DATA SHEET

LuminOx O$_2$ Sensors
LuminOx Evaluation Interface Board

✍ FEATURES

- Allows quick and easy evaluation of the LuminOx sensor[1] with minimum effort and / or design work

- Interface mounted screw terminals for easy wiring

- The interface simultaneously provides three outputs:

  - RS232 (serial interface voltage levels)

  - RS485 (Modbus RTU) port allows multiple sensors to be addressed on a bus

  - 0—5V analogue output for basic measurements of oxygen only

Housing	Supply Voltage	Operating Temp	Output Digital	Analogue Output	Response Time[2]
COMPACT	5 V VOLTAGE	0°C to +50°C TEMPERATURE	RS232 / RS485	0 - 5 V VOLTAGE	< 30 secs

📁 BENEFITS

- Converts the LuminOx TTL level RS232 output into three standard industrial outputs

- Auto detects ppO$_2$ or O$_2$% variants of LuminOx sensor

🔧 TECHNICAL SPECIFICATIONS

Supply voltage (Vs)	4.75—5.25V$_{DC}$
Supply current (Is)	<50mA
Output Type	RS232, RS485 (Modbus RTU) and 0—5V
Temperature	
Operating:	0°C to +50°C
Storage:	0°C to +60°C

📈 PERFORMANCE SPECIFICATIONS[3]

LuminOx sensor compatibility	0—25% (O$_2$ version)
	0—300mbar (ppO$_2$ version)
Resolution	
Digital outputs	0.01% / 0.1mbar
Analogue output	0.01V

✔ NOTES

1) LuminOx sensor sold separately.
2) LuminOx sensor response time.
3) At ambient conditions. All performance measurements are at STP unless otherwise stated. Following extreme temperature fluctuations, re-calibration may be required.

OUTLINE DRAWING

All dimensions shown in mm. Tolerances = ±1mm.

ELECTRICAL INTERFACE

Refer to Outline Drawing above.

Pin	Designation
1	Vs (+5V_{DC})
2	GND (0V)
3	0—5V GND (0V)
4	0—5V Signal
5	RS232 Rx
6	RS232 Tx
7	RS232/RS485 GND (0V)
8	RS485 A (+)
9	RS485 B (-)
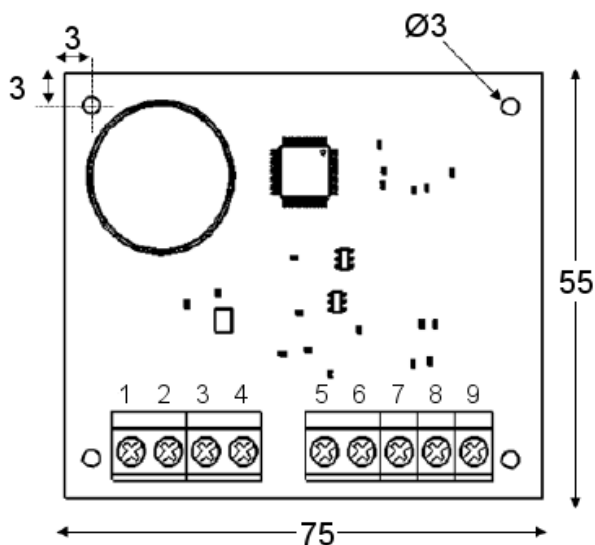
The sensor should be treated as an electronic component and handled using the correct ESD handling precautions.

1. RS232 Rx & Tx and RS485 A & B (pins 5, 6, 8 and 9) are referenced to the RS232/RS485 GND (pin 7). A connection should be made between pin 7 and the reference or common connection of the RS232 serial port or RS485 Bus.
2. Care should be taken when connecting the RS485 A & B connections to your system. The EIA-485 signalling specification states that signal A is the inverting or '-' pin and signal B is the non-inverting or '+' pin. This is in conflict with the A & B naming used by a number of differential transceiver manufacturers, including the transceiver used in the OXY-LC-485 interface. Therefore always ensure the '+' of the OXY-LC-485 interface is connected to the '+' input of the RS485 Bus and the '-' of the OXY-LC-485 interface is connected to the '-' input of the RS485 Bus.

ORDER INFORMATION

Specify the part number shown below when ordering.

L O X - E V B

CAUTION

Do not exceed maximum ratings and ensure sensor(s) are operated in accordance with their requirements.
Carefully follow all wiring instructions. Incorrect wiring can cause permanent damage to the device.
Do NOT use chemical cleaning agents.

Failure to comply with these instructions may result in product damage.

INFORMATION

As customer applications are outside of Apollosense Ltd.'s control, the information provided is given without legal responsibility. Customers should test under their own conditions to ensure that the equipment is suitable for their intended application.

General Note: Apollosense Ltd. reserves the right to make changes to product specifications without notice or liability.
All information is subject to Apollosense Ltd.'s own data and considered accurate at time of going to print.

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