

# AUTOMATION SOLUTIONS FOR PHARMACEUTICAL INDUSTRY





Malstrup walcher

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# RTD Probe with TC and Temperature Transmitter

#### Model : RTD Probe (Make : Pixsys)

#### Specification :

#### **RTD Probe**

- PT100 (3 Wire simplex)
- Process Connection: 1.5" TC (50.5 mm)
- 💠 Dia: 6 mm
- Length: up to 100 mm. (Other on Request)
- Weather proof Aluminium Dia. Head IP 65

# Temperature Transmitter

- Programming : Wireless with Mobile Application (No wiring required)
- Input : RTD (PT100/NI100/PT1000)
- Output : 4...20mA Loop Powered
- Power supply : operating range 6-32 Vdc
- Connection : Screw pins
- Fixing : On DIN/B head
- According to : CE, EN 61000-6-4, EN 61000-6-2, UL 61010-1
- 3600 Point Data Logging

Application : Hygienic Process In Pharmaceutical industries

#### Duct Temperature Transmitter

# Model : TEK LL (Make : HK Instruments)

#### Specification :

- Temperature measurement accuracy:±0.5 °C
- Sensor: Pt1000 EN 60751/B
- IP protection class:IP54
- Probe:Ø 8 x 200 mm
- Power supply: 15...35 Vdc
- Display: Optional
- \* Mounting: with flange
- Surface Temperature Sensor

# Model : TEPK (Make : HK Instruments)

#### Specification :

- Measuring range :-20 ... +80 °C
- Materials:Probe : Zinc casting
- Cable : PVC (LIYY 2 x 0.14)
- Probe dimensions : 41.2 x 14.9 x 6.5 mm
- Cable length : 2.0 m
- (Custom lengths available upon request) Protection class : IP54

# Application

Used to sense the liquid temperature in pipes in HVAC systems

#### Immpersion Temperature Transmitter

# Model : TENA LL (Make : HK Instruments)

# Specification :

- ✤ Range : 0...50 °C, 0...100 °C, -50...50 °C, -50...150 °C
- Power supply: 15...35 Vdc
- Temperature measurement accuracy:±0.5 °C
   Sensor : Pt1000 EN 60751/BIP
- Denson . FLIDUU EIN OU/
   Drotoction -lass Lass
- Protection class : Ip54
- Mounting : R <sup>1</sup>/<sub>2</sub>"Materials: PBT, PC, PA, acid proof steel

# Hand-Held Digital Thermo-hygrometer

# Model : DFT-700-M (Make : Shinko)

# Specification :

- Memory function for 10 pieces of data
- Backlight lets you check data in the dark
- Multi-range input : Thermocouple, RTD, Exclusive hygr
- Battery life 200 hours for continuous measurement
   Dust-proof, drip-proof : IP65 for the front panel
- Sampling period : 0.4sec

# Application

- General /Curved surface temperature
- Temperature of interiors of objects and liquids

#### Infrared Temperature Sensor

# Model : PyroMini (Make : Calex)

### Specification :

- High-ambient sensing heads withstand up to 120°C
- Field of view optics : 20:1
- Temperature range : 0 to 250°C (other on request)
- Output : 4-20 mA, 2 wire
- Without displayCable length : 3 meter
- Application : Autocoater



#### Diaphragm Seal Pressure Gauges

#### Make : Afriso

#### Specification :

- Glycerin Filling (99.5 %)
- Measuring system fully welded to housing
- Extremely robust design
- Can be used in case of heavy vibrations and high, dynamic pressure loads
- Tightness-tested with helium
- Suitable for corrosive environments.
- Diaphragm Welded to upper body, no dead space
  - Surface roughness  $R_A \le 0.8 \ \mu m$
  - Connection Stainless steel 316 TC end /316 L, bottom or bottom back
- Filling liquid silicone oil
  - \* 3-A-certified in conjunction with Bourdon tube pressure gauge RF 63/100
  - All materials FDA-listed
  - SIP/CIP enabled
  - NovAseptic<sup>®</sup>-compatible (1" up to 2½")

# Application

- For mounting to Bourdon tube pressure gauges, pressure transducers or pressure switches. For viscous, perishable or hot media.
- Food and beverages industry
- Pharmaceutical industry
- Biotechnology Fermenter Process

# Gas Pressure Switch

#### Model : 901P (Make : Beck GmbH)

#### Specification :

**Application :** 

**Specification :** 

Application :

AHU Filter Status

- Pressure Range : 5 to 500 mbar (as on requirement)
- Max. operating pressure : 0.5/1 bar
- Diaphragm material : NBR
- Process connection : 1/4", BSP thread
- Material : Brass

Air Differential Pressure Switch

Model : 930.8x (Make : Beck GmbH)

Pressure range : 20 – 1000 PA

Protection standard : IP54

Switch type : SPDT (1 NO + 1 NC)

Hose connection with 6 mm (OD)

Temperature range : -20°C to +85°C

Monitoring the overpressure of combustible gases

Accessories : IP65 cover cap

Gas Burner, Boiler Pressure

# Hygienic Pressure Transmitter

#### Model : TFP310 (Make : Trumen) Specification :

- Piezoresistive pressure sensor design
- Measuring ranges : -1bar to 100bar
- Output : 4...20mA, 0...10V, 0...5V and others
- Accuracy : ±0.25%FSO or ± 0.5%FSO
- Calibrated and temperature compensated
- Flush diaphragm construction
- Variety of pressure & electrical connections
- Operating Temperature Range: -20 to 200 °C

# Application :

Hygienic Process In Pharmaceutical Industries

#### Differential Pressure Gauges

#### Model : DPG (Make : HK Instruments)

#### Specification :

- Accuracy : < ± 3 % F.S (20 °C), (DPG60 < ± 5 %; DPG100 < ± 4 %)</p>
- Zero point adjustment screw : external in the plastic cover
- Mounting:surface mounting or flush mounting
- Mounting position:vertical
- Protection standard:IP65

#### Application

DPG series devices are commonly used in HVAC/R systems

# Digital Differential Pressure Transmitter

#### Model: 985M (Make: Beck GmbH)

#### Specification :

- Range : -100 Pa and 1 bar
- 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

- Pressure monitoring in sterilization tunnel chamber
- Bag Filter Status

# Digital Differential Pressure Transmitter with 2 relays

# Model : 990M (Make : Beck GmbH)

#### Specification :

- Range : 0 to 2.5 bar
- Pressure unit : mmWC, Pa, mbar
- Power Supply : screw terminals 24 VAC/VDC
- Output : 4 ... 20 mA or 0 ... 10 V, 3-wire
- Switching output : 2 relays with 50VAC/5A (S1) and 250VAC/5A (S2) switching capability
- Display : Red 7-segment LED display, 4-figure
- Accuracy :  $\leq \pm 1\%$  of FS
- IP65 SS/ MS enclosure with process connection : 2 Hose connection with 4 mm outer diameter

# Application : AHU/ HEPA Filter/ Scrubber/ De-Duster

Bag filter pressure monitoring



#### Pressure Transmitter

#### Model : TFP 40s (Make : Trumen) Specification :

- Measuring ranges from 100mbar to 600bar
- Absolute, gauge and sealed gauge
- Accuracy: ±0.25%FSO or ± 0.5%FSO
- Calibrated and temperature compensated
- Stainless steel construction
- Piezoresistive pressure sensor design
- Variety of pressure & electrical connections
- Output 4...20mA, 0...10V, 0...5V and others

# Application :

- Process control systems/ utility
- Refrigeration and HVAC controls
- Pumps and compressors

#### Draft Pressure Transmitter of ID/FD Fan

#### Model : 985M (Make : Beck GmbH) Specification :

- Range : 0-1000mmWC (other on request )
- Supply Voltage : 18 ... 30 VAC / VDC
- Output : 4 ... 20 mA or 0 ... 10 V, 3-wire or 4 ... 20 mA, 2-wire is also available
- With switching output
- ♦ Linearity :  $\leq \pm 0.5\%$  FS, min.  $\pm 1$  Pa
- Working temperature : -20 ... 70°C
- Protection class : IP65
- Display : with LED-display, 4 digits (only for 3-wire)
- Process connection P1 and P2 : Stainless steel Hose pipe
- Connection with 4 / 6 mm outer diameter

Application : Draft Pressure Measurement of ID/FD Fan

# **Air Differential Pressure Transmitter**

### Model : 984 A (Make : Beck GmbH)

# Specification :

- \* Range : -100 Pa ..... 500 mbar
- 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

- Measurement of constant pressure in VAV
- Dynamic filter and ventilator monitoring
- Monitoring & Controlling of Air Filters & Fan(Blower)
- Duct Static pressure monitoring

# Differential Pressure Transmitter

#### Model : DPT-Priima (Make : HK Instruments)

# Specification :

Range : ±25, ±50, ±100, ±500 0...25, 0...50, 0...250, 0...1000 (selectable via jumper)

Measuring units : Pa, kPa, mbar, inchWC, mmWC, psi

Supply voltage:24 VDC ±10 % / 24 VAC ±10 %
 Output signals (3-wire) : 0/2...10 VDC 4...20 mA

Application : Monitoring pressure in cleanrooms

High accuracy : 0.4% from applied pressure

Automatic zero point calibration

Span point calibration (Optional)

Operating temperature : -5...50 °C
 Response time : 0.4 / 8 s
 Protection standard : IP54

# **Differential Pressure Transmitter**

# Model : PS17 (Make : Halstrup Walcher)

# Specification :

- Robust ABS housing with protection class IP67 for mounting on top-hat rails or a wall (with just 2 screws)
- 3 ½ digits LCD display (optional) with 2-wire, 4 to 20 mA output signal
   Comes with either a defined measurement range or with the
- option of alternating between 4 measurement ranges Adjustable output signal 0/2 ... 10 V or 0/4 ... 20 mA
- Adjustable output signal of 2 ... To V of 0/4 ... 20 m/
   Adjustable output signal attenuation of up to 10 s
- Zero-point calibration via an external voltage signal
- Lowers maintenance requirements
- Span adjustment via internal pushbutton

#### Application

- Bag filter pressure monitoring
- Draft pressure monitoring
- Fan/blower flow monitoring

#### Differential Pressure Transmitter

#### Model : PS27 (Make : Halstrup Walcher) Specification :

- Suitable for top-hat rail mounting and wall surface installation
- Selectable output signal 0/2 .. 10 V, 0/4 .. 20 mA or 0 .. 5 V
- Selectable attenuation of the output signal
- of up to 4 s (optional)
- Display (optional)
- Zero-point calibration via an external signal reduces maintenance costs

#### Application

- Bag filter pressure monitoring
- Draft pressure monitoring
- Fan/blower flow monitoring

# Pressure Calibration Device in One with Automated Pressure Generator

# Model : KAL100/ KAL200 (Make : Halstrup Walcher) Specification :

- High level of accuracy and long-term stability through automatic zero-point calibration
- Simple menu navigation for unit conversion, setting
- calibration points and setting the measurement range
- Generation of positive and negative differential pressures
- \* Easy to operate and produce calibration curves via USB port and PC

# Application

- In house Calibration Purpose
- In house calibration of low pressure sensor like magnehelic gauge and DPT





# **Differential Pressure Transmitter for Liquids**

#### Model : 988 (Make: Beck GmbH)

#### Specification :

- Range: 0-2.5, 0-6, 0-10 bar (Special measuring ranges on request)
- Supply : 18 30 V AC/DC
- Output signal: 0-10 Volt & 4 to 20 mA
- Process connection: 2 x inner thread G1/4 Axial
- Accuracy : +/- 0.4% (typ.) / +/- 1.0 (max.)
- Protection class : IP65

# Application :

- Differential pressure measurement between supply and return in heating systems
- Monitoring of filters, fans and compressors
- Cooling systems for heating / air conditioning

# High Precision Differential Pressure Transmitter

# Model : P26 (Make : Halstrup Walcher)

#### Specification :

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- Top-hat rail or wall mounting
- Also ± measurement ranges
- Scalable measurement ranges and units
   Zero-point correction prevents zero-point drift
- Built-in valve provides a high level of over
- pressure protection
- High level of accuracy and long-term stability through automatic zero-point calibration
- Easy configuration of the measuring range, analog output, time constants and units via PC or keyboard (optional)
- USB interface (optional)
- Display with keyboard for configuration of the pressure transmitter (optional)
- 2 floating switching relays (optional)
- Margin of error: ± 0.2 % or ± 0.5 % of max. Value
- Protection class IP 65, with USB: IP 40 /IP20

# Application

Sterilization tunnel chamber

# Differential Pressure Transmitter

# Model : PIZ (Make : Halstrup Walcher)

# Specification :

- High level of accuracy and long-term stability
- Little zero point drift or hysteresis; largely independent of temperature

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- Measurement of positive and negative differential pressures
- LCD display (optional)
- Output signal 4 .. 20 mA
- Factory-adjusted attenuation of the output signal of up to 5 s possible (optional)
- Can be calibrated

Application : Isolator

# Portable Digital Manometer + Air Velocity Meter

# Model : EMA 200 (Make : Halstrup-walcher)

#### Specification :

- Range : ± 200 Pa
- Velocity range : 5 ... 58 m/s
- Display : 3 1/2" Digit, LCD
- Accuracy : ± 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

# **Differential Pressure Switch for Liquids**

# Model : 908 (Make : Beck GmbH)

# Specification :

**Application :** 

- Range : 40 to 1000 mbar
  Pressure connection: Inner thread G 1/8 of
- Pressure connection: miler thread & 1/0 of Brass (CuZn40) P1+ / P2–
  Maximum operating pressure : 10 bar

\* When the flow or pressure from this fall or

It can be used to monitor the filter, boiler,

For all applications where air, oil, or water is to be monitored

and pump condition and signal

rise to an alarm condition.

Switch type : 1 - SPDT
 Protection class : Ip65

#### Compact Liquid Vibrating Fork Level Switch

# Model : LFV 12 (Make : Trumen)

# Specification :

- Industrial power supply (15 to 80 VDC or 15 to 260 VAC).
- Low power consumption.
- No calibration required.
- Threaded & Hygienic process connection.
- Suitable for side as well as top mounting.
- Minimum 1/2" (LFV12) process connections
- High pressure up-to 15 bar
- High Temperature up-to 150 °C available

# Applications :

Flow/No-Flow detection in pipe-lines.

Used as a full, empty and demand alarm in fluid containers, tanks containing liquids of various types, fuel oil, lube oil etc.

# Hydrostatic Continuous Level Transmitter

## Model : TLH (Make : Trumen)

# Specification :

- Compact size.
- Wide range industrial dc power supply (12 to 36 VDC).
- Loop powered device (true-two wire).
- No calibration required.
- Customized process connections

Process pressure max. 200 mH2O

Process temperature max. 80 °c.

- Accuracy +/- 0.25% of FS.
- Suitable for corrosive liquids



#### Application

- Pressure sensor for hydrostatic level measurement at Bore Well, Well etc.
- Deep submersible liquid level measurements.

# Solid Vibrating Fork Level Switch

# Model : LSV (Make: Trumen)

# Specification :

- Enclosure : Aluminium non-Hazardous IP-66/68
- Process Temperature : 200°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 : Customize

# Application

Level Measurement of Free flowing powders and granules (size max. 10mm).

# Capacitance Level Transmitter

# Model : TLC (Make : Trumen)

- Specification :
- Compact size.
- Rigid rod/flexible rope versions.
- Wide range industrial dc power supply (15 to 60 VDC).
- Loop powered device (two wire).
- No potentiometers hassle free calibratiowo wirn.
   Various customized process connections like
- Threaded/Flanged/Hygienic etc.
- Remote electronics version available on request.
- Process temperature max. 200 °C.
- Process pressure max. 20 bar.
- Suitable for corrosive liquids.
- Suitable for top mounting.

# Application :

Free flowing homogeneous liquids Like oil, raw water, WFI, DM/DI water etc.





# Liquid Vibrating Fork Level Switch

# Model : LFV (Make : Trumen)

# Specification :

- Compact size.
   Universal industrial power supply (15 to 80 VDC & 15 to 260 VAC).
- Low power consumption.
- No calibration required.
- Threaded & Hygienic process connection.
- All liquids from free-flowing to viscosity up-to 10,000cP.
- Process pressure max. 15 bar.
- Process temperature max 200 °C.
- Suitable for side as well as top mounting.
- Minimum and maximum fail safe field selectable.

# Application

- High low detection in Silo/Vessel.
- Flow/ no-flow detection in pipe-lines.

# **Conductivity Level Switch**

#### Model : LWS (Make : Trumen) Specification :

- specificat
- 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

# **RF Admittance Level Switch**

# Model : LSY (Make : Trumen)

# Specification :

Application :

Specification :

Compact Size

User Friendly menus

- Enclosure : Aluminium Non-Hazardous IP-65/68
- Process Temperature : 200 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

Switching : Single-point level switching

Coal Bunker Level Measurement

Ultrasonic Level Transmitter

Model : TLU (Make : Trumen)

Temperature Compensation

Simple Installation & Maintenance

Two-wire loop-powered

\* RS232, RS485, Modbus

Various output types

High protection class

Explosion proof type
LCD display

Sedimentation Tank
 Sewage Treatment
 FO Tank Level

Applications :

EIUD : Mains: Universal Supply 15-60VDC & 15-260VAC

Relay Rating : 5A 230VAC, 5A 24VDC for Resistive Loads

Output : 1 x DPDT potential-free relay output

L500 : Probe Length: 500 mm (other on request)

# pH/ORP/ Conductivity/ DO Analyzer

# Model : AER 102-pH (Make : Shinko)

# Specification :

- Power supply : 100 to 240 VAC (standard)
- O/P : 1-4...20 mA & 2-points contact output (standard)
- 48 x 96 mm, panel mounting type
- Drip-proof/Dust-proof IP66 (for front panel only)
- 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
- Low Iconic Boiler Feed Water
- Drinking Water Treatment
- ETP

Note : Suitable Electrode/ Sensor will provide along with Transmitter

# Cell Growth Measurement Transmitter (Bio Mass Sensor)

# Model : EXcell 241/ 231 (Make : Exner)

# Specification :

- Hygienic design (CIP/SIP-compatible & autoclavable)
- Integrated digital transmitter (logarithmic amplifier)
- Resistant sapphire window
- Long-lasting LED light source for color-neutral measurements
- Configuration using EXpert software
- AU, OD, EBC, FAU, mg/l or customer-specific unit (CDU)
- OPL available in 5 / 10 / 20 mm and various shaft lengths
- Can be used in small fermenters
- Protection class IP68

#### Application

- Measurement and monitoring of cell growth (e.g. yeast or mammalian cells) in the laboratory and the production process
- Monitoring of fermentation processes
- Colour-independent concentration measurement of microorganisms (e.g. determination of bacteria or algae concentrations, particularly microalgae)
- Determination of the optimal time for cell harvesting
- Establishment of controlled systems for cell density, feed or dilution rates
- Filter monitoring

# 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/m<sup>3</sup> dust, max. measuring range 0...250 mg/m<sup>3</sup> 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

\*

# pH Electrode

#### Make : Kuntze Specification :

- High alkali high temperature glass
- Measuring range pH 0.. 14
- Very small alkaline error
- Suitable for temperatures up to 135 °C (275 °F)
- Long service life due to refillable reference electrode
- \* High quality Zirkon junction for reliable measurement results
- Dirt-repellent and corrosion resistant PTFE junction
- Integrated temperature sensor
- Process Connection : Vario pin (PG 13.5)
- Reference System: Ag / AgCl / Solid electrolyte
- Max. Pressure : < 10 bar</p>

# Application :

- Scrubber System & Low Iconic Boiler Feed Water
- Drinking Water Treatment ETP Fermentation Process

Total Chlorine, Free Chlorine, Chlorine Dioxide, Ozone, or Hydrogen Peroxide Measurement

#### Make : Kuntze Instrument

# Specification :

- Automatic cleaning by ASR<sup>®</sup> possible
- Low maintenance due to gel filling
- Stable zeropoint
- High quality Zirkon<sup>®</sup> junction for reliable measurement results
- Max. Pressure: < 10 bar at 20 °C</p>
- Temperature: -5...+70 °C
- Electrode Material: 2 Gold rings
   Process Connection: M12 Plug

# Measuring Parameter

- Free Chlorine : Up to 1000 μg/l ; up to 5,00 ; 10,00 ; 20,00 mg/l
- Chlorine Dioxide : Up to 1000 μg/l ; up to 5,00 ; 10,00 ; 20,00 mg/l
- Ozone : Up to 1000 μg/l ; up to 5,00 ; 10,00 mg/l
- Hydrogen Peroxide : Up to 30,00 mg/l
- Total Chlorine : Up 0-1000 μg/l ; 5,00 ; 10,00 ; 20,00 mg/l

#### Application :

Drinking Water Process Water Waste Waste Water Treatment

# Duct Smoke Detector

# Model : KRM

# Specification :

Specification :

- VdS certification (G210059)
- Patented single tube air sampling system
- Contamination display in% and signalling at 100%
- Electronic air flow control
- Remote reset option via terminals
- Long service life, low contamination
- Modbus interface (KRM-2-MOD only)
- Alarm indication with red LED combined with reset button
- Digital contamination display on 2-digit LED segment display
- Maintenance and power supply indication via LED

Probe : tribo-electric probe consisting of rod and head

Process connection : welding sleeve with Tri-Clamp fastener

Probe rod : electrically isolated from housing

Measuring range of dust : 0...100% (qualitative)

Analogue output : 4...20 mA, 2-wire transmitter

Power supply 24 V AC/DC or 230 V AC ± 10%

# Solid Flow Monitor (BBD Sensor) Model : PFM 13C (Make : Dr. Födisch AG)

Galvanically isolated to device ground
 Power supply : 24 VDC (max. +25%, -10%)
 Exhaust gas temperature : max. 260°C

Housing : IP 65, protection class 1
 Application : Broken Bag Leak Detector/ FBD

Immersion depth : 500 mm

#### Air Flow & Velocity Transmitter

# Model : DPT Flow+ FloXact Series (Make : HK Instruments)

# Specification :

- Range : 0 ... 1000 Pa
- Multiple field selectable measurement
- Measuring Units :
  - Volume flow : m3/s, m3/h, cfm, l/s
  - Velocity : m/s, ft./min
- Pressure : Pa, inWC, mmWC, kPa, mbar, psi
- With Autozero function
- Supply Voltage: 24 VAC or VDC, ±10 %
- Output : 4 ... 20 mA or 0 ... 10 V, 3-wire
- Accuracy (from applied pressure): 1%
- Protection standard : IP54
- Display : 2-line LCD display
- Line 1 : Volume or velocity measurement
- Line 2 : Pressure measurement
- \* Length : 100 mm to 450 mm

## **Application :**

- Air Flow Measurement in DHS / Autocoater
- In-duct air flow monitoring
- Measure and monitor air flow across centrifugalfans

# 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

# Accessories: class : IP65

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

FloXact-R160

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Application : Duct Velocity Measurement

# Air Velocity Transmitter

Mounting type : cleat or flange

# Model : AVT (Make : HK Instruments)

# Specification :

- Range : 0 to 2/ 0 to 10/ 0 to 20m/s (selectable via jumper)
- \* Output : 0-10V or 4-20mA
- Probe : Adjustable immersion length 50...180 mm, mounting flange included
- Display Optional
- Field adjustable relay (Optional)

# Application

- in-duct air flow and velocity monitoring
- VAV applications

# **Cleanroom Indicator**

# Model : DPT-CR-MOD (Make : HK Instruments)

# Specification :

- Input terminal : Humidity & Temperature
- MODBUS Communication
- Measurement range:-250...2500 Pa
- Accuracy (from applied pressure):
- ♦ Pressure < 125 Pa = 1 % + ±2 Pa</li>
   ♦ Pressure > 125 Pa = 1 % + ±1 Pa
- Input accuracy:
  - Temperature : ±0.25 °C typical @ 25 °C
  - Humidity : ±0.5 % rH typical @ 25 °C
- Measuring units : Pa, mbar, inchWC, mmWC, psi (Selectable via menu)
- Response time : 1...20 s selectable via menu

# Indoor AIR Quality Transmitter/ PM (Particulate Matter)

# Model : Siro-MOD (Make : HK Instruments)

# Specification :

- Measurement parameter Co2, VOC, PM, Humidity, Temperature
- Several options for indoor air quality measurements (CO2, VOC, PM, rH, T)
- Field configurable outputs for selected measurements
- Output signal 1–4:0...10 V (optional 2...10 V / 0...5 V,
- display or configuration tool required) (Optional 4...20 mA) Optional LCD-display and buttons
- Communication : RS-485 Modbus (RTU)
- Protection standard : IP20
- Calibration (Co2) : Automatic self-calibration, ABC LogicTM
- Supply voltage : 24 VDC/VAC ±10 %
- Linear to selected measurement (CO2, VOC, PM, rH or Temp)
- Operating temperature : 0...50 °C

# Application

- Indoor air quality in offices, public spaces, meeting rooms
- CO2 and VOC concentration to regulate demand-controlled ventilation and to keep the IAQ in a good level
- PM concentration to measure the size and amount of particulate in the IAQ

# Humidity & Temperature Transmitter

# Model : KLK100 (Make : HK Instruments)

# Specification :

- Duct + Wall Mounting
- Power supply : 24 Vac/dc, < 1 VA</p>
- Accuracy: ±2 %rH
- Modbus Communication (optional)
- Humidity measurement range : 0...100 %rH
- Humidity measurement accuracy : ±2 %rH
- Temperature measurement range : -50...50 °C
- ✤ Temperature measurement accuracy : ±0.5 °C
- Humidity output 0...10 Vdc, 2 mA / 4...20 mA < 600 Ω</p>
- Temperature output 0...10 Vdc, 2 mA / 4...20 mA < 600  $\Omega$
- ✤ IP protection class : IP54 Ambient temperature :-50...50 °C
- Mounting : with flange, probe depth adjustable < 150 mm</p>

# Load Cell/Strain-Gauge Indicator

# Model : STR 561 (Make : Pixsys)

# Specification :

- \* Multilingual interface with full-text menus for intuitive and fast programming
- Visualization of process trend or Bar graph

Universal Power Supply

Modbus Communication

3600 points data logger

PID Controller

AT on startup function!

Simplified Program control!

Simple settings from a PC

Sampling Time 125 ms

Drip-proof/Dust-proof IP 66

Direct current (As per ordering)

Multi-input:total 18 types of input

Password Protection for Configuration

Simplified converter function!

A variety of Event Input/Output function

Large, Easy-to-view, 5-digit PV, SV Displi

Compact, 60 mm-deep control panel interior!

Control O/P: Relay contact 1a,Non-contact voltage(for SSR drive),

**Application :** 

Specification :

OLED Sharp Display

Alarm thresholds and process analogue retransmission
 Size:96x48

Configuration very easy and can done through mobile

Retransmission Output to connect with PLC

2 High and low Level Switch for Safety

Connected To Any make of Load Cell

Model : BCS Series (Make : Shinko)

Convenient Initial setting mode!

#### Recorder

# Model : HR-700 (Make : Shinko)

# Specification :

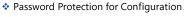
- Effective recording width 100mm
- Short Depth (150mm) and Light weight (1.5kg)
- Communication function (RS-232C) is provided as standard
- Multi-range input
- Input points Pen/1-point, 2-point/Dot printing/6-point
- Supply voltage 100 to 240V AC 50/60Hz
- Interface RS-232C/1200/2400/4800/9600bps

Application : Process Data Recording

# DIN Rail Temperature Transmitter & Signal Isolator

#### Model : DCL 33 (Make : Shinko) Specification :

- Multi-input:total 18 types of input
- Loop Break Alarm output
- Compact Design
- Galvanic Isolation 1.5 kV
- Sampling Time 125 ms
- User-Friendly Operation & Configuration



Calibration of Transmitter by Key Pad

#### Application :

- Universal Isolated Digital Temperature Transmitter
- Digital Temperature Switch
- Universal Signal Isolator

## **Vibration Monitoring Sensor**

# Model : HE 050 (Make : Hauber Electronik)

# 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, 3 wire
- Measuring range : 0 25 mm/s rms (other on Request)
- Electrical Connection : M12 connector Measuring head temperature : -40°C ... +85°C
- Protection class : IP 66/67
- Frequency range : 10 1,000 Hz

Application : Fan & Blower Vibration Measurement

# **Positioning System**

#### Model : PSE 30x-8 (Make : Halstrup Walcher) Specification :

- Space-saving, compact design
- Galvanically separated supply voltages for control and performance electronics Durable EC-motor
- Extremely accurate positioning due to measurement of the position at the output side
- Easy and low-cost mounting via hollow shaft
- Bus interfaces simplify start-up and wiring complexity
- Address may be set using the bus or an address switch (not for IO-Link)
- Baud rate set via switch
- Status messages retrievable via bus

# Application

- Used in Vial filling machine/ vial capping machine for
- Cap Vibrating Bowl Height Regulation
- Capping head Height Regulation
- Stopper Vibrating Bowl Height Regulation
- Capping Infeed Auger Height Regulation



# Universal Temperature Transmitter

#### Model : Temperature Transmitter (Make : Pixsys) Specification :

- Programming : Wireless with mobile application (no wiring required)
- Input : Thermocouple/ RTD
- Output : 4...20mA loop powered Power supply : Operating range 6-32 Vdc
- Connection : Screw pins
- Fixing : On DIN/ B head
- \* Operating conditions : Temperature -40+85 °C, humidity 30..90% (non condensing)
- Galvanic isolation
- 3600 points data logger
- DIN Clip optional

# Exner Retractable Fittings

# Model : EXstatic 310, EXstatic 311 (Make : Exner) Specification :

- Designed according to hygienic criteria
- Stainless steel AISI 316I / 1 4404
- EPDM sealings with FDA and USP VI approval
- ♦ Up to 10 bar and 140 °C
- Protection cap for cable connection
- Process connections for hygiene applications Static probe housing with Ingold connection
- (DN25) Static probe housing with clamp connection
- Excellent stainless steel surface qualities
- Suitable for sensors with 120 mm length and PG13.5 connection

# **Application :**

- Pharmaceutical
- For all kind of Ø12/120mm sensors with thread PG13.5 (pH-glass- and ISFET sensors, conductivity- or temperature sensors, turbidity and other optical sensors)

# Special Drive for Gate Opening and Closing

#### Model : PSE200 (Make : Halstrup Walcher) Specification :

- Release-input (optional) and position report ensure high level of functional security
- Variable positioning range up to 50 rotations
- Position : Horizontal construction
- Protection class : IP 55
- Position feedback : 0 .. 10 V
- (floating contact "position reached")
- Output shaft : 12 mm solid shaft with flattening
- Positioning accuracy : 2 % of positioning range
- Power supply : 24 VDC

# Application :

Sterilizing Tunnel / DHS



