



Correflow 5430

Real-time inline catalyst detection

The Correflow™ 5430 electrostatic sensor monitors conditions within polyolefin reactor catalyst feed lines. It can measure catalyst pulses and feeder changes, allowing plant operators to take appropriate actions to avoid problems.

With the real-time feedback from these electrostatic charge measurements, process continuity can be improved, and shutdowns prevented.

The Correflow ring sensor is installed directly in the catalyst feed line. The sensor ID can be customized to fit existing lines greater than 1/8" (3 mm). The Correflow 5430 is typically provided in a remote configuration to allow for a variety of process and mounting requirements.

BENEFITS

- Real-time inline monitoring of catalyst pulses
- Identify changes in feeder characteristics
- Real-time indication of blow-through failure
- Detect feed line blockages
- Low cost of ownership due to no moving parts

ADVANTAGES

- Compact one-piece design (remote electronics version also available)
- Inline measurement with no pressure drop or diameter step changes
- User selectable sensitivity, range, and smoothing settings
- Real-time bipolar measurement
- DCS reporting via 4-20mA outputs
- No maintenance or spare parts required
- Custom-designed sensor for easy low-cost installation
- Intrinsically safe design

TECHNICAL SPECIFICATIONS

MECHANICAL

- Swagelok® or flange mounting (150# or 300# typical)
- All metals exposed to reactor are stainless steel
- Pressure tested up to at least 1000 psi (higher pressure systems available)

ENVIRONMENTAL

- cULus Listed for Class I, Division 2, Groups A, B, C, and D
- Operating Temperature Range: -20°C up to 55°C
- Consult LexMar Global for high temperature applications

ELECTRONICS ENCLOSURE

- Two ¾" NPT entries for power and analog output signal
- Cylindrical enclosure is 5.6" (14.3 cm) in diameter, 7.6" (19.4 cm) L

ELECTRICAL

- 120 or 230 VAC 50/60 Hz or 24 VDC, 10 VA
- Frequency response: 0-100Hz
- Intrinsically safe sensor
- 4-20mA bipolar output
- Full scale output range selectable from ± 0.1nA to ± 1000nA of electrostatic current
- User selectable signal damping

DISPLAY

- LED Display indicates real-time signal and allows navigation through system menus
- Menu selectable output range adjustment
- Menu selectable outputs: Instantaneous DC, Instantaneous AC, Avg. DC, Avg. AC, and device temperature
- All controls and indicators viewable through the enclosure window

REAL-TIME CATALYST FEED MEASUREMENT

The Correflow™ 5430 sensor directly measures catalyst as it feeds into a reactor. The system provides a robust, non-contact measurement of catalyst conveyed by gas or solvent. Polymer manufacturers have substantially improved reaction control using the Correflow for instant detection of catalyst blockages or blow-by to ensure polymer production efficiency and shutdown avoidance.