

# *Haze\_N 3000* On-Line Color Monitor



## ACCURATE ON-LINE COLOR MEASUREMENT!

Our unique optical design even compensates for much of the turbidimetric interference associated with measurement of settled and raw water sources. The automatic cleaning system ensures a minimum of operator maintenance.

The *Haze\_N 3000* color measurement system from HOWILL INSTRUMENTS eliminates the subjectivity associated with Hazen (APHA) color measurement in drinking water, industrial or QC applications. Continuous measurement allows changes in treatment to be implemented more readily for improved quality of the finished water. Simple operation with 2-point calibration using industry standard platinum cobalt solution and de-ionized water.

The *Haze\_N 3000* offers measurement to the nearest 0.1 color unit, Nema 4X enclosure, 4-20 mA output and automatic cleaning.

Best of all the measurements obtained using the *Haze\_N 3000* are more accurate and repeatable than any other system available. The longer path length (10 cm) employed by the *Haze\_N 3000* ensures greater accuracy and repeatability at the critical low end of the color scale.

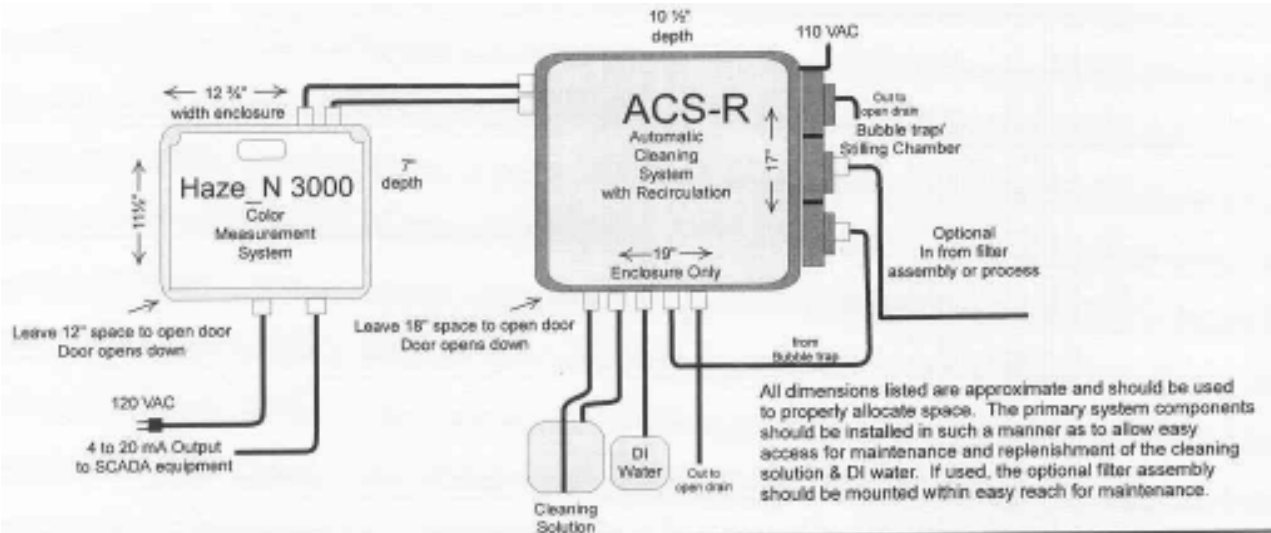
### FEATURES:

- Continuous Measurement!
- 0.1 color unit resolution!
- Simple 2-point calibration!
- Automatic Cleaning System!
- 4-20 mA output!
- Easy operation!
- Range 0 - 200 Color Units!
- Quick disconnect fittings!
- Compensate for turbidity!

## Specifications

<b>Range:</b>	0 - 200 Color Units (Platinum Cobalt / APHA / Hazen Units)
<b>Resolution:</b>	0.1 Color Unit
<b>Accuracy:</b>	± 1 color unit 0 - 50 ± 5 color units 50 - 200 (note: contact factory for readings over 200 color units)
<b>Calibration:</b>	PtCo Standard Solution user selectable 0 - 200 color units
<b>Temperature:</b>	0 - 50 degrees C Operating Temperature
<b>Response Time:</b>	Dependent upon flow (at 100 ml/minute response is approximately 30 seconds)
<b>Lamp Life:</b>	Approximately 15,000 hours
<b>Path Length:</b>	10-cm measuring path
<b>Power:</b>	115 required for both the <b>Haze_N 3000</b> and the ACS-R (Call for other voltages)
<b>Analog Output:</b>	4 - 20 mA output (user selectable 0 - 50, 0 - 100, or 0 - 200 color units)
<b>Output Calibration:</b>	4 - 20 mA output features a switch selectable constant current capability of 4 mA and 20 mA to facilitate calibration of external devices.
<b>Display:</b>	3 1/2 Digit LED
<b>Wavelengths:</b>	455 nm for color measurement plus a reference wavelength which compensates for turbidity & lamp loss. Reference wavelength also provides improved stability.
<b>Auto Clean w/DI Flush:</b>	ACS-R provides constant sample flow, recirculation of cleaning solution & a DI water flush
<b>Sample connectors:</b>	Quick disconnect with automatic shut-off. Use 1/4" ID tubing.
<b>Enclosure:</b>	Nema 4X for <b>Haze_N 3000</b> , outdoor enclosure for ACS-R.
<b>Flow rate:</b>	Minimum required 50 ml/minute, maximum 250 ml/minute.

## Recommended Connection/Installation



**HOWILL INSTRUMENTS, Inc.**  
 1219 Cleburne Drive  
 Fort Myers, FL 33919  
 Phone: (239) 275-9062  
 Fax: (239) 275-8455  
 e-mail: mail@howill.us  
 Website: Howill.us

Represented by: