



AIH

Active In-car Humidity Temperature Sensor



An integrated, low-noise fan draws a greater volume of cabin air across the temperature sensor providing a faster response as compared to traditional passive sensors. This can result in a more accurate climate control, leading to better cabin comfort. This sensor can also help improve the efficiency of the temperature control system by reducing the on / off cycles of the heating and cooling system.

The humidity and temperature output also provides the control system with a better model for windshield “anti-fogging” prevention. Data from the sensor is also used for evaporator control.

Applications

- For in-cabin vehicle temperature and humidity measurement In vehicles that have automated temperature control systems

Features

- Existing field proven design
- Quiet Operation
- Fast Response
- Accuracy maximizes driver / passenger comfort
- Ultra-low noise, high air flow optimised system design

- Coreless Type Motor
- Small size & flexible packaging facilitates installation & service
- Low current consumption
- Long-term stability – even in extreme humidity environments
- Alternate RvT curves available
- Electronics integrated into one assembly with the humidity and temperature sensor.
- Different geometries to meet package requirements

Specifications

R @ 25°C

30.0 kΩ ±1.2%

B (0/50)

3887K ±1%

Operating Temperature Range

Temperature: -40°C to 85°C

Humidity: 0°C to 60°C

Storage Temperature Range

Temperature: -40°C to 85°C

Humidity: 0°C to 60°C

Thermistor Response Time

< 10 seconds (25°C to > 85°C in OIL)

Housing Material

PP-(GF+TD)15

NTC Part Number

TC330S39FB

Weight

36.8 grams

Humidity Sensor

Capacitive

Humidity Sensor Response Time

< 30 seconds (30 → 80% RH)

Air Flow Volume

Minimum 1.2 m/s (at 23 ±5°C, 13.5 ±0.1V), inlet

Humidity Output (Hz)

RH (%)	0	5	10	15	20	25	30	35	40	45	50
Fout (Hz)			7155	7080	7010	6945	6880	6820	6760	6705	6650
RH (%)	55	60	65	70	75	80	85	90	95	100	
Fout (Hz)	6600	6550	6500	6450	6400	6355	6305	6260	6210		

Operating Current

Motor Part: MAX 70.0 mA

(at 23°C ±5°C, 13.5 ±0.1 V)

Humidity Part: MAX 15.0 mA (at 5.0 ±0.5V)

Rated Voltage

Motor : 12.0V

Humidity : 5.0V

Minimum Starting Voltage

9.0V MAX

Noise

38.0dB MAX(at 12.0±0.1V)

Connector

YAZAKI 7282- 8663

Mating Connector

KET MG651439

Resistance and Temperature Accuracy

Temp. (°C)	Tolerance (%)	R (kOhms)	Tolerance (%)
+60	-0.73/+0.71	7.463	±2.6
+50	-0.59/+0.58	10.810	±2.2
+35	±0.39	19.590	±1.6
+25	±0.27	30.000	±1.2
+15	-0.36/+0.35	47.130	±1.7
0	-0.47/+0.46	97.710	±2.4
-15	-0.58/+0.57	216.100	-3.1/+3.2
-30	-0.69/+0.67	509.600	-4.0/+4.1

Drawing



