Correstat®3410

Correflow®

Probe measures charge imbalances within the reactor

Progression's Correstat3410 electrostatic probe monitors conditions within gas phase reactors. The probe can measure charge imbalances within the reactor chamber allowing plant operators to take appropriate action to avoid problems associated with sheeting and polymer agglomeration. With the real-time reactor electrostatic charge measurements provided by the Correstat3410, process continuity can be improved and shutdowns avoided.

The Correstat3410 reactor probe is installed directly in the reactor. The sensing probe can be customized to fit into existing ports or nozzles with standard flanged connections. The Correstat3410 probe is available in either an integral or remote probe and electronics configuration to allow for a variety of process requirements.

Benefits

- User selectable sensitivity, range, and smoothing settings
- Real-time bipolar measurement
- No artificially high voltage source within the reactor
- Fast data sampling and higher frequency response
- No maintenance or spare parts required

Advantages

- Compact one-piece design standard (remote version also available)
- Custom-designed probe for easy low-cost installation into existing ports
- Approved for use in hazardous areas

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Specification

Mechanical

Standard port (nozzle) sizes: 1" (2.5 cm), 1.5" (3.8 cm), and 2" (5.1 cm) (others available)

Flange mounting (300 or 600 lb typical)

All metals exposed to reactor are stainless steel

Built to withstand significant impacts and reactor conditions

Distance from flange face to tip of sensor is user specific

Pressure tested up to at least 750 psi
(higher pressure systems available)

Standard operating temperatures
Probe: ambient to 120°C
Electronics: ambient up to 40°C
Consult Progression for high temperature applications

Electronics Enclosure

Two 3/4" NPT hubs for power and analog output signal

Cylindrical enclosure is 5.6" (14.3 cm) in diameter, 7.6" (19.4 cm) long

Typically extends 10.6" (27 cm) from flange

Designed NEMA 4/7/9, ATEX approved EEx d i_a IIC T4

Multi-point systems available

Electrical

120/230 VAC 50/60 Hz or 10 – 32 VDC

Frequency response: 0 – 100Hz

Intrinsically safe probe connection

Probe tip operates at <1 volt, eliminating the dangers of an artificially high voltage source within the reactor

4 – 20mA bipolar output

Full scale output selectable in 9 steps from ±0.1 to ±1000nA of electrostatic current

Signal damping selectable at 0, 1, 10, or 100 seconds

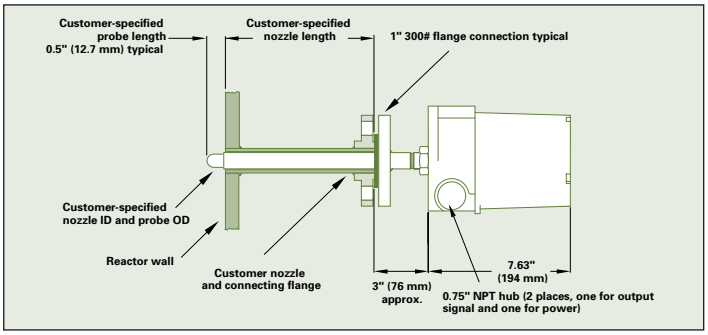
Display

20 segment LED bar graph to indicate real time bipolar signal (10 negative, 10 positive segments) with green LED power indicator in the center

5 position full scale current range adjustment switch with an additional X100 switch

4 position signal smoothing switch

All controls and indicators viewable through window in enclosure



The Correstat3410 sensor is engineered to operate continuously 24 hours per day, seven days a week. It is designed for the harsh environment of fluidized bed reactors, requiring no maintenance or spare parts. Unlike traditional electrostatic probes, the Correstat3410 sensor measures current. This keeps the potential of the active probe tip under one volt (verses nearly 10kV from traditional probes). Both polarity and signal frequency response are important parameters in electrostatic reactor monitoring.

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Analyze with integrity.™

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