- ***Point Level Indicators***
- ***Inventory Measurement***
- ***Flow Detection***
- ***Dust Detection***
- ***Aeration & Vibration***

www.binmaster.com

The Most Powerful, Reliable, and Affordable Level, Dry Flow,

SmartBob II Silo Inventory Management System

Inventory tracking system featuring Web-based reporting capabilities. The robust design of the Remote sensor will provide years of maintenance free service in vessels up to 180 feet. This system is capable of measuring solids, liquids, and slurries. Dust, steam, noise, dielectric, temperature, and vessel shape pose no problem to SmartBob II.

The Most Reliable Rotary Level Control You Can Buy...Period

A rotary level control is only as reliable as its motor. Our rotaries are built with a specially designed motor that features "de-energized" operation. The motor shuts down when material is present rather than entering a "stalled" condition. This reduces wear and operating temperature. A built in motor slip-clutch protects the drive gears from damage due to over-rotation. The rotary is designed for controlling solid material storage and flow in bins, vessels, chutes, and conveyers.

PRO Series Capacitance Probes

The PRO Series capacitance sensors provide reliable point level detection and process control for solids, liquids and slurries. PRO Series feature a unique design which doesn't emit RF signals. "Quick-Set" calibration provides simple selection of detection sensitivity. PRO-Shield design ignores material build-up on the sensor probe and guards against false readings. Over 50 probe combinations to choose from.

Single Blade Vibrating Rods

The signal from the electronic circuit excites the single rod of this instrument to vibrate. When material covers the rod the vibration stops. This is sensed by the electronic circuitry which forces the output relay to switch. When the blade becomes uncovered, the vibration will restart and the relay will switch back.

Maintenance Free Continuous Dust Monitoring and Filter Leak Detection

The Particulate Monitor and Transmitter employ a field-proven combination of passive-induction and protective-probe technologies. As particulates flow near and around the probe, minute currents are dynamically induced into the probe by flowing particulates. The DSP processes the signal into an absolute output that is reasonably linear to mass. A protective-layer over the probe ensures reliable operation with all types of particulate including moist powders and highly conductive dust.

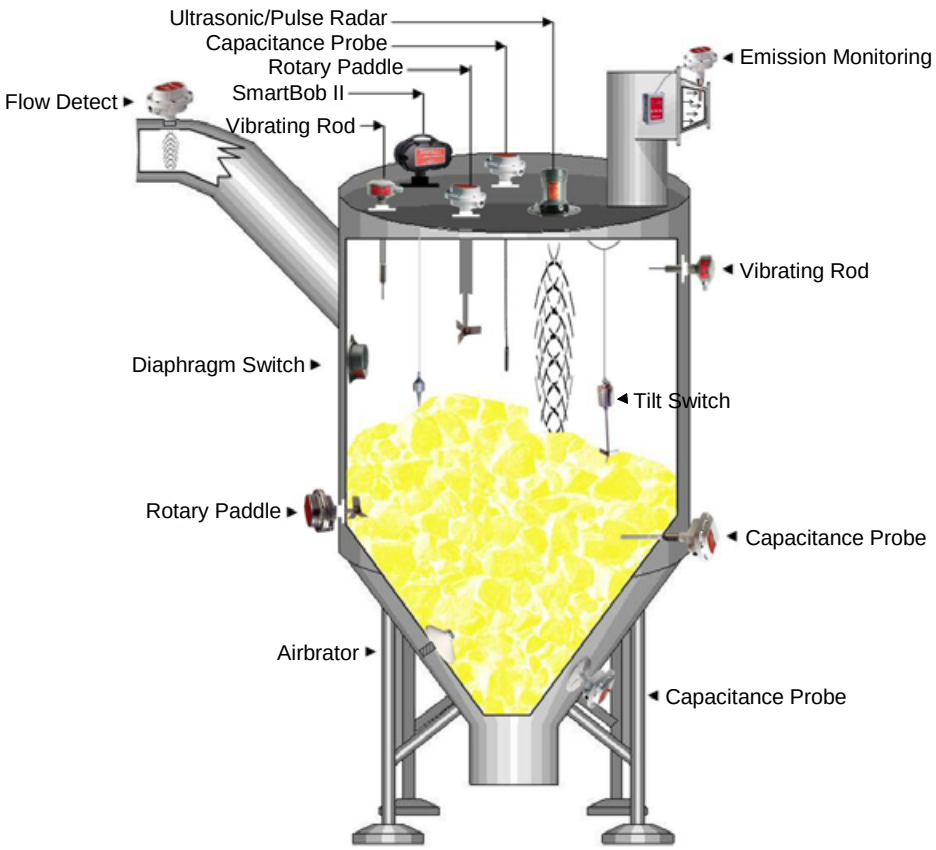
Tilt Switch Level Indicator Used in a Variety of Applications

Tilt switch suspends in a bin, over an open pile or conveyor. When material level rises, the switch tilts and breaks a circuit. Used to detect high level , installed as a plug detector, or suited as a load sensor when positioned over a conveyer belt or open pit.

and Dust Detection Controls

Ultrasonic and Pulse Radar Continuous Non-Contact Level Measuring

The SmartSonic features a variety of ultrasonic transmitters and the SmartWave features a variety of pulse radar transmitters, both with broad processor capabilities that provide remote display and full communication solutions. Both transmitters can be programmed to simply send a 4-20 mA analog output or send data to a PC running a calibration/data logging program using RS-485 communications.

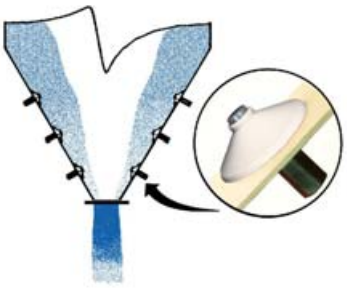


A simple, Low Cost Point Level Control with Lasting Reliability

The Diaphragm Switch provides automatic level indication of free flowing dry materials in high, intermediate, and low level applications. They are designed for use in internal, external and explosion proof applications. The unit operates by sensing material pressing against the diaphragm.

Microwave Solids Flow/No Flow Detection

The Flow Detect 1000 is a high quality industrial grade instrument which senses flow/no flow conditions of solids and powders in pneumatic pipelines, gravity chutes and feeders. Doppler shift technology is used by the sensor to determine material flow. The sensor probe is completely non-intrusive, avoiding contact with the flow stream.



Airbrator Provides Two-Action Flow Aid Through Aeration and Vibration

Airbrator combines aeration and vibration to solve even the most difficult material flow problems. The special design creates a vibration as the air flows between the pad's boot and the bin wall. This provides a very effective flow aid for all types of dry products. Plus, Airbrator pads do not require specific air pressure for operation.

Point Level Indicators

GR, GRE, GRX Rotary Paddle

APPLICATIONS

- ◊ Reliable point level detection for bulk solids including powder, pellets, and granular materials
- ◊ Used in bins, silos, chutes and conveyors
- ◊ Material density from 2 lbs./cu. ft. to over 100 lbs./cu. ft.
- ◊ Feed, seed, grain, food, sand, gravel, concrete, aggregate, plastics, chemical, coal, and many other materials

FEATURES

- ◊ Rugged construction and simple, dependable design
- ◊ De-energizing motor for extended operation life
- ◊ Three bearing shaft assembly reduces wear and increases reliability
- ◊ Internal, bi-directional clutch
- ◊ Various voltages available
- ◊ Explosion Proof Models
- ◊ Terminal strip for quick and easy installation
- ◊ Interchangeable with other rotary units
- ◊ Adjustable Sensitivity

SPECIFICATIONS

Power Requirements: 120/240 VAC 50/60 Hz; 24/ 12 VDC, 60/35 mA
Output Contacts: SPDT 15 Amp 120 VAC
Ambient Operating Temperature: -40°F to +300°F, (-40°C to +149°C)
Pressure: 1/2 micron, 30 PSI
Approvals & Certifications: listed for Class I, Groups C & D and Class II Groups E, F & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 7, 9 & 12
Enclosure: Die cast aluminum
Mounting: 1 1/4" NPT
Conduit Connection: 3/4" NPT
Shaft and components: 316 SS

GRX-Plus Rotary Paddle

APPLICATIONS

- ◊ Reliable point level detection for bulk solids including powder, pellets, and granular materials
- ◊ Used in bins, silos, chutes and conveyors
- ◊ Material density from 2 lbs./cu. ft. to over 100 lbs./cu. ft.
- ◊ Feed, seed, grain, food, sand, gravel, concrete, aggregate, plastics, chemical, coal, and many other materials

FEATURES

- ◊ Easy to wire terminal strip for quick installation
- ◊ Two SPDT 15 amp switches
- ◊ Rugged construction and simple, dependable design
- ◊ De-energizing motor for extended operation life
- ◊ Three bearing drive shaft assembly reduces wear and increases reliability
- ◊ Internal, bi-directional clutch
- ◊ Multiple voltages
- ◊ Interchangeable with other rotary units
- ◊ Adjustable Sensitivity

SPECIFICATIONS

Power Requirements: 120/240 VAC 50/60 Hz; 24/ 12 VDC, 60/35 mA
Output Contacts: Two SPDT 15 Amp 250 VAC
Ambient Operating Temperature: -40°F to +300°F, (-40°C to +149°C)
Pressure: 1/2 micron, 30 PSI
Approvals & Certifications: listed for Class I, Groups C & D and Class II Groups E, F & G Hazardous Locations. Enclosure Type NEMA 4x, 5, 7, 9 & 12
Enclosure: Die cast aluminum, USDA Approved powder coat finish
Mounting: 1 1/4" NPT
Conduit Connection: 3/4" NPT
Shaft and components: 316 SS

GRDX Rotary Paddle

APPLICATIONS

- ◊ Reliable point level detection for bulk solids including powder, pellets, and granular materials
- ◊ Used in bins, silos, chutes and conveyors
- ◊ Material density from 2 lbs./cu. ft. to over 100 lbs./cu. ft.
- ◊ Feed, seed, grain, food, sand, gravel, concrete, aggregate, plastics, chemical, coal, and many other materials

FEATURES

- ◊ Fail-Safe circuitry eliminates spills and process shortages from power failures
- ◊ Rugged construction and simple, dependable design
- ◊ De-energizing motor for extended operation life
- ◊ Three bearing drive shaft assembly reduces wear and increases reliability
- ◊ Internal, bi-directional clutch
- ◊ Multiple voltages
- ◊ Interchangeable with other rotary units
- ◊ Adjustable Sensitivity

SPECIFICATIONS

Power Requirements: 120/240 VAC 50/60 Hz; 24/ 12 VDC, 60/35 mA
Output Relay: DPDT 10 Amp 250 VAC
Ambient Operating Temperature: Electronics, -40°F to +185°F (-40°C to +85°C)
Pressure: 1/2 Micron, 30 PSI
Approvals & Certifications: listed for Class I, Groups C & D and Class II Groups E, F, & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 7, 9 & 12
Enclosure: Die cast aluminum, USDA Approved powder coat finish
Mounting: 1 1/4" NPT
Conduit Connection: 3/4" NPT
Shaft and components: 316 SS

GR-II Maxima Rotary Paddle

APPLICATIONS

- ◊ Reliable point level detection for bulk solids including powder, pellets, and granular materials
- ◊ Used in bins, silos, chutes and conveyors
- ◊ Material density from 2 lbs./cu. ft. to over 100 lbs./cu. ft.
- ◊ Feed, seed, grain, food, sand, gravel, concrete, aggregate, plastics, chemical, coal, and many other materials

FEATURES

- ◊ Fail-Safe circuitry eliminates spills and process shortages from power failures, motor or gear failures. Visual LED indicates sensor status: uncovered, covered and fault conditions
- ◊ Normal and fault status contact
- ◊ De-energizing motor for extended operation life
- ◊ Three bearing drive shaft assembly reduces wear and increases reliability
- ◊ Internal, bi-directional clutch
- ◊ Multiple voltages
- ◊ Interchangeable with other rotary units

SPECIFICATIONS

Power Requirements: 24/120/240 VAC
Output Relay: DPDT 10 Amp 250 VAC; SPDT supervisory 10 Amp 250 VAC normal, fault
Ambient Operating Temperature: Electronics, -40°F to +185°F (-40°C to +85°C)
Pressure: 1/2 Micron, 30 PSI
Approvals & Certifications: listed for Class II, Groups E, F, & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 9 & 12
Enclosure: Die cast aluminum, USDA Approved powder coat finish
Mounting: 1 1/4" NPT
Conduit Connection: 3/4" NPT
Shaft and components: 316 SS

Point Level Indicators

Mini-Rotary
Rotary Paddle

APPLICATIONS

- ◊ Reliable point level detection for bulk solids including powder, pellets, and granular materials
- ◊ Used in small bins, silos, chutes and conveyors
- ◊ Material density from 2 lbs./cu. ft. to over 30 lbs./cu. ft.
- ◊ Feed, seed, grain, food, concrete, plastics, chemical and many other materials

FEATURES

- ◊ Compact design ideal for small bins, hoppers, and feeders
- ◊ Simple to install
- ◊ No calibration required
- ◊ De-Energizing motor extends motor life
- ◊ Motor slip-clutch prevents gear damage
- ◊ Adjustable sensitivity
- ◊ 3/4" NPT mounting
- ◊ Optional sensing paddles

SPECIFICATIONS

Input Voltage: 110/240/24 VAC 50/60 Hz
Power Consumption: 1.5 Watts
Switch: SPDT
Contact Rating: 3A @ 250 VAC
Rotary Speed: 1 RPM
Temperature Range: -4° F to +140° F
Wiring Cable: 18 AWG, 12 inch cable
Mounting: 3/4" PF
Clutch: Magnetic Slip Clutch prevents damage to motor gears
Enclosure : Polycarbonate, NEMA 1
Weight: .77 lbs.

BM-45
Diaphragm Switch

APPLICATIONS

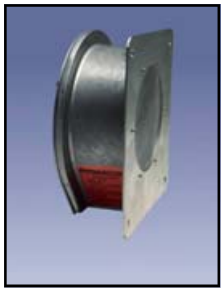
- ◊ Reliable point level detection for free flowing dry materials
- ◊ Used in bins, vessels, and some plugged chute applications
- ◊ Material density from 20 lbs./cu. ft.
- ◊ Feed, seed, grain, food, rubber, plastics, light powders, granules and many other materials.

FEATURES

- ◊ Rugged construction and simple design, very economical point level detection
- ◊ Neoprene, or silicone diaphragm material
- ◊ Internal or external mount
- ◊ Multiple voltages

SPECIFICATIONS

Switch Ratings: 15 Amps @125, 250 or 480 VAC, 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 1/2 A @ 125 VDC, 1/4 A @ 250 VDC
Operating Temperature: -40°F to +300° F, (-40°C to +149°C)
Housing Enclosure: Die cast aluminum
Mounting: Internal or External, 16 ga. galvanized mounting plate



BM-65
Diaphragm Switch

APPLICATIONS

- ◊ Reliable point level detection for free flowing dry materials
- ◊ Use in bins, vessels, and some plugged chute applications
- ◊ Material density from 20 lbs./cu. ft.
- ◊ Feed, seed, grain, food, rubber, plastics, light powders, granules and many other materials.

FEATURES

- ◊ Explosion Proof listed for Class II, Groups E, F & G
- ◊ Rugged construction and simple design, very economical point level detection
- ◊ Neoprene, silicone, or Hypalon diaphragm material
- ◊ Internal or external mount
- ◊ Multiple voltages

SPECIFICATIONS

Switch Ratings: 15 Amps @125, 250 or 480 VAC, 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 1/2 A @ 125 VDC, 1/4 A @ 250 VDC
Operating Temperature: -40°F to +300°F (-40°C to +149°C)
Approvals & Certifications: Listed for Class II, Groups E, F, & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 9 & 12
Housing Enclosure: Die cast aluminum
Mounting: Internal or External, 16 ga. galvanized mounting plate

BM-T
Tilt Switch

APPLICATIONS

- ◊ Reliable high level detection for dense bulk solids
- ◊ Use in bins, vessels, chutes,
- ◊ Silos or over conveyers and open pits where conventional level devices cannot be mounted
- ◊ Material density of 15 lbs./cu. ft. and greater
- ◊ Grain, sand, gravel, concrete, aggregate, coal, and many other materials

FEATURES

- ◊ Economical high level point detection
- ◊ Rugged construction and easy installation
- ◊ Simple design with one moving part
- ◊ Switch activated at 15 degrees
- ◊ Float paddle option available

SPECIFICATIONS

Switch Ratings: 15 Amps @125, 250 or 480 VAC, 1/8 HP @ 125 VAC, 1/4 HP @ 250 VAC, 1/2 A @ 125 VDC, 1/4 A @ 250 VDC
Operating Temperature: -40°F to +300°F, (-40°C to +149°C)
Housing: Die cast aluminum
Mounting: Suspended by flexible hanger

Point Level Indicators

PRO I & PRO Auto Cal Capacitance Probe

APPLICATIONS

- ◊ Point level detection and process control for solid, liquid and slurry materials
- ◊ Used in bins, vessels, tanks, chutes and conveyers
- ◊ Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain, mining, foundries, wood/paper processing, many other materials.

FEATURES

- ◊ "Quick-Set" simple calibration
- ◊ Unsurpassed sensitivity 0.5 pF
- ◊ PRO Auto Cal includes auto-calibration and external test features
- ◊ PRO-Shield compensates for material build-up
- ◊ Operates below RF range, temperature stable calibration and protection from RF interference
- ◊ Fail-Safe, switch selectable high/low
- ◊ Adjustable time delay to 10 seconds
- ◊ Optional sensing probes: Delrin or Teflon sleeved, food grade, flush mount, solid and flexible extension
- ◊ Visual LED indicates sensor status: uncovered, covered or power failure

SPECIFICATIONS

Power Requirements: 120/240 VAC, 50/60 Hz ±15% , 5 VA
Output Relay: DPDT 10 Amp at 250 VAC
Ambient Temp: -40°F to +185°F (-40°C to +85°C)
Int Bin Temp: to 250°F Delrin (121°C); to 500°F Teflon (260°C)
Pressure: 500 PSI
Approvals & Certifications: NEMA 4X, 5 and 12
Housing Enclosure: Die cast aluminum, USDA approved powder coat finish
Mounting: 3/4" NPT 316 SS Standard; 1 1/4" NPT & Sanitary Flange Optional
PRO Auto-Cal: Calibration initiated through the cover with magnetic applicator, or internal push button, 5-switch selectable sensitivity settings with external test feature

PRO X & PRO II X Capacitance Probes

APPLICATIONS

- ◊ Point level detection and process control for solid, liquid and slurry materials
- ◊ Used in bins, vessels, tanks, chutes and conveyers where explosion rated sensor is necessary
- ◊ Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain, mining, foundries, wood/paper processing, many other materials.

FEATURES

- ◊ "Quick-Set" simple calibration
- ◊ Unsurpassed sensitivity 0.5 pF
- ◊ PRO-Shield compensates for material build-up
- ◊ Operates below RF range, temperature stable calibration and protection from RF interference
- ◊ Fail-Safe, switch selectable high/low
- ◊ Adjustable time delay to 10 seconds
- ◊ Optional sensing probes: Delrin or Teflon sleeved, food grade, flush mount, solid and flexible extension
- ◊ Internal LED indicates material in contact with probe

SPECIFICATIONS

Power Requirements: 120/240 VAC, 50/60 Hz ±15%, 5VA
Output Relay: DPDT 10 Amp at 250 VAC
Ambient Temp: -40°F to +185°F (-40°C to +85°C)
Int Bin Temp: to 250°F Delrin (121°C); to 500°F Teflon (260°C)
Pressure: 500 PSI
Approvals & Certifications:
PRO X- listed for Class I, Groups C & D and Class II Groups E, F & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 7, 9 & 12
PRO IIX- listed for Class II, Groups E, F, & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 9 & 12
Housing Enclosure: Die cast aluminum, USDA approved powder coat finish
Mounting: 3/4" NPT 316 SS Standard; 1 1/4" NPT & Sanitary Flange Optional

PRO III X Capacitance Probe

APPLICATIONS

- ◊ Point level detection and process control for solid, liquid and slurry materials
- ◊ Used in bins, vessels, tanks, chutes and conveyers for top mount applications or in materials that are free flowing
- ◊ Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain, mining, foundries, wood/paper processing, many other materials.

FEATURES

- ◊ Quick-Set" simple calibration
- ◊ Unsurpassed sensitivity 0.5 pF
- ◊ Operates below RF range, temperature stable calibration and protection from RF interference
- ◊ Fail-Safe, switch selectable high/low
- ◊ Adjustable time delay to 15 seconds
- ◊ Optional sensing probes: Delrin or Teflon sleeved, food grade, flush mount, solid and flexible extension
- ◊ Internal LED indicates material in contact with probe

SPECIFICATIONS

Power Requirements: 120 or 240 VAC, 50/60 Hz ±15%, 1.5VA
Output Relay: DPDT 5 Amp at 250 VAC
Ambient Temp: -40°F to +185°F (-40°C to +85°C)
Int Bin Temp: to 250°F Delrin (121°C); to 500°F Teflon (260°C)
Pressure: 500 PSI
Approvals & Certifications: listed for Class II, Groups E, F, & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 9 & 12
Housing Enclosure: Die cast aluminum
Mounting: 3/4" NPT 316 SS Standard; 1 1/4" NPT & Sanitary Flange Optional

PRO Flush Capacitance Probe

APPLICATIONS

- ◊ Point level detection and process control for solid, liquid and slurry materials
- ◊ Used in bins, vessels, tanks, chutes and conveyers where non-intrusive flush mounted sensor is necessary
- ◊ Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain, mining, foundries, wood/paper processing, many other materials.

FEATURES

- ◊ "Quick-Set" simple calibration
- ◊ Unsurpassed sensitivity 0.5 pF
- ◊ PRO-Shield compensates for material build-up
- ◊ Operates below RF range, temperature stable calibration and protection from RF interference
- ◊ Fail-Safe, switch selectable high/low
- ◊ Adjustable time delay to 10 seconds
- ◊ Optional High-Temperature sensing probe
- ◊ Visual LED indicates sensor status (on select models): uncovered, covered or power failure

SPECIFICATIONS

Power Requirements: 120/240 VAC, 50/60 Hz ±15% , 5 VA
Output Relay: DPDT 10 Amp at 250 VAC
Ambient Temp: -40°F to +185°F (-40°C to +85°C)
Int Bin Temp: 150°F Standard (65°C); 450°F High Temp (232°C)
Pressure: 250 PSI
Approvals & Certifications: Available with Class I, Groups C & D and Class II Groups E, F & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 7, 9 & 12
Housing Enclosure: Die cast aluminum, USDA approved powder coat finish
Mounting: Flush

Point Level Indicators

PRO Remote Capacitance Probe

APPLICATIONS

- ◊ Point level detection and process control for solid, liquid and slurry materials
- ◊ Used in bins, vessels, tanks, chutes and conveyers with high temperature/ high vibration conditions; electronics may be located up to 75' from sensing probe
- ◊ Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain, mining, foundries, wood/paper processing, many other materials.

FEATURES

- ◊ "Quick-Set" simple calibration
- ◊ Unsurpassed sensitivity 0.5 pF
- ◊ PRO-Shield compensates for material build-up
- ◊ Operates below RF range, temperature stable calibration and protection from RF interference
- ◊ Fail-Safe, switch selectable high/low
- ◊ Adjustable time delay to 10 seconds
- ◊ Optional sensing probes: Delrin or Teflon sleeved, food grade, flush mount, solid and flexible extension
- ◊ Internal LED indicates material in contact with probe

SPECIFICATIONS

Power Requirements: 120/240 VAC, 50/60 Hz ±15%, 5VA
Output Relay: DPDT 10 Amp at 250 VAC
Ambient Temp: -40°F to +185°F (-40°C to +85°C)
Int Bin Temp: to 250°F Delrin (121°C); to 500°F Teflon (260°C)
Pressure: 500 PSI
Approvals & Certifications: Intrinsically Safe, NEMA 4X, 5, & 12
Probe Enclosure: Die cast aluminum, USDA approved powder coat finish
Electronic Enclosure: Polycarbonate or Steel
Mounting: 3/4" NPT 316 SS Standard; 1 1/4" NPT & Sanitary Flange Optional

PRO DC Capacitance Probe

APPLICATIONS

- ◊ Point level detection and process control for solid, liquid and slurry materials
- ◊ Used in bins, vessels, tanks, chutes and conveyers where low voltage DC power is necessary
- ◊ Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain, mining, foundries, wood/paper processing, many other materials.

FEATURES

- ◊ "Quick-Set" simple calibration
- ◊ Unsurpassed sensitivity 0.5 pF
- ◊ PRO-Shield compensates for material build-up
- ◊ Operates below RF range, temperature stable calibration and protection from RF interference
- ◊ Fail-Safe, switch selectable high/low
- ◊ Adjustable time delay to 10 seconds
- ◊ Optional sensing probes: Delrin or Teflon sleeved, food grade, flush mount, solid and flexible extension
- ◊ Internal LED indicates material in contact with probe

SPECIFICATIONS

Power Requirements: 12/24 VDC, ±15%, 5VA
Output Relay: DPDT 10 Amp at 250 VAC
Ambient Temp: -40°F to +185°F (-40°C to +85°C)
Int Bin Temp: to 250°F Delrin (121°C); to 500°F Teflon (260°C)
Pressure: 500 PSI
Approvals & Certifications: NEMA 4X, 5 and 12
Housing Enclosure: Die cast aluminum, USDA approved powder coat finish
Mounting: 3/4" NPT 316 SS Standard; 1 1/4" NPT & Sanitary Flange Optional

PRO II X 3A Capacitance Probe

APPLICATIONS

- ◊ Point level detection and process control for solid, liquid and slurry materials
- ◊ Used in bins, vessels, tanks, chutes and conveyers where 3-A and/or USDA approvals are necessary
- ◊ Dairy products, food, pharmaceuticals, and many other materials needing 3-A/USDA approvals

.

FEATURES

- ◊ 3-A approved, food grade designed
- ◊ "Quick-Set" simple calibration
- ◊ Unsurpassed sensitivity 0.5 pF
- ◊ PRO-Shield compensates for material build-up
- ◊ Operates below RF range, temperature stable calibration and protection from RF interference
- ◊ Fail-Safe, switch selectable high/low
- ◊ Adjustable time delay to 10 seconds
- ◊ Internal LED indicates material in contact with probe

SPECIFICATIONS

Power Requirements: 120/240 VAC, 50/60 Hz ±15%, 5VA
Output Relay: DPDT 10 Amp at 250 VAC
Ambient Temp: -40°F to +185°F (-40°C to +85°C)
Int Bin Temp: to 250°F Delrin (121°C)
Pressure: 200 PSI
Approvals & Certifications: listed for Class II, Groups E, F, & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 9 & 12. 3-A Dairy Food Grade
Housing Enclosure: Die cast aluminum, USDA/3-A approved powder coat finish
Mounting: 1" or 2.5" Sanitary Flange

PRO HTRC-20 Capacitance Probe

APPLICATIONS

- ◊ Point level detection and process control for solid, liquid and slurry materials
- ◊ Used in bins, vessels, tanks, chutes and conveyers when process temperature exceed 500°F
- ◊ Plastics, chemicals, coal/fly ash, concrete, food ingredients, pharmaceuticals, feed/grain, mining, foundries, wood/paper processing, many other materials.

FEATURES

- ◊ "Quick-Set" simple calibration
- ◊ Unsurpassed sensitivity 0.5 pF
- ◊ PRO-Shield compensates for material build-up
- ◊ Operates below RF range, temperature stable calibration and protection from RF interference
- ◊ Optional length sensing probes available
- ◊ Fail-Safe, switch selectable high/low
- ◊ Adjustable time delay to 10 seconds
- ◊ Internal LED indicates material in contact with probe

SPECIFICATIONS

Power Requirements: 120 or 240 VAC, 50/60 Hz ±15%, 5VA
Output Relay: DPDT 5 Amp at 250 VAC
Ambient Temp: -40°F to +185°F (-40°C to +85°C)
Int Bin Temp: to 1112°F (600°C)
Pressure: 100 PSI
Approvals & Certifications: NEMA 4X, 5 and 12
Probe Enclosure: Die cast aluminum, USDA approved powder coat finish
Electronic Enclosure: Metal
Mounting: 1 1/4" NPT

Point Level Indicators

CompactPRO Capacitance Probe

APPLICATIONS

- ◊ Point level detection and process control in liquid, powder, granular, and palletized materials.
- ◊ Used in smaller bins, vessels, tanks, and chutes
- ◊ Plastics, chemicals, concrete, food ingredients, pharmaceuticals, feed/grain, wood/paper processing, many other materials.

FEATURES

- ◊ Works where Proximity Switches don't
- ◊ PRO-Shield feature ignores material build-up
- ◊ LED on housing indicates sensor status
- ◊ Easy "One-Time" calibration
- ◊ Compact Design; simple to install
- ◊ For metal, plastic or other non-metallic vessels

SPECIFICATIONS

Power Requirements: 120, 240 VAC or 24 VDC
Output Relay: SPDT 5 amp at 250 VAC
Ambient Temp: -40ºF to +185ºF (-40ºC to +85ºC)
Int Bin Temp: to 240ºF (116ºC);
Pressure: 150 PSI
Approvals & Certifications: NEMA 4X, 5, and 12
Enclosure: PVC
Probe: CPVC
Mounting: 1" NPS (1 1/4" adapter available)
LED: Indicates material presence or absence

VR-21 Vibrating Rod

APPLICATIONS

- ◊ Suitable for high and low level indication, or plugged chute detection
- ◊ Detects extremely light, fluffy materials and materials with low dielectric constants
- ◊ Materials densities from 1.25lb./cu. ft.
- ◊ Carbon black, plastics, fly ash, feed, seed, grain, food, chemical, and other materials

FEATURES

- ◊ Unique "blade" probe design reduces false alarms caused by buildup
- ◊ No calibration required
- ◊ Wear and maintenance free
- ◊ No moving parts
- ◊ Three sensitivity adjustments
- ◊ Universal Power Supply
- ◊ Self-Cleaning sensor
- ◊ Remote electronics available
- ◊ Insertion length adjustable from 7.37" to 19.5'
- ◊ Switch selectable high/low fail-safe
- ◊ Universal power supply

SPECIFICATIONS

Power Requirements: Wide range 20-250V AC/DC
Relay: SPDT relay, 5A @ 250 VAC (optional DPDT relay available)
Time Delay: 1 second from stop of vibration 2 to 5 second for start of vibration
Ambient Temp: -4ºF to +150ºF (-ºC to +65ºC)
Int Bin Temp: -40ºF to +190ºF (-40ºC to +88ºC)
Pressure: 500 psi
Enclosure: Die cast aluminum NEMA 4X, 5 and 12
Probe: 304 SS, 7.37" - 19.5' insertion length
Mounting: 1 1/2" NPT
Materials densities: From 1.25 lb./cu. ft

CVR-600 Vibrating Rod

APPLICATIONS

- ◊ Compact designed for reliable point level sensing in small bins and hoppers that contain plastics, food, seed, chemicals, and many other powder and bulk solid materials.
- ◊ Material densities from 3.5 lb./cu. ft.

FEATURES

- ◊ Compact design ideal for small bins, hoppers, and feeders
- ◊ Single rod design
- ◊ No calibration required
- ◊ Wear and maintenance-free
- ◊ No moving parts
- ◊ High and low level fail-safe
- ◊ Three sensitivity adjustments
- ◊ Universal Power Supply
- ◊ Self-Cleaning sensor
- ◊ 1" NPT mounting
- ◊ 6" insertion length
- ◊ Remote electronics available
- ◊ Process temperatures up to 300ºF
- ◊ Screw –top enclosure

SPECIFICATIONS

Power Requirements: Wide range 20-250V AC/DC
Power Consumption: 3VA
Relay: SPDT 5A 250 VAC
Time Delay: 1 second from stop of vibration 2 to 5 second for start of vibration
Ambient Temp: -4ºF to 150ºF (-40º C to +65ºC)
Int Bin Temp: to 175ºF standard (1ºC); to 300ºF high temp (ºC)
Max. Pressure: 145 psi
Wiring Cable: 1/2"
Mounting: 1" NPT
Enclosure: Die cast aluminum NEMA 4X, 5 and 12
Probe: AISI 304 Stainless Steel
Material Density: From 3.5 lbs./cu. ft.

SHT-120 Vibrating Rod

APPLICATIONS

- ◊ Suitable for high and low level indication, or plugged chute detection
- ◊ The SHT-Series has been built specifically for higher process temperatures up to 500ºF (250ºC).
- ◊ Detects extremely light, fluffy materials and materials with low dielectric constants
- ◊ Materials densities from less than 1.25 lb./cu. ft.
- ◊ Carbon black, plastics, fly ash, feed, seed, grain, food, chemical, and many other materials

FEATURES

- ◊ Single Stainless Steel rod design
- ◊ No calibration required
- ◊ Wear and maintenance-free
- ◊ No moving parts
- ◊ High and low level fail-safe
- ◊ Three sensitivity adjustments
- ◊ Universal Power Supply
- ◊ Self-Cleaning sensor
- ◊ 1 1/2" NPT mounting
- ◊ Remote electronics available
- ◊ Lagged design to locate electronics away from heat source

SPECIFICATIONS

Power Requirements: Wide range 20-250V AC/DC
Power Consumption: 3VA
Relay: SPDT 5A 250 VAC (optional DPDT relay available)
Time Delay: 1 second from stop of vibration 2 to 5 second for start of vibration
Ambient Temp: -4ºF to 150ºF (-40º C to +65ºC)
Int Bin Temp: to 500ºF (260ºC)
Max. Pressure: 145 psi
Wiring Cable: 1/2"
Mounting: 1 1/2" NPT
Enclosure: Die cast aluminum NEMA 4X, 5 and 12
Probe: AISI 304 Stainless Steel
Material Density: From 3.5 lbs./cu. ft.

Alarm Panel and Continuous Level Monitors

APPLICATIONS

BM-12 Point Level Alarm Panel

- ◊ Designed to monitor the level of multiple bins or tanks from one convenient location.
- ◊ Operator can tell when a bin is full, partially full, or empty
- ◊ Indicates a level point by means of an eye catching signal light and audible alarm
- ◊ Operates with a variety of point level Indicators

SmartBob II Cable-Based Inventory

- ◊ Rugged, simple, and dependable inventory measurement system for solid, liquid, and slurry materials
- ◊ Works in dusty and very demanding applications
- ◊ Direct Internet based reporting capability
- ◊ Vendor Managed Inventory
- ◊ Plastics, chemicals, coal, concrete, food ingredients, pharmaceuticals, feed/grain, aggregates and many other materials

SmartSonic Ultrasonic Transmitter

- ◊ Continuous non-contact level monitoring of tanks, bins, and silos.
- ◊ Narrow beam design using a wide frequency bandwidth to enhance operation in difficult applications
- ◊ Smart signal processing to eliminate unwanted echoes
- ◊ Measuring range from 4 inches up to 90 feet
- ◊ Liquids, plastics, grain, sand, aggregate, and many more applications

SmartWave Pulse Radar Transmitter

- ◊ Continuous non-contact level monitoring of tanks, bins, and silos.
- ◊ Self-adjusting
- ◊ Measuring range up to 100 feet using 6.3 GHz operating frequency
- ◊ Adapts to adverse conditions
- ◊ Food, beverage, water/wastewater, chemicals (with vapor), plastics, sand, grain, aggregate, hot asphalt, and many more applications

FEATURES

- ◊ Available in 4 to 24 Stations
- ◊ NEMA 4X
- ◊ Front Panel LED Alarm & Power Indication
- ◊ Indicates a level point by means of an eye catching signal light and audible alarm
- ◊ Modules on the alarm panel can also be interconnected to signal an external common alarm (horn)

- ◊ Economical, regardless of size of installation
- ◊ 4th generation Web-Based PC program
- ◊ Output and display accessories
- ◊ Requires no field calibration or adjustment
- ◊ Advanced microprocessor based system with built-in measurement reliability for one to 100 vessels
- ◊ Minimal ongoing operation and maintenance cost
- ◊ Explosion-proof rating standard
- ◊ RS 485 Network with wiring distance up to 4000 ft.
- ◊ Simple daisy chain wiring makes for easy installation
- ◊ Wireless options available

- ◊ Power control operation in transmitter
- ◊ Easy two point push-button calibration
- ◊ Output 4 to 20 mA signal
- ◊ RS-232 or RS-485 communications with PC Based ulility/diognostic program
- ◊ Built-in temperature compensation
- ◊ Logarithmic receiver with very high dynamic range
- ◊ Uniform polar pattern
- ◊ Self-cleaning operation

- ◊ Low Noise
- ◊ Accurate and Reliable
- ◊ High Sensitivity
- ◊ Self-adjusting amplitude and width of microwave pulse
- ◊ Easy two point push-button calibration
- ◊ Output 4 to 20 mA signal
- ◊ RS-232 or RS-485 communications with PC Based ulility/diognostic program
- ◊ Uniform polar pattern
- ◊ No mounting influence

SPECIFICATIONS

Input Voltage: 120 VAC ± 10%, 50/60 Hz, 3 VA. 240 VAC ± 10%, 50/60 Hz, 3 VA. 24-48 VDC, 2 W max.
Relay: SPDT, 2A 240 VAC
Enclosure: Type 4X
Operating Temperature: -4 to 158º F
Warranty: One Year

Power Requirements: 120/240 VAC 50/60 Hz
Ambient Temp: -40ºF to +185ºF (-40ºC to +85ºC)
In Bin Temp: to 500º F (260ºC)
Measurement Range: 180'
Measurement Rate: 2' per second
Accuracy: 0.1%
Mounting: 3"- 8 NPT
Enclosure: Molded Polycarbonate
Approvals & Certifications: listed for Class II, Groups E, F, & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 9 & 12

Power Requirements: AC units 120 VAC 60 Hz or 240 VAC 50Hz; DC units 12 to 30 VDC 0.07 A
Ambient Temp: -40ºF to +140ºF (-40ºC to +60ºC)
In Bin Temp: to 200ºF (93ºC)
Operation: Ultrasonic
Frequency: 25 to 148 KHz
Measurement Range Liquids: 90' max.
Measurement Rate Solids: 40' max.
Accuracy: ± 0.25%
Beam Angle: 6º - 12º conical at –3dB
Temp Compensation: Continuous in transducer
Output: 4-20 mA and RS-485
Mounting: 3" NPT
Enclosure: PVC-94V0
Approvals & Certifications: NEMA 4X (IP65)

Power Requirements: AC units 120 VAC 60 Hz or 240 VAC 50Hz; DC units 12 to 30 VDC 0.07 A
Ambient Temp: -40ºF to +140ºF (-40ºC to +60ºC)
In Bin Temp: PP rod to 140ºF (60ºC), PTFE rod to 400ºF (204ºC)
Operation: Pulse Radar
Frequency: 6.3 GHz
Measurement Range Liquids: 100' max.
Measurement Rate Solids: 50' max.
Accuracy: ± 0.25%
Transmitter Power: 50 uW average
Antenna: Dielectric rod (PP & optional PTFE)
Output: 4-20 mA and RS-485
Mounting: 2" NPT
Enclosure: Aluminum-94V0 (optional SS)
Approvals & Certifications: NEMA 4X (IP65), explosion proof units available

Flow Detection, Dust Detection and Aeration

Flow Detect 1000
Microwave Flow Detection

APPLICATIONS

- The Flow Detect 1000 is a high quality, industrial grade instrument which senses flow/no-flow conditions of solids and powders in pneumatic pipelines, gravity chutes and feeders.
- It is virtually unaffected by humidity, ambient light, pressure, vacuum, temperature, noise, vibration, electrical signals, non-metallic build-up or dust.
- Used with food processing, plastics, grain, cement/aggregate, paper, mining and many other materials

FEATURES

- Indicates flow/no flow conditions of solids and powders in pipelines, chutes, and feeders
- Non-intrusive flush mounting senses through non-metallic surfaces
- Non-contact operation eliminates flow stream interruption and equipment wear
- Control settings can be made without accessing the remote sensor probe
- Fail-safe power protection and loop fault monitor
- "Quick-Set" selectable, single turn calibration
- Explosion proof design

SPECIFICATIONS

Power Requirement: 120 or 240 VAC 50/60 Hz, 5 VA
Operating Temp Remote: -22°F to +158°F (-30°C to +70°C)
Operating Temp Console: -31°F to +158°F (-35°C to +70°C)
Process Temp: 250°F (121°C) if ambient air temp. is below 150°F (65°C)
Detection Range: Up to 10'
Frequency: 24.125 Ghz, less than 1mW/cm³ (OSHA limit is 10mW/cm³)
Remote Enclosure: Die cast Aluminum
Remote Approvals: listed for Class II, Groups E, F, & G Hazardous Locations. Enclosure Type NEMA 4X, 5, 9 & 12
Output: DPDT dry contacts, 5A @ 240 VAC, or 30 VDC
Sensitivity Adjustment: High/Low selectable
Time Delay: Single turn 0.1-15 sec
Fail-Safe: Alarm for flow/no-flow

BM-30 T-1P
Particulate Transmitter

APPLICATIONS

- Reliable dust collector emissions monitor and leak detector
- Designed for general maintenance planning and process protection applications for baghouses, cartridge filters, bin vents and cyclones
- Metals, chemicals, fly-ash, plastics, pharmaceuticals, food, utilities, mining, pulp/paper, and many more applications

FEATURES

- Comply with US and International EPA regulations
- Simple absolute output r correlate to mg/m³ or gr/cf
- Performs in tough applications (kilns, smelters, carbon black)
- Prevents the escape of valuable materials
- Simple, low cost two-wire installation for PLCs
- Repeatable in all applications
- Adjustable linear or logarithmic output scaling enables trending both the baseline emissions and high peak emissions caused by developing leaks

SPECIFICATIONS

Power Requirements: From 4-20 mA loop
Supply Voltage: 18-28 VDC
Output: 500 Ohms Max at 24 VDC
Output Isolation: 500 VDC Process to Loop
Ambient Temp: -15°F to +160°F (-25°C to +70°C)
Int Bin Temp: to 250°F standard (121°C); to 450°F (232°C) with optional remote electronics
Pressure: 10 PSI standard; 100 PSI with optional remote electronics
Approvals & Certifications: Ordinary/Gen Purpose
Housing Enclosure: Cast aluminum enclosure NEMA 4X
Sensor Rod: 304 SS and Teflon
Mounting: 1/2" NPT standard; flange & quick-clamp optional

BM-30 LGX
Particulate Monitor

APPLICATIONS

- Reliable dust collector emissions monitor and leak detector
- Designed for general maintenance planning and process protection applications for baghouses, cartridge filters, bin vents and cyclones
- Metals, chemicals, fly-ash, plastics, pharmaceuticals, food, utilities, mining, pulp/paper, and many more applications

FEATURES

- Comply with US and International EPA regulations
- Simple absolute output r correlate to mg/m³ or gr/cf
- Performs in tough applications (kilns, smelters, carbon black)
- Prevents the escape of valuable materials
- Convenient split-architecture design
- Repeatable in all applications
- Large LED display provides both logarithmic analog bar graph and an absolute digital readout. The log scale enables observation of baseline and peaks

SPECIFICATIONS

Power Requirements: 120/240 VAC 50/60 Hz, or 24 VDC
Output Relay: Two SPDT, 5A @ 240 VAC
4 –20 mA: Optional
Ranging: Log or linear
Resolution: 5.0 pA
Operating Temp Sensor: Standard 250° F (120°C); Optional 450°F (232°C)
Operating Temp Console: -13°F to +160° F (-25°C to + 70°C)
Pressure: Standard 10 PSI; optional 100 PSI
Approvals & Certifications: Std Ordinary/Gen Purpose; optional Class I, II & III, Div 1 & II (Intrinsically Safe-CSA)
Housing Enclosure: Cast aluminum enclosure NEMA 4X
Mounting: 1/2" NPT standard; Optional ANSI flange & quick-clamp
Sensor Cable: 300' max length, 450°F max temp

Airbrator
Aeration & Vibration

APPLICATIONS

- Eliminate packing and maintain flowability of finely-ground dry bulk materials
- Indoor and outdoor applications in bins and storage vessels
- Use in high temperature, corrosive applications
- Flour, seeds, grain, flakes, sawdust, cement, PVC resin, fly ash, carbon black, lime, sand, cornstarch, gypsum, sugar and other materials

FEATURES

- Special design provides two action flow aid through aeration and vibration
- Requires fewer pads than diffuser type because of unique design
- Uses high or low pressure
- Not affected by moisture or temperature
- Self-cleaning
- Simple to install in any type vessel
- Suitable for abrasive material
- Check valve to keep material out of air line

SPECIFICATIONS

Pad Material: Durable molded silicone or neoprene rubber construction
Shaft: Stainless Steel Center Shaft
In Bin Temp: to 250°F (121°C)
Air pressure: From 5 PSIG to 60 PSIG
Air Consumption: Dependent on application

Product Selection Chart

	Point Level Indicators													Continuous Level			Flow & Dust		
	PRO III X Cap Probe	PRO Remote Cap Probe	PRO Flush Cap Probe	PRO I & II X Cap Probe	PRO HTRZ 2.0 Cap Probe	CompactPRO Cap Probe	GR & GR-Plus Rotary	GRD & GR-II Rotary	VR-21 Vibrating Rod	CVR-600 Vibrating Rod	SHT-120 Vibrating Rod	Diaphragm Switch	Tilt Switch	SmartBob II	SmartSonic	SmartWave	Flow Detect 1000	BM-30 T Part. Monitor	BM-30 LGX Part.
Material																			
Powder	√	√	√	√	√	√	√	√	√		√		√	√	*	*	√	√	√
Granular	√	√	√	√	√	√	√	√	√	√	√	√	√	√	*	*	√	√	√
Slurry	√	√	√	√	√	*	*	*						√	√	√			
Liquid	√	√	√	√	√	√			*					√	√	√			
Material Density																			
Low	*	*	*	*	*	*	√	√	√		√		√	√	√		√	√	√
High	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Material Moisture																			
Low	*	*	*	*	*	*	√	√	√	√	√	√	√	√	√		√	√	√
High	√	√	√	√	√	√	√	√					√	√	√	√	√	√	√
Temperature																			
High		√			√		√				√			√					√
Pressure																			
Atmospheric	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Low	√	√	√	√	√	√	√	√	√	√	√		√	√		√	√	√	√
Medium	√	√	√	√	√				√	√	√		√	√					
Vibration																			
Low	√	√	√	√	√	√	√	√	√	√	√	√	√	√				√	√
High		√			√		√					√	√	√					
Material Coating																			
Minimal	√	√	√	√	√	√	√	√	√		√		√	√	√	√	√	√	√
Heavy Build Up		√		√	√								√	√		√	√	√	√
Corrosive																			
Low	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
High	√	√	√	√	√	√			√	√	√	√			√	√	√	√	√
Installation																			
Top Mounted	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√	√
Side Mounted	√	√	√	√	√	√	√	√	√	√	√	√					√	√	√
Atmosphere																			
Dust	√	√	√	√	√	√	√	√	√	√	√	√	√	√			√	√	√
Steam									√	√	√		√	√		√			
Vapor	√	√	√	√	√	√	√	√	√	√	√	√	√	√		√	√	√	√

√ - Applicable * - Consult Factory

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