DATA SHEET

SST — DESIGN • MANUFACTURE • CUSTOMISE • CONFIGURE

Oxygen Sensing—LuminOx ppm Sensor
Luminescence-based Optical Flow-Through Series

📝 FEATURES

- Operates in any O_2 concentration without damaging the sensor
- Long life, non-depleting technology—no need to store in an inert gas environment
- Fast response and purge times
- Connects directly to a microcontroller without any additional circuitry
- Factory calibrated
- Low power—high accuracy—fast response

Housing	Supply Voltage	Operating Temp	Output Digital	Response Time
COMPACT	4.5 - 5.5 V VOLTAGE	-10°C to +35°C TEMPERATURE	TTL Modbus RTU	< 30 secs

🗂 BENEFITS

- Compact footprint, flow-through housing with sealed base
- Evaluation kit available with Windows software and USB to UART converter cable
- Contains no hazardous materials; RoHS & REACH compliant

🔧 TECHNICAL SPECIFICATIONS

Supply voltage (Vs)	4.5—5.5 V_{DC}
Supply current (ls)	< 30 mA Average < 60 mA Peak
Output Type	3.3 V TTL level UART (Modbus RTU)
Temperature	
Operating:	-10 °C to +35 °C
Storage:	-30 °C to +35 °C
Humidity	Dry, clean gas
Barometric pressure range	500—1200 mbar
Flow rate	0.5 litre / minute minimum 1.0 litre / minute maximum

📈 OUTPUT VALUES[a]

Oxygen range	0—1000 ppm
Oxygen pressure range	0—1.2 mbar ppO_2
Response time[b]	T90 < 30 seconds (typical)
Purge time	≥ 30 minutes
Accuracy	
ppO_2	< 2 % full scale
Temperature	Indication only
Pressure	± 5 mbar
O_2	Determined by ppO_2 & pressure accuracy
Resolution	
ppO_2	0.001 mbar
Temperature	0.1 °C
Pressure	1 mbar
O_2	1 ppm

Other sensor options available on request, email: technical@sstsensing.com

Need help? Ask the expert
Tel: + 44 (0)1236 459 020
and ask for "Technical"

✅ NOTES

a) At ambient conditions. All performance measurements are at STP unless otherwise stated. Following extreme temperature fluctuations, re-calibration may be required.
b) Refer to response time graph on .

RESPONSE TIME GRAPH
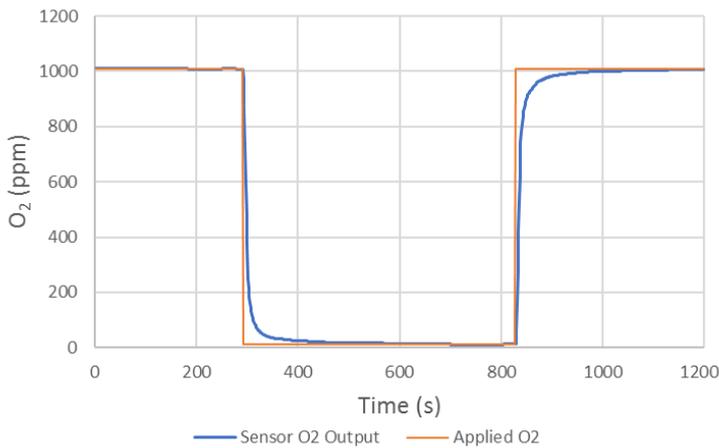
NOTE: Graph shown reflects the following conditions: Switching between 1010 ppm and 10 ppm with a flow rate of 1 litre/ min at 20 °C.

ELECTRICAL INTERFACE
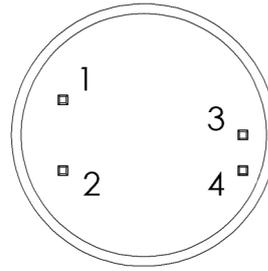
Pin	Designation
1	Vs (+ 5 V)
2	GND (0 V)
3	3.3 V UART Sensor Transmit
4	3.3 V UART Sensor Receive

CONNECTION: Four gold-plated pins (0.64 mm^2) on a 2.54 mm grid for PCB mounting via sockets or hand soldering using no-clean flux.

**NOTE:** Do NOT put the sensor through a PCB washing process.

NOTE: Always apply power to sensor pins 1 and 2 before attempting to communicate on pins 3 and 4.

The sensor should be treated as an electronic component and handled using the correct ESD handling precautions.

OUTLINE DRAWING

All dimensions shown in mm. Tolerances = ± 0.5 mm.
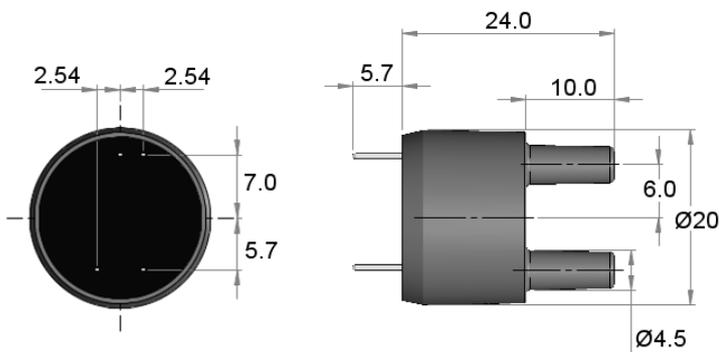
NOTE: 4.5 mm OD push-fit tubing connectors.

ORDER INFORMATION

When ordering, specify part number:

L O X - P P M - 1 0 0 0 - F

The sensor is also available as part of an evaluation kit.
The evaluation kit includes a LuminOx ppm sensor, USB to UART converter cable and Windows evaluation & logging software.

Contact sales@sstsensing.com for details.

! 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 SST Sensing 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.

For technical assistance or advice, please email:
technical@sstsensing.com

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

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RoHS

REACH COMPLIANCE