



Steve Nixon &lt;steve.nixon.viamed@googlemail.com&gt;

## EC Sense sensor project, range 0-30 % oxygen

1 message

Steve Nixon <steve.nixon@viamed.co.uk>  
 To: Jens Schwarz <j.schwarz@sensatronic.com>

22 April 2018 at 23:30

Hi Jens

Further to discussions the following are suggested specifications, which may or may not be applicable.

Specifications	
Galvanic Solid State Sensor	
Part number	
Model number	
Output in ambient air	? $\mu$ A
Power requirement	
Output connector	Existing sensor PCB, with 3 pin connection.
Input	Open input
Operating range	0 – 30% oxygen (lower limit?)
Resolution	
Pressure range	? (e.g. 600 to 2500 mbar)
Repeatability	<? % volume oxygen. Does this depend upon constant temperature and pressure
Linearity error	? e.g. 0.1 to 1.0 bar < ?% relative
Accuracy at constant temperature, pressure and humidity	Accuracy – Within + / - ?% of reading Hysteresis accuracy?
Calibration interval	3 months?
Warm up time	< ? seconds/minutes after sensor installed
Zero offset voltage	< ?% oxygen reading in 100% nitrogen @ 25°C after 36 seconds
Cross interference	< ?% volume oxygen response to 5% CO <sub>2</sub> balance N <sub>2</sub>
Response time	< 2 s for 90% of final value.
Operating humidity	5 – 99% R.H. (non-condensing?).
Influence of humidity	? % relative per % R.H. at 25 °C.
Influence of mechanical shock	< ? % after fall from 1m
Operating temperature range	e.g. 0 – 50 °C
Storage temperature	e.g. -20 to +50 °C
Recommended storage temperature	e.g. 5 to +15 °C
Temperature compensation	Is this required?
Temperature compensation error	0 °C to 50 °C, ? % relative error

<b>(steady state)</b>	
<b>Nominal sensor life</b>	12 months
<b>Typical sensor life</b>	12 - 24 months from date of invoice (including shelf life).  Limited to 24 months by on-board integrated circuit. <b>Ensures optimal linearity performance and integrity of the capillaries.</b>
<b>Long term output drift</b>	< ? % volume oxygen per month, typically < ? % over sensor lifetime.
<b>Load required</b>	?

<b>Weight (approximate)</b>	? g
<b>Sensor dimensions (in standard package)</b>	
<b>Packaging</b>	Does the packaging have to ensure a minimal humidity?
<b>Warranty period</b>	12 months
<b>All specifications are applicable at standard conditions: 1013 mbar, 25°C dry ambient air</b>	
<b>OEM Interface Board</b>	
Part number	
Model number	
Dimensions	
Sensor connections	3 pin
Communications connection	USB / 9 pin D ?
Communication interface:	USB / UART / USART / RS232?
Inter system protocol	I2C, SPI, CAN...?
Driving circuit	Potentiostatic with I/U transducer.
Power requirement	5V
Power input connector	

--  
Steve

Steve Nixon  
Director - Viamed Ltd.

Office: +44 (0)1535 634542  
Mobile: +44 (0)7850 252267