



GAS SENSORS : TYPE AF63

ETHANOL (C_2H_5OH) SENSOR

DESCRIPTION:

Alcohol gas sensor made with thick film sensing element.

FEATURES:

- Constant heater voltage
- Tight resistance tolerance
- Short initial stabilisation time
- Typical applications include gas leak detection, alcohol detection

DATA:

Operating conditions:

Operating temperature -10 to +55°C

Storage temperature -30 to +60°C

Load Resistor R_L Variable

Heater resistance 19Ω (nom)

Rated power consumption P_s <15mW

Rated working voltage of circuit V_c

..... 5V d.c. or 5V rms a.c. (max 12V)

Rated working voltage of heater

..... 5 ±0.2V d.c.

..... 5 ±0.2 V rms a.c.

Parts and material:

Sensing element Semi-conducting oxide

Thick film heater Platinum

Case Nylon 66

Pin Nickel alloy

Flame arrestor

... Double 100-mesh stainless gauze (SUS316)

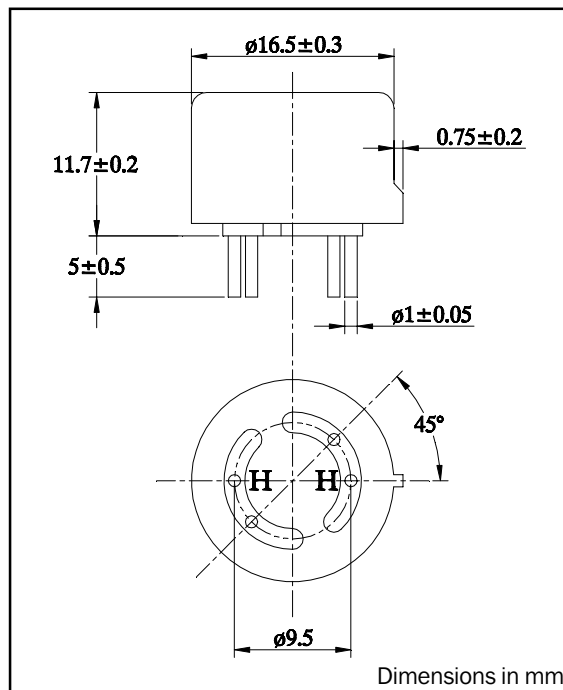
Sensitivity characteristics:

	Specification	Conditions
Sensor resistance R_{gas}	3k to 12k Ω	In clean air
Gas sensitivity R_{gas}/R_{air}	0.07 to 0.20	Resistance ratio at 100ppm ethanol to clean air
Power consumption	680mW (max)	

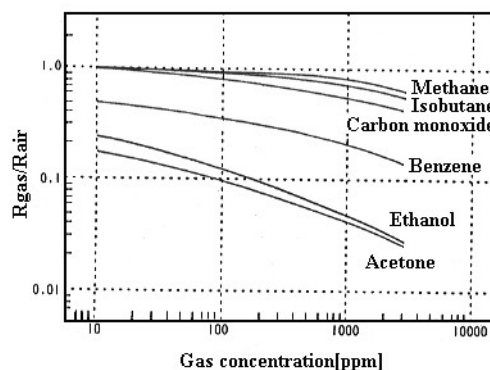
Mechanical characteristics:

Test	Condition	Performance
Vibration	Frequency: 10 - 500 Hz Amplitude (10 - 50Hz): 2 mm Acceleration (50 - 500 Hz) 10G Recipricol scanning time: 5 min Test time: 2 hours each for X, Y and Z directions	Should satisfy the specifications shown in the sensitivity characteristics
Shock	Acceleration: 100G Number of impacts: 5	

DIMENSIONS:



Typical gas sensitivity:



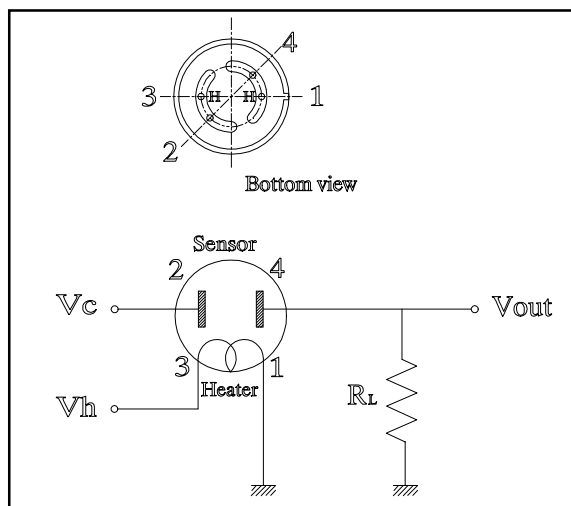


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ALCOHOL (C_2H_5OH) SENSOR

NOTES:

Pin allocation and standard test circuit:



Test conditions:

Atmosphere

Clean air at $25 \pm 2^\circ C$ and $50 \pm 5\%$ RH without noise gas.

Circuit condition

V_c (circuit voltage) $5 \pm 0.05V$

V_h (heater voltage) $5 \pm 0.05V$

Preheat time 48 hours

Test gas

Ethanol 100ppm

WARNING:

Do not use if the case or wire netting is damaged, otherwise built-in heater may cause explosions or fires.

Do not disassemble or change any parts.

Use only within specified conditions.