





STRUCTURAL INTEGRITY ASSOCIATES, INC.®



SYSTEM DESCRIPTION The BG5 Biofilm Growth Detector system, originally developed for and proven in power plant cooling water systems, monitors biofilm activity continuously and in real time. Biofilm formation occurs more rapidly on the probe than on system piping or heat exchanger tubes. As a result, maintaining the probe in a clean condition assures that the pipe work, heat exchangers or other system surfaces are clean.

The BG5 system consists of a probe, its integrated electronics, interconnecting cable, display, a user manual, and product support.



## **ENVIRONMENTS**

BG5 is suitable for use in all aqueous environments.

- High purity/controlled purity water
- Fresh waters (hard and soft)
- Brackish waters
- Seawater
- Most brines
- Contaminants such as oil can be accommodated

Fluid velocity past the probe should be typical of that of metal surfaces in the system; no special ad-justments for flow are required (e.g., BG5 can monitor normally stagnant or intermittently flowing systems)

Compatible with water treatment chemicals including biocides, deposit control agents, corrosion inhibitors, and most on-line cleaning solutions.

# **COMMUNICATIONS**

ModBus over TCP/IP via wired. Bluetooth option via BGMobile. BGConnect Utility software available.

The information presented in this document is accurate as of the date of publication. All images and photographs presented herein are representative and actual products may differ.

Structural Integrity Associates reserves the right to change product information, offerings, and specifications without prior notification.

### PROBE SPECIFICATIONS

| Electrodes . | Type 316L stainless steel for fresh water environments; Ti, Gr.2 for saline environments |
|--------------|--|
| Attachment   | Standard, threaded pipe plug (stainless steel or PVC; 1" or 2" NPT body                  |
| imiting Pres | surePVC Body 300 psiç  |
|              | Stainless Steel Body 3000 psig   |
|              |  |

Probe must be continuously wetted

Specialized probe configurations, such as flow-through or flush mounted probes, or other custom designs available

### Mounting

- The electrode stack projects into the system to be monitored. Coupon racks, dedicated threaded ports in heat exchangers, other access points may be acceptable.
- Mounting in any circumferential position is acceptable
- Suitable for outdoor installations
- A data cable with 5/6-pin connection is used to link the BG probe sensor to the BG5 controller. A standard 50′ cable is included.

## **CONTROLLER SPECIFICATIONS**

#### Instrument

| Dimensions (approximate)                                   |   |
|--|---|
| Weight (approximate) · · · · · · · · · · · · · · · · · · · | 1.36 lbs (0.617kg)  |
| Power Supply   | USB-C or Power over Ethernet (PoE) w/Battery Backup           |
| Battery Type   | Non-Rechargeable 19Ah 3.6V Lithium Thionyl Chloride (LiSOCl2) |
| Battery Life   | 6-months of operation   |
| Display  | LCD 240x340 pixels  |
|  | Power/Wake/Directional buttons                                |
| Indicators   |   |
| Storage Temperature  | 0° – 150°F (-30° – 80°C)                                      |
| Operating Temperature                                      | 10° – 120°F (-20° – 70°C)                                     |
| Humidity   | 0 – 80% relative  |
| Noise Level  | <65 dBA   |
|  |   |

#### Electrical requirements

| United StatesAC/DC adapter with USB-C DC Power Pol       | rt compatible with standard 110 volt/60 Hz, AC |
|--|--|
| Europe   | 240 V/50 Hz power supplies                     |
| North America, Europe, United Kingdom, Australia & China | Interchangeable power plug                     |
| Output   | 5V, 3A   |
| Output Current Range (from probe)                        | +/-20 µA (Internal Resolution = 0.01 µA)       |
| Output Voltage Range (to probe)                          | 0-500 mV (Internal Resolution = 0.1 mV)        |

| Connectivity    | luetooth, Ethernet |
|-----------------|--------------------|
| Memory          | 6 months           |
| Calibration···· | Not required       |

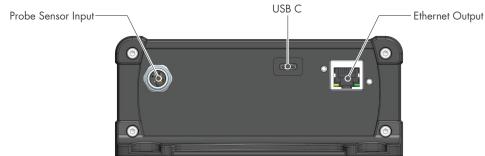
The **BG5** biofilm growth detection system is a modern approach to monitor the EFFECTIVENESS of a biocide treatment program to ensure sufficient application of biocide for system cleanliness.

Mitigate MIC Through Real Time **Biofilm Monitoring** 

**Reduce Thermal** Fouling by **Controlling Biofilms** 

**Optimize Biocide Treatment Programs** 







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