

Fuel Sensor



Modern high-pressure injection systems for diesel fuels are very sensitive to changes of the lubricity of the diesel fuel. Even short interruptions or impairments of lubrication in most cases result in irreparable damage to the system. A frequent cause of such insufficient lubrication is the dilution of the diesel fuel with gasoline because of incorrect refueling. Various automobile clubs say that the number of cases in which help is provided after such refueling is increasing.



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The damage can be prevented by a fuel sensor developed by Hella which detects incorrect fueling. Using a simple but robust principle, the sensor can be installed either in the tank or in the filler pipe. Admixtures of less than 3 % gasoline in the diesel fuel are detected even during filling, and the driver can be warned accordingly.

The sensor application described is based on the detection of specific combustion properties of the fuel. Using this information, bio-diesel or winter fuel or summer fuel can also be recognized, for example. Equally, there is the possibility of detecting already degassed fuels or biological fuel portions. Via the engine control system, combustion processes can be optimized with regard to emissions and consumption both in diesel and gasoline engines.

Technical data	
Installation location	Tank, tank module, low-pressure fuel pipe
Operating temperature	-40 °C to 125 °C
Power supply	9 V to 14 V
Accuracy	<3 % gasoline in diesel
Output signal	Customer-specific analogue or digital interface