



SURESENSE

SURESENSE RANGE

FOAM SENSORS

Hycontrol's SureSense sensors, when used with an appropriate Foam Controller, provide efficient and cost effective foam control over a wide range of water based process applications.

Although outwardly similar, each stainless steel sensor can be customised to suit the client's needs. Different heads, process fittings and lengths are available making Hycontrol's sensors the first choice for many applications throughout the world.

The sensors are hygienic and steam sterilisable, and thanks to Hycontrol's patented IMA Sensing® technology they are able to discriminate between the residual build up of foam on the sensor and the foam created during the process. Thus Hycontrol sensors are able to continue to efficiently monitor foam levels regardless of how fouled the sensor may become.



HOUSING

The standard head design used on Hycontrol SureSense sensors is seen in the picture right. It is available in aluminium, stainless steel or heavy duty plastic. Alternatively, if space is limited the sensor can be supplied fitted with a mini aluminium head. The only exception to this head design is the SureSense Laboratory Sensor which is fitted with a Lemo connector.



PROCESS FITTINGS

With a wide range of applications our sensors are available with an equally wide range of process fittings. If the level of foam is always variable then sensors can be made adjustable, or if the optimum level is known then the sensor can be set at a fixed length. Fittings available for use with SureSense sensors can be fixed or adjustable depending on process connection.

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	Screened twisted pair - eg, Belden 8760
Temperature	Maximum continuous operating temperature 150°C Peak temperature 170°C
Pressure	10 Bars (higher pressure available to special order)

SURESENSE CONTROLLER RANGE

WALL MOUNT CONTROLLER



Designed with reliability in mind this controller is an advanced wall mounted foam controller designed to control foam at a fixed level, or to reduce it to a minimum. Our unique IMA Sensing technology ensures the system will operate correctly even if the attached sensor becomes severely fouled.

To discriminate between foam and splashing or other spurious triggers the controller has an adjustable response time. A dosing or shot time can be set for the operation of a pump or valve for anti-foam addition. Although the controller can be used for stand alone control 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 output for level indication.

Electrical Data:

Power supply	110v, 240v AC., 50/60Hz, or 24v DC.	
Indicators	Power:	illuminates when unit connected to power supply
	Sense:	illuminates when foam is first sensed
	Activate:	illuminates when foam detected continuously for pre-set delay time and stays on until foam collapses
Response Time	1 - 60 seconds (set by dil switches)	
Shot Time	1 - 60 seconds (set by dil switches)	
Sensitivity	0.35K to 100K ohms impedance (set by dil switches)	
Fouling Immunity	Sensitivity to fouling <1% of sensitivity	
Interfaces output	'Volt free' c/o contacts rated at 240v AC/30v DC., 2amps. 0-20mA, 4-20mA analogue	

Enclosure Data

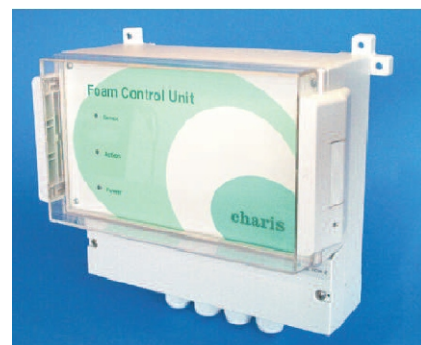
IP Rating	IP65 wall mounting
Dimensions	Height (including glands) 225mm,
	Width 240mm, Depth 115mm
Connections	Screw terminals. Cable entry via Pg11 cable glands (4)

FOAM AND LIQUID CONTROLLER

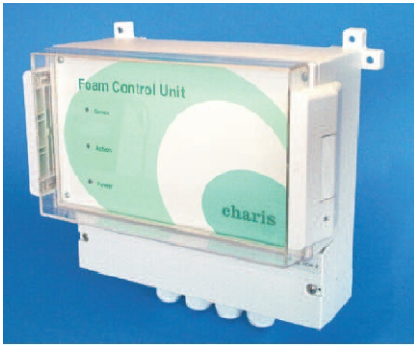
The foam and liquid controller is an advanced foam controller with the unique ability to sense both liquid and foam and to respond differently in each case. They are designed to be used with a Hycontrol foam sensor to achieve a very reliable foam control system. There are a variety of sizes and styles of foam sensors. They are all designed for hygienic applications and will operate in the presence of high levels of fouling (i.e. surface coating)

Electrical Data:

Power supply	110v, 240v AC., 50/60Hz, or 24v DC.	
Indicators	Power:	illuminates when unit connected to power
	Sense:	illuminates when foam is first sensed
	Activate:	illuminates when foam detected continuously for pre-set delay time and stays on until foam collapses
Response Time	1 - 60 seconds (set by dil switches)	
Shot Time	1 - 60 seconds (set by dil switches)	
Sensitivity	0.35K to 100K ohms impedance (set by dil switches)	
Fouling Immunity	Sensitivity to fouling <1% of sensitivity	
Interfaces output	'Volt free' c/o contacts rated at 240v AC/30v DC., 2amps. 0-20mA, 4-20mA analogue	



DUAL FOAM CONTROLLER



With the Dual Foam option, this allows you to have a multiple switch point all on the one probe. This means an alarm will be triggered when foam reaches the first switch point and a second alarm will be triggered when foam reaches the second switch point.

Enclosure Data

Same as for the Wall Mount Controller

Electrical Data

Same as for the Wall Mount Controller

RACK MOUNT CONTROLLER

This controller is a rack mounted version of the Wall Mount Controller. Designed to fit into a 19" rack the controller is a standard eurocard size and has all the features of the Wall Mount.



Enclosure Data

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

Electrical Data

Same as for the Wall Mount Controller

BENCHTOP CONTROLLER

This is a bench standing, advanced Foam Controller which, when used in conjunction with a Hycontrol / Charis Laboratory Sensor forms a compact foam control system for the control of foam in a laboratory process. It includes an integral pump for the automatic addition of a chemical anti-foam agent. A 'delay and shot' algorithm is used to give a very reliable control of the foam with the minimum usage of anti-foam.

Two relays can be connected to external equipment. One operates when foam is detected and the other switches on an off with the pump. The response time is variable to discriminate against splashing and other spurious triggers.



Electrical Data:

Power supply 220-250v AC., 50/60Hz
Pump Watson Marlow 102 pump head, 12rpm, Flow 0.2-19ml/min.
Indicators Power: illuminates when unit connected to power supply
Sense: illuminates when foam is first sensed
Activate: illuminates when foam detected continuously for pre-set delay time and stays on until foam collapses.
Response Time 1 - 60 seconds (set by dil switches)
Shot Time 1 - 60 seconds (set by dil switches)
Sensitivity Adjusted by means of a 4 pole switch. 35K to 100K ohms impedance
Fouling Immunity Sensitivity to fouling <1% of sensitivity
Interfaces 'Volt free' c/o contacts rated at 240v AC/30v DC., 2amps.
Relay 1 operates with pump.
Relay 2 operates with active indicator.

Enclosure Data

Type 28HP x 3U 19" caseframe
Dimensions Width 186mm, Depth 262mm, Height 147mm

FOAM CONTROLLER



This is an advanced Foam Detector designed to be interfaced with an existing process controller or alarm. It can be wall mounted or fit inside an existing cabinet.

Electrical Data

Same as for the Wall Mount (*except for there being no shot time facility.*)

Enclosure Data

Dimensions Height 150mm, Width 200mm, Depth 80mm
Connections Screw terminals

INDUSTRIAL CONTROL SYSTEM



Designed for industrial applications this controller is an intelligent Foam Control System with integral peristaltic pump designed for low maintenance. It features high reliability and can be operated for long periods without attention.

A Hycontrol foam sensor can be placed in a suitable position to detect foam when it occurs. An internal dosing system operates the pump automatically in a 'shot and delay' mode to minimise anti-foam usage.

Electrical Data:

Power Supply	110 - 250V AC., 50/60Hz
Indicators	Power: illuminates when unit connected to power supply Sense: illuminates when foam is first sensed Activate: illuminates when pump is actuated automatically
Pump	Industrial peristaltic pump (no valves)
Flow Rate	0 to 10lt/hour at 5 bars back pressure
Sensitivity	0.35K to 100K ohms impedance
Fouling Immunity	Sensitivity to fouling <1% of sensitivity

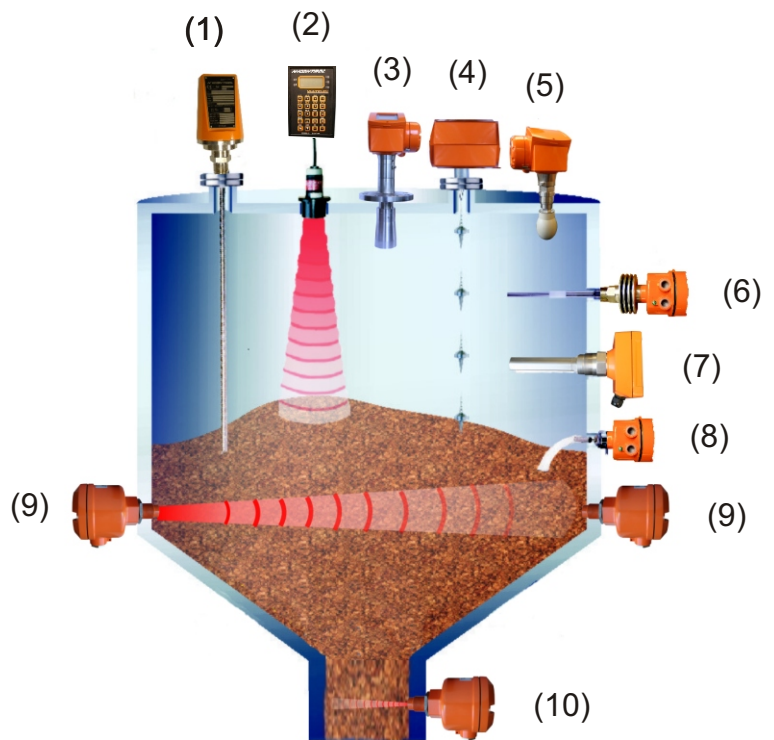
Enclosure Data

IP Rating	IP65
Mounting	Wall mounting, GRP with brackets
Dimensions	Height 400mm, Width 300mm, Depth 200mm (enclosure)
Connections	Screw terminals. Cable entry via PG135 cable glands x 4.
Flood Alarm	The controller includes a flood alarm which detects that the liquid level has risen above the sensor. It can be used to disable the dosing pump.

HYCONTROL LEVEL TECHNOLOGIES

Product Range For Solids :-

- (1) TDR Radar For Solids
- (2) Ultrasonic, 'Through Air'
- (2) 2 Wire Ultrasonic Transmitter
- (3) FMCW 2 Wire Radar
- (4) Continuous 'Servo' Level Indicator
- (5) FMCW 2 Wire Radar
- (6) Capacitance Level Switch
- (7) Vibrating Probe Level Switch
- (8) Rotating Paddle Level switch
- (9) Microwave Level Switch
- (10) Doppler Flow Switch



Product Range For Liquids :-

- (1) By-Pass Level Indicator With Radar
- (2) TDR Radar For Liquids
- (3) 2 Wire Ultrasonic Transmitter
- (4) FMCW 'Horn' Radar 2 Wire
- (5) Magnetic Float Switches
- (6) FMCW 2 Wire Radar
- (7) Foam Level Switch
- (8) Capacitance Level Switch
- (9) RF Admittance Level Switch
- (10) Side Mounting 316 SS Float Switch
- (11) Tuning Fork Level Switch
- (11) Tuning Fork Level Switch
- (12) Ultrasonics 'Through Wall'
- (13) Mini Magnetic Float Level Switch

