



GAS	MEASURES	APPLICATION
MOISTURE	DEW POINT PPMV	PROCESS CONTROL

SENSING TECHNOLOGY



KEY APPLICATIONS

- Air separation units
- Natural gas processing and transportation
- Glove boxes
- Instrument air units
- Ethylene production
- Refining gases
- Medical gases
- Semiconductors
- Furnace gas/heat treating
- Power generation
- Air dryers
- Pharmaceutical
- Aerospace

A FAST, ACCURATE AND RESILIENT MOISTURE MEASUREMENT SOLUTION

UNRIVALLED PERFORMANCE

- High-performance ultra-thin film high-capacitance aluminum oxide field-replaceable sensor element
- Accurate dew point measurements over its full range, even under extreme temperature conditions
- Hazardous Area versions (Zone 2/Div 2) available soon
- Sensor unaffected by condensation and liquid water

FLEXIBLE

- Interfaces with AquaXact controller via a digital interface - maximum cable length 200 meters, SERVOPRO MonoExact DF310E gas analyzer system and SERVOPRO MultiExact 4100
- Advanced communication protocols including RS485, Modbus TCP/IP and PROFIBUS
- Functions as a standalone dew point transmitter - 4-20 mA loop powered

EASY TO USE

- Intuitive-use icon driven color touchscreen for easy device interaction and configuration
- USB serial port for data logging and software upgrades
- Analyzer configurations can be easily duplicated using USB thumb drive

LOW COST OF OWNERSHIP

- Sensor element easily replaced by user
- Calibration files easily loaded eliminating the need for return-to-factory calibrations
- Yearly field calibration adjustments require only a single gas standard
- Long term storage

BENCHMARK COMPLIANCE

- Designed and verified by testing to meet the requirements of the EU EMC Directive 2014/30/EU, for Industrial, Scientific & Medical equipment
- IP65 rated connector
- CE for electromagnetic compatibility, accredited laboratory tested and certified

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HIGH PERFORMANCE

The AquaXact 1688 is a rugged ultra-thin film aluminum oxide moisture sensor that enables fast and accurate dew point and ppm H₂O measurements. The innovative design of the aluminum oxide sensor means that it rapidly comes into equilibrium with the surrounding atmosphere, with the sensor varying in direct proportion to the water vapour content making this a high-performance sensor.

VERSATILITY

With the ability to be used in a wide range of applications such as combustion, cryogenic gases, ethylene gas, gloveboxes, hopper dryers, natural gas production, ASU and many others, it makes this a highly versatile and invaluable sensor. Not only is it a standalone 4-20mA transmitter, but it is also able to be remotely interfaced via a digital cable (up to 200m) to the AquaXact 1688 digital controller, SERVOPRO MonoExact DF310E and the SERVOPRO MultiExact 4100. The AquaXact 1688 digital controller provides a high-clarity color touchscreen display, alarms, relays and advanced communication protocols including RS485, Modbus RDU, Modbus TCP/IP and PROFIBUS. There is also a wide variety of sampling systems available to order, which makes it easier to attach to a wide variety of applications.

SIMPLE MAINTENANCE AND REDUCED ONGOING COSTS

The ability to plug this sensor into the AquaXact 1688 digital controller, SERVOPRO MonoExact DF310E and the SERVOPRO MultiExact 4100 makes this a quick and simple sensor to install and use. The sensor element can be easily replaced by the user and the associated calibration file loaded into the transmitter using the controller, eliminating the need for return-to-factory calibrations. Yearly field calibration adjustments require only a single gas standard.

PARTNERS WITH MonoExact DF310E and MultiExact 4100

- High-clarity color display
- Alarms and relays
- Advanced communication protocols including RS485, Modbus TCP/IP and PROFIBUS



USEFUL LINKS



PBTDS 1688 Rev. 0 Date: 05/20

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. This document is not intended to form the basis of a contract.

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TECHNICAL DATA SHEET

SERVOPRO AquaXact 1688



SPECIFICATIONS

SAMPLE MEASURED	Moisture
TECHNOLOGY	Ultra-thin film aluminum oxide moisture sensor
INSTRUMENT PERFORMANCE	
Operating temperature	-30°C to +70°C (-22°F to +158°F)
Mechanical connections	5/8" – 18 threads. Adapters for other threads are available
Electrical connections	Industrial standard 9.4mm, 7-pin connector IP65
Maximum digital cable length	200m
Power requirements	13V dc (min) to 33V dc (max), instrument draws 4-20mA depending on measured dew point
Input resolution	0.1°C dew point
Engineering units	Factory programmed °C, °F, ppmV
Mechanical connection	5/8" – 18 UNF
Electrical connections	Industrial standard 14mm (0.54"), 7 pin connector
Control	Digital RS485 with AquaXact controller or SERVOPRO MonoExact DF310E or SERVOPRO MultiExact 4100
Outputs	Analog and digital outputs are available
Alarms	4-20mA signal can be used by external device to operate relays
PHYSICAL (INCLUDES SENSOR AND CONNECTOR)	
Housing	Stainless Steel, weatherproof I65/NEMA4x
Size	31.5 mm (1.24") diameter x 136 mm (5.36") length
Weight	175 grams
SENSOR	
Type	Thin film high capacitance Al ₂ O ₃
Dew point range	-100°C to +20°C (-148°F to +68°F) (0.02ppm to 23000ppm)
Accuracy	±3°C (± 3.6°F)
Repeatability	±0.5°C (± 0.9°F)
Ambient temperature range	-10°C to +70°C (+14°F to +158°F)
Sample pressure range	0 to 100 psig
Sample flow range	2 to 15l/min
Storage temperature	-40°C to +80°C (-40°F to +176°F)
Sample gas pressure range	0 to 300 psig
Mechanical	Encapsulated in 100µ sintered stainless steel
Calibration method	NIST/NPL traceable multi-point factory calibration

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



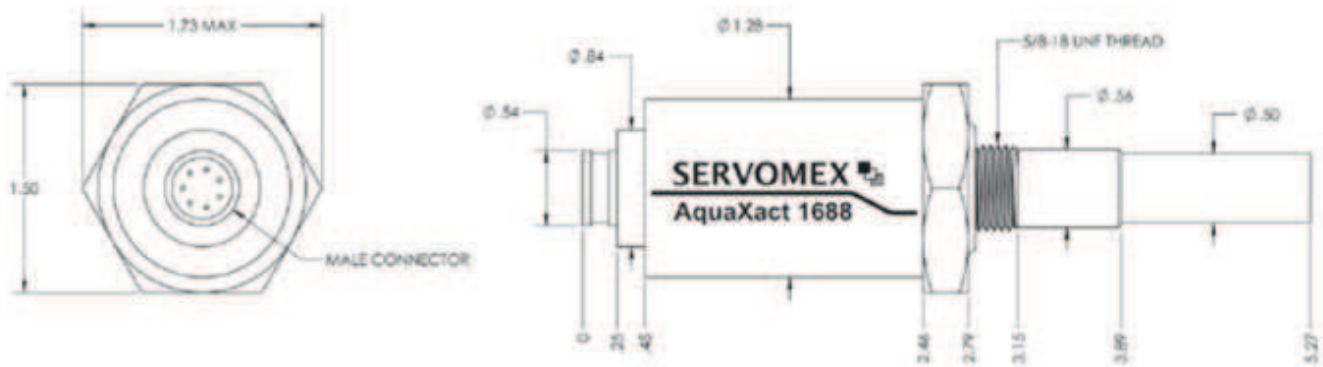
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COMPLIANCE

EC DIRECTIVES	The AquaXact 1688 has been designed and verified by testing to meet the requirements of the EU EMC Directive 2014/30/EU
ELECTRICAL SAFETY	Electrical safety to IEC 61010-1 Rated for "Overvoltage Category II" and "Pollution Degree 2"

DIMENSIONAL DRAWINGS



> WE'RE READY TO HELP

WHATEVER YOUR GAS ANALYSIS REQUIREMENTS, WHEREVER YOU ARE

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