

BGTM5

BIOFILM GROWTH DETECTOR




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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 adjustments 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.

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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)
Limiting Pressure	PVC Body 300 psig Stainless Steel Body 3000 psig

Recommended Operating Temperature	PVC Body 50° – 120°F (10° – 49°C) Stainless Steel Body 50° – 130°F (10 – 54°C)
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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)	W 5.75 H 5.88 D 2.38 (inches) [W 146 H 149 D 60 (mm)]
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
Interface	Power/Wake/Directional buttons
Indicators	Three status LEDs
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 States	AC/DC adapter with USB-C DC Power Port 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	Bluetooth, 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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