

Specification Datasheet - 8010050
JFD Ltd.
DB200381 Oxygen Sensor



v1.4
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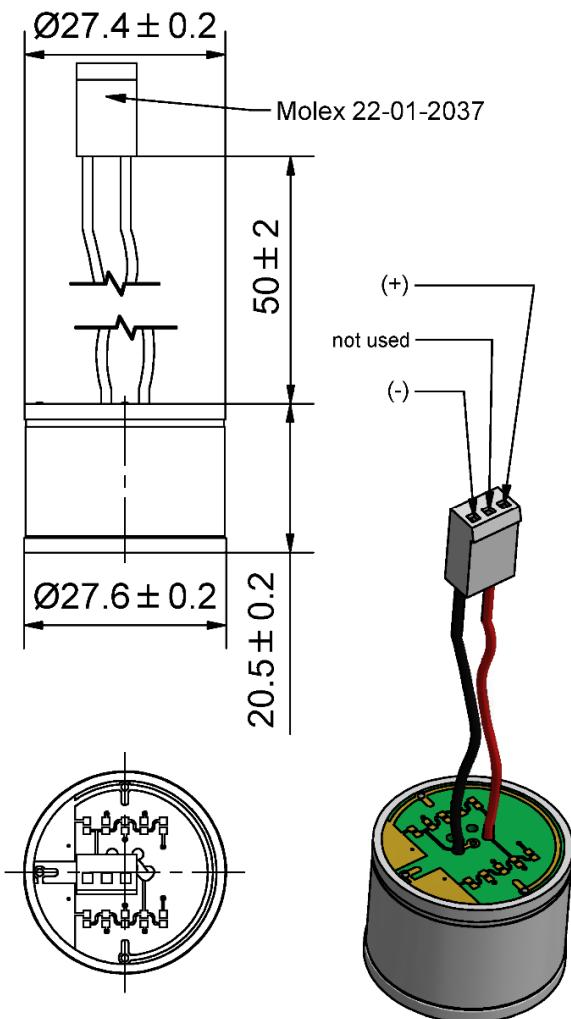
Specifications

VST part number	8010050																														
OEM model number	DB200381 Oxygen Sensor																														
Output in ambient air	6.5 – 9.0 mV																														
Electrical output	30 to 60 μ A																														
Output connector	Flying leads with 3 pin female connector - Molex 22-01-2037																														
Input	Open input – see drawing and images																														
Input O ring	Not applicable																														
Range	0 – 100% oxygen																														
Pressure range	600 to 2500 mbar																														
Repeatability	<1% volume oxygen at constant temperature and pressure																														
Linearity error	0.1 to 1.0 bar < 3% relative 0.1 to 2.5 bar < 5% relative (at $ppO_2 > 1.0$ bar after 1-hour equilibration time)																														
Accuracy at constant temperature, pressure and humidity	<p>Accuracy – Within + / - 3% of reading (or ± 5 mBar oxygen, whichever is greater) up to specified range, when calibrated using 100% oxygen at known atmospheric pressure and 25°C</p> <p>Acceptable limits are</p> <table> <thead> <tr> <th>mBar pO₂</th> <th>Error mBar pO₂</th> <th>Min</th> <th>Max</th> <th></th> </tr> </thead> <tbody> <tr> <td>209</td> <td>-4</td> <td>4</td> <td></td> <td></td> </tr> <tr> <td>1000</td> <td>0</td> <td>0</td> <td></td> <td>Calibration point</td> </tr> <tr> <td>1500</td> <td>-30</td> <td>30</td> <td></td> <td></td> </tr> <tr> <td>2000</td> <td>-75</td> <td>75</td> <td></td> <td>Specified range</td> </tr> <tr> <td>2300</td> <td>-100</td> <td>100</td> <td></td> <td>Over-range capability</td> </tr> </tbody> </table> <p>Hysteresis after use at high pressure according to accuracy specification (within + / - 3% of reading)</p>	mBar pO ₂	Error mBar pO ₂	Min	Max		209	-4	4			1000	0	0		Calibration point	1500	-30	30			2000	-75	75		Specified range	2300	-100	100		Over-range capability
mBar pO ₂	Error mBar pO ₂	Min	Max																												
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2300	-100	100		Over-range capability																											
Warm up time	< 30 minutes after sensor installed																														
Zero offset voltage	< 0.5% oxygen reading in 100% nitrogen @ 25°C after 36 seconds																														
Cross interference	<0.5% volume oxygen response to 5% CO ₂ balance N ₂																														
Response time	< 5 s for 90% of final value.																														
Operating humidity	0 – 99% R.H. (non-condensing).																														
Influence of humidity	- 0.03% relative per % R.H. at 25 °C.																														
Influence of mechanical shock	< 1% after fall from 1m																														
Operating temperature range	0 – 50 °C																														
Storage temperature	-20 to +50 °C																														
Recommended storage temperature	+5 to +15 °C																														
Temperature compensation	Integrated NTC network																														
Temperature compensation error (steady state)	0 °C to 50 °C, 5% relative error																														
Nominal sensor life	500,000 % oxygen hours																														
Typical sensor life	20 to 24 months from date of invoice (including shelf life).																														
Long term output drift	< 1% volume oxygen per month, typically < -15% over sensor lifetime.																														
Load required	≥10 K Ohms																														

Input - membrane protection grille	No
Input - hydrophobic membrane	Yes
Conformal coating on PCB	Yes
Pressure equalization - PCB	Yes
Pressure equalization - output cap	Not applicable
Weight (approximate)	28 g
Flow diverter	No
Packaging	Gas barrier bag
Warranty period	12 months from date of sales invoice
Application specific components	Low/non-magnetic components utilized: Cathode, internal wiring. Suitability and QA assessment carried out by JFD.

All specifications are applicable at standard conditions: **1013 mbar, 25°C dry ambient air**

Drawings/images



Labelling

Oxygen sensor label 90.0mm x 15.0mm

White vinyl label, text & graphics - black



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United Kingdom

Oxygen Sensor

P/N: DB200381



2017-07

S/N: 123456



Gas barrier bag label 63.5mm x 46.6mm

White label, text & graphics – black



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This oxygen sensor contains caustic liquid, in case of leakage avoid contact with eyes and skin. Do not puncture or staple this bag. Do not remove the oxygen sensor from this bag until ready to use. Depending upon the ambient conditions the oxygen sensor may require 30 minutes to reach signal stability after installation.