DATA SHEET

Dansensor®
CheckMate 4
HEADSPACE GAS ANALYZER

Accurate, fast and reliable quality control

Dansensor®
AMETEK®

BENEFITS & FEATURES

A flexible and reliable analyzer with maximum uptime

The Dansensor CheckMate 4 is our premier headspace gas analyzer – a compact tabletop instrument that combines extreme accuracy and reliability with an intuitive user experience. The multilingual touchscreen helps minimize the training time needed for new operators. At the same time, individual user logins provide limited access to functions, helping to secure data and traceability.

Save product test settings to ensure complete and comparable data records. Quickly switch between product test settings on-screen or by scanning the product's barcode with the optional barcode scanner.

Automated data storage and real time data transfer ensure accuracy and speed by eliminating the time and risk associated with manual data entry. Optional PC software makes it easy to monitor data across multiple packaging lines and prepare for audits.

To ensure smooth operation, the Dansensor CheckMate 4 sensor module can be changed to a newly calibrated module on-site in minutes.*

** Service options vary by country. Please speak to your local distributor for details.*

Benefits

- Reliable, accurate measurements protect your product and brand
- Increase efficiency with short test times and automated data logging
- Easy to use with intuitive touchscreen
- Accurately measure headspace in all sizes of packaging
- Maximize uptime with enhanced hardware and service options
- Reduce errors with defined test programs, automated data handling and user logins

Features

- O_2 or combined O_2/CO_2 headspace measurements – flexible configuration
- Multiple applications, including small volume headspace
- Save test settings for quick changes and comparable results
- Data storage and real time data transfer
- Fast and secure LAN connection
- Touchscreen with multilingual graphic interface
- Individual user logins provide security and reduce risk of errors
- Alarm alerts when pre-set gas limits exceeded
- USB port for connecting optional barcode scanner, keyboard or printer

How does it work?

1. Identify the correct test program by scanning the product's barcode or manually selecting the correct test definition.
2. Place a septum on the package and insert the needle through the septum, into the package. Start the test with the touch of a button.
3. The headspace gas is analyzed, and the result is automatically stored on the unit.
4. Test results can be printed on an optional printer or exported via LAN (real time transfer) or a USB drive. Import the data to CheckMate 4 PC software or to your own database for analysis.

SENSOR TYPES & APPLICATIONS

DATA SHEET

Available in several models optimized for specific applications, CheckMate 4 provides the most reliable and accurate headspace analysis, regardless of your product type or package size.

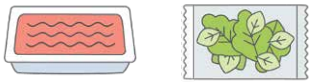
Standard

The standard CheckMate 4 is available with either an O_2 sensor or O_2 and CO_2 sensors. Two different oxygen sensors are available which are suited to specific applications.

O_2 SENSOR (ZIRCONIA)

Our fastest and most reliable and accurate sensor for most food and healthcare applications. Sensitive to alcohol and high carbon monoxide content.

APPLICATION EXAMPLES:



O_2 SENSOR (ELECTROCHEMICAL)

An excellent alternative oxygen sensor for packages containing alcohol or high levels of carbon monoxide.

CO_2 SENSOR (INFRARED DUAL BEAM)

This full-scale, temperature compensated sensor is suitable for most food and healthcare applications with carbon dioxide.

Small volume (SV)

O_2 SENSOR (OPTICAL) A

This robust model uses a scalpel-tipped probe pen to place an oxygen sensor inside the test package. It can precisely test the headspace of coffee pods or capsules, medicine vials and other small packages without drawing a gas sample.

O_2 SENSOR (OPTICAL) B

This model also places the oxygen sensor inside the package but uses a needle-tipped probe pen. This is specifically designed for blister packages or other shallow packages to ensure that probe does not go through the package or pierce the product.

CONSUMABLES & SPECIFICATIONS

DATA SHEET

Consumables & Accessories

Left to right: Septa, filters, needles, sample hose (kit), SmartPen retractable needle, barcode scanner, CheckMate 4 PC software, Can piercer.

Technical Specifications

Available configurations	O_2 (Zirconia)	O_2 (Electrochemical)	CO_2 (Infrared dual beam)	O_2 (Optical) Small Volume A	O_2 (Optical) Small Volume B
Sample volume (minimum)	2 ml	5 ml	5 ml	No minimum	No minimum
Sample time (minimum)	3 sec	7 sec	8 sec	1 sec	1 sec
Measuring range	0-100%	0-100%	0-100%	0-50%	0-100%
Resolution	Under 10% O_2: 0.001% Over 10% O_2: 0.01%	0.1%	0.1%	Under 10% O_2: 0.001% Over 10% O_2: 0.01%	Under 10% O_2: 0.001% Over 10% O_2: 0.01%
Accuracy	Under 1% O_2: ±0.01% Over 1% O_2: ±1% of readout	±(0.25% absolute + 2% of readout)	±(0.5% absolute + 1.5% of readout)	At 1% O_2: ±0.05%*	At 1% O_2: ±0.02%* At 20% O_2: ±0.2%*
Heating time	10 min	n/a	10 min	n/a	n/a
Calibration and service**	12 months	6 months	12 months	12 months	12 months
Number of product test settings	999				
Data collection capacity	Log results of up to 1,000,000 tests				
Data export	Stored data to CSV file (USB) or real time data transfer CSV-string per test (RJ-45). Compatible with CheckMate 4 PC software, Microsoft SQL datbases and other select third party software.				
Dimensions (WxDxH) and weight	305 x 240 x 187mm (12" x 9.4" x 7.4"); 4.2 kg (9.3 lbs)				
Ambient temperature	Operational: 0°C to +35°C Storage: -20°C to +60°C				
Relative humidity	Operational: 10 to 90 %RH (non-condensing) Storage: less than 95 %RH (non-condensing)				
Power supply and consumption	100-240 VAC, 47-63 Hz Max 70W				
Connections	LAN: RJ-45 Ethernet 10/100 Mbit/s, DHCP client or fixed IP USB: 1 x Host, USB 2.0 Type A; 1 x Device, USB 2.0 Type B (max current 500 mA)				
Consumables and accessories	Septa, filters, needles, sample hose (kit), CheckMate 4 PC software, SmartPen retractable needle, Can piercer for testing cans and wine bottles***, barcode scanner				
Warranty	12 months				
Compliance	CE, China RoHS II				

** At 20°C and 1013 mbar. ** Sensor lifetime depends on usage patterns. *** Can piercer cannot be used with small volume modules.*
Specifications subject to change without notice.

DS-PTPS-Dansensor CheckMate 4_EN-2.2

Dansensor® AMETEK®

MOCON Europe A/S
Rønnedevej 18
4100 Ringsted, Denmark
Tel +45 57 66 00 88
sales.dk.mocon@ametek.com
www.ametekmocon.com