The Servomex 1800 analyzer is a stable, accurate and highly specific oxygen analyzer for safe areas.

- Designed for safe area oxygen analysis
- Low maintenance and re-calibration requirements
- Range of alarm outputs to aid integration with other systems
- Easy to set up and operate
- Special versions for solvent bearing samples
- Special high flow rate cell option

Specification	
Gases Measured:	**O_2**
PERFORMANCE	
Technology:	Paramagnetic transducer
Range:	0-100% O_2
Intrinsic Error (accuracy):	<0.2% of reading or 0.05% O_2 [1]
Linearity:	<0.05% O_2 [2]
Repeatability:	<0.1% of reading or 0.05% O_2 [1]
Response time (T_{90})	4 to 8 seconds [3]
Zero drift/ week:	<0.05% O_2
Span drift/ week:	<1% of reading or 0.05% O_2 [1]
SIGNAL OUTPUTS	
Analog:	One 4-20 mA, isolated & one 0-1V dc, non-isolated. Ranges selectable from 0 - 2.5, 5, 10, 25 and 100% O_2
Alarms: Concentration	Two dry contact SPDT relays rated 250Vac/3A or 28Vdc (non inductive) maximum and 5V/10mA ac/dc minimum
Sample flow fail	One dry contact SPDT relay rated 250Vac/3A or 28Vdc (non inductive) maximum and 5V/10mA ac/dc minimum
PHYSICAL	
Dimensions:(W x D x H)	17.6" x 9" x 9.25" / 448mm x 229mm x 235 mm
Weight:	57 lbs / 26 kg
Hazardous area Classification:	Non-Hazardous Areas only
Ingress Protection:	IP 66 / NEMA 4X
Mounting:	Wall or Panel

[1] whichever is greater
[2] inherently linear, value dependant on calibration gases
[3] dependant on configuration

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Ambient Conditions

Temperature:

Operating: 14°F to 122°F/-10°C to 50°C

Storage: -4°F to 131°F/-20°C to 55°C

Atmospheric Pressure:

79 to 124 kPaa/11 to 18psia

(for operation up to 2000m altitude.)

Warm Up Time

4 hours at an ambient temperature of 68°F (20°C)

Power Supply

100 to 240V ac ±10% - 50/60Hz -50VA max.
Note: The internal pumps are AC voltage dependant and are supplied as 110Vac 50, 110Vac 60Hz, or 230Vac 50Hz. Ensure that the correct AC input voltage is supplied to an analyzer fitted with a sample pump.

Sample Wetted Materials

Material Of Construction	Basic Analyzer	Standard Cell + Flow Alarm	Standard Cell + AFCD	Standard Cell + Sample Pump	Standard Cell + BPR	High Flow rate cell / Stainless Steel Pipework	Solvent Resistant Cell + Stainless Steel Pipework	Solvent Resistant Cel +Hastelloy pipework
Beryllium-Copper					✔			
Borosilicate Glass	✔	✔	✔	✔	✔	✔	✔	✔
Bonded Borosilicate Glass Fiber			✔					
Brass		✔						
Phospher Bronze		✔						
Fluorocarbon Rubber	✔	✔	✔	✔	✔			
Hastelloy C-276								✔
Nickel (electroless)	✔	✔	✔	✔	✔	✔	✔	✔
Neoprene Rubber		✔						
Glass Filled Nylon 12		✔						
Polysulphone		✔						
Platinum	✔	✔	✔	✔	✔	✔	✔	✔
Platinum / Iridium alloy	✔	✔	✔	✔	✔	✔	✔	✔
Glass Filled Polypropylene			✔					
Polypropylene	✔	✔	✔	✔	✔			
PVC					✔			
PVDF				✔	✔			
Gold Plated Silver		✔						
302 / EN58A SSteel			✔					
303 Stainless Steel	✔	✔	✔	✔	✔			
316 Stainless Steel	✔	✔	✔	✔	✔	✔	✔	✔
Viton (325 cell)	✔	✔	✔	✔	✔	✔		
Viton - A			✔					
Chemraz (364 cell)							✔	✔
PTFE							✔	✔

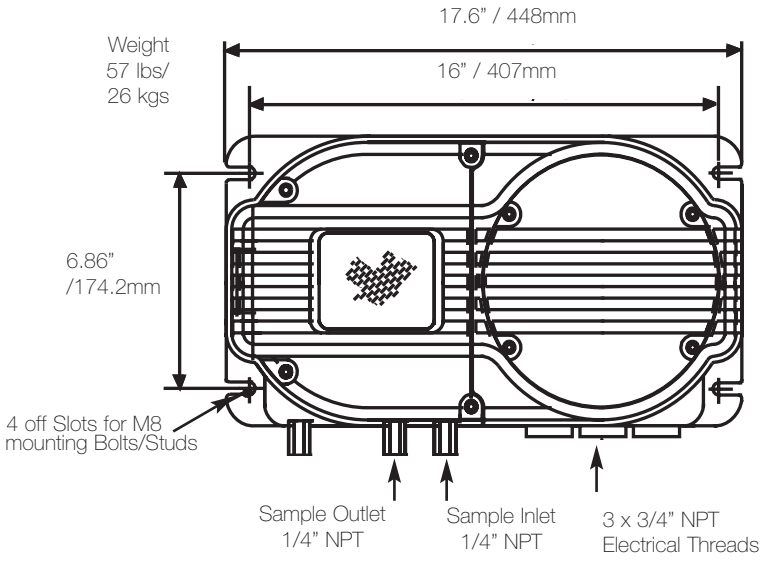
Sample Gas Conditions

Configuration	Basic Analyzer	with AFCD	with AFCD and Sample Pump	with AFCD and BPR	S.Steel or Hastelloy/PFA High Flow cell or bypass
Inlet Pressure	0.04 psig/ † 0.3 kPag minimum	1 to 5 psig/ 7 to 35 kPag	-0.03 to 1 psig/ -0.2 to 7kPag	17 to 22 psia/† 119 to 154 kPaa	0.05 psig/† 0.4 kPag minimum
Flow Rate	50 to 250ml/min	1.2 to 3.5 l/min	1.6 to 1.8 l/min	1.0 to 2.0 l/min	50 to 70 l/hour (60 l/hour nominal)
Vent Pressure	11.5 to 18.0 psia (80.5 to 126kPaa) - DO NOT RESTRICT ANALYZER VENT				
Dew Point	5°C below ambient temperature				
Temperature	Sample gas not above ambient				
Particulates	<3µm (micron)				
Condition	Clean, non-flammable * and free from oil/condensate**				
Connections	¼" NPT. INT Inlet/Outlet Connectors (Female). (6mm option available)				

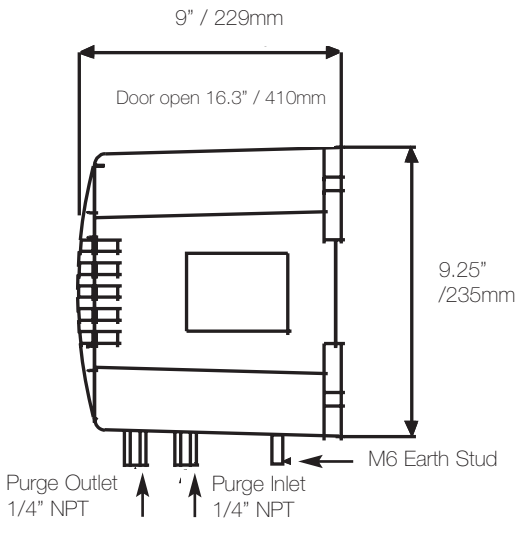
† Adjust pressure and sample flow externally to provide sample flow rate
* For Flammable samples use the Servomex 1900 analyzer
** For Corrosive samples use a solvent resistant cell option

AFCD - Automatic Flow Control Device **BPR** - Back Pressure Regulator

Front View



Side View



Performance Approval

The 1800 complies with EN50104:1999 "Electrical apparatus for the detection and measurement of oxygen".

Certificates of Compliance

CSA (Canada) Safety Requirements for Electrical Equipment for Measurements, Control and Laboratory Use: Part 1: General Requirements

EC Directive Compliance

The 1800 complies with the Low Voltage Directive 73/23/EEC and the EMC Directive 89/336/EEC (as amended by Directive 92/31/EEC), both as amended by Directive 93/68/EEC.

It conforms to the following harmonised European standards for product safety and electromagnetic compatibility:

EN 50081-1: Generic emission standard

EN 50082-2: Generic immunity standard

EN 61010-1: Safety requirements for electrical equipment for measurement, control and laboratory use.

This product is rated for Installation Category II in accordance with IEC 664.

This product is rated for Pollution Degree 2 in accordance with IEC 664.

Performance Specification Continued

Configuration	Units	Base Analyzer	with AFCD	with AFCD and Sample Pump	with AFCD and BPR	High Flow Transducers, Standard or Solvent resistant
Response time (T_{90})	Seconds (200ml/min)	<4	<7	<8	<7.5	<5 (60 l/hour)
Noise (peak to peak)	% O_2	<0.04	<0.05	<0.05	<0.04	<0.04
Ambient Pressure Coefficient	% of reading for a 1% change in ambient pressure	1	1	1	<0.13	1
Sample Flow Rate Effect	% O_2 over 50 to 250ml/min	<0.1	N/A	N/A	N/A	<0.2 (over 50 to 70 liters/hour)
Ambient Temperature Coefficient	/10°C	0.2 % O_2 ±0.5% of reading				

The performance specification has been written, and verified, in accordance with the international standard IEC 1207-1:1994 "Expression of performance of gas analyzers".

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Servomex has a policy of constant product improvement and therefore reserves the right to change specifications without notice.

Certificate No._____Q05166
BS EN ISO 9001

Certificate No._____EMS82701
BS EN ISO 14001

Servomex

EAME (Europe, Africa and Middle East):

Servomex Group Limited, Jarvis Brook, Crowborough, East Sussex, TN6 3DU, England	☎ (44) 1892 652181	**Fax** (44) 1892 662253
Servomex GmbH, Münsterstraße 5, 59065 Hamm, Germany	☎ (49) 23 81 68 82 13	**Fax** (49) 23 81 68 81 75
Servomex S.A., 8 Rue Proudhon, B.P. 50, 93212 St Denis La Plaine Cedex, France	☎ (33) 1 49 46 22 50	**Fax** (33) 1 49 46 22 51
Servomex B.V., Stephensonstraat 20, 2723 RN Zoetermeer, Netherlands	☎ (31) 79-346 42 42	**Fax** (31) 79-342 08 19
Servomex Group Limited., SAIF Zone, Executive Suites Z1-56, PO Box 8962, Sharjah, UAE.	☎ (971) 6 557 0303	**Fax** (971) 6 557 1242

AMERICAS:

Servomex Company Inc., 525 Julie Rivers, Suite 185, Sugar Land, Texas 77478-2847, USA.	☎ (1) 281-295-5800	**Fax** (1) 281-295-5899

ASIA PACIFIC:

Servomex Asia Pacific Ltd, (Spectris Instrumentation and Systems (Shanghai) Ltd) Building 9, Shanghai Euromate Industrial Park, No.88 Lane 2888 Hua Ning Road, Xinzhuang Industrial Park, Shanghai 201108 PR China	☎ (86) 21 6442 6488	**Fax** (86) 21 6442 6498
Servomex Asia Pacific Ltd, 7F, No.88, Sec. 6, Chung Shan N. Rd., Taipei, Taiwan	☎ (886) 2-2833 8848	**Fax** (886) 2-2833 8844
Servomex India, (Spectris Technologies Pvt.Ltd) 7th Floor, Sunil Enclave, CTS No.307, Village Gundavli, Shivaji & Perriera Hill Road Junction, Opp. Landmark Building, Off Andheri Kurla Road, Andheri (East), Mumbai 400 099, India.	☎(91) 22 67100359/60	**Fax** (91) 22 66778896
Servomex Japan, (Spectris Co.Ltd.,) 1F KDX Kaji-cho Bldg., 3-5-2 Kandakaji-chou, Chiyoda-ku,Tokyo 101-0045, Japan	☎ (81) 3 3255 8162	**Fax** (81) 3 3255 8154

Global email: info@servomex.com **Website:** http://www.servomex.com

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