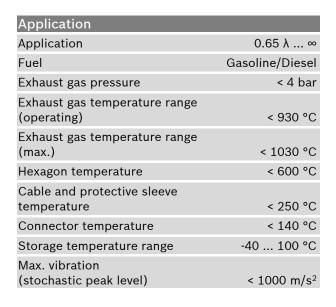


Lambda Sensor LSU 4.9

This sensor is designed to measure the oxygen content and Lambda value of exhaust gases in automotive engines (gasoline or Diesel).

The wide band lambda sensor LSU 4.9 is a planar ZrO_2 dual cell limiting current sensor with integrated heater. Its monotonic output signal in the range of $\lambda = 0.65$ to air makes the LSU capable of being used as an universal sensor for $\lambda = 1$ measurement as well as for other Lambda ranges. The connector module contains a trimming resistor, which defines the characteristic of the sensor. The LSU operates only in combination with a special LSU-IC, used in most Bosch Motorsport ECUs and lambda control boxes (LT4).

The main benefit of the LSU is the robust design combined with the high Bosch production quality standard.





| Mechanical Data | |
|-------------------|----------|
| Weight w/o cable | 120 g |
| Length | 84 mm |
| Thread | M18x1.5 |
| Wrench size | 22 mm |
| Tightening torque | 40 60 Nm |

| Electrical Data | |
|-----------------------------------|----------|
| Power supply H+ nominal | 7,5 V |
| System supply voltage H+ (min) | 10,8 V |
| Heater power steady state | 7,5 W |
| Heater control frequency | ≥ 100 Hz |
| Nominal resistance of nernst cell | 300 Ω |
| Max Current load for nernst cell | 250 µA |



| Connectors and Cal | oles |
|---|--|
| Connector | [1] 1 928 404 687 [2] AS 6-07-35PN |
| Connector loom | [1] D 261 205 356-01 [2] AS 0-07-35SN |
| Pin 1 | IP / APE |
| Pin 2 | VM / IPN |
| Pin 3 | Uh- / H- |
| Pin 4 | Uh+ / H |
| Pin 5 | IA / RT |
| Pin 6 | UN / RE |
| Sleeve | fiber glas / silicone coated |
| Cable size | AWG 24 |
| Cable length L | 32.5 cm |
| Various motorsports and automotive connectors on request. | |
| Please specify the req | uested cable length with your |

| Α | | | | |
|--------------------|--------|--------------|----------------|--|
| Λ Γ | olica | חדנ | $\mathbf{n} =$ | |
| AUI | 711150 | \mathbf{x} | | |

order.

The LSU 4.9 can be connected to most Bosch Motorsport ECUs and lambda control units like LT4.

The lambda sensor should be installed at point which permits the measurement of a representative exhaust-gas mixture, which does not exceed the maximum permissible temperature.

Install at a point where the gas is as hot as

Observe the maximum permissible temperature.

As far as possible install the sensor vertically (cable upwards).

The sensor is not to be fitted near to the exhaust pipe outlet, so that the influence of the outside air can be ruled out.

The exhaust-gas passage opposite the sensor must be free of leaks in order to avoid the effects of leakair.

Protect the sensor against condensation water.

The sensor is not to be painted, nor is wax to be applied or any other forms of treatment. Use only the recommended grease for lubricating the thread.

Please find further application hints in the offer drawing (http://www.bosch-motorsport.com).

| Characteristic | | |
|--------------------|--------|--------------------|
| Signal output | | Ip meas / Ua (AWS) |
| Accuracy @ λ = 1 | | 1.016 ±0.007 |
| Accuracy @ λ = 0.8 | | 0.80 ±0.01 |
| Accuracy @ λ = 1.7 | | 1.70 ±0.05 |
| IP | Ua [V] | Lambda [λ] |
| -1.243 | 0.192 | 0.750 |
| -0.927 | 0.525 | 0.800 |
| -0.800 | 0.658 | 0.822 |
| -0.652 | 0.814 | 0.850 |
| -0.405 | 1.074 | 0.900 |
| -0.183 | 1.307 | 0.950 |
| -0.106 | 1.388 | 0.970 |
| -0.040 | 1.458 | 0.990 |
| 0 | 1.500 | 1.003 |
| 0.015 | 1.515 | 1.010 |
| 0.097 | 1.602 | 1.050 |
| 0.193 | 1.703 | 1.100 |
| 0.250 | 1.763 | 1.132 |
| 0.329 | 1.846 | 1.179 |
| 0.671 | 2.206 | 1.429 |
| 0.938 | 2.487 | 1.701 |
| 1.150 | 2.710 | 1.990 |
| 1.385 | 2.958 | 2.434 |
| 1.700 | 3.289 | 3.413 |
| 2.000 | 3.605 | 5.391 |
| 2.150 | 3.762 | 7.506 |
| 2.250 | 3.868 | 10.119 |
| | | |

| Part Number | |
|-------------|-----------------------------|
| LSU 4.9 | [1] 0 258 017 025 |
| LSU 4.9 | [2] B 261 209 358-02 |