BRIEF INFORMATION

Air quality sensor – measurement of air properties

➔ Greater driving comfort due to continual optimisation of the interior air quality in the inside of the vehicle
➔ The intelligent software automatically provides pre-processed information for the air conditioning system while taking into account the respective environmental conditions (e.g. city traffic, cross-country drive, motorway)

PRODUCT FEATURES

Application
The air quality levels are evaluated based on the recorded changes in CO and NO₂ concentration and classified from 0 to 4. In order to give consideration to the environmental conditions, as they are present e.g. in the city compared to country areas, the air quality monitor has an autonomous sensitivity adjustment for different gas concentrations and occurrences.

Example: With an increasing number of gas occurrences (air quality level ≥ 2) recorded, the sensitivity of the device is lowered to reach an average rate of 0.25 event recordings per minute.

Design and functions
During the trip the AQM air quality monitor from HELLA records all occurrences that could have an effect on the air quality in the inside of the vehicle (e.g. driving through a tunnel or driving past vehicles with high exhaust emissions).

The AQM is installed in the vehicle in a location where the outdoor air quality can quickly be recorded in all driving situations. A possible installation location could be the water tank, for example.

The AQM activates the air-conditioning system which in turn automatically regulates the recirculation air function based on the outdoor air quality. If there is a high exhaust concentration around the vehicle, it switches automatically to air circulation mode. This prevents exhaust emissions from entering the vehicle.
TECHNICAL DETAILS

Technical Data

- **Rated voltage**: 9 – 16 V
- **Detectable gases**: CO, NO₂
- **Min. detectable change in concentration**: CO: 7ppm, NO₂: 75ppb
- **Response time**: CO: 5s, NO₂: 10s
- **Chemical resistance**: Typical automotive media
- **Operating temperature**: -40°C bis + 85°C
- **Storage temperature**: -40°C bis + 95°C
- **Protection rating**: IP 26 (with sealed connector: IP 5K9K)
- **Service life**: 241,350 km (150,000 miles), 10 years
- **Material**: Housing: PA 66 GF25, diaphragm: PTFE
- **Contact pin material**: C19010
- **Contact pin coat**: Ni 1 – 2 µm, electrogalvanised pin, 5 ± 2.5 µm matt finish plating, Sn on Ni
- **Electric connector**: EWCAP no. 064-S-003-1-Z01 (option A)
- **Mechanical interface**: Delphi clip receptacle
- **Adjustment during assembly**: Connector and air inlet point downwards
- **Weight**: 21 g

PWM duty cycle

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<th>Maximum</th>
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RANGE OVERVIEW

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