

Lambda Sensor Interface Board

HZS 561



The interface electronics can be connected to the LSM11 of a HZS function module. The electronics control the LSU4.9 Lambda sensor and provide an output signal, which corresponds to the output signal (oxygen content) of the LSM11 Lambda sensor.

Performance Data

Controller	AT90CAN32
Controller frequency	16.0 MHz
Command execution time	circa 70 ns
Internal program memory	32-kbytes (Flash)
Internal data or program (internal EEPROM)	1-kbyte (Flash) no buffer battery required!

Electrical Requirements

Electronics supply	12 V AC to 14 V AC
Electronics current consumption	200 mA
Electronics current consumption and Lambda sensor	1200 mA (1400 mA in in the heating phase)

Lambda Sensor Interface Specifications (LSU 4.9 Input Signal)

Lambda sensor type	LSM 4.9 Robert Bosch GmbH. No. 0 258 017 025
Supply - heating	0-12 V AC - switched by the controller
Heater current	approximately 1.0 V DC at 1.0 A
Lambda sensor set temperature	780 °C
Regulation range	1.11 to ∞ (air) Lambda value l 2.00 to 21.00 % oxygen
Nernst cell voltage	450 mV
Nernst cell current	20 µA
Pump cell pumping current	0.240-2.519 mA
Interface IC (LSU4.9 - µC)	Bosch CJ125
Transducer resolution	10 bits

Lambda Sensor Interface Specifications (Output Signal corresponds to LSM11)

Lambda sensor type	LSM 11 Robert Bosch GmbH Nr. 0 258 104 002 001
Regulation range	1.11 to ∞ (air) Lambda value l 2.00 to 21.00 % oxygen
Output voltage	-10 mV ...+60 mV < -20 mV (> 21 % oxygen if µC is in the Initialization phase, µC in Reset / error status, with under voltage)
Resolution	10 bits
Capacity of the output voltage	maximum 2.5 mA
Capacitive load of the output voltage	maximum 4.7 nF
Short-circuit proof	yes

Environmental Conditions

Storage temperature	-20 ... +70 °C	
Operating temperature	0 ... +60 °C	
Humidity	0-95 %, uncondensed	
EMV stability	according to EN 61000-6-2 (industrial area)	
EMV - noise generation	according to EN 61000-6-3 (living area)	
Shock resistance	EN 60068-2-27	150 m/s ²

Article Number and Miscellaneous

Artikelnummer	05-895-561
Hardwareversion	1.x