

# Ammonia Sensor

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AppliedSensor's ammonia sensor is based on a field-effect (FE) transistor with a catalytic gate metal and proven long term stability and reproducibility combined with high selectivity and low cross sensitivity.

## Highly sensitive and selective

AppliedSensor's ammonia sensor is equipped with a nanoporous sensing layer that is highly selective towards ammonia and offers a very low cross sensitivity to humidity changes. AppliedSensor's design and processing of the gas sensitive layer also ensures an ammonia sensor with high sensitivity and low detection limit.

The sensor can be operated within one minute from start-up and the speed of response is of the order of 20 seconds for typical alarm applications.

## Packaged in a module

The sensor is packaged in a module which acts as mechanical interface and environmental protection. Furthermore the module measures the raw signal from the sensor, controls the heating of the sensor, provides an input voltage stabilization and CAN-bus output of the sensor signal.

The modules are available and can be tailored to customer-specific packaging, applications and interfaces.

## Key benefits

- High sensitivity to ammonia gas
- High selectivity to ammonia
- Low cross sensitivity to humidity changes
- Low detection limit
- Fast response
- Sensor component with low power consumption

## Applications

- Ammonia leakage detection
- Ventilation control for the agricultural and animal farming industries

# Ammonia Sensor

## Ammonia sensor specifications

Target gas	Ammonia
Typical application range	1-10,000 ppm in air
Detection limit	Below 1 ppm in air
Speed of response ( $t_{63}$ )	< 20 s for 100ppm (depending on application characteristics)
Selectivity	Very low responses to propane, propene, butane, CO, petrol fumes, diesel fumes and ethanol. Some response to hydrogen.
Start-up time	45 s
Lifetime	Years, depending on applicational- / environmental-conditions

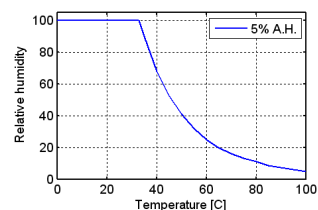
## Electrical

Supply voltage	9 – 16 V
Supply current	75 mA typical
CAN Interface	Version 2.0 ISO 11898
Connector	MQS 6-pin

## Environmental

Operation temperature	-40 → +110 °C
Storage temperature	-50 → +125 °C
Humidity	5 – 95 % R.H. at temperatures up to 40 °C, not condensing 0-5% Absolute Humidity

Pressure	70 – 130 kPa
EMC	Automotive
Shock	Automotive
Vibration	Automotive



## Mechanical

Dimensions (LxWxH)	82.8 x 42 x 17.3 mm
Weight	50g
Material	PBT + 30%GF
Gas filter membrane	Pall SUPOR 450R, 045µm
IP code	IP67

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