Lambda Sensor LSU 4.2

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 4.2 is a planar ZrO_2 dual cell limiting current sensor with integrated heater. Its monotonic output signal in the range of λ = 0.65 to air makes the LSU capable of being used as an universal sensor for λ = 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.

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

Application	
Application	0.65 λ ... ∞
Fuel	Gasoline/Diesel
Exhaust gas temperature range (operating)	930 °C
Exhaust gas temperature range (max.)	< 1,030 °C
Hexagon temperature	< 570 °C
Cable and protective sleeve temperature	< 250 °C
Connector temperature	< 120 °C
Storage temperature range	-40 ... 100 °C
Max. vibration (stochastic peak level)	1000 m/s^2

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	9 V
Heater power steady state	10 W
Heater control frequency	> 2 Hz
Nominal resistance of nernst cell	80 Ω
Max. current load for nernst cell	10(DC)/250(AC) µA

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

Connectors and Cables	
Connector	Y 928 K00 050
Connector loom	D 261 205 138
Pin 1	IP/APE
Pin 2	UN/RE
Pin 3	VM/IPN
Pin 4	Uh-/H-
Pin 5	Uh+/H
Pin 6	IA/RT
Various motorsports and automotive connectors on request.	
Please specify the requested cable length with your order.	

Application Hint
The LSU 4.2 can be connected to most Bosch Motorsport ECUs.
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 possible.
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 leak-air.
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).

Part Number	
LSU 4.2	**0 258 006 065**