

Specification Datasheet - 8010050

JFD Ltd.

DB200381 Oxygen Sensor



v1.7
3rd July 2018

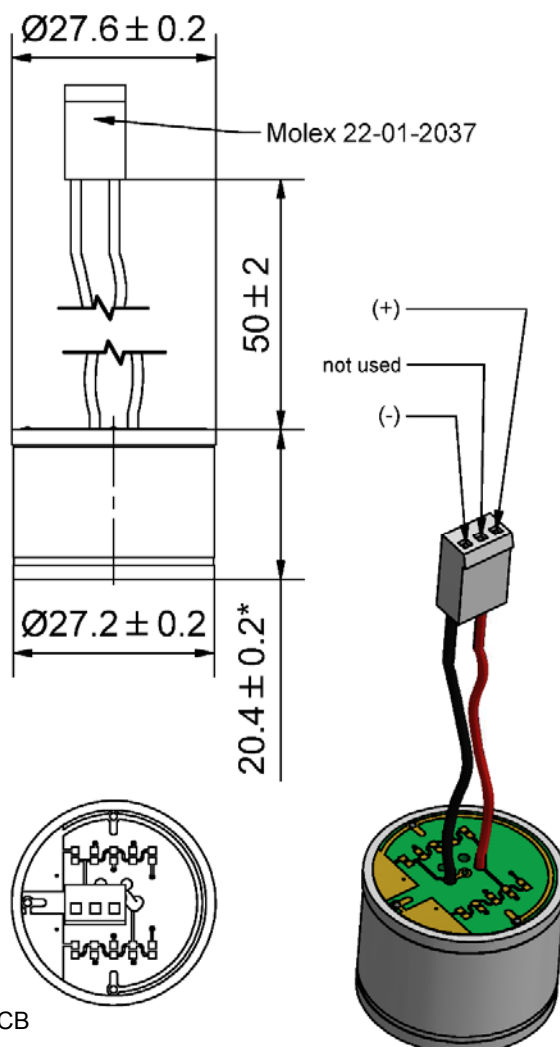
Specifications

VST part number	8010050																												
OEM model number	DB200381 Oxygen Sensor																												
Output in ambient air	6.5 – 9.0 mV																												
Electrical output	30 to 60 µA																												
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	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 Acceptable limits are <table><tr><td></td><td colspan="3">Error mBar pO2</td></tr><tr><td>mBar pO2</td><td>Min</td><td>Max</td><td></td></tr><tr><td>209</td><td>-4</td><td>4</td><td></td></tr><tr><td>1000</td><td>0</td><td>0</td><td>Calibration point</td></tr><tr><td>1500</td><td>-30</td><td>30</td><td></td></tr><tr><td>2000</td><td>-75</td><td>75</td><td>Specified range</td></tr><tr><td>2300</td><td>-100</td><td>100</td><td>Over-range capability</td></tr></table> Hysteresis after use at high pressure according to accuracy specification (within + / - 3% of reading)		Error mBar pO2			mBar pO2	Min	Max		209	-4	4		1000	0	0	Calibration point	1500	-30	30		2000	-75	75	Specified range	2300	-100	100	Over-range capability
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2000	-75	75	Specified range																										
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
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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 to be carried out by JFD prior to sensor production.
All specifications are applicable at standard conditions: 1013 mbar, 25°C dry ambient air	

Drawings/images



Dimensions in mm

*Sensor housing height, without PCB

Labelling

Oxygen sensor label 90.0mm x 15.0mm

White vinyl label, text & graphics - black



JFD Ltd.
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Westhill,
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AB32 6TQ
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.

