



1-5

Averaging temperature sensor GDAT Series



Applications

"GDAT" Average temperature sensor is intended for installing on Ventilation and airhandling units will be used on following usages.

Units contain either a high quality platinum or thermistor (NTC) sensing element suitable for use in the range $-30 \sim +70^{\circ}\text{C}$.

- Sensing the duct temperature of supplying or ventilating air and mixed air average temperature
- Measuring sensor (In case of displaying sensing point or using by connecting with control unit or converter)

Technical Data

Model	PT sensor	Temp. range	Precision	Wiring	Remarks
(RTD..Sensor)					
GDAT-100	Pt100Ω	$-30 \sim 70^{\circ}\text{C}$	$\pm 0.3^{\circ}\text{C}$ (at 0°C)	3wire / 1.0mm^2	
GDAT-1000	Pt1000Ω	$-30 \sim 70^{\circ}\text{C}$	$\pm 0.3^{\circ}\text{C}$ (at 0°C)	3wire / 1.0mm^2	
(Thermistor.. NTC Sensor)					
GDAT-N10K-AN	NTC10000Ω	$-30 \sim 70^{\circ}\text{C}$	$\pm 0.2^{\circ}\text{C}$ (at 25°C)	2wire / 1.0mm^2	ACI/AN, ANDOVER, BA/10K-3 PRECON-3 (Model.3)
GDAT-N10K-CP	NTC10000Ω	$-30 \sim 70^{\circ}\text{C}$	$\pm 0.2^{\circ}\text{C}$ (at 25°C)	2wire / 1.0mm^2	ACI/CP, BA/10K-2 PRECON-2 (Model.24)
GDAT-N5K	NTC5000Ω	$-30 \sim 70^{\circ}\text{C}$	$\pm 0.3^{\circ}\text{C}$ (at 25°C)	2wire / 1.0mm^2	
GDAT-N3K	NTC3000Ω	$-30 \sim 70^{\circ}\text{C}$	$\pm 0.25^{\circ}\text{C}$ (at 25°C)	2wire / 1.0mm^2	ACI/3K PRECON-2 (Model.22)

Technical Features

- Temp. sensor : 4 sensors installed
- Self-heating current : below Max. 2mA
- Sensing time : 30sec at 3m/sec Velocity
- Ambient Temp. : $-30 \sim 80^{\circ}\text{C}$
- Ambient humidity : below 95%RH
- Cable entry gland : PF 1/2"
- Length of Temp. sensing part : 2m in standard (to be adjusted by order)
- Protection : IP65 (EN60529)
- Weight : 0.25kg

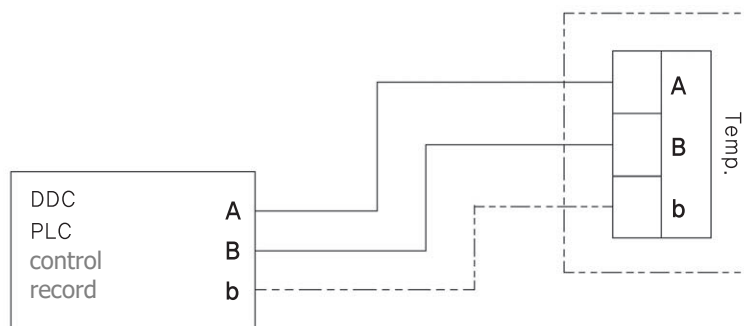
Guide for mounting

- In case of sensing inside temperature of Duct
 - In case of sensing the temperature by inserting into Duct, attach the body to higher position of side wall, and Sensor should be fixed with clamp or 2, 3 screw-down terminal by zigzag method to avoid touching to Duct wall by putting inside of Duct through the hole.

Notes

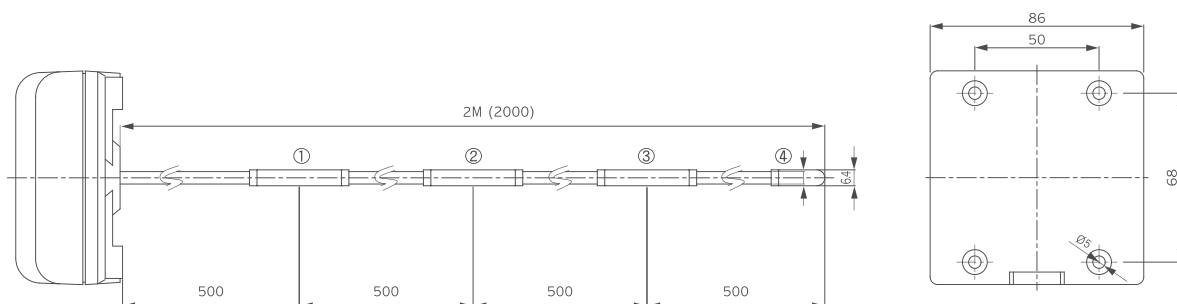
- As this detector is lower magnet generating current of regular element, the standard Controller or Converter should be used to prevent from being errors or breakage in case of putting more than regular current.

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