



Room sensor for room temperature measurement with setpoint adjustment.

The SAP series employs different types of sensors designed for use with AB Industrietechnik regulators and other manufacturers.

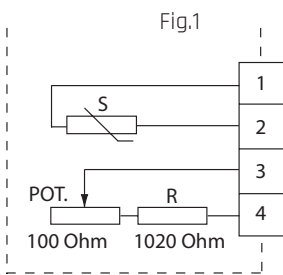
TECHNICAL DATA

| | |
|-------------|-----------------|
| Range: | 0...+50 °C |
| Mounting: | wall |
| Protection: | IP30 |
| Size: | 86 x 86 x 30 mm |

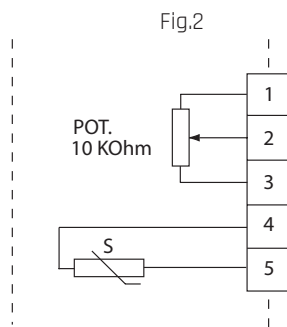
| TYPE | WIRING | SENSOR ELEMENT |
|-----------------|--------|-------------------------|
| SAP-PT100-2 | Fig.2 | PT100, 100 Ohm/0°C |
| SAP-PT1000-1 | Fig.1 | PT1000, 1000 Ohm/0°C |
| SAP-PT1000-2 | Fig.2 | PT1000, 1000 Ohm/0°C |
| SAP-NTC1.8-2 | Fig.2 | NTC 1.8, 1800 Ohm/25°C |
| SAP-NTC2.2-2 | Fig.2 | NTC 2.2k, 2252 Ohm/25°C |
| SAP-NTC10-01-2 | Fig.2 | NTC 10k, 10kOhm/25°C |
| SAP-NTC10-02-2 | Fig.2 | NTC 10k, 10kOhm/25°C |
| SAP-NTC10-03-2 | Fig.2 | NTC 10k, 10kOhm/25°C |
| SAP-NTC10-02-4 | Fig.4 | NTC 10k, 10kOhm/25°C |
| SAP-NTC15-01-3 | Fig.3 | NTC 15k, 15kOhm/0°C |
| SAP-NTC20-2 | Fig.2 | NTC 20k, 20kOhm/25°C |
| SAP-Ni1000-01-2 | Fig.2 | Ni1000, 1000 Ohm/0°C |
| SAP-Ni1000-02-2 | Fig.2 | Ni1000, 1000 Ohm/0°C |

NOTE: for detailed ohmic values see table sensors

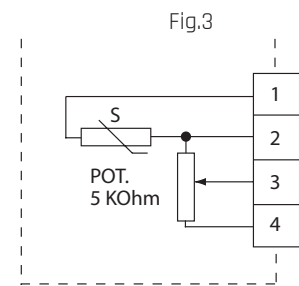
WIRING AND DIMENSIONS (MM)



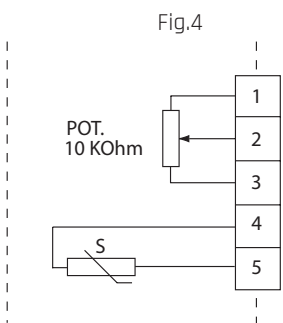
1 - 2 = sensor
 3 - 4 ≈ 1120 Ohm (31°C)
 3 - 4 ≈ 1020 Ohm (5°C)



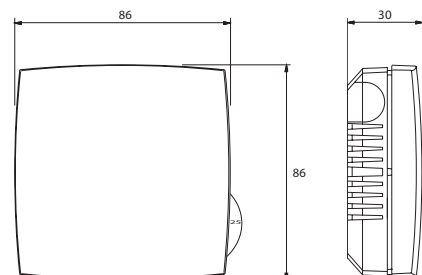
4 - 5 = sensor
 2 - 3 ≈ 10 KOhm (30°C)
 2 - 3 ≈ 0 Ohm (5°C)



1 - 2 = sensor
 2 - 3 ≈ 5 KOhm (30°C)
 2 - 3 ≈ 0 Ohm (0°C)



4 - 5 = sensor 10K



SENSOR CHARACTERISTICS

| | PT100 | PT1000 | NTC 1,8K | NTC 2,2K | NTC 10K-01 | NTC 10K-02 | NTC 10K-03 | NTC 15K-01 | NTC 15K-02 | NTC 15K-03 | NTC 15K-04 | NTC 20K | NI 1000-01 | NI 1000-02 |
|-------------|-------|--------|-------------|------------------|------------------------------------------------------------------------------|----------------------------------------------------|-----------------------------------------------|--------------------------------|--------------------------------|--------------------------------|--------------------------------|------------|------------------------------|---------------|
| Compatible | | | Tac | Johnson Controls | Aquatrol - Johnson Controls - Satchwell - Trend - Cylon - Honeywell | Carel - Evco - Eliwell - AB Industrietechnik | Andover - Delta Controls - Siebe - York | Regin - AB Industrietechnik | Regin - AB Industrietechnik | Regin - AB Industrietechnik | Regin - AB Industrietechnik | Honeywell | Siemens - Landis & Staefa | Sauter |
| Temp. °C | Ω | Ω | Ω | Ω | Ω | Ω | Ω | Ω | Ω | Ω | Ω | Ω | Ω | Ω |
| 150 | 157,3 | 1573 | | | 186 | | | | | | | | | |
| 140 | 153,6 | 1536 | | | 235 | | | | | | | | 1737 | 1909 |
| 130 | 149,8 | 1498 | | | 301 | | | | | | | | 1675 | 1833 |
| 120 | 146,1 | 1461 | | | 390 | | | | | | | | 1615 | 1760 |
| 110 | 142,3 | 1423 | 138 | 115 | 511 | 758 | 624 | | | | | 818 | 1557 | 1688 |
| 100 | 138,5 | 1385 | 177 | 153 | 679 | 973 | 817 | | | | | 1114 | 1500 | 1618 |
| 90 | 134,7 | 1347 | 230 | 206 | 916 | 1266 | 1084 | | | | | 1541 | 1444 | 1549 |
| 80 | 130,9 | 1309 | 303 | 283 | 1255 | 1668 | 1457 | | | | | 2166 | 1390 | 1483 |
| 70 | 127,1 | 1271 | 404 | 395 | 1752 | 2228 | 1990 | | | | | 3098 | 1337 | 1417 |
| 65 | 125,2 | 1252 | 469 | 469 | 2083 | 2588 | 2338 | | | | | 3732 | 1311 | 1385 |
| 60 | 123,2 | 1232 | 547 | 560 | 2488 | 3020 | 2760 | | 10000 | | | 4518 | 1285 | 1353 |
| 55 | 121,3 | 1213 | 640 | 672 | 2986 | 3536 | 3270 | | | | | 5494 | 1260 | 1322 |
| 50 | 119,4 | 1194 | 753 | 811 | 3602 | 4160 | 3893 | | 10830 | 10000 | | 6718 | 1235 | 1291 |
| 45 | 117,5 | 1175 | 888 | 984 | 4368 | 4911 | 4655 | | | 10830 | | 8260 | 1210 | 1260 |
| 40 | 115,5 | 1155 | 1052 | 1199 | 5324 | 5827 | 5594 | | 11670 | 11670 | 10000 | 10212 | 1186 | 1230 |
| 35 | 113,6 | 1136 | 1252 | 1471 | 6532 | 6940 | 6754 | | | 12500 | 10625 | 12698 | 1162 | 1200 |
| 30 | 111,7 | 1117 | 1498 | 1814 | 8055 | 8313 | 8196 | 10000 | 12500 | 13330 | 11250 | 15886 | 1138 | 1171 |
| 29 | 111,3 | 1113 | 1553 | 1893 | 8406 | 8622 | 8525 | 10170 | | | | 16627 | 1132 | 1165 |
| 28 | 111,0 | 1110 | 1611 | 1977 | 8779 | 8944 | 8869 | 10330 | | | | 17407 | 1128 | 1159 |
| 27 | 110,5 | 1105 | 1671 | 2064 | 9165 | 9281 | 9229 | 10500 | | | | 18227 | 1123 | 1153 |
| 26 | 110,1 | 1101 | 1734 | 2156 | 9574 | 9632 | 9606 | 10670 | | | | 19090 | 1119 | 1147 |
| 25 | 109,7 | 1097 | 1800 | 2252 | 10000 | 10000 | 10000 | 10830 | | 14170 | 11875 | 20000 | 1114 | 1141 |
| 24 | 109,3 | 1093 | 1868 | 2353 | 10448 | 10380 | 10413 | 11000 | | | | 20958 | 1109 | 1136 |
| 23 | 109,0 | 1090 | 1940 | 2460 | 10924 | 10780 | 10845 | 11170 | | | | 21968 | 1105 | 1130 |
| 22 | 108,6 | 1086 | 2015 | 2572 | 11421 | 11200 | 11298 | 11330 | | | | 23033 | 1100 | 1124 |
| 21 | 108,2 | 1082 | 2092 | 2689 | 11940 | 11630 | 11773 | 11500 | | | | 24156 | 1095 | 1118 |
| 20 | 107,8 | 1078 | 2174 | 2813 | 12491 | 12090 | 12270 | 11670 | 13330 | 15000 | 12500 | 25340 | 1091 | 1112 |
| 19 | 107,4 | 1074 | 2258 | 2944 | 13073 | 12560 | 12791 | 11830 | | | | 26491 | 1086 | 1107 |
| 18 | 107,0 | 1070 | 2347 | 3081 | 13681 | 13060 | 13337 | 12000 | | | | 27912 | 1081 | 1101 |
| 17 | 106,6 | 1066 | 2440 | 3226 | 14325 | 13580 | 13910 | 12170 | | | | 29307 | 1077 | 1095 |
| 16 | 106,2 | 1062 | 2537 | 3378 | 15000 | 14120 | 14510 | 12330 | | | | 30782 | 1072 | 1089 |
| 15 | 105,9 | 1059 | 2638 | 3538 | 15710 | 14690 | 15140 | 12500 | | | 13125 | 32340 | 1068 | 1084 |
| 14 | 105,5 | 1055 | 2744 | 3707 | 16461 | 15280 | 15801 | 12370 | | | | 33982 | 1063 | 1078 |
| 13 | 105,1 | 1051 | 2854 | 3886 | 17256 | 15900 | 16494 | 12830 | | | | 35716 | 1058 | 1072 |
| 12 | 104,7 | 1047 | 2972 | 4074 | 18091 | 16560 | 17222 | 13000 | | | | 37550 | 1054 | 1067 |
| 11 | 104,3 | 1043 | 3093 | 4272 | 18970 | 17240 | 17987 | 13170 | | | | 39489 | 1049 | 1061 |
| 10 | 103,9 | 1039 | 3222 | 4482 | 19902 | 17960 | 18790 | 13330 | 14170 | | 13750 | 41540 | 1045 | 1056 |
| 9 | 103,5 | 1035 | 3354 | 4703 | 20884 | 18700 | 19633 | 13500 | | | | 43715 | 1040 | 1050 |
| 8 | 103,1 | 1031 | 3493 | 4936 | 21918 | 19480 | 20519 | 13670 | | | | 46018 | 1036 | 1044 |
| 7 | 102,7 | 1027 | 3639 | 5183 | 23015 | 20300 | 21451 | 13830 | | | | 48457 | 1031 | 1039 |
| 6 | 102,3 | 1023 | 3791 | 5443 | 24170 | 21150 | 22430 | 14000 | | | | 51041 | 1027 | 1033 |
| 5 | 101,9 | 1019 | 3951 | 5718 | 25391 | 22050 | 23460 | 14170 | | | 14375 | 53780 | 1022 | 1028 |
| 4 | 101,6 | 1016 | 4120 | 6009 | 26683 | 23000 | 24545 | 14330 | | | | 56678 | 1018 | 1022 |
| 3 | 101,2 | 1012 | 4296 | 6317 | 28051 | 23990 | 25687 | 14500 | | | | 59751 | 1013 | 1016 |
| 2 | 100,8 | 1008 | 4481 | 6643 | 29498 | 25030 | 26890 | 14670 | | | | 63011 | 1009 | 1011 |
| 1 | 100,4 | 1004 | 4677 | 6988 | 31030 | 26130 | 28156 | 14830 | | | | 66469 | 1004 | 1005 |
| 0 | 100,0 | 1000 | 4882 | 7353 | 32650 | 27280 | 29490 | 15000 | 15000 | | 15000 | 70140 | 1000 | 1000 |
| -5 | 98,0 | 980 | 6059 | 9532 | 42327 | 33900 | 37310 | | | | | 92220 | 978 | 973 |
| -10 | 96,1 | 961 | 7580 | 12460 | 55329 | 42470 | 47540 | | | | | 122260 | 956 | 946 |
| -15 | 94,1 | 941 | 9519 | 16430 | 72957 | 53410 | 61020 | | | | | 163480 | 935 | 919 |
| -20 | 92,2 | 922 | 12061 | 21863 | 97083 | 67770 | 78910 | | | | | 220600 | 914 | 893 |
| -25 | 90,2 | 902 | 15359 | 29371 | 130422 | 86430 | 102900 | | | | | 300400 | 893 | 867 |
| -30 | 88,2 | 882 | 19747 | 39855 | 176976 | 111300 | 135200 | | | | | 413400 | 872 | 842 |
| -35 | 86,3 | 863 | | | | | | | | | | | 851 | 816 |
| -40 | 84,3 | 843 | | | | | | | | | | | 831 | 791 |