PRODUCT BULLETIN

ONGUARD SMART + MODBUS

The Purafil OnGuard® Smart with Modbus Atmospheric Corrosion Monitor, the 5th generation of OnGuard® technology, adds Modbus connectivity to a platform backed by decades of proven reliability in corrosion and environmental monitoring for data centers, industrial facilities, water and wastewater treatment plants, museums, control rooms, and other critical environments. The system monitors overall corrosion severity levels, temperature, humidity, and room pressure, with corrosion classifications based on the industry recognized ISA 71.04 standard. Fast wall installation and flexible connectivity through a web interface, direct LAN connection, analog 4-20 mA, and Modbus make integration simple.

Features

- Modbus - 4-20 mA connection for existing facility management systems or distributed control systems (DCS)
- Tracks peaks and trends to determine the level of corrosion
- Measures temperature, relative humidity, and room pressure
- Low maintenance: Sensors remain reliable until reaching 4000 Angstroms of cumulative corrosion
- Direct interface provided by the backlit LCD and keypad
- Remote power from network cable (PoE)
- Accurate within ± 1% of full span

Benefits

- Easy remote access to data and graphs
- Indicates the level of corrosion before damage occurs, preventing costly repairs/downtime
- RoHS compliant
- Measures corrosion, room air pressure, temperature, and relative humidity on a continuous basis
- Provides incremental and cumulative corrosion data
- Easy to install
- Long service life
- Readings correspond to ISA Standard 71.04-2013

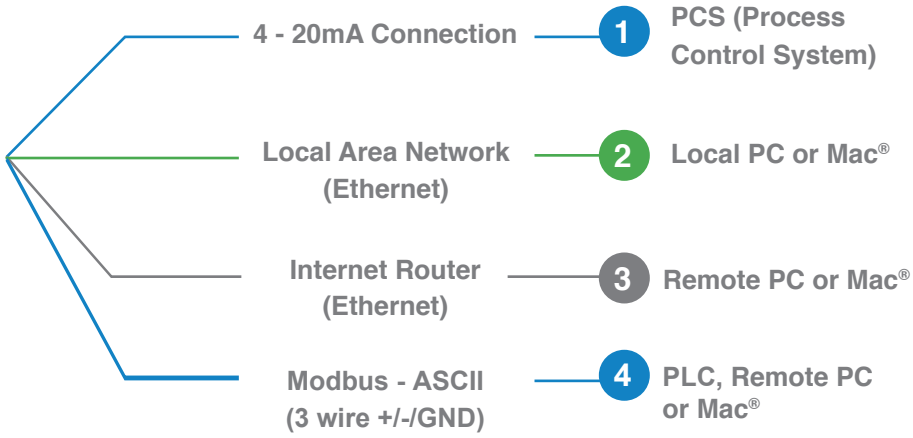
Principle of Operation

The OGS comes with two quartz crystal microbalance (QCM) sensors, one that is plated with copper and another with silver. The QCM is used to measure the corrosive film that results from the environment. This highly sensitive method of measurement will indicate contaminant levels at or less than one part per billion (1 ppb). The corrosion film thickness is measured and recorded in Angstroms (Å). This measurement corresponds directly to ISA Standard S71.04-2013.

ISA STANDARD ANSI / ISA-71.04-2013*

Severity Level	Copper Corrosion	Silver Corrosion
G1 - Mild	<300 Angstroms / 30 days	<200 Angstroms / 30 days
G2 - Moderate	<1000 Angstroms / 30 days	<1000 Angstroms / 30 days
G3 - Harsh	<2000 Angstroms / 30 days	<2000 Angstroms / 30 days
GX - Severe	>2000 Angstroms / 30 days	>2000 Angstroms / 30 days

4 Ways to Connect



Connectivity Benefits

- Supports Modbus-ASCII
- Supports Simple Network Management Protocols (SNMP)
- Connect using any device with a web browser
- Communicate via local network and remotely over internet
- Enable email alerts for alarm thresholds

Location Requirements

- Install in a controlled environment between -10° and 75° C (14° and 167° F)

Applications

- Industrial: Pulp & Paper, Manufacturing, Oil Refineries
- Precision Air: Data Centers, Semiconductor
- GLAM: Galleries, Libraries, Archives, Museums

1.75 in (4.5 cm)

Weight: 9 ounces, 255 grams

3.5 in (9 cm)

5.5 in (14 cm)

Purafil Inc. • 2654 Weaver Way, Doraville, GA 30340 • Office: 770.662.8545 • www.purafil.com

purafil Filtration Group®