

industrial sensors



Thermo Electron foam sensors are purpose designed to detect foam using patented sensing technology. A new improved design of the guard electrode ensures even better reliability and fouling immunity. When used with Thermo Electron controllers the foam sensors will detect all types of foam, even with a heavy build up of material on the surface of the sensor.

- FP101** Adjustable type for use with suitable sealed fitting for process entry. Available lengths to order 150mm – 4m
- FP102** With welded 1/2" BSPT bush for process entry. Available lengths to order 180mm – 4m
- FP103** With welded DN25 fitting for process entry. Available lengths to order 180mm – 4m
- FP104** With welded 1" ANSI 316 SS pipe flange. Available lengths to order 180mm – 2m
- FP105** With welded 2" ANSI 316 SS pipe flange. Available lengths to order 180mm – 2m
- FP106** With welded 3/4" BSPT bush for process entry. Available lengths to order 180mm – 4m
- FP108** With welded 2" Triclover fitting. Available lengths to order 180mm – 4m

mechanical and electrical data

Body material	316 stainless steel
Insulator material	Vitrex Peek 450g engineering thermoplastic
Termination	Heavy duty die cast alloy industrial termination lead. IP66 2-way ceramic block with screw terminals
Cable entry	20mm ISO conduit entry
Cable	Unscreened twisted pair (low capacitance) e.g. Belden 8795, 8201. Alpha 45281. Delta 69HUF3
Temperature	Maximum continuous operating temperature 150°C. Peak temperature 170°C
Pressure	10 bars (higher pressure available to special options)

foam controllers

Foam controllers are available in wall or rack mounted versions

FCW2 – Wall mounted foam controller

FCR2 – Rack mounted foam controller

The FCW2 is an advanced foam controller designed for use with Thermo Electron foam sensors for the control of foam in processes such as Biotechnology, Food and Chemical manufacture and effluent treatment. It uses Thermo Electron's sensing technology to sense and control foam at a fixed level or to reduce it to a minimum. Considerable reduction in antifoam use can be achieved.

The FCW2 is designed primarily for reliability and will operate correctly even in the presence of severe fouling of the sensor.

The controller can be used for "stand alone" control of foam or can be interfaced to a process controller.

An adjustable response time discriminates between foam and splashing or other spurious triggers. A dosing or shot time can be set for the operation of a pump or valve for antifoam addition. Other control actions such as vacuum valves or gas control can be interfaced. Volt-free contacts can be used for point detection and an analogue o/p for level indication.

The FCW2 has been designed specifically for foam and is not a modified liquid level detector.



electrical data

Power supply	110, 230 Volts a.c., 50Hz, or 24V d.c.
Indicators	Power: This illuminates when the unit is connected to the power supply Sense: This illuminates when foam is first detected Activate: This illuminates when foam has been detected continuously for the delay time and stays on until foam collapses.
Response time	1, 2, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 52 or 60 seconds (set by dip switches)
Shot time	1, 2, 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 52 or 60 seconds (set by dip switches)
Sensitivity	0.35K to 100K ohms impedance (set by dip switches)
Fouling immunity	Sensitivity to fouling <1% of sensitivity to foam with Thermo Electron sensors
Interfaces	'Volt-free' c/o contacts rated at 240 Volts a.c./30 Volts d.c., 2amps. 0-20mA, 4-20mA analogue output

enclosure data (wall mounted)

IP rating	IP65 wall mounting
Dimensions	Height 225mm (including glands), width 240mm, depth 115mm
Connections	Screw terminals. Cable entry via PG11 cable glands x 4

enclosure data (rack mounted)

Format	8HP x 3U standard eurocard. Standard 19" rack mounting
Dimensions	Pcb 100x160mm. Overall: 130x190x40mm including panel and handle
Mating connector	Harting 0904 232 6823