



AWS LSU 4.9



- ▶ **Lambda interface**
- ▶ **80 g**

The AWS LSU 4.9 is used in combination with the lambda sensor (Mini-)LSU 4.9. The box is able to supply two (Mini-)LSU 4.9 lambda sensors. It includes two heaters and converts each specific sensor signal into two separate lambda signals. Furthermore, the temperature of the sensor, the duty cycle of the heater and diagnosis of the probe is available. The signal output is via CAN-message. Please note: Lambda sensors are not part of the AWS LSU 4.9.

Application

Measuring range Lambda 0.6 to 2.5

Technical Specifications

Mechanical Data

Weight	80 g
Size	38 x 43 x 16 mm
Wire length	150 mm
Operating temperature	10 to 60°C

Electrical Data

Power Supply	5 to 20 V
Rent consumption	120 mA at 12 V + heater current (max. 2 A per probe)
Channels	2 A/F
Resolution	0.01
Sampling rate	100 Hz per channel

Diagnosis

Lambda _{value} = 0.0069	Failed sensor (short cut or not connected)
Lambda _{value} = 0.0686	Sensor did not reach 600°C (up to 30 sec)
Lambda _{value} = 0.1373	Heating period

CAN-ID

For each sensor the following CAN-IDs will receive the A/F value as 16-bit unsigned Integer and the heating value and the temperature values as 8-bit unsigned byte (Motorola-type):

CAN-ID	0x290
Byte 0	A/F1
Byte 1	
Byte 2	AF/2
Byte 3	
Byte 4	Temp1
Byte 5	Temp2

Byte 6	Heat1
Byte 7	Heat2
A/F _{Value}	= 0.001*A/F _x
Lambda _{Value}	= A/F _{Value} /14.57
	= A/F _{Digits} /14,570
	= A/F _{Digits} *0.00006863418
Heat Temp	= TempxDigits*2 + 496.9°C

Pin Assignment life connector

Pin	Name	Function
1	GND	Ground
2	GND LSU 1 / 2	Ground LSU heater
3	Vext	External power supply 5 to 20 V
4	LSU heater	External power supply for LSU 1/2 heater
9	CAN H	CAN bus high
10	CAN L	CAN bus low
11	TxD	TxD serial interface
12	RxD	RxD serial interface

Pin Assignment LSU 1/2 in connector

Pin	Name	Function
1	LSU 1 IP	Inv. Input of pump current amp
2	LSU 1 VM	Virtual ground
3	GND heater 1	Ground for heater 1
4	Vext heater 1	External power supply 5 to 20 V LSU 1
5	LSU 1 IA	Non Inv. Input of pump current amp
6	LSU 1 UN	Inv. Input of pump current control
7	LSU 2 IP	Non Inv. Input of pump current amp
8	LSU 2 VM	Virtual ground
9	GND heater 2	Ground for heater 2
10	Vext heater 2	External power supply 5 to 20 V LSU 2
11	LSU 2 IA	Non Inv. Input of pump current amp
12	LSU 2 UN	Inv. Input of pump current control

Accessories

Lambda Sensor LSU 4.9

Lambda Sensor LSU 4.9D

Lambda Sensor Mini-LSU 4.9

Ordering Information

AWS LSU 4.9

F 01E B01 622

Europe:
Bosch Engineering GmbH
Motorsport
Robert-Bosch-Allee 1
74232 Abstatt
Germany
Tel.: +49 7062 911 79101
Fax: +49 7062 911 79104
motorsport@bosch.com
www.bosch-motorsport.de

North and South America:
Bosch Engineering North America
Motorsports
38000 Hills Tech Drive
Farmington Hills, MI 48331-3417
United States of America
Tel.: +1 248 876 2977
Fax: +1 248 876 7373
motorsport@bosch.com
www.bosch-motorsport.com

Asia Pacific:
Bosch Engineering Japan K.K.
Motor Sport Department
3-33-8 Tsuruya-cho, Kanagawa-ku, Yokohama-shi
Kanagawa 221-0835
Japan
Tel.: +81 45 410 1650
Fax: +81 45 410 1651

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