

Pharmaceutical & Biotech Industry



PARSHVI
TECHNOLOGY (INDIA) PVT. LTD.



**Note : All Sensors Available in ATEX
and Flame Proof Version.**

Represented by :



PARSHVI
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RTD Probes & Temperature Transmitter

Model : RTD Probes

Specification :

RTD Probes

- ❖ Pt100/ Pt1000
- ❖ Process Connection : Triclover & Thread
- ❖ Dia: 6 mm
- ❖ Length: up to 100 mm. (Other on Request)
- ❖ Weather proof Aluminium Dia. Head IP 65

Temperature Transmitter (Make : Pixsys)

- ❖ 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/ Utility Process

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 (other on request)
- ❖ Protection class : IP54



Application

- ❖ Used to sense the liquid temperature in pipes in HVAC systems

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 display
- ❖ Cable length : 3 meter



Application : Autocoater

Differential Pressure Indicator (Battery-Operated)

Specification :

- ❖ Range : 0 – 5000
- ❖ Dimensions : 145 mm Ø
- ❖ Easy to read LCD display
- ❖ Differential pressure displayed in Pa
- ❖ Filter contamination level displayed in %
- ❖ Limit displayed in Pa
- ❖ Measuring range displayed
- ❖ Flashing red light when set limit is exceeded
- ❖ Power supply : 2 "AA" batteries 1.5 V which last for at least 3 years



Digital Differential Pressure Gauge Cum Transmitter

Specification :

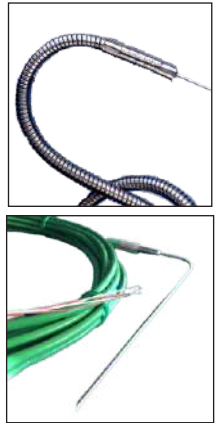
- ❖ Range ± 150 Pa
- ❖ Large LCD display
- ❖ Differential pressure displayed in Pa
- ❖ Limit displayed in Pa
- ❖ Flashing red light when below the set limit
- ❖ Programmable limit, range, signal range of the analog output
- ❖ Power supply : 24 V AC/24 V DC
- ❖ Available in two built-in and one surface mounted versions



Autoclave Chamber & Load Temperature Probe

Specification :

- ❖ Available in PT100 RTD (Class A, AA as per IEC 60751:2008, and 1/10 DIN)
- ❖ All 316 stainless steel construction.
- ❖ Double lock 316 stainless conduit to protect the probe whilst inside the autoclave, and during unloading/unloading.
- ❖ Manufacturing process designed to ensure probe is sealed against moisture ingress.
- ❖ Silicone insulated lead insulation FDA approved (21CFR 177 2600).
- ❖ Steel tailpiece (chamber entry tube) to ensure a good seal through the autoclave wall. Available with a range of fittings for efficient sealing.



Application :

- ❖ For Temperature Measurements in Sterilizers

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 $R_a \leq 0.8 \mu m$
- ❖ 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®-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

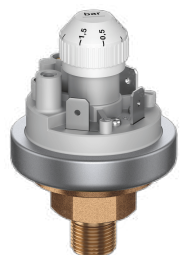
Model : 901P (Make : Beck GmbH)

Specification :

- ❖ 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
- ❖ Accessories : IP65 cover cap

Application :

- ❖ Monitoring the Overpressure of Combustible Gases
- ❖ Gas Burner, Boiler Pressure



Air Differential Pressure Switch

Model : 930.8x (Make : Beck GmbH)

Specification :

- ❖ Pressure range : 20 - 5000 Pa
- ❖ Switch type : SPDT (1 NO + 1 NC)
- ❖ Protection standard : IP54
- ❖ Temperature range : -20°C to +85°C
- ❖ Hose connection with 6 mm (OD)

Application :

- ❖ AHU Filter Status
- ❖ Fan, Blower & Filter Status



Hygienic Pressure Transmitter

Model : TFP310 (Make : Trumen)

Specification :

- ❖ Piezoresistive pressure sensor design
- ❖ Measuring ranges : -1 bar to 40 bar
- ❖ Output : 4...20mA, 0...10V, 0...5V and others
- ❖ Accuracy : $\pm 0.25\%$ FSO or $\pm 0.5\%$ FSO
- ❖ Calibrated and temperature compensated
- ❖ Flush diaphragm construction
- ❖ Variety of pressure & electrical connections
- ❖ Operating Temperature Range : -20 to 150°C

Application :

- ❖ Hygienic Process



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. ± 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



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. ± 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

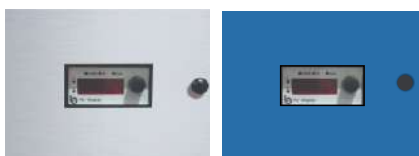
Model : 990M (Make : Beck GmbH)

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 100 mbar to 600 bar
- ❖ Absolute, gauge and sealed gauge
- ❖ Accuracy: $\pm 0.25\%$ FSO or $\pm 0.5\%$ 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



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. ± 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 : $\pm 25, \pm 50, \pm 100, \pm 500$ 0...25, 0...50, 0...250, 0...1000 (selectable via jumper)
- ❖ High accuracy : 0.4% from applied pressure
- ❖ Automatic zero point calibration
- ❖ Span point calibration (Optional)
- ❖ Measuring units : Pa, kPa, mbar, inchWC, mmWC, psi
- ❖ Supply voltage : 24 VDC $\pm 10\%$ / 24 VAC $\pm 10\%$
- ❖ Output signals (3-wire) : 0/2...10 VDC 4...20 mA
- ❖ Operating temperature : -5...50 °C
- ❖ Response time : 0.4 / 8 s
- ❖ Protection standard : IP54

Application : Monitoring Pressure in Cleanrooms



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 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

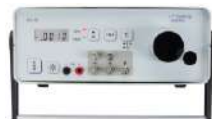
Model : KAL100/ KAL200 (Make : Halstrup Walcher)

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 Switch for Liquids

Model : 908 (Make : Beck GmbH)

Specification :

- ❖ Range : 40 to 1000 mbar
- ❖ Pressure connection : Inner thread G 1/8 of Brass (CuZn40) P1+ / P2-
- ❖ Maximum operating pressure : 10 bar
- ❖ Switch type : 1 - SPDT
- ❖ Protection class : IP65
- ❖ When the flow or pressure from this fall or rise to an alarm condition.

Application :

- ❖ It Can Be Used to Monitor the Filter, Boiler, and Pump Condition and Signal
- ❖ For All Applications Where Air, Oil, or Water is to be Monitored
- ❖ Running Status of Primary and Secondary Variable Pump



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
- ❖ Secondary Variable Pump Control in Chiller Management
- ❖ Cooling Systems for Heating / Air Conditioning



High Precision Differential Pressure Transmitter

Model : P26 (Make : Halstrup Walcher)

Specification :

- ❖ Top-hat rail or wall mounting
- ❖ Also \pm 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: $\pm 0.2\%$ or $\pm 0.5\%$ 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
- ❖ 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 : $\pm 0.5\%$ 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

Differential Pressure Gauges

Model : DPG (Make : HK Instruments)

Specification :

- ❖ Accuracy : $< \pm 3\%$ F.S (20 °C), (DPG60 $< \pm 5\%$; DPG100 $< \pm 4\%$)
- ❖ 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



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 :

- ❖ 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



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).



RF Admittance Level Switch

Model : LSY (Make : Trumen)

Specification :

- ❖ 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
- ❖ EIUD : Mains : 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
- ❖ L500 : Probe Length : 500 mm (other on request)

Application :

- ❖ Coal Bunker Level Measurement



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.



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 calibration
- ❖ 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.



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
- ❖ Accuracy +/- 0.25% of FS.
- ❖ Suitable for corrosive liquids
- ❖ Process pressure max. 200 mH2O
- ❖ Process temperature max. 80 °C.

Application

- ❖ Pressure Sensor for Hydrostatic Level Measurement at Bore Well, Well etc.
- ❖ Deep Submersible Liquid Level Measurements.



Ultrasonic Level Transmitter

Model : TLU (Make : Trumen)

Specification :

- ❖ Compact Size
- ❖ User Friendly menus
- ❖ Temperature Compensation
- ❖ Two-wire loop-powered
- ❖ Simple Installation & Maintenance
- ❖ RS232, RS485, Modbus
- ❖ Various output types
- ❖ High protection class
- ❖ Explosion proof type
- ❖ LCD display

Applications :

- ❖ Sedimentation Tank
- ❖ Sewage Treatment
- ❖ FO Tank Level



pH/ORP/ Conductivity/ DO Analyzer

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 :

1. Suitable Electrode/ Sensor will provide along with Transmitter
2. We have Multi Channel Systems for all Above Sensors.

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

Make : Kuntze Instrument

Specification :

- ❖ Automatic cleaning by ASR® possible
- ❖ Low maintenance due to gel filling
- ❖ Stable zeropoint
- ❖ High quality Zirkon® junction for reliable measurement results
- ❖ Max. Pressure: < 10 bar at 20 °C
- ❖ Temperature: -5...+70 °C
- ❖ Electrode Material: 2 Gold rings
- ❖ Process Connection: M12 Plug
- ❖ Connect with the Kuntze Cloud Connect® service
- ❖ PID 3-point controller & On/off Controlling
- ❖ Output : 2 x 0/4 ... 20 mA (scaleable, galvanically isolated)
- ❖ Output : 2 relays



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 Water Treatment

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



Application :

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

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/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

Solid Flow Monitor (BBD Sensor)

Model : PFM 13C (Make : Dr. Födisch AG)

Specification :

- ❖ Probe : tribo-electric probe consisting of rod and head
- ❖ Probe rod : electrically isolated from housing
- ❖ Immersion depth : 500 mm
- ❖ Measuring range of dust : 0...100% (qualitative)
- ❖ Analogue output : 4...20 mA, 2-wire transmitter
- ❖ Galvanically isolated to device ground
- ❖ Power supply : 24 VDC (max. +25%, -10%)
- ❖ Exhaust gas temperature : max. 260°C
- ❖ Process connection : welding sleeve with Tri-Clamp fastener
- ❖ Housing : IP 65, protection class 1



Application : Broken Bag Leak Detector/ FBD

Duct Smoke Detector

Model : KRM

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



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 : $\pm 1\%$ FS, min. ± 1 Pa
- ❖ Protection class : IP65

Accessories:

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

Application : Duct Velocity Measurement



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, $\pm 10\%$
- ❖ 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

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



Humidity & Temperature Transmitter

Model : KLK100 (Make : HK Instruments)

Specification :

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



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
 - ❖ 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 Logic™
- ❖ Supply voltage : 24 VDC/VAC $\pm 10\%$
- ❖ 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



Digital Process Indicator

Model : JIR (Make : Shinko)

Specification :

- ❖ Compact Design
- ❖ Galvanic Isolation 1.5 kV (Input, Output and Power Supply)
- ❖ Sampling Time 125 ms
- ❖ User-Friendly Operation and Configuration
- ❖ Password Protection for Configuration
- ❖ IP66 Protection Class for Front Flush
- ❖ Standard Retransmission Output (4-20 mA, 12000-bit Resolution)
- ❖ CE and UL approved
- ❖ 3 Points Alarm output
- ❖ Lower Power Consumption (8VA), Longer Life of Electronics Modules
- ❖ Loop Break & Sensor Burnout Alarm
- ❖ Multi-input : total 18 types of input



PID Controller

Model : BCS Series (Make : Shinko)

Specification :

- ❖ Convenient Initial setting mode!
- ❖ AT on startup function!
- ❖ Simplified Program control!
- ❖ Simplified converter function!
- ❖ A variety of Event Input/Output function:
- ❖ Large, Easy-to-view, 5-digit PV, SV Displays:
- ❖ Compact, 60 mm-deep control panel interior!
- ❖ Simple settings from a PC
- ❖ Drip-proof/Dust-proof IP 66
- ❖ Control O/P : Relay contact 1a, Non-contact voltage (for SSR drive), Direct current (As per ordering)
- ❖ Multi-input : Total 18 types of input
- ❖ Sampling Time 125 ms
- ❖ Password Protection for Configuration



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



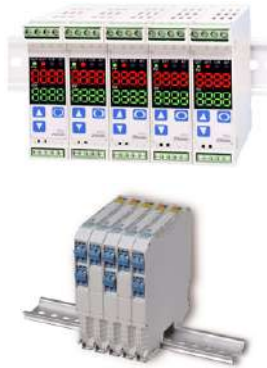
Signal Isolator & Isolated Barriers

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
- ❖ Password Protection for Configuration
- ❖ Calibration of Transmitter by Key Pad

Application :

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



Vibration Monitoring Sensor

Model : HE050 (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 In feed 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 316L / 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 (up to Ra <0.37 µm)
- ❖ Available with or without protection cage
- ❖ 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



IoT Based AHU Management System

Specification :

- ❖ Reduced Load on Chiller
- ❖ Upto 12% Energy Efficiency
- ❖ Remote Control Operations
- ❖ 360 Degree Visibility on AHU Health
- ❖ Enhanced Comfort of occupants

