SERVOFLEX MiniMP 5200

PORTABLES

GAS	MEASURES	APPLICATION
OXYGEN	PERCENT	PROCESS CONTROL
CARBON DIOXIDE		QUALITY
		EMISSIONS

⚡ SENSING TECHNOLOGY

PARAMAGNETIC   INFRARED

KEY APPLICATIONS

- Laboratories and research
- Air separation and gas bottling plants
- Catalyst regeneration
- Solvent recovery

BENCHTOP ANALYZER OFFERING SINGLE OR DUAL MEASUREMENTS OF O_2 AND CO_2

UNRIVALLED PERFORMANCE

- Patented Paramagnetic and Infrared technologies for high sensitivity monitoring and reliability
- Precision single or dual measurement operation
- Ergonomic, space saving footprint
- Manufactured by Servomex - over 60 years' experience innovating and pioneering gas analysis and thousands of units used in the field every year

FLEXIBLE

- Accurate measurement of O_2 and CO_2 levels
- A range of sampling and power options
- Ideal for laboratory, healthcare, fermentation, combustion analysis, CEMS testing, light industrial use and medical gas transfill

EASY TO USE

- Only device in its class that offers true portability.
- Quick start up and use
- Small footprint that integrates easily into any location
- Mains or battery power option

LOW COST OF OWNERSHIP

- Non-depleting technologies maximize availability and reduce maintenance/running costs
- Paramagnetic O_2 and Infrared CO_2 sensing technologies require minimal ongoing calibration

BENCHMARK COMPLIANCE

- Meets USFDA requirements for verification of medical O_2 USP and N_2 NF
- European Pharmacopeia compliant (O_2)
- TÜV certified EN15267-3 (MCERTS v3.3, Annex F) for O_2 analysis
- Source Reference Method (O_2) to EN14789, verification of AMS to EN14181

Learn more about the SERVOFLEX MiniMP
Visit servomex.expert/pb-5200mp

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RELIABILITY YOU CAN DEPEND ON

When you work in light industrial or laboratory applications, you need equipment you can depend on and help you get the job done as efficiently as possible.

In certain applications you'll need equipment that's certified to the highest level. No matter what your application monitoring requirement, you'll want a device that offers long battery runtime, low operational costs, simplified ongoing maintenance and ease of use. And we don't believe you should have to compromize.

A NO COMPROMIZE SOLUTION

The MiniMP combines ease of use and simple device care with high powered CO_2 and O_2 monitoring capabilities (EN15267-3 MCERTs approved), providing the ideal solution for a wide range of applications.

With the full capability to meet the demands of sensitive, accurate testing, in an easy-to-use interface that includes a single or dual sample format, the MiniMP has long-life operation powered by a durable battery system.

TRUE PORTABILITY

The MiniMP is the only device to offer true battery-powered portability that meets MCERTS certification. This, combined with gas-specific accuracy, ensures the MiniMP is ready for a range of monitoring needs from the verification of medical oxygen to CEMS testing.

It's always ready to work when you are. When you want sensitive, accurate detection, low maintenance requirements and the flexibility to do the job the way you want it done, the MiniMP provides a small, easy to use and cost-effective solution that delivers on all levels.

USEFUL LINKS

SERVOMEX **SERVICE** NETWORK
servomex.com/service

SERVOMEX **SYSTEMS** INTEGRATED SOLUTIONS
servomex.com/systems

SERVOMEX **EXPERT** UNRIVALLED KNOWLEDGE AND VISION
servomex.com/expert-guidance

▶ **Watch our product video**

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PBTDSMiniMP5200 Rev. 0 Date: 04/20

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TECHNICAL DATA SHEET

SERVOFLEX MiniMP 5200

SPECIFICATIONS

GAS MEASURED	OXYGEN (O$_2$)			CARBON DIOXIDE (CO$_2$)
TECHNOLOGY	Paramagnetic			Infrared **
Variant	Standard (1dp)	Industrial (1dp)	High accuracy (2dp)	All variants (1dp)
Full scale range (FSR)	0-100% O$_2$	0-100% O$_2$	0-100% O$_2$	10%, 25%, 50%, 100%
Mnimum output range	0-10% O$_2$	0-1% O$_2$	0-1% O$_2$	0-10% FSR
Cell construction	Polymer (PPS)	316 stainless steel	316 stainless steel	316 stainless steel
Decimal places	1	1	2	Ranges ≤10%:2 >10%:1

** Allow 1 hour warm up to meet performance specification

PERFORMANCE				
Accuracy	±0.2% O$_2$	±0.1% O$_2$	±0.05% O$_2$	±2% FSR
Zero drift per week	±0.4% O$_2$	±0.2% O$_2$	±0.2% O$_2$	±4% FSR
Response time (T$_{90}$) •	<10 seconds	<15 seconds	<15 seconds	<10 seconds
Tilt effect	±0.3% O$_2$ (22.5° from cal)	±0.15% O$_2$ (15° from cal)	±0.15% O$_2$ (15° from cal)	±1% FSR (15° tilt)
Power cycle offset	±0.4% maximum	N/A	N/A	N/A
Pressure effect	Directly proportional to ambient barometric pressure			<0.2% reading / mBar change in ambient pressure
Flow variation effect §	±1% O$_2$ for a ±0-5psig (3.5kPa) change			±0.5% FSR for a 10psig (70kPa) change
Temperature coefficient zero	±0.2% O$_2$ per 10°C (18°F)			±1% FSR per 10°C (18°F)
Temperature coefficient span	±0.3% O$_2$ per 10°C (18°F)			±5% FSR per 10°C (18°F) (excl. 100% CO$_2$) ±8.5% FSR per 10°C (18°F) 100% CO$_2$ only

OPERATING ENVIRONMENT				
Operating ambient pressure range	1.013 x 10^2 kPa ±10% (1.013 bar ±10%) (14.69 psi ±10%)			
Operating ambient humidity range	0 to 95% RH, non-condensing			
Operating altitude range	-500 † to 5000 ‡ meters (-1640 † to 16400 ‡ feet)			
Ingress protection	IP40			
Ambient temperature range	OPERATION	BATTERY CHARGING	STORAGE *	
Analyzer	-10 to +50°C (+14°F to +122°F)	+10 to +40°C (+50°F to +104°F)	-20 to +60°C (-4°F to +140°F)	
Power supply unit	0 to +50°C (+32°F to +122°F)			

• Response time - all at 10psig (70kPa)
§ Flow effect - AFCD version, within specified sample gas supply range
† Below sea level
‡ Above sea level
* Storage below 21°C (70°F) is recommended to ensure optimum battery life

We recommend a calibration of the analyser after each power up

The performance specification has been written and verified in accordance with the international standard IEC 61207-1:1994 "Expression of performance of gas analyzers"

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SAMPLE CONDITIONS	
Sample gas	Clean, dry, non-flammable and non-toxic gases only Note: Though samples containing >5% CO_2 are toxic they can be analysed if suitable precautions are taken.
Flow control	To maximise measurement stability, unpumped units are supplied with an automatic flow control device (AFCD) over the specified inlet pressure range this controls sample flow rate to approximately 1.5 to 6 litres (0.05 to 0.2 cubic feet) per minute
Sample inlet connection	5mm OD stub with "QuickConnect" barb fitting for 6.3mm (1/4") ID tube or adaptor to 1/8" NPT fitting (option)
Sample outlet connection	5mm OD stub (sample and bypass)
Inlet pressure	Without pump 7kPa (1psig) to 70kPa (10psig) With optional internal pump -7kPa (-1psig) to 3.5kPa (0.5psig)
Sample filter	Replaceable 0.6μm glass fibre particulate filter
PHYSICAL	
Weight	2.6kgs (5.7lbs) to 3.9kgs (8.6lbs) depending on configuration
Dimensions, WxDxH	W 150mm (6.0") x D 260mm (10.5") x H 300mm (12.0")

SAMPLE WETTED MATERIALS

	Common gas path in the multi purpose	Industrial or high accuracy oxygen sensor	Standard oxygen sensor	IR (infrared) sensor
302 stainless steel *	●			
316 stainless steel		●	●	●
Borosilicate glass	●	●	●	
Carbon T94 #	●			
Carbon P-7454 #	●			
Epoxy adhesive (EPO-TEK H72)			●	●
Electroless nickel		●		
Gold			●	●
Krytox® GPL205 grease			●	
Kynar® (PVDF: polyvinylidene fluoride)	●			
Nickel	●		●	●
PPS (polyphenylene sulphide) with carbon fibre filler	●			
PPS (polyphenylene sulphide) †	●			
PPS (polyphenylene sulphide) with PTFE (polytetrafluoroethylene)/glass filler			●	
Platinum		●		
Platinum/iridium alloy		●	●	
Polysulphone	●			
Polypropylene			●	
POM (polyoxymethylene)	●			
Sapphire				●
Viton®	●	●	●	●

* Standard Multi Purpose without internal sample pump only
† Standard Multi Purpose with internal sample pump only
# Multi Purpose HF only

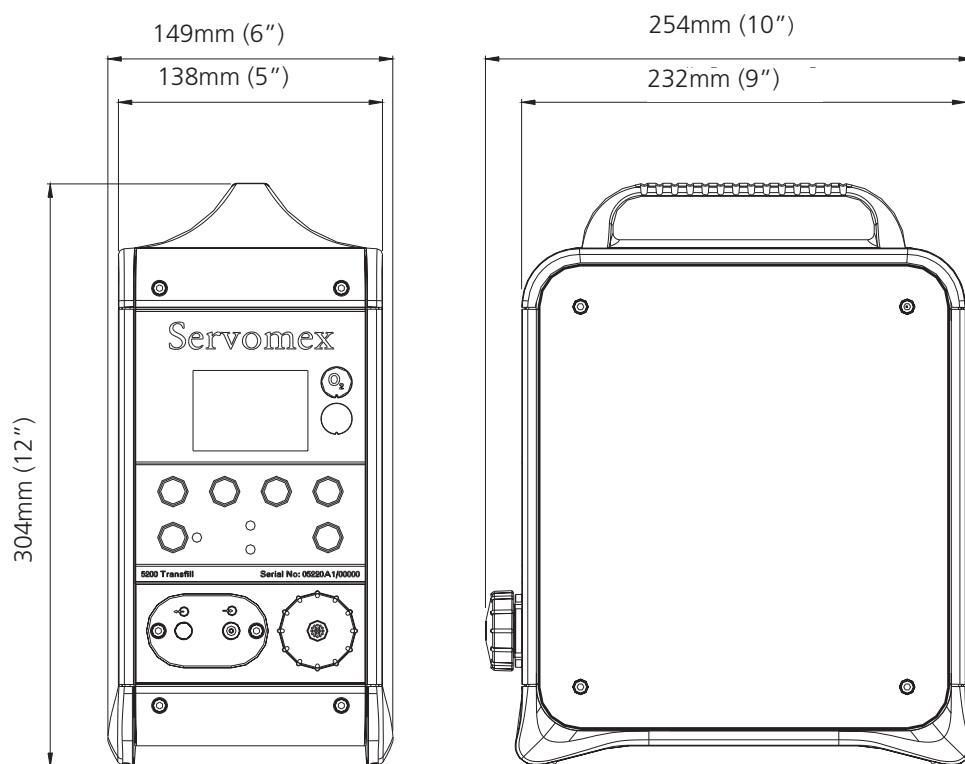SERVOMEX
ANALYZERS
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OPTIONS

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OPTIONS

DESCRIPTION	
Internal pump	0.7l (0.02 cu.ft)/min internal pump with user configurable timer: Pump ☐ When an internal pump is specified users may also select sample outlet location: Front ☐ Rear ☐
Analogue output	One 4-20mA output per measurement. (Note RS 232 output included as standard on base model) ☐
Rechargeable batteries	Advanced lithium ion batteries providing 8-36 hours use, depending on sensor selections ☐
Vehicle power adaptor	Allows the unit to run/recharge from 12/24V dc vehicle socket ☐
Printer	Preformatted compact, mains power/rechargeable printer ☐
Sample inlet	5mm OD stub with "QuickConnect" barb fitting for 6.3mm (1/4") ID tube ☐ Optional adaptor to 1/8" NPT fitting ☐
Flowmeter	AFCD: unvalved flowmeter, 1-10 l min⁻¹ (0.035-0.35 ft³ min⁻¹) ☐ Internal pump: valved flowmeter, 100-1000 cm³ min⁻¹ (0.0035-0.035 ft³ min⁻¹) ☐
Sample conditioning panel	Available with internal pump. Silica gel drier and catchpot fitted to side of analyzer ☐
2 years spares	Recommended spares for two years operation, comprising replacement filters (5) and filter cap 'O' ring ☐

Please tick the box for required options

COMPLIANCE

EC DIRECTIVES	This product complies with the EMC Directive, the Low Voltage Directive, and all other applicable directives.
ELECTRICAL SAFETY	Electrical safety to IEC 61010-1 Rated for "Overvoltage Category II" and "Pollution Degree 2"

DIMENSIONAL DRAWINGS

Dimensions shown in millimetres
(dimensions in brackets are in inches)

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OPTIONS

DESCRIPTION	
Internal pump	0.7l (0.02 cu.ft)/min internal pump with user configurable timer: Pump ☐ When an internal pump is specified users may also select sample outlet location: Front ☐ Rear ☐
Analogue output	One 4-20mA output per measurement. (Note RS 232 output included as standard on base model) ☐
Rechargeable batteries	Advanced lithium ion batteries providing 8-36 hours use, depending on sensor selections ☐
Vehicle power adaptor	Allows the unit to run/recharge from 12/24V dc vehicle socket ☐
Printer	Preformatted compact, mains power/rechargeable printer ☐
Sample inlet	5mm OD stub with "QuickConnect" barb fitting for 6.3mm (1/4") ID tube ☐ Optional adaptor to 1/8" NPT fitting ☐
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SERVOMEX ANALYZERS
HIGH-PERFORMANCE GAS ANALYSIS

PBTDSMiniMP5200 Rev. 0 Date: 03/20

These analyzers are not intended for any form of use on humans and are not medical devices as described in the Medical Devices Directive 93/42EEC.

Please note: *Whilst every effort has been made to ensure accuracy, no responsibility can be accepted for errors and omissions.*
Data may change, as well as legislation, and you are strongly advised to obtain copies of the most recently issued regulations, standards and guidelines.
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