

Smart Foam Probe

Datasheet v1.0



Semrad Smart Foam Probe



Advantages of the Smart Foam Probe;

- Unique IMA Sensing technology renders this probe immune to fouling.
- Low cost installation.
- 24V DC power supply.
- Reliable, robust and long life.
- Can connect directly to a PLC or process controller.

Description

The Smart Foam Probe has been designed to simplify the foam detection process. Within the Smart Foam Probe head is a built-in transmitter, enabling foam detection and control from a single unit and eliminating the need for an external controller.

The 316-stainless steel and PVDF probe with a polypropylene head construction ensure enhanced durability and maximum compatibility with most process systems.

These high-quality materials, weatherproof design and simply sensitivity adjustments show we are serious about producing an innovative and reliable foam detection system suitable for almost any foam sensing application.

Our Smart Foam Probe uses the same tried and tested technology as Semrad's other foam control products used by the Australian and New Zealand Navy's, so you can be sure you're getting a robust, reliable foam detection system.

Typical Applications



- Food processing
- Carbonated beverages
- Pharmaceutical



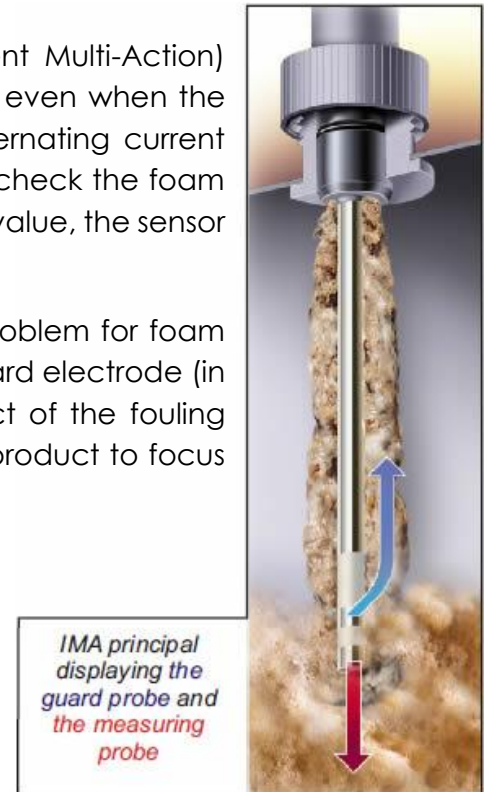
- Paper Manufacture
- Waste Water & Effluent Treatment
- Sludge Tanks

How it Works

The sensor is designed using the IMA Sensing™ (Intelligent Multi-Action) technology which enables foam to be reliably measured even when the probe is fouled. The sensor works by passing a small alternating current through the foam into the liquid surface, which is used to check the foam density. When the measurement passes a pre-determined value, the sensor recognises that foam is present.

To overcome fouling of the sensor, which is a constant problem for foam sensing instruments, the IMA Sensing technology uses a guard electrode (in blue) which is used to isolate and compensate the effect of the fouling layers. The main foam sensor (in red) ignores the built-up product to focus only on the foam within the process.

The Sensor also has an adjustable built in time delay to reject splashes and other spurious alarms as well as a sensitivity setting, ranging from 0-9 (0 for liquid, 9 for low density foam). The alarm signal can be sent through the volt-free output which can be directly connected to a PLC or to switch a low voltage signal, e.g. 24VDC.



Mechanical Probe Specifications

Body Material	316 Stainless Steel
Head Material	Polypropylene
Insulator Material	PVDF
Process Connection	3/4 " BSP Tapered
Temperature	Maximum 70°C.
Pressure Rating	1.5 Bars
Probe Dimensions	20mm diameter, length, 60, 100 or 150cm.

Electrical Specifications

Power Supply	24V DC, 25mA.
Indicators	Power (on when powered up). Foam (indicates foam).
Response Time	1, 6, or 25 seconds.
Sensitivity	0-9 (0 = light foam, 9 = dense foam)
Output	'Volt-free' c/o contacts rated at 24 V DC 400mA.
Connections	Screw terminals.
Cable	4-core screened cable.