

PIPE TEMPERATURE SENSOR



STTP

STTP211, STTP212, STTP213, STTP214
STTP221, STTP222, STTP223, STTP224

Application

"STTP" Pipe Temperature sensor is intended for immersion mounting in pipes, and tanks. Units contain either a high quality platinum or thermistor sensing element suitable for use in the range -30 ~ +150°C.

The immersion probe is made of stainless steel.

- TEMPERATURE CONTROL AND LIMITING FOR FLUIDS
- TEMPERATURE LIMITING FOR CIRCULATING WATER
- WATER TEMPERATURE SENSING FOR TANK

Technical Data

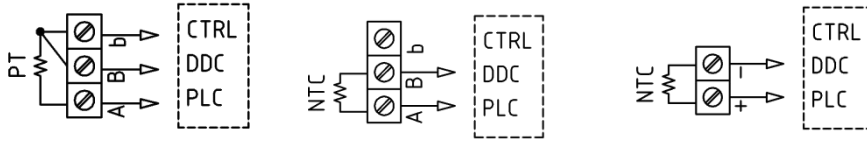
MODEL	ELEMENT	RANGE	ACCURACY	WIRE	SUITABLE
STTP211,221	Pt100Ω	-30 ~ 150°C	±0.15°C (at 0°C)	3wire/ 1.0mm ²	
STTP212,222	Pt1000Ω	-30 ~ 150°C	±0.3°C (at 0°C)	2wire/ 1.0mm ²	
STTP213,223	NTC3KΩ	-30 ~ 130°C	±0.2°C (at 25°C)	2wire/ 1.0mm ²	
STTP214,224	NTC10KΩ	-30 ~ 130°C	±0.2°C (at 25°C)	2wire/ 1.0mm ²	

- SENSING TIME : About 28sec (without well 10sec)
- AMBIENT TEMPERATURE : -25~80°C, (Probe: -30~+150°C)
- AMBIENT HUMIDITY : 5 ~ 95%Rh
- APPLICATION : DDC System and controller
- CHARACTERISTICS : Table of Reference Values
- PROTECTION CLASS : IP 65 to EN60529
- WELL (PROBE) : Material / SUS304 Dimensions/130mm x 9.6mm dia.
- CABLE FITTING : PF 1/2"
- HOUSING MATERIAL : PC, Aluminum die-casting
- WEIGHT : 170g

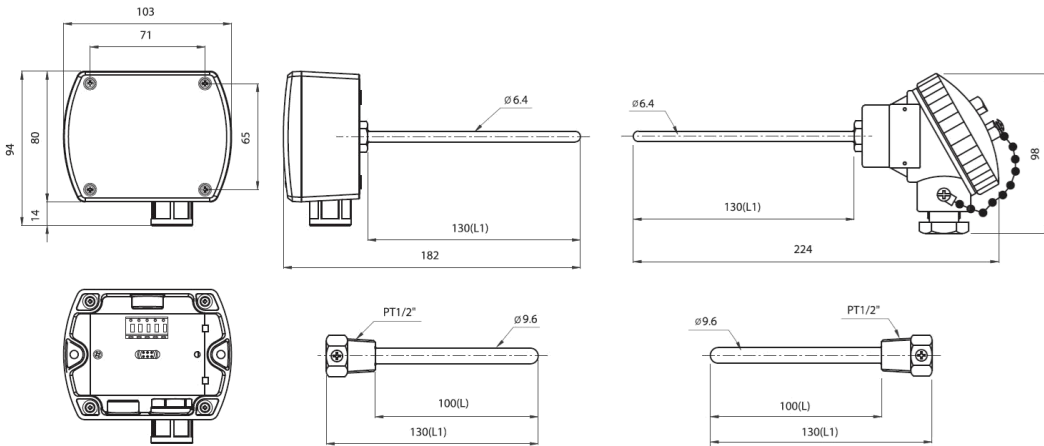
Mounting Guide

- Use DRILL BAR for well in case of over 6Kg/cm² of nominal pressure.
- Install the sensor to the following location depend on each usage :
 - ① In case of controlling temperature for fluids objects (Hot & Cold water)
 - ▶ In case of installing the pump inside of fluids : Install at the behind of pump
 - ▶ In case of installing the pump on the line of circulating water :
 - Install 1.5 ~ 2m away from Mixed Valve
 - ② In case of controlling temperature for circulating water.
 - For accurate control of temperature, Sensor should be installed at inside of circulating pipe, and installed at the place where water can be mixed well.
- ※ "WELL" should be installed at the Elbow for the reverse direction from fluids.

Wiring Diagram

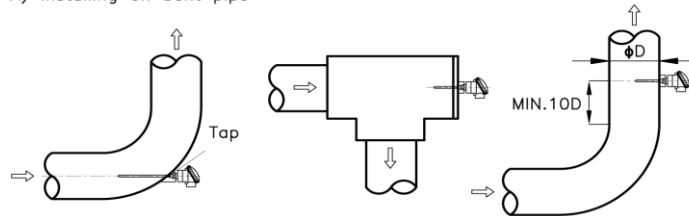


Shape Dimension



Installing Methods

A) Installing on bent pipe



B) Installing on straight pipe



C) Installing on narrower pipe



Product Data

RESISTANCE CURVE TABLE

Temperature		Pt100	Pt1000	NTC3K (ACI/3K)(22)	NTC10K (Type II)(CP)	NTC10K (Type III)(AN)	Temperature		Pt100	Pt1000	NTC3K (ACI/3K)(22)	NTC10K (Type II)(CP)	NTC10K (Type III)(AN)
Temp	Temp	Resistance	Resistance	Resistance	Resistance	Resistance	Temp	Temp	Resistance	Resistance	Resistance	Resistance	Resistance
	°F	Ω	Ω	Ω	Ω	Ω	°C	°F	Ω	Ω	Ω	Ω	Ω
-40	-40	84.3	843	100.701	332.15	239.78	50	122	119.4	1194	1.081	3.60	3.85
-35	-31	86.2	862	72.658	242.12	179.25	55	131	121.3	1213	896	2.99	3.23
-30	-22	88.2	882	53.196	173.34	135.23	60	140	123.2	1232	747	2.49	2.72
-25	-13	90.2	902	39.190	129.40	102.51	65	149	125.2	1252	625	2.08	2.30
-20	-4	92.2	922	29.162	96.46	79.01	70	158	127.1	1271	526	1.75	1.96
-15	5	94.1	941	21.909	71.25	61.02	75	167	129.0	1290	445	1.48	1.70
-10	14	96.1	961	16.611	54.99	47.55	80	176	130.9	1309	378	1.26	1.43
-5	23	98.0	980	12.705	42.17	37.55	85	185	132.8	1328	322	1.07	1.23
0	32	100	1000	9.800	32.56	29.99	90	194	134.7	1347	275	0.92	1.08
5	41	102.0	1020	7.620	25.34	23.90	95	203	136.6	1366	237	0.79	0.94
10	50	103.9	1039	5.971	19.87	19.03	100	212	138.5	1385	204	0.68	0.81
15	59	105.8	1058	4.713	15.93	15.26	105	221	140.4	1404	177	0.59	0.72
20	68	107.8	1078	3.747	12.49	12.28	110	230	142.3	1423	153	0.51	0.62
25	77	109.7	1097	3.000	10.00	10.00	115	239	144.2	1442	134	0.45	0.54
30	86	111.7	1117	2.416	8.06	8.17	120	248	146.1	1461	117	0.39	0.48
35	95	113.6	1136	1.959	6.53	6.71	125	257	148.0	1480	103	0.34	0.42
40	104	115.5	1155	1.597	5.33	5.55	130	266	149.8	1498	90	0.30	0.37
45	113	117.5	1175	1.310	4.37	4.61	135	275	151.7	1517	80	0.26	0.33
							140	284	153.6	1536	71	0.23	0.30