Exhaust gas treatment
Lambda sensor LSU 5.1

Product benefits

- Minimized system costs with 4-wire wiring harness
- Unrestricted connector selection
- Improved system tolerance
- Improved robustness against water impact through thermal shock protection, thus providing early signal availability
- Improved soot robustness
- Rugged sensor design

Vehicle segments

1. Connector interface
2. Wiring harness (four-wire cable routing)
3. Sealing ring
4. Protective tube
Task  In-engine mixture formation is extremely important for minimizing the pollutant content in the untreated emissions. This process is managed by the electronic diesel control unit. The lambda sensor LSU 5.1 supports the process by precisely determining the residual oxygen content in the exhaust.

Function  As the key component in the lambda sensor, the planar sensor element with integrated measurement cell and heater ensures very high accuracy when measuring the residual oxygen content in the exhaust. This data forms the basis for precisely setting the air/fuel mixture via the air system. Even the most stringent exhaust and OBD regulations can be met in this way.

Technical characteristics

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<table>
<thead>
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<tbody>
<tr>
<td>Lambda control range</td>
<td>λ = 0.8 to air</td>
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<tr>
<td>Max. exhaust temperature</td>
<td>≤ 930 °C</td>
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<tr>
<td>Technology</td>
<td>Nernst cell</td>
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</tbody>
</table>

Very high system accuracy

over 300 h

Very high soot robustness with constant sensor dynamics during continual soot buildup

Technical design

1. Protective sleeve
2. Sealing ring
3. Sensor housing
4. Protective tube, external
5. Protective tube, internal
6. Sensor element with thermal protection jacket
7. ISO socket
8. Steatite package
9. Contact springs
10. Contact holder
11. Disk springs and position element
12. Bushing
13. Cables

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