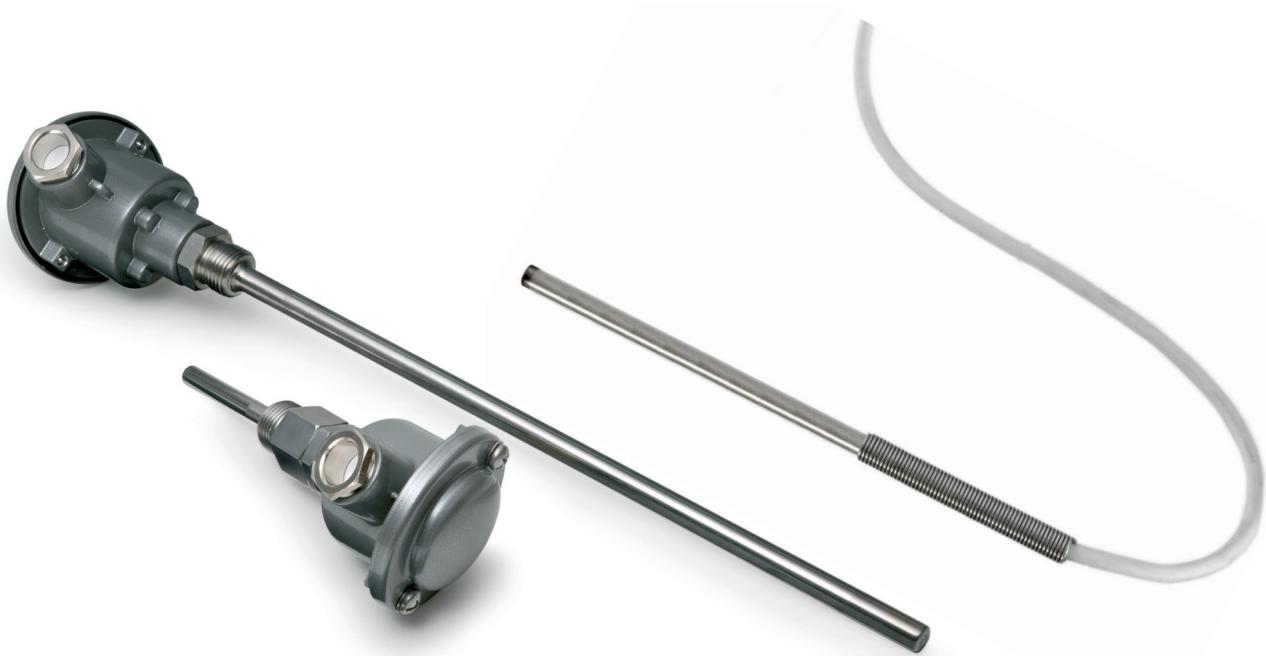




PT100 - PT1000

Temperature probes

**PT100-PT1000**

100/1000 Ohm output, 2/3/4 wires

Analog output 4-20 mA

Cable outlet

FEATURES

Sensor:	PT100-PT1000 platinum resistance thermometer
Accuracy:	Class A $\pm 0,15^\circ\text{C}$ @ 0°C - DIN EN 60751
Probe:	stainless steel
Head:	DIN B in aluminum with blue painted cast
Execution:	IP 65 / NEMA 4X
Operating temperature:	With traditional insulation from -50 to 300°C (standard version) With mineral insulation MgO from -50 to 500°C Optional with minimum range from -200 $^\circ\text{C}$ to 200 $^\circ\text{C}$ (PT100 only)
Probe diameter:	standard ø 6 mm (other a available)

TECHNICAL SPECIFICATIONS WITH CABLE VERSION

Sensor:	PT100-PT1000 platinum resistance thermometer
Accuracy:	Class A $\pm 0,15^\circ\text{C}$ @ 0°C , DIN EN 60751
Probe:	stainless steel
Anti-bend spring:	IP 65 / NEMA 4X version Silicone rubber cable, max 180 $^\circ\text{C}$ in TTS, max 300°C Operating temperature: with traditional insulation from -50 to 300°C , with MgO mineral insulation from -50 to 500°C and optional with minimum range from -200°C to 200°C.
Probe diameter:	standard ø 6 mm (other than available)



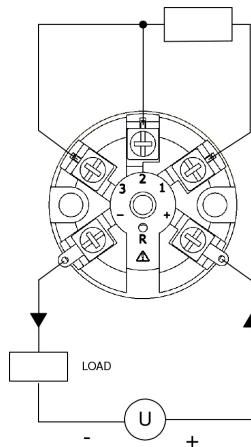
TRANSMITTERS

SEM 206 P: (RTD 100 2-3 wires)

PC configurable transmitter.

Transmitter specifications at 20°C and in nominal conditions.

Power supply:	10-30 Vcc
Analog output:	4-20 mA (2 wires)
Minimum span that can be set:	25°C
Calibration error:	0,2°C ±0,05% r.v.
Operating ambient temperature:	from -40 to 85°C
Relative humidity (without condensation):	0-90%



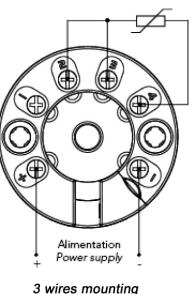
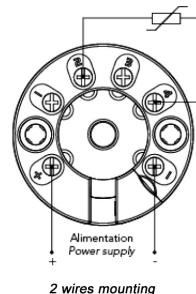
TIXO 1 B: (RTD 100 2-3 wires)

ATEX Transmitters configurable by PC.

Transmitter at 25°C and in nominal conditions.



Power supply	8-28 Vdc
Analog output:	4-20 mA (2 wires)
Minimum span can be set:	0°C PT-100 - 10°C
Transmission error:	≤ ±0,1% of the f.s.
Operating ambient temperature:	from -40 to 85°C
Relative humidity (without condensation):	5-95%



TIXO 2 B: (RTD 100 - RTD 1000 - Ni 100 - Ni 1000 - Thermocouples)

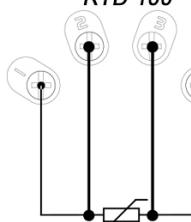
ATEX galvanically isolated transmitters configurable by PC.

Transmitter at 25°C and in nominal conditions.

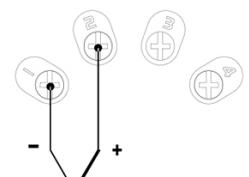


Power supply:	10-28 Vcc
Analog output:	4-20 mA (2 wires)
Minimum span that can be set:	10°C (RTD) 50°C (TC)
Transmission error:	≤ ±0,1% of the f.s.
Operating ambient temperature:	from -40 to 85°C
Relative humidity (without condensation):	5-95%

Mounting 2-3-4 wires
RTD 100



Mounting TC



TIXO 3 B: (RTD 100 - RTD 1000 - Ni 100 - Ni 1000 - Thermocouples)

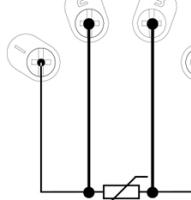
ATEX galvanically isolated transmitters configurable by PC.

Transmitter at 25°C and in nominal conditions.

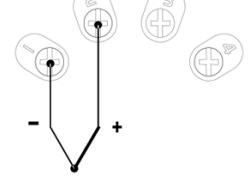


Power supply:	10-28 Vcc
Analog output:	4-20 mA (2 wires) + HART
Minimum span that can be set:	10°C (RTD) 50°C (TC)
Transmission error:	≤ ±0,1% of the f.s.
Operating ambient temperature:	from -40 to 85°C
Relative humidity (without condensation):	5-95%

Mounting 2-3-4 wires
RTD 100

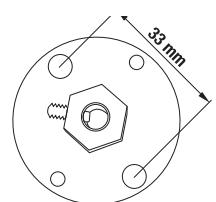
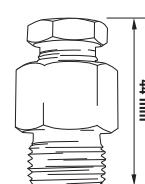


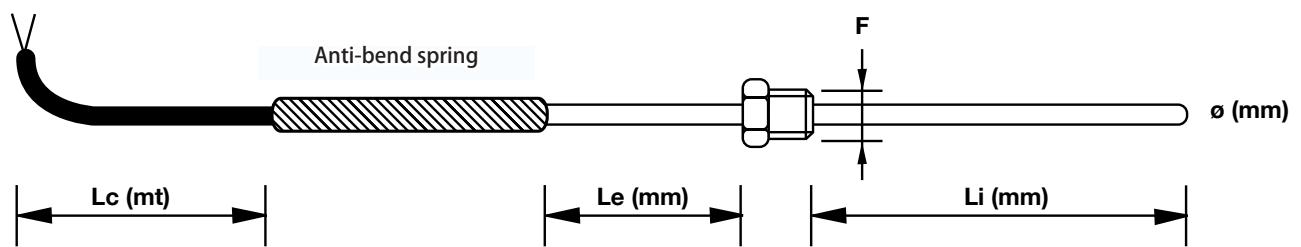
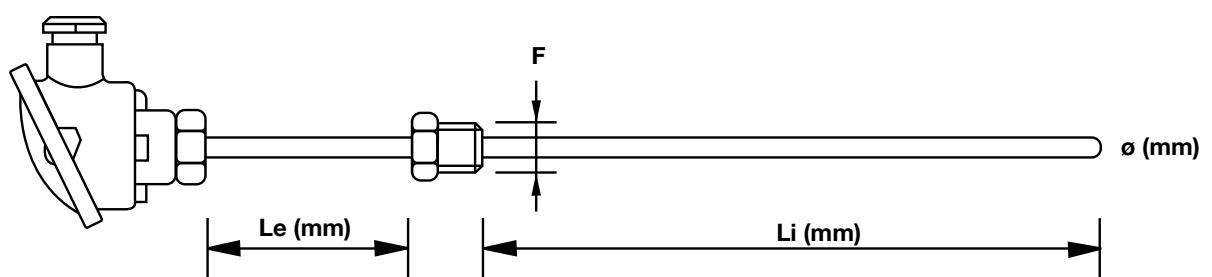
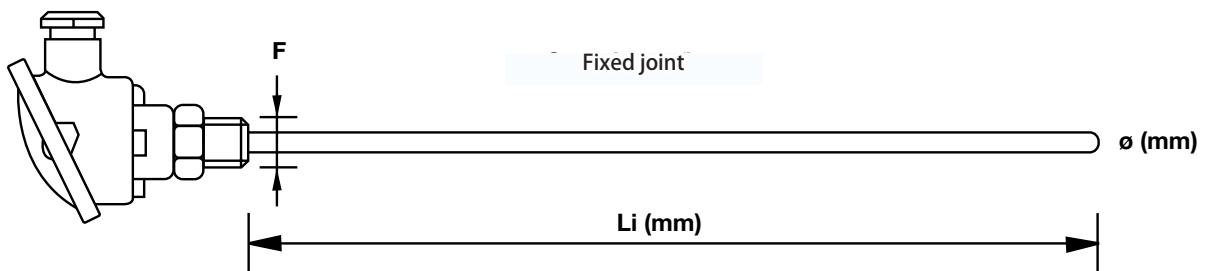
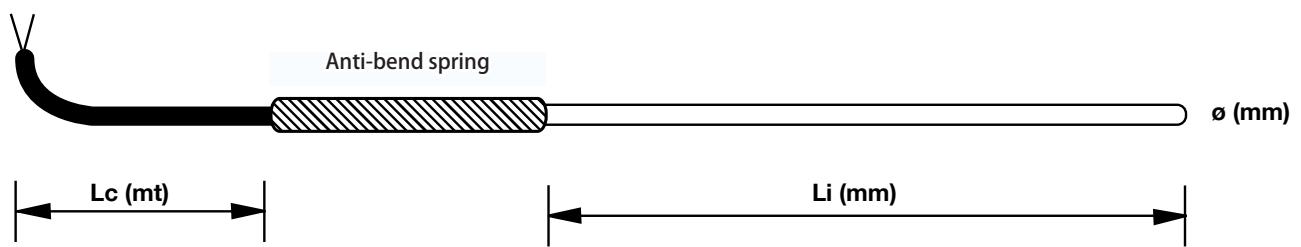
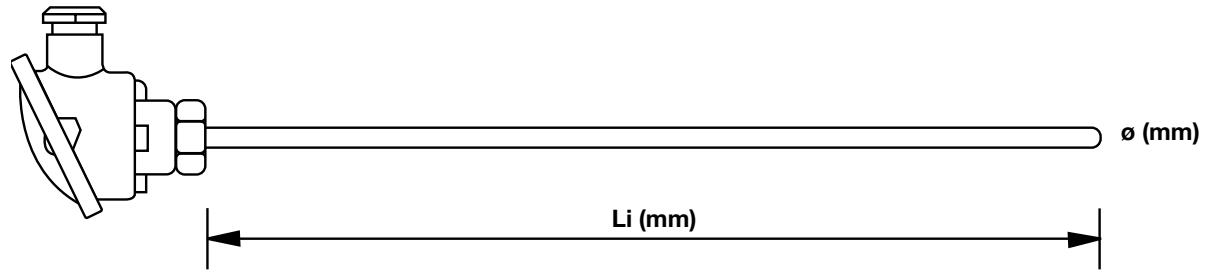
Mounting TC

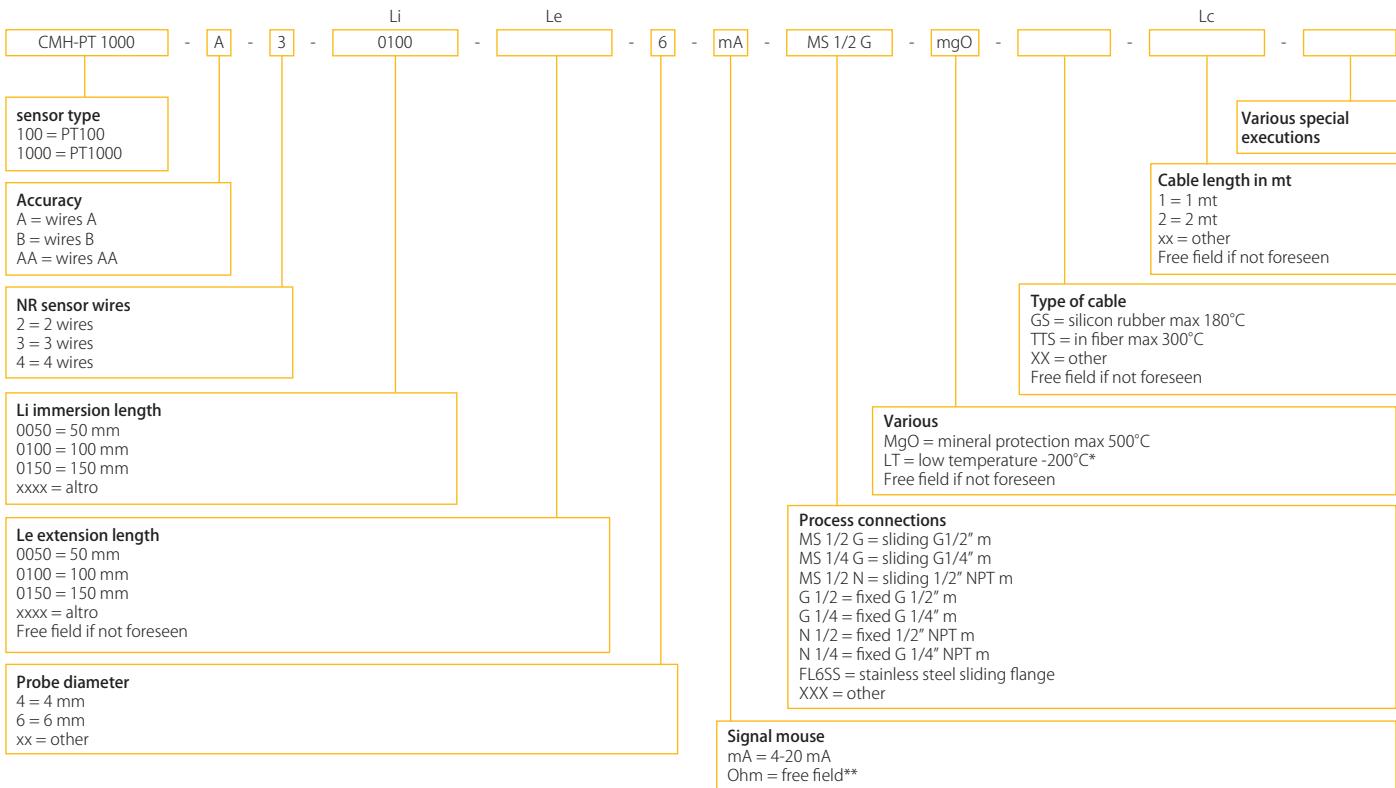


OTHER ACCESSORIES

MS1/2G:	sliding fitting compression
Materials:	316 stainless steel
Process connection:	1/2" male gas 1/2" male NPT 1/4" male NPT
Length:	44 mm
FL-6-SS:	sliding flange for probes diameter 6 mm
Material:	stainless steel
Distance between fixing holes:	33 mm







* Only PT100

** In case of Ohm output it will be supplied with internal terminal connection

OTHER ACCESSORIES

MS1/2G: compression sliding joint.

Material: 316 stainless steel

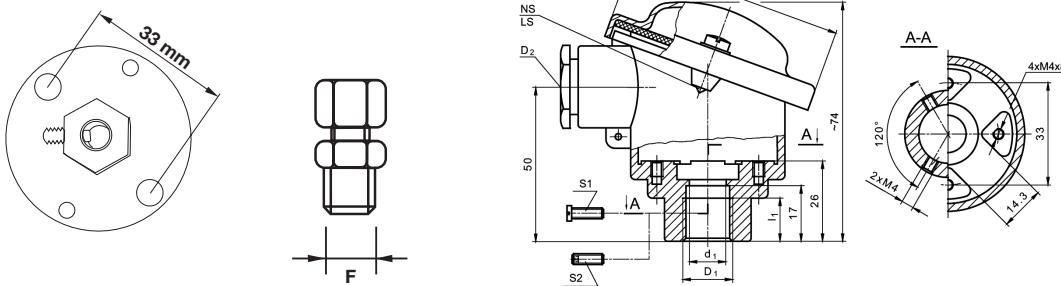
Process connection: 1/2 "male gas

Length: 44 mm

FL-6-SS sliding flange for 6 mm diameter probes

Material: stainless steel

Interax fixing holes: 33 mm



PT100 / PT1000 RESISTANCE THERMORESISTANCE TOLERANCES ACCORDING TO IEC 60751: 2008

Range	Classe A		Classe B	
	°C	Ohm	°C	Ohm
-200	0,55	0,24	1,30	0,56
-100	0,35	0,14	0,80	0,32
0	0,15	0,06	0,30	0,12
100	0,35	0,13	0,80	0,30
200	0,55	0,20	1,30	0,48
300	0,75	0,27	1,80	0,64
400	0,95	0,33	2,30	0,79
500	1,15	0,38	2,80	0,93
600	1,35	0,43	3,30	1,06
650	1,45	0,46	3,55	1,13
700			3,80	1,17
800			4,30	1,28
850			4,55	1,34



CONVERSION TABLE FOR PT100 RESISTANCE THERMOMETERS ACCORDING TO IEC 75

Relationship between resistance and temperature

	0	-1	-2	-3	-4	-5	-6	-7	-8	-9
-200	18,493									
-190	22,803	22,374	21,944	21,514	21,083	20,653	20,221	19,790	19,358	18,926
-180	27,078	26,652	26,226	25,799	25,372	24,945	24,517	24,089	23,661	23,232
-170	31,320	30,897	30,474	30,051	29,627	29,203	28,779	28,354	27,929	27,504
-160	35,531	35,111	34,691	34,271	33,850	33,429	33,008	32,587	32,165	31,742
-150	39,714	39,297	38,879	38,462	38,044	37,626	37,208	36,789	36,370	35,951
-140	43,869	43,455	43,040	42,625	42,210	41,795	41,379	40,963	40,547	40,130
-130	47,999	47,587	47,175	46,763	46,350	45,937	45,524	45,111	44,697	44,283
-120	52,106	51,696	51,286	50,876	50,466	50,055	49,645	49,234	48,822	48,411
-110	56,190	55,783	55,375	54,967	54,559	54,151	53,742	53,333	52,924	52,515
-100	60,254	59,849	59,443	59,037	58,631	58,225	57,818	57,412	57,005	56,598
-90	64,299	63,895	63,491	63,087	62,683	62,279	61,874	61,469	61,065	60,659
-80	68,325	67,923	67,521	67,119	66,717	66,314	65,911	65,508	65,105	64,702
-70	72,335	71,934	71,534	71,134	70,733	70,332	69,931	69,530	69,128	68,727
-60	76,328	75,930	75,531	75,132	74,733	74,333	73,934	73,534	73,135	72,735
-50	80,307	79,910	79,512	79,115	78,717	78,319	77,921	77,523	77,125	76,727
-40	84,271	83,875	83,479	83,083	82,687	82,291	81,894	81,498	81,101	80,704
-30	88,222	87,828	87,433	87,038	86,643	86,248	85,853	85,458	85,063	84,667
-20	92,160	91,767	91,374	90,980	90,587	90,193	89,799	89,405	89,011	88,617
-10	96,086	95,694	95,302	94,910	94,517	94,125	93,732	93,339	92,946	92,553
0	100,000	99,609	99,218	98,827	98,436	98,045	97,653	97,262	96,870	96,478
	0	1	2	3	4	5	6	7	8	9
0	100,000	100,391	100,781	101,172	101,562	101,953	102,343	102,733	103,123	103,513
10	103,902	104,292	104,681	105,071	105,460	105,849	106,238	106,627	107,016	107,404
20	107,793	108,181	108,570	108,958	109,346	109,734	110,122	110,509	110,897	111,284
30	111,672	112,059	112,446	112,833	113,220	113,607	113,994	114,380	114,767	115,153
40	115,539	115,925	116,311	116,697	117,083	117,469	117,854	118,240	118,625	119,010
50	119,395	119,780	120,165	120,550	120,934	121,319	121,703	122,087	122,471	122,855
60	123,239	123,623	124,007	124,390	124,774	125,157	125,540	125,923	126,306	126,689
70	127,072	127,454	127,837	128,219	128,602	128,984	129,366	129,748	130,130	130,511
80	130,893	131,274	131,656	132,037	132,418	132,799	133,180	133,561	133,941	134,322
90	134,702	135,083	135,463	135,843	136,223	136,603	136,982	137,362	137,741	138,121
100	138,500	138,879	139,258	139,637	140,016	140,395	140,773	141,152	141,530	141,908
110	142,286	142,664	143,042	143,420	143,797	144,175	144,552	144,930	145,307	145,684
120	146,061	146,438	146,814	147,191	147,567	147,944	148,320	148,696	149,072	149,448
130	149,824	150,199	150,575	150,950	151,326	151,701	152,076	152,451	152,826	153,200
140	153,575	153,950	154,324	154,698	155,072	155,446	155,820	156,194	156,568	156,941
150	157,315	157,688	158,061	158,435	158,808	159,180	159,553	159,926	160,298	160,671
160	161,043	161,415	161,787	162,159	162,531	162,903	163,274	163,646	164,017	164,388
170	164,760	165,131	165,501	165,872	166,243	166,613	166,984	167,354	167,724	168,095
180	168,465	168,834	169,204	169,574	169,943	170,313	170,682	171,051	171,420	171,789
190	172,158	172,527	172,895	173,264	173,632	174,000	174,368	174,736	175,104	175,472
200	175,840	176,207	176,575	176,942	177,309	177,676	178,043	178,410	178,777	179,143
210	179,510	179,876	180,242	180,609	180,975	181,340	181,706	182,072	182,437	182,803
220	183,168	183,533	183,899	184,264	184,628	184,993	185,358	185,722	186,087	186,451
230	186,815	187,179	187,543	187,907	188,271	188,634	188,998	189,361	189,724	190,088
240	190,451	190,813	191,176	191,539	191,901	192,264	192,626	192,988	193,350	193,712
250	194,074	194,436	194,798	195,159	195,520	195,882	196,243	196,604	196,965	197,326
260	197,686	198,047	198,407	198,768	199,128	199,488	199,848	200,208	200,568	200,927
270	201,287	201,646	202,006	202,365	202,724	203,083	203,442	203,800	204,159	204,517
280	204,876	205,234	205,592	205,950	206,308	206,666	207,024	207,381	207,739	208,096
290	208,453	208,810	209,167	209,524	209,881	210,237	210,594	210,950	211,307	211,663
300	212,019	212,375	212,731	213,086	213,442	213,797	214,153	214,508	214,863	215,218
310	215,573	215,928	216,282	216,637	216,991	217,346	217,700	218,054	218,408	218,762
320	219,115	219,469	219,822	220,176	220,529	220,882	221,235	221,588	221,941	222,294
330	222,646	222,999	223,351	223,703	224,055	224,407	224,759	225,111	225,463	225,814
340	226,166	226,517	226,868	227,219	227,570	227,921	228,272	228,622	228,973	229,323
350	229,673	230,023	230,373	230,723	231,073	231,423	231,772	232,122	232,471	232,820
360	233,169	233,518	233,867	234,216	234,565	234,913	235,261	235,610	235,958	236,306
370	236,654	237,002	237,349	237,697	238,044	238,392	238,739	239,086	239,433	239,780
380	240,127	240,473	240,820	241,166	241,513	241,859	242,205	242,551	242,897	243,242
390	243,588	243,933	244,279	244,624	244,969	245,314	245,659	246,004	246,349	246,693
400	247,038	247,382	247,726	248,070	248,414	248,758	249,102	249,445	249,789	250,132
410	250,476	250,819	251,162	251,505	251,848	252,190	252,533	252,875	253,218	253,560
420	253,902	254,244	254,586	254,928	255,269	255,611	255,952	256,294	256,635	256,976

CONVERSION TABLE FOR PT1000 RESISTANCE THERMOMETERS ACCORDING TO IEC 751 STANDARDS

	0	1	2	3	4	5	6	7	8	9	0
-80	683,25	687,27	691,29	695,3	699,31	703,32	707,33	711,34	715,34	719,34	723,35
-70	723,35	727,35	731,34	735,34	739,34	743,33	747,32	751,32	755,3	759,29	763,28
-60	763,28	767,26	771,25	775,23	779,21	783,19	787,17	791,14	795,12	799,09	803,06
-50	803,06	807,03	811	814,97	818,94	822,9	826,87	830,83	834,79	838,75	842,71
-40	842,71	846,66	850,62	854,57	858,53	862,48	866,43	870,38	874,33	878,27	882,22
-30	882,22	886,16	890,1	894,04	897,99	901,92	905,86	909,8	913,73	917,67	921,6
-20	921,6	925,53	929,46	933,39	937,32	941,24	945,17	949,09	953,02	956,94	960,86
-10	960,86	964,78	968,7	972,61	976,53	980,44	984,36	988,27	992,18	996,09	1000
0	1000	1003,9	1007,8	1011,7	1015,6	1019,5	1023,4	1027,3	1031,2	1035,1	1039
10	1039	1042,9	1046,8	1050,7	1054,6	1058,5	1062,4	1066,3	1070,2	1074	1077,9
20	1077,9	1081,8	1085,7	1089,6	1093,5	1097,3	1101,2	1105,1	1109	1112,9	1116,7
30	1116,7	1120,6	1124,5	1128,3	1132,2	1136,1	1140	1143,8	1147,7	1151,5	1155,4
40	1155,4	1159,3	1163,1	1167	1170,8	1174,7	1178,6	1182,4	1186,3	1190,1	1194
50	1194	1197,8	1201,7	1205,5	1209,4	1213,2	1217,1	1220,9	1224,7	1228,6	1232,4
60	1232,4	1236,3	1240,1	1243,9	1247,8	1251,6	1255,4	1259,3	1263,1	1266,9	1270,8
70	1270,8	1274,6	1278,4	1282,2	1286,1	1289,9	1293,7	1297,5	1301,3	1305,2	1309
80	1309	1312,8	1316,6	1320,4	1324,2	1328	1331,8	1335,7	1339,5	1343,3	1347,1
90	1347,1	1350,9	1354,7	1358,5	1362,3	1366,1	1369,9	1373,7	1377,5	1381,3	1385,1
100	1385,1	1388,8	1392,6	1396,4	1400,2	1404	1407,8	1411,6	1415,4	1419,1	1422,9
110	1422,9	1426,7	1430,5	1434,3	1438	1441,8	1445,6	1449,4	1453,1	1456,9	1460,7
120	1460,7	1464,4	1468,2	1472	1475,8	1479,5	1483,3	1487	1490,8	1494,6	1498,3
130	1498,3	1502,1	1505,8	1509,6	1513,3	1517,1	1520,8	1524,6	1528,3	1532,1	1535,8
140	1535,8	1539,6	1543,3	1547,1	1550,8	1554,6	1558,3	1562	1565,8	1569,5	1573,3
150	1573,3	1577	1580,7	1584,5	1588,2	1591,9	1595,6	1599,4	1603,1	1606,8	1610,5
160	1610,5	1614,3	1618	1621,7	1625,4	1629,1	1632,9	1636,6	1640,3	1644	1647,7
170	1647,7	1651,4	1655,1	1658,9	1662,6	1666,3	1670	1673,7	1677,4	1681,1	1684,8
180	1684,8	1688,5	1692,2	1695,9	1699,6	1703,3	1707	1710,7	1714,3	1718	1721,7
190	1721,7	1725,4	1729,1	1732,8	1736,5	1740,2	1743,8	1747,5	1751,2	1754,9	1758,6
200	1758,6	1762,2	1765,9	1769,6	1773,3	1776,9	1780,6	1784,3	1787,9	1791,6	1795,3
210	1795,3	1798,9	1802,6	1806,3	1809,9	1813,6	1817,2	1820,9	1824,6	1828,2	1831,9
220	1831,9	1835,5	1839,2	1842,8	1846,5	1850,1	1853,8	1857,4	1861,1	1864,7	1868,4
230	1868,4	1872	1875,6	1879,3	1882,9	1886,6	1890,2	1893,8	1897,5	1901,1	1904,7
240	1904,7	1908,4	1912	1915,6	1919,2	1922,9	1926,5	1930,1	1933,7	1937,4	1941
250	1941	1944,6	1948,2	1951,8	1955,5	1959,1	1962,7	1966,3	1969,9	1973,5	1977,1
260	1977,1	1980,7	1984,3	1987,9	1991,5	1995,1	1998,7	2002,3	2005,9	2009,5	2013,1
270	2013,1	2016,7	2020,3	2023,9	2027,5	2031,1	2034,7	2038,3	2041,9	2045,5	2049
280	2049	2052,6	2056,2	2059,8	2063,4	2067	2070,5	2074,1	2077,7	2081,3	2084,8
290	2084,8	2088,4	2092	2095,6	2099,1	2102,7	2106,3	2109,8	2113,4	2117	2120,5
300	2120,5	2124,1	2127,6	2131,2	2134,8	2138,3	2141,9	2145,4	2149	2152,5	2156,1