACITANCE IS 100 +/- 10 NANOFARADS.

	1400	PT 1000-Resis
	1350	F7 1000-1163/3
	1300 ·	
	1250	
MS	1200	
HO	1150	
RESISTANCE OHMS	1100	
Z	1050	
₹	1000	~~~~
SIS	950	
К	900	
	850	
	800	
	750	
	-	40 -35 -30 -25 -20 -15 -10 -5 0 5 10 15

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Temp. (deg C)	RST. PT 1K OHMS
-40	842.7065
-35	862.4779
-30	882.2166
-25	901.9234
-20	921.5990
-15	941.2439
-10	960.8588
-5	980.4440
0	1000.0000
5	1019.5271
10	1039.0253
15	1058.4946
20	1077.9350
25	1097.3466
30	1116.7293
35	1136.0831
40	1155.4080
45	1174.7041
50	1193.9713
55	1213.2096
60	1232.4190
65	1251.5996
70	1270.7513
75	1289.8741
80	1308-9680
85	1328.0331

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