

1-2

Outside air temperature sensor  
GOT Series



Applications

"GOT" Outside Air temperature sensor is intended for sensing outside air temperature and it also can sense radiant heat and low-high temperature of atmosphere. Units contain either a high quality platinum or thermistor (NTC) sensing element suitable for use in the range -35 ~ +80℃.

Technical Data

| Model                    | PT sensor | Temp. range | Precision       | Wiring                     | Remark                                          |
|--------------------------|-----------|-------------|-----------------|----------------------------|-------------------------------------------------|
| (RTD.. sensor)           |           |             |                 |                            |                                                 |
| GOT-100                  | Pl100Ω    | -35 ~ 80℃   | ±0.3℃ (at 0℃)   | 3wire / 1.0mm <sup>2</sup> |                                                 |
| GOT-1000                 | Pl1000Ω   | -35 ~ 80℃   | ±0.3℃ (at 0℃)   | 3wire / 1.0mm <sup>2</sup> |                                                 |
| (Thermistor..NTC sensor) |           |             |                 |                            |                                                 |
| GOT-N10K-AN              | NTC10000Ω | -35 ~ 80℃   | ±0.2℃ (at 25℃)  | 2wire / 1.0mm <sup>2</sup> | ACI/AN, ANDOVER, BA/10K-3<br>PRECON-3 (Model.3) |
| GOT-N10K-CP              | NTC10000Ω | -35 ~ 80℃   | ±0.2℃ (at 25℃)  | 2wire / 1.0mm <sup>2</sup> | ACI/CP, BA/10K-2<br>PRECON-2 (Model.24)         |
| GOT-N5K                  | NTC5000Ω  | -35 ~ 80℃   | ±0.3℃ (at 25℃)  | 2wire / 1.0mm <sup>2</sup> |                                                 |
| GOT-N3K                  | NTC3000Ω  | -35 ~ 80℃   | ±0.25℃ (at 25℃) | 2wire / 1.0mm <sup>2</sup> | ACI/3K<br>PRECON-2 (Model.22)                   |

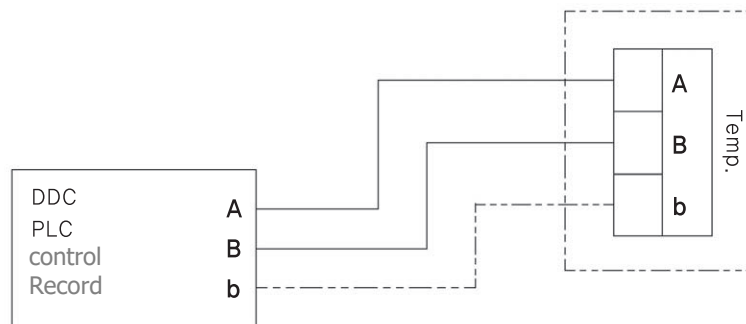
Technical features

- Sensing time : Appr. 5min at 0.15m/sec Velocity
- Ambient Temp. : -30 ~ 80℃
- Ambient humidity : 5 ~ 100%RH
- Applications : DDC System and controller
- Temp. variance : according to Thermistor NTC Curve Table
- Protection : IP30
- Housing with ABS (flame retardation)
- Weight : 0.06kg

## Notes

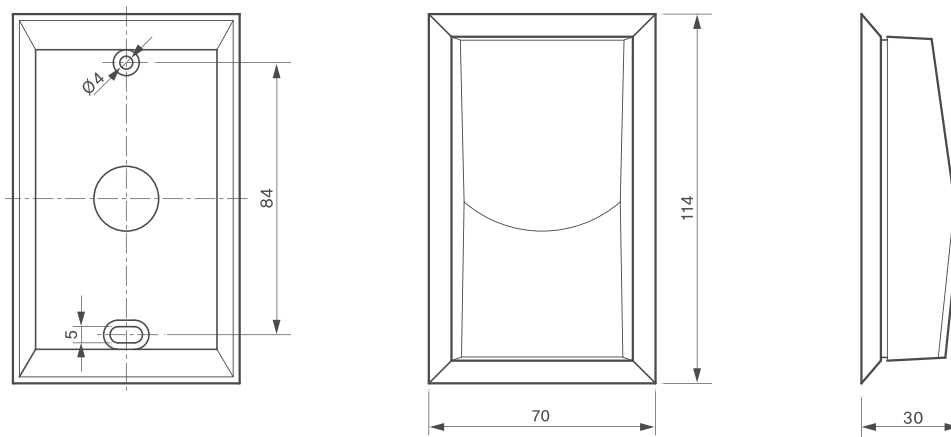
- Select a location approx. 1.5M above the floor for the sensor which is representative of the space to be controlled and where it will be readily affected by change in the general space temperature & humidity level
- The sensor location should also be reasonably clean and free from damp and condensation and must be installed at the coldest place as north wall generally and prevent from direct sun light.  
The element must not be touched and should be protected from dust, water, spray, condensation.
- Prohibited place for installation : Window, Door, Air ventilation hole, Upper place of heat source, veranda or eaves of roof.
- To protect any errors from warm air convection, cable wire should be shielded and sensor must not be painted.
- The sensor element must not be exposed to organic solvents, liquids or sylphid bearing materials. Do not use a DC test meter as this will damage the sensor element.
- Fix with the bolts provided in pull box (50×100)
- To avoid the conductive current the wires should be separated from power Line.
- Use the shield Line when wiring.

## Wiring diagram



Pt100Ω (3wire) / Pt1000Ω (3wire) / NTC10KΩ / NTC5KΩ / NTC3KΩ

## Shape dimension



Thermistor NTC Curve Table

| Temperature |      | NTC/10K-AN | NTC/10K-CP | NTC/5K     | NTC/3K     |
|-------------|------|------------|------------|------------|------------|
| Temp        | Temp | Resistance | Resistance | Resistance | Resistance |
| °C          | °F   | ohms       | ohms       | ohms       | ohms       |
| -40         | -40  | 239,831    | 335,671    | 88,910     | 100,701    |
| -35         | -31  | 179,280    | 242,195    | 68,190     | 72,658     |
| -30         | -22  | 135,233    | 176,683    | 52,870     | 53,005     |
| -25         | -13  | 102,890    | 130,243    | 41,210     | 39,073     |
| -20         | -4   | 78,930     | 96,974     | 32,440     | 29,092     |
| -15         | 5    | 61,030     | 72,895     | 25,660     | 21,868     |
| -10         | 14   | 47,549     | 55,298     | 20,480     | 16,589     |
| -5          | 23   | 37,316     | 42,314.6   | 16,430     | 12,694.4   |
| 0           | 32   | 29,490     | 32,650.8   | 13,290     | 9,795.2    |
| 5           | 41   | 23,462     | 25,395.5   | 10,800     | 7,618.7    |
| 10          | 50   | 18,787     | 19,903.5   | 8,840      | 5,971.1    |
| 15          | 59   | 15,136     | 15,714.0   | 7,267      | 4,714.2    |
| 20          | 68   | 12,268     | 12,493.7   | 6,013      | 3,748.1    |
| 25          | 77   | 10,000     | 10,000     | 5,000      | 3,000      |
| 30          | 86   | 8,197      | 8,056.0    | 4,179      | 2,416.8    |
| 35          | 95   | 6,754      | 6,530.1    | 3,508      | 1,959.0    |
| 40          | 104  | 5,594      | 5,324.9    | 2,961      | 1,597.5    |
| 45          | 113  | 4,656      | 4,366.9    | 2,509      | 1,310.1    |
| 50          | 122  | 3,893      | 3,601.0    | 2,137      | 1,080.3    |
| 55          | 131  | 3,271      | 2,985.1    | 1,826      | 895.52     |
| 60          | 140  | 2,760      | 2,487.1    | 1,567      | 746.12     |
| 65          | 149  | 2,339      | 2,082.3    | 1,350      | 624.69     |
| 70          | 158  | 1,990      | 1,751.6    | 1,169      | 525.49     |
| 75          | 167  | 1,700      | 1,480.1    | 1,014      | 444.04     |
| 80          | 176  | 1,458      | 1,256.2    | 883.5      | 376.85     |
| 85          | 185  | 1,255      | 1,070.6    | 772.2      | 321.17     |
| 90          | 194  | 1,084      | 916.11     | 677.1      | 274.83     |
| 95          | 203  | 939.6      | 786.99     | 596.1      | 236.10     |
| 100         | 212  | 817.2      | 678.63     | 526.5      | 203.59     |
| 105         | 221  | 713.0      | 587.31     | 465.4      | 176.19     |
| 110         | 230  | 624.1      | 510.06     | 412.8      | 153.02     |
| 115         | 239  | 547.9      | 444.48     | -          | 133.34     |
| 120         | 248  | 482.5      | 388.59     | -          | 116.578    |
| 125         | 257  | 426.0      | 340.82     | -          | 102.246    |
| 130         | 266  | 377.2      | 299.82     | -          | 89.946     |
| 135         | 275  | 334.9      | 264.54     | -          | 79.363     |
| 140         | 284  | 298.1      | 234.08     | -          | 70.225     |
| 145         | 293  | 266.0      | 207.70     | -          | 62.309     |
| 150         | 302  | 238.0      | 184.79     | -          | 55.436     |