

## AGAR OW-101 WATER IN OIL MONITOR

### SPECIFICATIONS:

### OPERATING RANGE

Concentration:	0-100% Water/Hydrocarbon by Volume
Minimum Span:	0-10% Water
Process Temperature:	
Standard:	32°F to 300°F (0°C to 150°C)
Optional:	450°F (230°C)
Ambient Temperature:	-40°F to 180°F (-40°C to 80°C)
Pressure Rating:	
Standard:	ANSI 150#, 300#, 600#
Optional:	ANSI 900#, 1500#



### PERFORMANCE

Repeatability:	Better than 0.1% of 100% Water
Linearity:	1% Full Scale with Linearizer
Temperature Effect:	For 0-80% Water: 0.01% per °F For 80-100% Water: 0.05% per °F
Salinity Effect:	For 0-40% Water: Negligible For 40-100% Water: Negligible above 0.2% Salt
Pressure Density:	Nil Effect
Flow Effect:	Nil — If well-mixed in the oil-continuous phase Contact factory for water-continuous recommendations.

### INSTALLATION

Process Connection:	1", 1 1/2", 2" and 3" NPT or Flanged Connection Available
Flow:	Vertical, well-mixed, constant, for full range (0-100% ) meters only - minimum velocity 5 ft/sec, maximum 7ft/sec.

### MATERIALS OF CONSTRUCTION

Pipework & Probe:	Standard: 316 Stainless Steel, Carbon Steel, or Teflon and Peek. Optional: Zirconium, Hastalloy, Monel
Seals:	Standard: AFLAS (Other available on request)
Antenna:	Standard: PEEK Coated Stainless Steel



## ELECTRICAL RATING

OW-101 Probe:	Intrinsically Safe, CSA Div. I, Class 1, C & D, T3C CENELEC EEx ia IIB T4 and EEx ia IIC T4
Power Supply:	Explosion Proof (N7) NEMA 7 CSA Div I, Class 1, D (standard) Explosion Proof (N7) NEMA 7 CSA Div I, Class 1, C & D (optional) Flame-Proof (EEx d) EEx d[ia] IIB T4 Weatherproof (N4X) NEMA 4X Fiberglass Enclosure (optional)
Power:	115/240 VAC 50-60 Hz or 12/24 VDC(±20%), Maximum Power Consumption of 250 Watts
Wiring Connections:	Barrier Terminal Block #18 AWG Maximum Diameter

## OUTPUT OPTIONS

Powered 4-20 mA into 400 Ohms Maximum; 4 mA = Oil, 20 mA Water

OW-101/4-20/LN:	4-20 mA Linearized for % Water.
OW-101/4-20/LN/DD:	4-20 mA Linearized for % Water with LCD Display
OW-101/RL:	Relay contact 1A; 115V; NO and NC; (SPDT); Fail Safe on Oil or Water; Adjustable Trip Point
OW-101/RL/LI:	Relay with Local Indicating Lights: Amber = Oil; Blue = Water
OW-101/RL/PN:	Relay with Pneumatic Output 75 PSI Maximum; 3-Way Explosion Proof Valve, 12W, CSA and UL Listed; 1/4 inch NPT Connections, 3/32 inch Orifices, OC-102 Totalizer; LCD Display of Instantaneous % Water, Total Oil, Total Water and Total Fluid (Ref: OC-102 Net Oil Meter Specification).
Net Oil Meter:	

***Combinations of the above output options are available.***

## ORDERING INFORMATION

- |                   |                        |
|-------------------|------------------------|
| 1. Span           | 2. Process Temperature |
| 3. Output Options | 4. Process Connections |
| 5. Model Number   | 6. Operating Voltage   |

The Agar Oil/Water Monitor measures percent water through measurement of certain electrical properties of the hydrocarbon/water mixture. There are other constituents in such oil/water mixtures (such as sulfur, iron sulfide/oxide, etc.) that absorb electromagnetic energy at a rate that is equal to or even greater than that of water. When these interfering constituents are present and their content varies, the resultant change in composition of the oil/water mixture can cause a baseline shift in the energy absorption. The shift will be seen as variations in the measured percent water. This shift can be corrected with automatic instrumentation/algorithm (e.g., densitometer or sulfur analyzer) input or by manual adjustment of the OW-102's zero setting. In either case, prior knowledge of the interfering parameters and their variation will allow for most accurate measurement.