MONITOR TECHNOLOGIES LLC

Practical solutions... at every level!

Level Measurement and Process Control Instrumentation For Powder/Bulk Solids Applications

Solids Flow
Moisture Measurement
Bin Aeration
Particle Emission

Point Level

Continuous Level

Providing more than just a product...

We are dedicated to providing practical solutions backed by a customer service approach that emphasizes the "personal connection" to you, our customer. We are committed to listen to your feedback with the goal of delivering a matchless combination of product quality, ease of purchase, low total cost and effective post-sale product support. Services that we provide in support of our products include:

- Fast access to a worldwide network of sales and technical personnel
- Expert advice based on 55 years of experience in powder and bulk solids
- Exceptional product literature and award winning tools to simplify product selection
- 2-Year Warranty on most items
- Full-featured website and blog packed full with information and solutions
- Service department capable of in-factory product repairs or field service
- On-time, quick delivery for most standard products
- ISO 9001 registered quality system that continually pursues "best business practices"

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	Continuous Level		Point Level
			
	Flexar®	**SiloPatrol® SE**	**SafePoint®**
	GUIDED WAVE RADAR	CABLE-BASED SMART SENSOR	ROTARY PADDLE, FAIL-SAFE
FEATURES	▼ Real-Time Continuous Output ▼ Focused / Directed Energy Field ▼ TDR Technology Unaffected by Dust, Bulk Density and Temperature ▼ No Moving Parts ▼ Smart RS-485 and/or Analog Output ▼ Measuring Range (Dependent on Target Material Dielectric Constant): ● Up to 100ft (30m) for Solids ● Up to 200ft (60m) for Liquids	▼ Sensor Performance Unaffected by Material Composition...Works in Tough and Dusty Conditions ▼ Intuitive, wireless set-up / configuration using a free app on an Android™-based device with Bluetooth® ▼ Modbus™ connectivity ▼ Automatic or On-Demand Measurements with Lock Out Capability ▼ Easy to Install & Virtually Maintenance Free ▼ Smart Sensing Reliability Combining Optic and Hall-Effect Technologies ▼ Measuring Range Up to 150 ft (46m)	▼ Self–Validating “TRUE” Fail-Safe Design with Microcontroller-Based Reliability ▼ Patented Magnetic Sensing Technology ▼ Maximized Sensor Life via Motor Shut-Off Feature ▼ Externally Viewable LED Sensor Status Indicator (Except Hazardous Location Units) ▼ Independent Sense and Fault Outputs ▼ Enclosure Provides Ample Wiring Access and a Twist ON/OFF Cover
OPTIONS	▼ Hazardous Location Approvals for Gases and Dust (Consult Factory) ▼ Flexible or Rigid Probe Variations ▼ Split Architecture Configuration for High Temperatures or High Vibration ▼ Local Indication (HMI²) ▼ PC Based Server / Client Software (**Silo**Track™) with Multi-user Access via LAN or Internet ▼ **Wireless**EZ Communication Interface	▼ Hazardous Location Approvals for Dust ▼ Outputs: Smart RS-485 with Modbus Connectivity or Analog ▼ Local Indication (HMI²) ▼ PC Based Server / Client Software (**Silo**Track™) with Multi-user Access via LAN or Internet ▼ **Wireless**EZ Communication Interface ▼ 0°, 5° or 10° Freeze-Resistant Mounting Flange ▼ Auxiliary Output Enclosure (AOE) with Relay and/or Analog Outputs	▼ Hazardous Location Approvals for Gases and Dust ▼ Variety of Paddle Designs for Material Detection and Sensor Longevity ▼ High Temperature Unit (Top Mount) ▼ Pipe Extension Models ● 144” (365cm) Maximum Length ▼ Field Adjustable Cable Extension ● 78” (2m) Maximum Length
PRACTICAL APPLICATIONS	▼ Use when instantaneous level measurement is required. ▼ Focused / directed energy will prevent undesired detection of obstructions within the vessel. ▼ Perfectly suited for a variety of liquid level measurements. *Practical Tip* Flexar’s capability to penetrate dust clouds makes it suitable for applications using pneumatic conveying such as flour, cement and flyash.	▼ Use when target material characteristics may change thereby eliminating need for re-calibration. ▼ Reliable inventory management system. ▼ Great economical choice when accurate yet infrequent measurements are required. *Practical Tip* SiloPatrol provides reliable long-range measurement of materials with low dielectric constants such as plastics.	▼ Use “true” fail-safe product if undetected sensor failure could result in catastrophic process problem. ▼ LED provides means for personnel to view sensor status without visiting control room. ▼ Capable of sensing materials as light as 5 lbs/ft³ (80kg/m³). *Practical Tip* SafePoint’s independent “sense” and “fault” outputs can be wired in series to simplify wiring while still providing “true” fail-safe performance.
BASIC SPECIFICATIONS	**Power:** 100-240 VAC; 24 VAC/DC **Ambient Temp:** -5° to +120°F (-20° to +50°C) **Int. Bin Temp:** Ordinary Locations -20° to +300°F (-30 to +150°C); Hazardous Loc. -20° to +392°F (-30° to +200°C) **Output:** RS-485; Analog 4-20mA **Mounting:** 1-1/2” NPT, 1-1/2” BSP, ANSI or DIN Flanges **Pressure:** 580 PSI (40 bar) **Approvals:** Ordinary Locations; CE Mark; $CSA_{US/C}$: Class I & II (Consult Factory) **Enclosure Protection:** NEMA 4; IP66	**Power:** 115 VAC; 230 VAC ±15% **Ambient Temp:** SMU: -40° to +150°F (-40° to 65°C); HMI²/AOE: -4° to +131°F (-20° to 55°C) **Int. Bin Temp:** Up to 300°F (149°C) **SMU Output:** Smart: RS-485 half-duplex, isolated Analog: 4-20 mA, isolated Pulse: 1 pulse per 1/10’ or dm, isolated **Mounting:** Flange with 7.0” (177.8mm) bolt circle **Approvals:** $CSA_{US/C}$: Ordinary Locations; $CSA_{US/C}$: Class II & III; **ATEX:** Ⓔx II 1/2 D c, Ex tb IIIC T75°C Db IP66, (Ta -40°C TO +65°C); **IECEx:** Ex tb IIIC T75°C Db IP66, (Ta -40°C TO +65°C); **CE Mark** **Enclosure Protection:** NEMA 4X; IP66	**Power:** 115 VAC; 230 VAC; 24 VAC/DC **Ambient Temp:** -40° to +150°F (-40° to +65°C) **Int. Bin Temp:** to 250°F (121°C) With Hi-Temp Unit: 250-500°F (121-260°C) without air-cooling 500-750°F (260-400°C) with air-cooling [0.5 psig / 2.14 CFM] **Sense Output:** SPDT, 5A @ 250 VAC/30 VDC **Fault Output:** SPDT, 5A @ 250 VAC/30 VDC **Mounting:** 1-1/4" NPT or 1-1/2” BSPT **Pressure:** 30 PSI (2 bar) max **Approvals:** $CSA_{us/c}$: Ordinary Locations; $CSA_{us/c}$: Class I & II; **ATEX:** Ⓔx II 1/2 D c T 85°C, ExtD A20/A21 T 85°C, (Ta -40°C to +65°C), IP6x; **IECEx:** DIP A21 IP6X T_A 100°C, -40°C to +65°C; **CE Mark** **Enclosure Protection:** NEMA 4; IP66
AVAILABLE DOCUMENTS	▼ Product Bulletins - 353P, 393P (SiloTrack™), 393Q (HMI²), 393R (AOE), 393S (WirelessEZ) ▼ Installation & Operation Manuals - 354A, 344B (HMI²), 344H (WirelessEZ), 344J (SiloTrack™), 344F (AOE)	▼ Product Bulletins - 343P, 393P (SiloTrack™), 393Q (HMI²), 393R (AOE), 393S (WirelessEZ) ▼ Installation & Operation Manuals - 344A, 344N (Modbus Map), 344B (HMI²), 344F (AOE), 344H (WirelessEZ), 344J (SiloTrack™)	▼ Product Bulletin - 253 ▼ Installation & Operation Manual - 254

Point Level

KA, KAX

ROTARY PADLE

- Basic Electro-Mechanical Operation
- Maximized Sensor Life via Motor Shut-Off Feature
- DC Powered Models Use Longer Life AC Motor
- Economical and Versatile
- Enclosure Provides Ample Wiring Access and a Twist ON/OFF Cover

Practical Tip

Rugged, aluminum enclosure is superior in applications where a fragile plastic enclosure is vulnerable to harsh installation conditions.

- Hazardous Location Approvals for Gases and Dust (Model KAX)
- Variety of Paddle Designs for Material Detection and Sensor Longevity
- High Temperature Unit (Top Mount)
- Pipe Extension Models
  - 144" (365cm) Maximum Length
- Field Adjustable Cable Extension
  - 78" (2m) Maximum Length
- Up To 3 SPDT Outputs

- Excellent when facility personnel are expected to perform in-field troubleshooting and maintenance with virtually no prior training.
- Low-cost and long-life can be achieved by specifying a DC powered model. A voltage converting circuit permits use of a reliable AC motor.
- Capable of sensing materials as light as 5 lbs/ft^3 (80kg/m^3).

Power: 115 VAC; 230 VAC; 24 VAC; 48 VAC; 12/24 VDC
Ambient Temp: -40˚ to +200˚F (-40˚ to +93˚C)
Int. Bin Temp: to 300˚F (150˚C)
With Hi-Temp Unit:
300-500˚F (150-260˚C) without air-cooling
500-750˚F(260-400˚C) with air-cooling[0.5 psig / 2.14 CFM]
Output: Up to (3) SPDT, 15A @ 250 VAC
Mounting: 1-1/4" NPT or 1-1/2" BSPT
Pressure: 30 PSI (2 bar) max
Approvals: **KA - UL & CSA:** Ordinary Loc.; **CE Mark**
KAX - UL & CSA: Class I & II; **CE Mark**;
ATEX: Ⓔx II 1/2 D c T 100˚C, ExtD A20/A21 T 100˚C, (Ta -40˚C to +93˚C), IP6x; **IECEx:** DIP A21 IP6X T_A 100˚C, -40˚C to +93˚C; **Enclosure Prot:** NEMA 4; IP66

- Product Bulletin - 213
- Installation & Operation Manual - 214

TrueCap® MK-2

RF CAPACITANCE

- Maximized Reliability via Smart Sensing Algorithms Including "Self-Validating" Fail-Safe Protection
- Simple, Convenient Push-Button Calibration and Test
- Driven Shield Technology Overcomes Material Build-up
- Externally Viewable LED Sensor Status Indicator (Ordinary Loc. Unit)
- Universal Power Supply
- Superior 0.5pF Sensitivity
- Enhanced Temp. Compensation

- Hazardous Location Approvals for Gases and Dust
- Remote Calibration Module
- Split Architecture Model for High Temperatures or High Vibration
- Variety of Probe Variations for Chemical Compatibility, Food Grade, Abrasion Resistance

Practical Tip

Use RF capacitance sensors where a residual material build-up on probe would otherwise indicate a false material level indication.

- Smart sensing maximizes reliability with material having low dielectrics and applications with wide temperature swings.
- LED provides means for personnel to view sensor status without visiting control room.
- Excellent performance in solids over 15 lbs/ft^3 (240kg/m^3).

Power: Universal 48-240 VAC, 24-48 VDC
Ambient Temp: -40˚ to +150˚F (-40˚ to +65˚C)
Int. Bin Temp: Alum mount: to +176˚F (80˚C); SS mount: to 400˚F (204˚C); Split architecture probe: to 450˚F (232˚C)
Output Relay: DPDT, 5A @ 250 VAC or 30 VDC
Mounting: 1-1/4" NPT or 1-1/2" BSPT alum, Optional 3/4" NPT 316SS
Pressure: 50-150 PSI (3.5 - 40 bar)
Approvals: $CSA_{US/C}$: Ordinary Locations; $CSA_{US/C}$: Class I & II; CE Mark
Enclosure Protection: NEMA 4; IP66

- Product Bulletin - 413
- Installation & Operation Manual - 434

TrueCap® MK-2e

- Economical Design
- Potentiometer-Adjusted Calibration / Sensitivity and Delay
- Driven Shield Technology Overcomes Material Build-up
- Externally Viewable LED Sensor Status Indicator (Ordinary Loc. Unit)
- Superior 0.5pF Sensitivity
- Temperature Compensation

- Hazardous Location Approvals for Gases and Dust
- Split Architecture Model for High Temperatures or High Vibration
- Variety of Probe Variations for Chemical Compatibility, Food Grade, Abrasion Resistance

- Perfect for tight budgets where excellent performance is still required but without the advanced features that drive-up cost.
- LED provides means for personnel to view sensor status without visiting control room.
- Excellent performance in solids over 15 lbs/ft^3 (240kg/m^3).

Power: 115 VAC; 230 VAC; 24 VDC
Ambient Temp: -40˚ to +150˚F (-40˚ to +65˚C)
Int. Bin Temp: Alum mount: to +176˚F (80˚C); SS mount: to 400˚F (204˚C); Split architecture probe: to 450˚F (232˚C)
Output Relay: SPDT, 5A @ 250 VAC or 30 VDC
Mounting: 1-1/4" NPT or 1-1/2" BSPT alum, Optional 3/4" NPT 316SS
Pressure: 50-150 PSI (3.5 - 40 bar)
Approvals: $CSA_{US/C}$: Ordinary Locations; $CSA_{US/C}$: Class I & II; CE Mark
Enclosure Protection: NEMA 4; IP66

- Product Bulletin - 413
- Installation & Operation Manual - 464

PROXIMITY SWITCH

- Compact Potted Packaging
- Versatile Application Sensing
- Electronic Solid State Outputs
- AC Model (PAC-30U) in 2-Wire Series Configuration
- DC Models (PDC-30) in 3-Wire Sinking / Sourcing Configurations
- Field Selectable Normally Open or Normally Closed
- Economical
- LED Status Indicator
- Adjustable Calibration

- Mounting Well Converts 30mm to 1/4" NPT, Delrin®
- PDC-30 DC Models: 10-40 VDC
  - NPN (Current Sinking) Output
  - PNP (Current Sourcing) Output
- PAC-30U AC Model: 20-265 VAC

Practical Tip

Proximity Switch is ideal when mounting space is limited. Potted electronics protects circuitry in high vibration applications.

- Use for sensing materials that are solid, liquid, conductive, non-conductive, in direct contact or non-contact, slow moving or in part counting mode.
- A good choice when the output is required to be electronic, bounceless, long-life, and easily interfaced to other electronic equipment.

Power: PAC-30U: 20-265 VAC; PDC-30: 10-40 VDC
Ambient Temp: -13˚ to +176˚F (-25˚ to 80˚C)
Output: PAC-30U: N.O./N.C. field selectable; PDC-30: NPN or PNP
Mounting: 30mm thread
Load Current: PAC-30U: 10-500mA; PDC-30: 0-200mA
Approvals: UL & CSA: Ordinary Locations (PAC-30U Only); CE Mark
Enclosure Protection: NEMA 4; IP67

- Product Bulletin - 453
- Installation & Operation Manual - 454

Point Level

PZP

VibraRod™

G, GX, GX-SS

TC-1, TC-3

VIBRATORY

- Unaffected by Changes in Environment and Materials
- Exceptional Sensitivity with No Calibration Required
- Diamond Shape Single-Probe Design
- Universal Power Supply
- Fail-Safe on Power Failure
- Selectable Sensitivity

- Probe Extensions Available
  - Cable Extensions
  - Pipe Extension
- Split Architecture Model for High Temperatures or High Vibration

Practical Tip
PZP's exceptional sensitivity can reliably sense lightweight material such as expanded polystyrene beads and fumed silica (Aerosil).

- Ideal choice when material properties or environmental conditions are variable
- Excellent sensitivity for materials down to 1.25 lbs/ft^3 (20 kg/m^3)
- Tip sensitive probe eliminates false signals caused by product bridging between probe and vessel wall.

Power: Universal 20-250 VAC, 20-250 VDC
Ambient Temp: -22˚ to +140˚F (-30˚ to 60˚C)
Int. Bin Temp: Std Models: to 176˚F (80˚C); Hi-Temp, Remote Electronics Probe: to 302˚F (150˚C)
Output Relay: SPDT, 5A @ 250 VAC
Mounting: 1-1/2" NPT, 304ss
Pressure: 150 PSI (10.4 bar)
Approvals: Ordinary Locations
Enclosure Protection: NEMA 4; IP65

- Product Bulletin - 523
- Installation & Operation Manual - 524

- Economical Design
- Unaffected by Changes in Environment and Materials
- Good Sensitivity with No Calibration Required
- Single-Probe Design
- Universal Power Supply
- Fail-Safe on Power Failure
- Local Status Indicating Light
- Twist On/Off Cover
- Switch Selectable Time Delay

- Hazardous Location Approvals for Dust
- Probe Extensions Available
  - Cable Extensions
  - Pipe Extension
- Plastic or Metallic Housing

- Economical vibratory solution
- Ideal choice when material properties or environmental conditions are variable
- Good sensitivity for materials down to 3.12 lbs/ft^3 (50 kg/m^3)
- Tip sensitive probe eliminates false signals caused by product bridging between probe and vessel wall.

Power:
Ordinary Loc. Unit: 20-255 VAC/DC
Haz. Loc. Unit:
85-265VAC, 120-375 VDC;
16-40 VAC, 19-55 VDC
Ambient Temp: -22˚ to +122˚F (-30˚ to 50˚C)
Int. Bin Temp: -22˚ to +230˚F (-30˚ to 110˚C)
Output Relay: SPDT, 8A @ 250 VAC
Mounting: 1-1/2" NPT or 1-1/2" BSP
Pressure: 363 PSI (25 bar)
Approvals: ATEX: ⟨Ex⟩ II 1/2 D; CE Mark
Enclosure Protection: NEMA 6; IP67

- Product Bulletin - 533
- Installation & Operation Manuals - 534B (O/L), 534C (H/L)

DIAPHRAGM TYPE

- Basic Pressure-Sensing Operation
- Electrically-Passive Sensing Method
- Reliable, Durable, and Low Maintenance Operation
- Low-Profile, Non-Intrusive Mounting
- Adjustable Sensitivity
- Over-Pressure Protection

- Hazardous Location Approvals for Dust
- Ultra-Sensitive Switch Option
- Choice of Neoprene®, Teflon®, or Stainless Steel Diaphragm
- Hycar® Diaphragm Cover For Abrasive Materials

Practical Tip
G/GX is an ideal choice when minimizing ownership price is the primary objective.

- Excellent when facility personnel are expected to perform in-field troubleshooting and maintenance with virtually no prior training.
- Provides "green" operation with no power consumption
- Low-profile eliminates need for internal baffles.
- Good performance in solids from 10 - 60 lbs/ft^3 (160 - 960 kg/m^3)
- Plugged chute applications

Int. Bin Temp:
Neoprene: -40˚ to +180˚F (-40˚ to 82˚C)
Teflon®: -40˚ to +250˚F (-40˚ to 121˚C)
321SS: -40˚ to +250˚F (-40˚ to 121˚C)
Output: SPDT, 15A @ 250 VAC
Mounting: Flange with 7.5" (190.5mm) bolt circle
Pressure: Atmospheric only
Approvals: UL & CSA: Ordinary Loc.; UL & CSA: Class II; CE Mark
Enclosure Protection: NEMA 4; IP56

- Product Bulletin - 623
- Installation & Operation Manual - 624

TILT SWITCHES

- Basic Angular-Sensing Operation
- Electrically-Passive, Mercury-Free Sensing Method
- Durable, Low Maintenance and Low-Cost Performance
- No Calibration Required...Output Switch Closes When Tilted Approximately 17˚
- Easily Adjustable Sensing Point by Repositioning Hanging Height

- Ball Type Actuators available to limit material contact with tilt switch enclosure (TC-3 only)

Practical Tip
Keep hanger for tilt switch as short as possible to maintain 17˚ detection sensitivity.

- Basic operation and minimal parts create a low-cost and easily maintained solution.
- Provides environmentally-safe, "green" operation with no power consumption
- **TC-3:** 15 - 60 lb/ft^3 (240-960 kg/m^3)
- **TC-1:** 45+ lb/ft^3 (>720 kg/m^3)
- Ideal for high level detection
- Works for open stock piles

Operating Temp:
TC-3: -40˚ to +175˚F (-40˚ to 80˚C)
TC-1: -40˚ to +250˚F (-40˚ to 121˚C)
Output:
TC-3: SPDT, 10A @ 250 VAC
TC-1: SPDT, 15A @ 250 VAC
Mounting:
TC-3: suspend by chain, 3/4" (19mm) ID eyebolt
TC-1: suspend by chain, 1-3/32" (27.7mm) ID eyebolt
Approvals: Ordinary Locations; CE Mark
Enclosure Protection: NEMA 4; IP56

- Product Bulletin - 633
- Installation & Operation Manual - 634

	Solids Flow Detection	Mass Flow Measurement	Moisture Measurement
			
	SFD-2 & SFI	**QuantiMass™**	**HumiCore™**
	MICROWAVE	MICROWAVE DOPPLER	HIGH FREQUENCY FIELD
FEATURES	▼ Non-Contact Flow Detection ▼ Non-Intrusive Flush Mounting ▼ Excellent Sensitivity ▼ Externally Viewable LED Sensor Status Indicator (SFD-2) ▼ Maintenance Free - No Moving Parts ▼ Relay Output (SFD-2) or Analog Output (SFI) ▼ Hazardous Location Approvals for Dust (Sensors Only)	▼ Continuous In-Line Mass Flow Measuring Without the Use of Weight Scales ▼ Measure Flow of Quantities in Pneumatic Conveying & Free-Falling Processes ▼ Microwave Doppler Effect Technology ▼ Sturdy, Non-Intrusive Design Minimizes Maintenance ▼ Compact Size for Easy Installation Into Existing Processes ▼ Fast Measuring & Adjustable Sensitivity ▼ Polyamide 6.6 Sensor Process Face	▼ Continuous In-Line Moisture Measurement System Provides Real-Time Data ▼ Ensure Product Quality Through Moisture Control...Provide Optimal Moisture Content for Finished Product ▼ High Frequency Field Technology ▼ Measures Moisture Inside the Material Core...Not Just the Surface ▼ Compact Size; Easy Installation and Calibration ▼ Integrated Temperature Compensation
OPTIONS	▼ Electrical Enclosure for SFD-2 PS/Conditioning Board ▼ Saddle Clamp and Gasket ▼ 1 1/2" Mounting Adapters ▼ Tri-Clamp Adapters ▼ 1 1/4" NPT Lock Nut **Practical Tip** SFI provides an analog output indicating a "general indication" of flow consistency. It is not intended to measure flowrate.	▼ Choose from ***Ultra*** Version with a Controller for Local Interface & Data Logging or **PRO** Version with DIN Transmitter ▼ Standard or High Temperature Styles ▼ 304 SS or 316 SS Sensor Housing Construction **Practical Tip** QuantiMass is ideal for monitoring material flow rates to verify blending mixture ratios.	▼ Choose from ***Ultra*** Version with a Controller for Local Interface & Data Logging or **PRO** Version with DIN Transmitter ▼ 115 VAC / 24 VAC/DC -or- 230 VAC / 24 VAC/DC ▼ Polyacetal or Ceramic Process Surface ▼ Variety of Sled Plates **Practical Tip** HumiCore is ideal for automating the drying or moisturizing processes to minimize energy costs and maximize profit.
PRACTICAL APPLICATIONS	▼ Use in flow applications where the non-contact attributes of microwave technology can eliminate challenges associated with temperature, light, acoustics and pressure. ▼ Non-intrusive mounting will allow natural flow of material, and will eliminate any risk of material being damaged by striking a sensing probe. ▼ Senses Flow / No Flow conditions in gravity chutes and pneumatic lines	▼ Monitor for variable flow quantities due to disturbances like different densities. ▼ Measure for proper mixing of additives. ▼ Non-contact, in-line mass flow measurement system for most bulk solids and many dusts (Ex. coal dust, saw dust). ▼ Suitable for powders, dust, pellets, and granular up to 0.75 inch (2cm).	▼ Installation locations include: conveyor belts, screw conveyors, silos, funnels, etc. ▼ Suitable for grain, feed, seed, cereal, flour, sugar, coal, sand, wood shavings, dried food, fertilizer, tobacco, powder, pigments, plastic granules, sand, cement & more. ▼ Limit dusty areas by monitoring & controlling material moisture levels to reduce cleaning and/or filtering costs.
BASIC SPECS	**Either Sensor:** **Ambient Temp:** -40˚ to +185˚F (-40˚ to 85˚C) **Process Temp:** to +250˚F (121˚C) **Pressure:** Teflon®: 75 PSI (5bar) intermittent Ryton® (or equiv.): 300 PSI (20 bar) **Mounting:** 1-1/4" NPT **Approvals:** $CSA_{US/C}$, Class II **Enclosure Protection:** NEMA 4; IP66 **SFD-2 Power Supply:** **Power:** 100-240 VAC **Operating Temp:** -40˚ to +158˚F (-40˚ to 70˚C) **Output Relay:** DPDT, 5A @ 250 VAC, 30 VDC **Approvals:** $CSA_{US/C}$: Ordinary Loc.; CE Mark **SFI Only:** **Output:** Analog 4-20mA, Detection range based on application	**Process Data:** **Pipe Diameter:** 1" to 12" (25mm to 300mm) **Particle Size:** .001 micron to 0.75" (1nm to 20mm) **Moisture:** Depending on the product **Pressure:** Up to 6 bar **Temperature:** -4 to +194°F (-20 to +90°C) (Higher temperatures on request) **Sensor Data:** **Material-touched Parts:** Polyamide 6.6 & 304SS or 316SS **Housing Material:** 304 SS or 306 SS **Protection Class:** IP 65 **Sensor Dimensions:** 11.06"L x 2.36"W x 2.36"H (281 x 60 x 60mm) **Accuracy:** 1 to 3% typical **Power:** Controller - 115 VAC / 24 VAC/DC; 230 VAC / 24 VAC/DC. Transmitter - 24 VAC/DC	**Process Data:** **Process Temperature:** +14 to +194°F (-10 to +90°C); up to +284°F (140°C) with cooling **Sensor Data:** **Measuring Surface:** Polyacetal or Ceramic **Housing Material:** 304 SS **Protection Class:** IP67 **Sensor Dimensions:** 4.57" dia. x 2.02" H (116mm dia. x 51.5mm) **Accuracy:** 0.1 to 0.3% typical **Interconnection:** 4 wires, RS-485, 3,280 ft (1,000m) max **Power:** Controller - 115 VAC / 24 VAC/DC; 230 VAC / 24 VAC/DC. Transmitter - 24 VAC/DC
AVAILABLE DOCUMENTS	▼ Product Bulletin - 813 ▼ Installation & Operation Manuals - 824 (SFD), 834 (SFI)	▼ Product Bulletins - 843P (Pro), 843R (Ultra) ▼ Installation & Operation Manual - 844	▼ Product Bulletins - 753P (Pro), 753R (Ultra) ▼ Installation & Operation Manual - 754

Particle Emission

Bin Aeration

Scan QR-Code with a smartphone to visit Monitor's website - www.monitortech.com

DustAlarm®

TRIBOELECTRIC

- Economical Sensing Alternative to Opacity Detection
- Exceptional and Reliable Sensitivity via Proven Triboelectric Technology
- Relay Output with Sensitivity Adjustment, Signal Smoothing and Time Delay Functions
- Quick-Disconnect Connector

- Custom Probe Length Over 12" (305mm) up to 36" (914mm)
- Split Architecture Configuration for High Temperatures or High Vibration

Practical Tip

DustAlarm is ideal for detecting early failure of a filter within a baghouse before a catastrophic tear creates an environmental disaster.

- Provides monitoring of dust levels where it is critical to safety, maintenance, equipment operation, plant efficiency, environment, etc.
- Ideal for exhaust ducts on dust collectors, baghouses and cyclones.
- Use triboelectric technology as a cost-effective alternative to opacity monitoring.
- Exceptional sensitivity is capable of detecting minute amounts of material (less than what is visible by the human eye).

Power: 105-130 VAC; 210-260 VAC; 10-32 VDC
Ambient Temp: -20˚ to +150˚F (-30˚ to 65˚C)
Process Temp: Up to +450˚F (235˚C) with split architecture probe
Output Relay: 2 SPDT; 5A @ 250 VAC or 30 VDC
Mounting: Quick Disconnect, 1" Trade Size
Pressure: 30 PSI (2 bar) maximum
Approvals: Ordinary Location; CE Mark
Enclosure Protection: NEMA 4; IP65

- Product Bulletin - 723
- Installation & Operation Manual - 724

AIR PAD / EVASSER

BIN AERATION

- Aeration Alternative to Vibration
- Quiet, Inexpensive, Non-Electrical Aeration Solution
- Simple Designs Facilitate Trouble-Free Operation
- Evasser Provides An Air Flow That Tends to Sweep the Vessel Wall
- Air Pad Comes in the Industry-Standard Low-Profile Footprint

- Multiple Configurations Available
- Boot Options for Evasser:
  - White, Food Grade
  - Black, General Purpose
- Rectangular Air Pads:
  - Cotton or Fiberglass Diffuser

Practical Tip

Aerators can be used to fluidize material in place of a mechanical vibrator which can cause material to settle and increase the material's density.

- Air-based solutions eliminate potential damage to surrounding equipment (such as level controls) that could be inflicted by pneumatic or electric vibrators.
- Aerators can reduce installation and maintenance expense associated with mechanical vibration systems.
- Solve problems such as arching, bridging, and rat-holing which reduce discharge flow.

Int. Bin Temp:
Air Pads:
to +180˚F (82˚C) w/external mounting kit;
to +650˚F (343˚C) w/internal mounting kit with fiberglass diffuser
Evasser:
Neoprene Boot: to +175˚F (80˚C);
Bronze Insert: to +900˚F (480˚C)
Pressure Range: Typically 3-5 PSI (0.2-0.35 bar)
Air Consumption: dependent on application (Consult Factory)

- Product Bulletins - 933 / 943
- Installation & Operation Manuals - 934B / 944

Practical solutions... at every level!

Dear Customer,

On behalf of our world-wide network of dedicated employees, sales representatives and distributors, I welcome you to Monitor Technologies. At Monitor, we strive to provide you with practical solutions at every level, whether it is a product or service. We believe that a practical solution in today's market is not just a plain, basic, mundane idea, but rather, a creative innovation wrapped in common sense, delivering the "exact" value that you require.

- Are features and functions your focus? We offer a variety of practical solutions from the very simple-to-operate to others that have complex functions designed for specific needs.
- Is cost-of-ownership your focus? We offer a variety of practical solutions in a wide range of prices.
- Is technical support your focus? Our world-wide team is motivated and equipped to support you. If you prefer independent study, we have a large number of resources on our website and blog.

We enjoy the privilege and challenge of providing a practical solution at every level of interaction whether it is a personal visit, email or simply your experience browsing our website. If you have not yet had the opportunity to experience "Monitor", contact us today and let us put our solutions to work for you!

All the best,

Craig Russell

Craig Russell
President, Monitor Technologies LLC

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