



## **Field Sensors for Bag-filler / Dust Collector / Scrubber System / Material Handling**

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### Temperature Sensor with Transmitter

Make : Pixsys, Srl

#### Specification :

- ❖ Input : RTD (PT100/ PT1000)
- ❖ Output : 4...20mA
- ❖ Length : 500 mm (other on request)
- ❖ OD : 8 mm
- ❖ Process connection : 1/2" BSP thread, adjustable
- ❖ Temp. range : 0 - 300 degrees C (Programmable)



### Air Differential Pressure Transmitter

Model : 984M (Make : Beck GmbH)

#### Specification :

- ❖ Range : 0 ... 250 mmWC / 0 ... 500 mmWC (other on request)
- ❖ Supply voltage : 18 ... 30 VAC / VDC
- ❖ Output : 4 ... 20 mA or 0 ... 10 V, 3 wire
- ❖ With switching output
- ❖ Linearity :  $\leq \pm 0.5\%$  FS, min.  $\pm 1$  Pa
- ❖ Protection class : IP54
- ❖ Working and storage temperature : -20 .....+70 °C
- ❖ Hose connection with 6 mm outer diameter
- ❖ Display : optional

Application : Bag Filter Status



### Digital Differential Pressure Transmitter

Model : 985M (Make : Beck GmbH)

#### Specification :

- ❖ Range : 0 ... 250 mmWC / 0 ... 500 mmWC
- ❖ Supply voltage : 18 ... 30 VAC / VDC
- ❖ Output : 4 ... 20 mA or 0 ... 10 V, 3 wire
- ❖ With switching output
- ❖ Linearity :  $\leq \pm 0.5\%$  FS, min.  $\pm 1$  Pa
- ❖ Working temperature : -20 ... 70°C
- ❖ Protection class : IP65
- ❖ Display : Optional
- ❖ Process connection P1 and P2 : Stainless steel -Hose pipe connection with 4 / 6 mm outer diameter

Application : Bag Filter Status



### Digital Pressure Transmitter with Switching Outputs

Model : DST400 (Make : Pixsys, Srl)

#### Specification :

- ❖ Range : 0 to 10 bar (other on request)
- ❖ Outputs : 2 x digital transistor PNP max 500 mA
- ❖ 1 x analog selectable 4...20 mA / 0...10 V
- ❖ Process connection : 1/4" thread
- ❖ Power supply : 15...30 VDC
- ❖ Display : 4 digit 1...3 decimal points
- ❖ Pressure unit selectable : Bar, Psi, mPa, kPa, inWC, mmWC
- ❖ Electric connection : 5 Pole male M12x1
- ❖ Accuracy :  $\pm 0,5\%$  F.S. @25°C
- ❖ Sensor working temperature : -25 ... + 85°C
- ❖ Rescalable till 1:2 full scale

Application : Compressed Airline



### Digital Differential Pressure Transmitter

Model : DPT7000-R8 (Make : HK Instruments Oy)

#### Specification :

- ❖ Range : 100, 150, 200, 250, 300, 400, 500, 700 mmWC (Field selectable via jumper)
- ❖ Power supply : 24 VAC or VDC,  $\pm 10\%$
- ❖ Output : 4 to 20 mA or 0 to 10 V, 3-wire
- ❖ Protection standard : IP 54
- ❖ Display (Optional)

Application : Bag Filter Status



### Adjustable Pressure Switch

Model : 901P (Make : Beck GmbH)

#### Specification :

- ❖ Positive pressure range : 1 ... 6 bar (other on request)
- ❖ Max. operating pressure : 25 bar
- ❖ Diaphragm material : NBR
- ❖ Process connection : 1/4", BSP thread
- ❖ Material : Brass
- ❖ Accessories : IP65 cover cap

Application : Compressed Airline



### Air Differential Pressure Switch - Protection Class IP65

Model : 930.8x (Make : Beck GmbH)

#### Specification :

- ❖ Pressure range : 500 – 2500 PA (50-250 mmWC)
- ❖ Switch type : SPDT (1 NO + 1 NC)
- ❖ Operating temperature range : -20°C to +85°C
- ❖ Hose connection : 6 mm(OD)

Application : Bag Filter Status



### Air Differential Pressure Switch

Model : 930.8x (Make : Beck GmbH)

#### Specification :

- ❖ Pressure range : 500 –2500 PA (50-250 mmWC)
- ❖ Switch type : SPDT (1 NO + 1 NC)
- ❖ Protection class : IP54
- ❖ Operating temperature range : -20°C to +85°C
- ❖ Hose connection : 6 mm (OD)

Application : Bag Filter Status



### Pressure Transmitter

Model : TFP40 C (Make : Trumen)

#### Specification :

- ❖ Pressure range : 0 to 10 bar
- ❖ Output signal : 4...20 mA
- ❖ Accuracy : 0.5% FS
- ❖ Mechanical connection : G 1/2" thread, SS
- ❖ Electrical connection : Connector DIN43650
- ❖ Operating temperature range : -20 to +85 degree C

Application : Compressed Air Line/ Utility



### Digital Differential Pressure Gauge with 2 Relay Outputs

Model : 990M (Make : Beck GmbH)

#### Specification :

- ❖ Pressure range : 0-250 mmWC (other on request)
- ❖ Pressure unit : Pascal (kPa); mbar; mmWC
- ❖ Power supply : Screw terminals 24 VAC/VDC
- ❖ Output : 4 ... 20 mA or 0 ... 10 V, 3-wire
- ❖ Switching output : Two adjustable relay switching outputs with a maximum switching capacity of 250VAC/5A
- ❖ Display : Red 7-segment LED display, -4 figure
- ❖ Accuracy :  $\leq \pm 1\%$  of FS
- ❖ Process connection P1 and P2 : 4 mm and 6mm hose connection
- ❖ Protection class : IP20
- ❖ Other mounting provision : MS Enclosure - IP 65 with SS process connection

Note : 3 relay output also available on request

Application : Bag Filter Status



## Differential Pressure Gauge

**Model :** DPG (Make : HK Instruments Oy)

### Specification :

- ❖ Range : 0-300 mmWC
- ❖ Mounting diameter : 110mm

**Application :** Bag Filter Status



## Digital Differential Pressure Transmitter

**Model :** PS17 (Make : Halstrup-walcher GmbH)

### Specification :

- ❖ Pressure range : 1 kPa/2.5 kPa/5 kPa/10 kPa (selectable)
- ❖ Supply voltage: 15 ... 32 VDC, two-wire
- ❖ Output : 4 ... 20 mA
- ❖ Protection class : IP67
- ❖ Operating temperature : 0 ... 50°C
- ❖ Pressure ports for tubing : NW 4 or 6 mm
- ❖ Display : 3 1/2 digits

**Application :** Bag Filter Status



## Portable Digital Manometer + Air Velocity Meter

**Model :** EMA 200 (Make : Halstrup-walcher GmbH)

### Specification :

- ❖ Range :  $\pm 2$  kPa ( $\pm 200$  mmWC)
- ❖ Velocity range : 5 ... 58 m/s
- ❖ Display : 3 1/2" Digit, LCD
- ❖ Accuracy :  $\pm 0.5\%$  of max. value
- ❖ Operating temperature : 0 ... 50°C
- ❖ Power supply : 9 V battery with calibration certificate

### Accessories:

- ❖ L - shape pitot tube
- ❖ Length : 600 mm
- ❖ MOC : Stainless steel
- ❖ Process connection : 6 mm hose

**Application :** Testing and Commissioning Purpose



## Digital Differential Pressure Transmitter

**Model :** PS27 (Make : Halstrup-walcher GmbH)

### Specification :

- ❖ Pressure range : 1 kPa / 2.5 kPa / 5 kPa / 10 kPa (selectable)
- ❖ Supply voltage : 15 ... 32 VDC, two-wire
- ❖ Output : 4 ... 20 mA
- ❖ Display : LCD, 4-digits
- ❖ Protection class : IP65
- ❖ Operating temperature : 0 ... 50°C
- ❖ Pressure ports for tubing : NW 4 or 6 mm

**Application :** Bag Filter Status



## Vibrating Fork Level Switch

**Model :** LSV (Make: TRUMEN)

### Specification :

- ❖ Enclosure : Aluminium non-Hazardous IP-66/ 68
- ❖ Process temperature: 80 degree C
- ❖ Sensing surface material : SS-316
- ❖ Process connection : Threaded 1 1/4" BSP
- ❖ Process connection material: SS-304
- ❖ Universal supply 15-60VDC & 15-260VAC
- ❖ Output : 1 x DPDT potential-free relay output
- ❖ Switching : Single-point level switching
- ❖ Relay rating : 5A 230VAC, 5A 24VDC for resistive loads
- ❖ Probe length: 250 mm (other on request)

**Application :** Dust Hopper



## Membrane/ Boot Level Switch

**Make :** Filsa

### Specification :

- ❖ Product temperature :  $-20^{\circ}$  C –  $+200^{\circ}$  C
- ❖ Sensitivity : 200 – 500g adjustable
- ❖ Protection : IP65
- ❖ Density of the product : 0,3 t/m<sup>3</sup> – 2,5 t/m<sup>3</sup>

**Application :** Screw Conveyor / Chute Jam Detection



## Rotating Paddle Level Switch

**Model :** LSR (Make: TRUMEN)

### Specification :

- ❖ Enclosure : Aluminium non-Hazardous IP-65/ 68
- ❖ Max temperature 80 Deg C
- ❖ Sensor extension rigid rod sensor
- ❖ Sensor extension material SS304
- ❖ Vane type double spring loaded
- ❖ Vane material SS-316
- ❖ Process connection : 1-1/2" BSP thread
- ❖ Process connection Material SS304
- ❖ Insertion length : 250 mm (other on request)
- ❖ Power supply : 230 VAC 50/60Hz

**Application :** Dust Hopper



## RF Admittance Level Switch

**Model :** LSY (Make : TRUMEN)

### Specification :

- ❖ Enclosure : Aluminium non-Hazardous IP-65/ 68
- ❖ Process temperature : 80 Degrees C
- ❖ Sensor type : Rigid rod probe sensing material : SS-316
- ❖ Insulation type : Part PTFE
- ❖ Process connection : Threaded 1- 1/2" BSP
- ❖ Process connection material : SS 304
- ❖ Universal supply 15-60VDC & 15-260VAC
- ❖ Output : 1 x DPDT potential - free relay output
- ❖ Switching : Single point level switching
- ❖ Relay rating : 5A 230VAC, 5A 24VDC for resistive loads
- ❖ Probe length : 250 mm (other on request)
- ❖ Flameproof version is also available

**Application :** Dust Hopper



## Conductivity Level Switch

**Model :** LWS (Make : TRUMEN)

### Specification :

- ❖ Enclosure : Aluminium non-Hazardous IP-65/ 68
- ❖ Sensor type : Rigid rod (PTFE insulated)
- ❖ Material temperature : max 80°C
- ❖ Sensor MOC : SS304
- ❖ Process connection : 1-1/2" BSP thread (M)
- ❖ Power supply : 12-260 VAC/12-60 VDC
- ❖ Output : 1 DPDT relay insertion length : 500mm
- ❖ Reference probe length : 500mm high level : 100mm, low level : 400 mm

**Application :** Scrubber Liquid Level



## Pendulum Level Indicators

**Model :** MS-1 (Make : Filsa)

### Specification :

- ❖ Rod length : Upto 2000 mm
- ❖ Product density : 0,3 t/m<sup>3</sup> – 3 t/m<sup>3</sup>
- ❖ Maximum pressure : +0,5 bar
- ❖ Switching function : 1 NO + 1 NC
- ❖ Capacity of the contact : 15 A / 250 V AC (for resistive loads)
- ❖ Bulk good temperature :  $-25^{\circ}$  C –  $+80^{\circ}$  C
- ❖ Type of protection : IP66 according to DIN En60529
- ❖ Materials : Housing Aluminium, RAL 7001 coated

### Application :

- ❖ High level switch of storage bunkers and silo
- ❖ Level Measurement in stacker reclaimer machine
- ❖ Control of conveying belts for gravel
- ❖ Level control in a coal bunker



### Filter Monitoring Device (Broken Bag Detector)

**Model : PFM13C, Make : Dr. Födisch)**

#### Specification :

- ❖ Consisting of : Probe made of stainless steel
- ❖ Insertion length : 500 mm
- ❖ Channels /stacks without/with max. 100 mm insulation
- ❖ Probe head with evaluation unit made of stainless steel,
- ❖ Range : 0 ... 100% protection degree: IP65
- ❖ Analog output : 4...20 mA (two-wire-transmitter)
- ❖ Power supply : 24 VDC (max. +25%, -10%)
- ❖ Exhaust gas temperature : max. 280°C
- ❖ Mounting by means of a Tri-Clamp snap closure on the counter-flange

**Application :** Bag - filter condition monitoring



### Flow Measuring Device

**Model : FMD02 (Make : Dr. Födisch)**

#### Specification :

- ❖ For the measurement of the gas velocity/ flow, temperature for gas velocities > 3 m/s ; in clean gases consisting of
- ❖ Dynamic pressure probe differential pressure transmitter : 0-10 mbar linear with an integrated PT 100
- ❖ Probe material : 1.4571
- ❖ (Standard) insertion length : 300 mm for channels/stacks without insulation
- ❖ Probe head with evaluation unit and display-integrated signal processing
- ❖ Display options in mbar, m/s, m3/h i.o. or m3/h i.n. as well as °C
- ❖ Analog outputs : 2x 4 ... 20 mA, potentially isolated
- ❖ Digital signals : failure, limit value 1, and limit value 2
- ❖ Power supply : 24 V DC or 110 V/230 V AC 50/60 Hz
- ❖ Velocity range : 0 -40 m/s exhaust gas temperature : max. 280°C
- ❖ Ambient temperature : -20 ... +50°C
- ❖ Process connection : 1" welding sleeve DIN 2986
- ❖ Cable gland / tightening zone : 3x M20 x 1.5 / 9...13 mm

**Application :** Stack Flow Measurement



### Air Velocity Transmitter with S - Type Pitot Tube

**Model : 985V (Make : Beck GmbH)**

#### Specification :

- ❖ Range : 0 ... 1 KPa (10 mbar)
- ❖ Velocity range : 0 ... 30 m/s
- ❖ Supply voltage : 18 ... 30 VAC / VDC
- ❖ Output : 4 ... 20 mA or 0 ... 10 V, 3-wire
- ❖ With switching output
- ❖ Display : LED display, red, 4 digits
- ❖ Accuracy : ± 1% FS, min. ± 1 Pa
- ❖ Protection class : IP65

#### Accessories:

- ❖ S-type pitot tube (Stainless steel)
- ❖ Length : 500 mm
- ❖ OD : 6 mm

**Application :** Direct velocity measurement



### pH Analyzer

**Model : AER Series**

#### Specification :

- ❖ 48 x 96 mm, panel mounting type
- ❖ Drip-proof/Dust-proof IP66 (for front panel only)
- ❖ Power supply : 100 to 240 VAC (standard)
- ❖ 2-points Contact output (standard), additional 2 points (optional)
- ❖ Proportional control, max. 4 points of relay contact
- ❖ Various settings & calibration via software communication (RS-485) (optional)
- ❖ Transmission output 2 (optional)

#### Application :

- ❖ Scrubber System



**Note : Suitable Electrode will provide along with Transmitter**

### Dust Measuring Device - QAL1 Certified

**Model : PFM20 (Make : Dr. Födisch)**

#### Specification :

- ❖ Compact device with aluminum housing
- ❖ Probe rod length : 500 mm
- ❖ Measuring range of dust : lowest certificated range 0 -7.5 mg/m³ dust, max. measuring range 0...250 mg/m³ dust
- ❖ Exhaust gas temperature : max. 280 °C
- ❖ Flow velocity : min. 5 m/s
- ❖ Protection degree : IP65
- ❖ Analog input : 1 x 4...20 mA for external velocity v [m/s]
- ❖ Analog output : 4 ... 20 mA, electrically isolated
- ❖ Digital outputs : 4 potential free contacts for failure
- ❖ Power supply : 110 V / 230 VAC
- ❖ Process connection : welding sleeve with Tri-Clamp fastener

**Application :** Stack Dust Emissions Measurement



### Flameproof & Weatherproof Enclosure for DP Switch & Transmitter :

#### Specification :

- ❖ Flameproof Exd/Gr.IIC as per IS/IEC : 60079/1 and weatherproof IP-65 as per IS/IEC : 60529, instrument junction box in Al. alloy LM/6 construction.
- ❖ Painted with epoxy powder-coated shade 631 of IS/IEC : 5
- ❖ Process Connections: 1/8 PT female brass Important notes for installations
- ❖ Make sure after cabling to close the tight cover and cable gland, to keep the IP65 rating
- ❖ Open cover only after de/energizing the instrument



### Smart Vibration Sensor

**Model : HE050 (Make : HAUBER - Elekonik GmbH)**

#### Specification :

- ❖ Vibration monitoring sensor
- ❖ Housing material and fastening : 1.4305 (V2A) with fastening
- ❖ M8 x 8 ; pitch 1.25 mm (standard)
- ❖ Output : 4-20 mA, 2 wire
- ❖ Measuring range : 0 -25mm/s rms
- ❖ Electrical connection : M12 connector
- ❖ Measuring head temperature : -40°C ... +85°C
- ❖ Protection class : IP 66/67 frequency range : 10 1,000 Hz

**Application :** Fan & Bearing Status

