

OMA-300

A UV-VIS DIODE ARRAY FIBER OPTICS PROCESS ANALYZER

FOR ONLINE CONCENTRATION MONITORING



FEATURES

- Accurate single or multi component concentration monitoring
- Solid state - Low maintenance
- Fiber optics probe- remote sensing
- Touch-screen display and user's interface
- Turn key system for specific applications.
- 4-20 mA Outputs
- Modbus Ethernet TCP IP output
- Wide wavelength range for a variety of applications
- Easy to operate and maintain

APPLICATIONS

Hydrogen Sulfide	Ammonia
Sulfur dioxide	Aromatics (BTX)
Mercaptans	Phenols
Chlorine	Additives
Chlorine dioxide	Color
Ozone	Metal ions
Hydrogen Peroxide	Monitor specific wavelengths
Bromine	Interface detection
Nitrogen oxides	CIP

The **OMA-300** is a diode-array fiber-optics process spectrophotometer, continuously measuring the absorbance spectra of the sample. It is constructed of a light source, a dispersion device to select a particular wavelength, a sample area, and a detector. The **OMA** uses a tungsten, xenon or deuterium light source (depending on application), a holographic grating to disperse the light according to its wavelength, a fiber optics probe to transfer the light to and from the sample and a diode array detector which converts the light intensity into electrical signal.

A full spectrum is continuously measured and analyzed, via a multi wavelength method, to give the composition of the stream.

The **OMA-300** is designed to address on-line applications that require cost effective, accurate continuous concentration monitoring. A simple touch-screen based user interface is ideal for single and multi component analysis and allows for quick setup and calibration. Wavelength ranges from 200-1,100 nm are continuously and instantaneously monitored by a diode array spectrophotometer with 2,048 elements. A nonvolatile memory section of the analyzer contains the calculation method, wavelength ranges and the name of the analyte to be displayed on the screen. Standard outputs includes 4-20mA output and digital I/O's. Since the analyzer incorporates modbus communication protocol it can readily communicate with external physical devices such as PLCs, RTUs, and controllers.

The **OMA-300** is offered in two different enclosures: A 316 Stainless Steel enclosure and a Class I Division I Groups B, C & D NEMA 4X / 7 Cenelec approved enclosure. Two fiber optic cables are used to conduct light to and from the probe or flow cell.

A variety of flow cells and probes with different optical paths and materials of construction are offered. The two standard sampling system designs are : an extractive aspirated system with a manual or automatic zero and span for gases and liquids, and a semi in situ / extractive stack sampler with flow indication and automatic span and zero.

Applied Analytics, Inc.



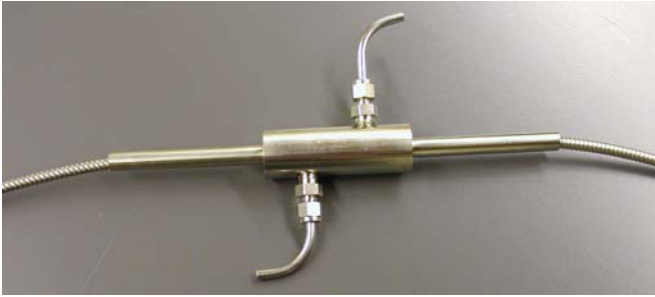
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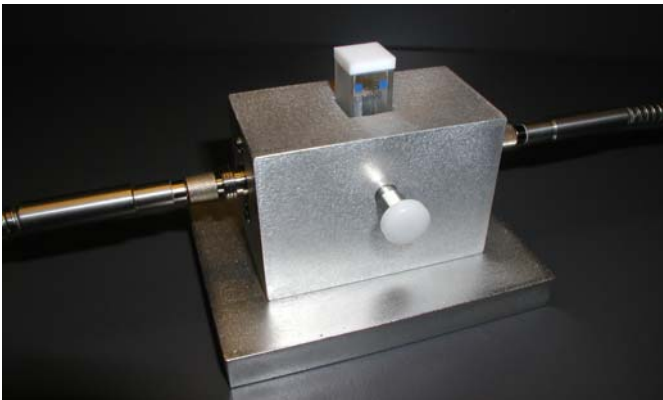
FLOW THROUGH CELL



IMMERSION PROBE

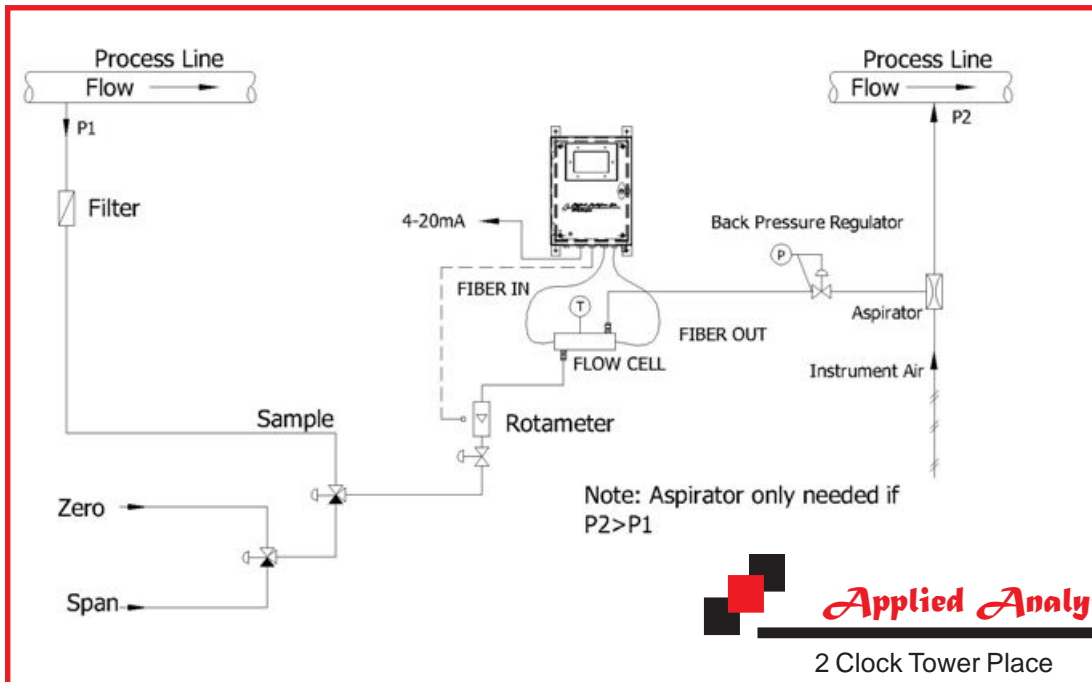


CUVETTE HOLDER



SPECIFICATIONS

<u>Analyzer</u>	
Wavelength range	190-800nm 400-1100nm
Slit Width	1nm
EP resolution	>1.6 toluene in hexane, ratio absorbance at 269nm / 266nm
Wavelength Accuracy	<+-0.5nm (NIST 2034)
Wavelength reproducibility	<+-0.04nm (NIST 2034)
Photometric accuracy	+/-0.005 (NIST '930e)
Photometric noise	<0.002AU 32 scans at 0 AU at 250nm
Photometric stability	<0.002AU/h at 0AU at 340nm +/-10C
Operating conditions	
Temperature	0° to 55° C (32° to 130° F)
Area Classifications	Standard
General purpose	Optional
Class 1 Div. 1 Group C, B&D	Two galvanically isolated 4-20mA (additional channels - optional)
Analogue output	Two SPDT alarm relay
Fault relay	1/4" VGA , NEMA 4 touch screen LCD display (340x240 pixels)
Display	80 to 240 Volts AC; 40 to 60 Hz ; 20 W 16"(H) x 14" (W) x 8" (D) (41 x 36 x 20 cm)
Power	
Analyzer Dimensions	
Immersion probe	-50° to 300° C (-60° to 570° F)
Temperature	200 bar (3000psi)
Pressure	
Flow through cell	
Temperature	-20° to 150° C (-4° to 302° F)
Pressure	10 bar (147psig) standard



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