

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** is designed to address on-line applications that require cost effective, accurate, continuous, and direct-concentration monitoring of single - or multicomponent streams.

Designed specifically for process applications, the **OMA** analyzer does not contain any moving parts, uses fiber optics to prevent flow cell leaks into the electronics enclosure, and utilizes operational software for easy diagnostics with simple and straightforward user interface.

The **OMA**, a diode-array fiber-optics process spectrophotometer, continuously measures the absorbance spectra of a given process stream. A full spectrum (from 200- 800nm or 400-1100nm) is obtained and analyzed via a multi wavelength method to give the composition of the stream. Two fiber optic cables are used to conduct light to and from the probe or flow cell.

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 to convert the light intensity into an electrical signal. An industrial embedded computer with a simple touch-screen based user interface controls the user interface calibration, analysis, and outputs.

Standard outputs, including a 4-20mA output and digital I/O's, are available. Since the analyzer incorporates modbus communication protocol, it can readily communicate with external physical devices such as PLCs, RTUs, and controllers.

A variety of flow cells and probes with different optical paths, materials of construction, and sampling system 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.

The controller continuously displays a complete spectrum allowing for a true **window into your process**.

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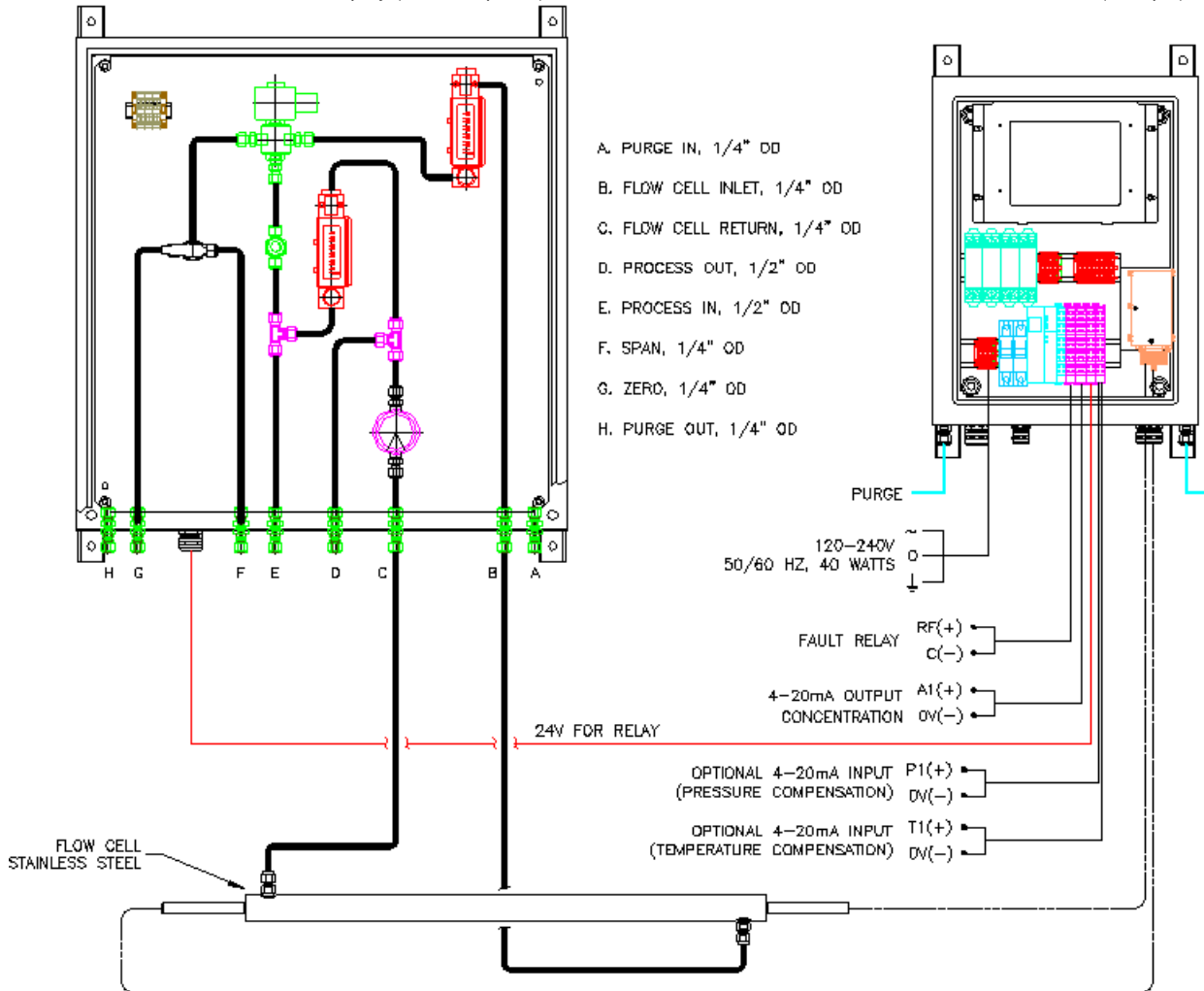
SPECIFICATIONS

Analyzer

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 ⁰ to 55 ⁰ C (32 ⁰ to 130 ⁰ F)
Display	1/4" VGA , NEMA 4 touch screen LCD display (340x240 pixels)

Area Classifications

General purpose NEMA-4X IP 65	Standard
US Class I Div. 2 Groups C&D	Optional (Z purged)
Zone 2(22) Category G D3	
US Class I Div. 1 Groups B,C&D	Optional (X purged)
EEx d II C T6 Category G D2	
NEMA 6 Class 1 div 1 B,C,D	Optional (Enclosure)
Analog output	Two galvanically isolated 4-20mA (additional channels - optional)
Fault relay	Two SPDT alarm relay
Power	80 to 240 Volts AC; 40 to 60 Hz ; 20 W
Analyzer Dimensions	16"(H)x14"(W)x8"(D)(41x36x20cm)
Flow through cell	
Temperature	-20 ⁰ to 200 ⁰ C (-4 ⁰ to 392 ⁰ F)
Pressure	200 bar (3000psi)



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