KOBOLD

MEASURING • MONITORING • ANALYZING

PRODUCT SUMMARY

FLOW • LEVEL • PRESSURE • TEMPERATURE • ACCESSORIES

WWW.KOBOLDUSA.COM

KOBOLD Instruments

For over 40 years, KOBOLD has been a world leader in process measurement and control solutions. We offer one of the industry's broadest lines of sensors, switches, and transmitters to measure and control flow, pressure, level, and temperature. The KOBOLD brand is synonymous with quality, craftsmanship, technological advancement, and cost effectiveness.

KOBOLD instrumentation has historically set the bar for innovation and excellence, helping to shape the field of industrial instrumentation into what it is today. Always on the leading edge, we offer a comprehensive portfolio of reliable instrumentation that is found in a vast array of applications all over the world. Our technologies offer a solution-oriented way to control the most diverse variables.

The KOBOLD Group's production plants are located all over the world.

MEASURE, CONTROL, AUTOMATE

KOBOLD's technical solutions can be easily integrated into a wide variety of systems in many industrial sectors. Thanks to internationally recognized BUS interfaces, most of our models can be easily adapted into already established automated processes. Our innovative instrumentation delivers the highest standards of service and can handle complex processes. Because our solutions are both sophisticated and easy to use, they are very popular among end users.

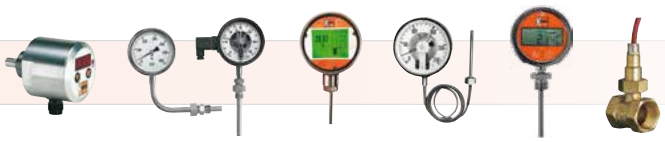
YOU ARE OUR PRIORITY

Our years of experience and excellence in customer service and technical support have built our reputation as the partner of choice. Serving and supporting our customers and our products is our priority. Our expert engineers are ready to help you choose your KOBOLD solution, and their experience is an asset that we are proud of. We are here to help you select the best solution for your application, and eliminate the challenges in selecting equipment that is both optimal and economical.

ABOVE AND BEYOND THE STANDARD

While KOBOLD offers a wide variety of instrumentation that meets most standard application needs, we are also able to meet extraordinary application needs. Our familiarity with exotic materials allows us to offer solutions for variables that are frequently hard to accommodate. Because we are the manufacturer, we also have the flexibility of being able to provide customized solutions in certain circumstances, based on the exact application needs.

THE KOBOLD PRODUCT LINE:



Feature Icons: Look for our "at a glance" icons in our product listings

- High Quality - Low Cost
- Stainless Steel Design
- For Chemicals
- Shock Resistant
- Heating Jacket
- Battery Powered / External Power Supply
- Battery Powered
- Sensor Supply
- Installation Under Process Conditions
- Scalable Analog Output
- Rotatable Display
- Configurable Display
- Bi-directional
- Resettable and Grand Total
- Configurable Outputs
- Operational with Gloves
- Temperature and Pressure Measurement
- Temperature and Flow Measurement
- Energy Measurement
- Space Saver
- NFC

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FLOW

WE EXCEL IN FLOW SOLUTIONS

KOBOLD offers a wide variety of flowmeters, flow regulators, flow indicators, flow switches, flow monitors, and flow sensors. Our flow instrumentation line includes a wide variety of technologies such as: variable area, ultrasonic, mass flow, thermal dispersion, turbine, electromagnetic, vortex, oval gear, positive displacement, differential pressure, Coriolis, helical or screw gear, rotameter, rotary piston, baffle plate, calorimetric, paddle wheel, and multi-parameter meters. We also offer portable and clamp-on instrumentation for short term installations. There are also models for accommodating bi-directional measurement. KOBOLD has a wide variety of instrumentation that is compatible with common communication protocols, such as HART®, PROFIBUS®, Foundation Fieldbus®, and Modbus®.

KOBOLD is able to accommodate most common liquid application media, such as: oils, lubricants, water, wastewater, chemicals, corrosives, abrasives, coolant, paints, coatings, adhesives, sealants, and fuels. Our instrumentation can also handle most types of gaseous media, such as: steam, clean gas, dirty gas, ammonia gas, combustible gas, compressed air, natural gas, and nitrogen flow. KOBOLD flow instrumentation can be found providing dependable and lasting service in common application fields, such as: irrigation, oil and gas, automotive, power generation, general manufacturing, machining, cement/aggregates, chemicals, petrochemicals, test measurement, laboratories, research and development, aerospace, HVAC, water, wastewater, building automation, pulp and paper, metals, mining, surface treatment, semiconductors, pumping, agriculture, marine, aviation, boilers, brewing, refrigeration, turbines, utilities, and welding.

MIM COMPACT MAGMETER

The new MIM magmeter delivers a revolutionary design for measuring and monitoring the flow and temperature of conductive liquids in pipes. The compact design offers exceptional features and functions, at an economical price.

Engineered to exceed the competition, the MIM triumphs with: a superior measuring accuracy, four times the turndown ratio, easy onsite programming, batching functionality, and bi-directional flow measurement.

The MIM is built to last, with a rugged stainless steel body. The multiparameter, touch screen display is both configurable and rotatable. The MIM is an ideal solution for a variety of applications; with ranges from 0.16...16 GPH to 0.4...90 GPM, temperatures up to 280 °F, and pressures up to 230 PSI.

Learn More on Page 24


Water/ Wastewater


Metal Rolling


Flue Gas Scrubbing


Beer/Wine Making


Food Production


Chemical Injection


Pharma


Glass Production


Cement Mixing

Other potential application areas include: automotive production, cooling water, pulp and paper production, energy generation, and agriculture. The MIM offers a repeatability of ±0.2% of full scale and an accuracy of < ±(0.8% of reading + 0.5% of full scale). The minimum media conductivity is ≥ 20 µS/cm.

MIS

All-Metal Magnetic Inductive Flowmeter

The KOBOLD MIS is a unique full bore magmeter that combines cost efficiency and extensive features with quality. It offers technological advantages, reduced commissioning time, and competitive pricing.

Analog, frequency, and pulse outputs are standard along with alarm, batching, and totalizing features. The totalizer offers both a grand and resettable function. The MIS can accomodate all flow directions, due to the rotating digital TFT display screen. It is also equipped to measure bi-directional flow. The rugged cast steel flow bodies are available with a variety of linings, electrode matierlals, and fittings.

The MIS features a convienent IO-Link, especially useful for industry 4.0 compliance. It offers a flow rate of 3.3 to 33 feet per second, a maximum pressure of 230 PSI and a maximum temperature of 158 °F. Accuracy is held to a high standard, at < ± (0.5% reading + 0.5% of the full scale).

Application Examples:

- *Water Recovery*
- *Water Treatmant*
- *Wastewater*
- *Storm Water Monitoring*
- *Water Distribution*
- *Effluent Monitoring*
- *Filtration Systems*
- *Water Hydrant Testing*
- *Machine Tools*
- *Industrial Applications*

Learn More on Page 24

REGulation

- ✓ **Flow Regulation**
- ✓ **No Power Needed**
- ✓ **Cost-efficient**

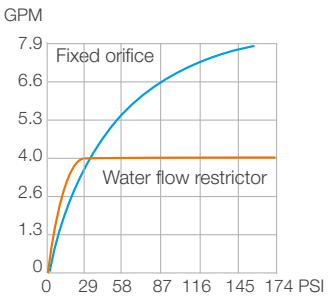
Superior Flow Regulation:

Unlike other models, our unique REG design does not use any rubber. Temperature, chemical influence, and aging affect the molecular structure of rubber and reduces its elastisity. Once the rubber is compromised the flow can no longer be regulated. Our all metal design provides reliable service. The REG excels in protecting pumps from water hammer, cavitation, and overheating from sudden lack of flow. They are also extremely useful in guaranteeing maintenance free and tamper proof allocation of flow for water circuits subject to uneven distribution.

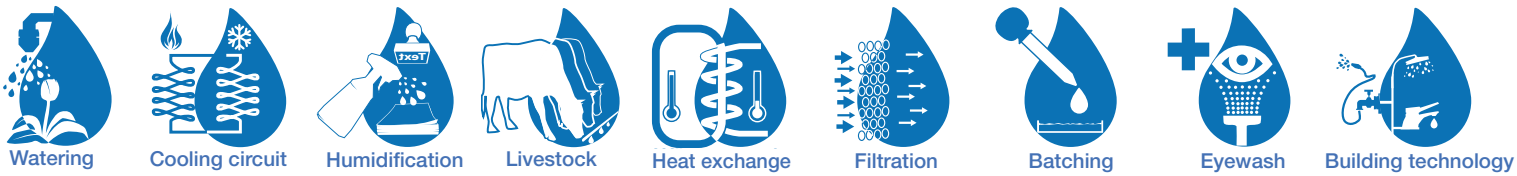
Features:

- Provides a Constant Flow Rate
- Lifelong Service Provides Significant Cost Savings
- Ideal for Batching, Distribution, and Restriction
- Protects Against Water Hammer, Overheating, and Overload
- Simple and Effective
- Flow is Limited, Regardless of Pressure Fluctuations
- High Quality Stainless Steel Build
- Completely Maintenance-free
- No Auxiliary Power Needed to Operate
- Secure from Tampering or Manipulation
- Uniform Supply for Multiple Consumers

Differential Pressure Curve



Example of a flow rate of 4 GPM in relation to a fixed orifice



Viscous Media has Met its Match

DON Oval Gear Flowmeter

The economical DON and DON-H oval gear, positive displacement flowmeters are the preferred choice for measuring clean, low and high viscosity liquids. They deliver precision measurement over a very wide range of viscosities, up to 1,000,000 cPs. Media properties have a minimal effect on the performance.

Common Media: Oil, Grease, Paste, Petroleum, and Fuels

The DON and DON-H flowmeters are built with stainless steel or aluminum bodies and are easy to install in small spaces. They can be used with vertical or horizontal flows and no flow profile conditioning is required. They are available with: a pulse output, an LCD display, 4-20 mA, alarms, and mechanical totalizers. Optional features include: cooling fins, check valves, and bi-directional flow sensing with an optional quadrature output.

Line sizes are available from 1/8" to 4", in both NPT and ANSI flange fittings. Flow ranges are from 0.13 to 9.5 GPH up to 40 to 660 GPM. Models are available for temperatures up to 300 degrees Fahrenheit and pressures up to 1,450 PSIG. Higher pressure models are also available up to 5,800 PSIG. The DON delivers excellent accuracy at 0.2% to 1% of the reading.

Precision Machined Oval Gears

DON and DON-H oval gear flowmeters contain two oval gear rotors that measure a constant volume per rotation. The rotation is detected via magnets embedded within the rotors that transmit a high resolution pulse output.

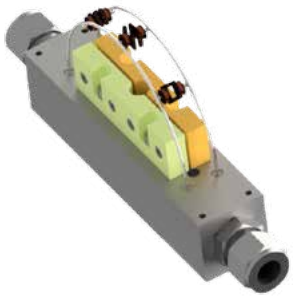
Learn More on Page 20

TMU-W and HPC

New Innovations in Coriolis Flowmeters

The new KOBOLD TMU-W was specially designed for hydrogen fueling dispensation units. The unique design provides the highest possible stability and unrivaled measuring accuracy. It is certified to international standard OIML R 139 2018 for hydrogen fueling stations, with an accuracy class of 1.5. The TMU-W is also suitable for other high pressure application areas for liquids or gases, such as: injection skids, fracking, or extrusion. It is pressure resistant to 1,000 bar and provides two 4-20 mA current output signals.

The HPC breaks the barriers of low-flow measurement for Coriolis flow meters. Most low-flow options employ a single tube design where external interference increases dramatically, requiring costly decoupling. Another challenge most low-flow options face is that the weight influence of the sensor coils compared to the pipe diameter limits the potential design size. The patented, revolutionary design of the HPC employs lightweight magnets that are mounted onto the pipes themselves. This provides the sensor with significantly noise-reduced and predictable dynamic behavior, capable of functioning at higher frequencies, further decoupling the sensor's measurement from any external vibrations. The HPC also integrates up to 4 sensor coils which increases the resolution accordingly. HPC sensor coils are mounted between the pipes, not on them. This new concept delivers an extremely small meter with exceptional accuracy and resistance to external interference. Using state of the art technology, KOBOLD is positioned to quickly overcome the barriers of challenging applications, delivering optimum customer-oriented solutions



KSR/SVN - Flow Switch for Water or Air

- *Materials: Stainless Steel, Glass, FKM*
- *Micro-flow Switches*
- *Control for Very Small Flow Rates*
- *Proximity Switch or Reed Contact*
- *Vertical Connection for Inline Mounting*
- *Anodized Aluminum Housing*

Water: 0.03...4 GPH
Air: 0.1...13 SCFH
t_{max} 160 °F; p_{max} 230 PSIG
Connection: 1/4" NPT

KSV - Economical Micro-Flowmeter

- *Polysulfone Body; Brass or SS Fittings*
- *Excellent Resistance to Acids and Alkalines*
- *Compact*
- *Easy to Read*
- *Easy Installation*
- *Convenient Panel Mount*
- *Highly Repeatable*
- *Optional Needle Valve*

Water: 0.04...0.4 GPH to 2...20 GPH
Air: 0.3...3 SCFH to 10...100 SCFH
t_{max} 250 °F; p_{max} 87 PSIG
Connection: 1/8" NPT
Accuracy: ± 6% of Full Scale

KFR - Acrylic Flowmeter for Liquid or Gas

- *Material: Clear Acrylic*
- *Clear, Easy to Read Scales*
- *Compact Size, Low Cost*
- *Durable Construction*
- *Metric Scales Available*
- *Inherently Stable Float Design*
- *Bridges Micro-flow and Large Ranges*
- *With or Without Control Valves*
- *PVC or Metal Fittings for Durability*

Water: 0.2...2 GPH to 2...20 GPM
Air: 0.1...1 SCFH to 10...100 SCFM
t_{max} 150 °F; p_{max} 100 PSIG
Connection: 1/8" NPT, 1/4" NPT, 1" NPT
Accuracy: ±2 – 5% of Full Scale

KSK - All-Plastic Flowmeter with Optional Switch

- *Materials: Polyamide, Polysulfone*
- *Compact Design*
- *Polysulfone Version Highly Resistant to Acidic and Alkaline Solutions*
- *Transistor or Reed Switch Contacts*
- *Can be used to Monitor and Alarm for Flow Upset Conditions*
- *LED Switching Indication Available*
- *Vertical, Flow Up Orientation*

Water: 0.006...0.05 GPM to 0.44...4.4 GPM
Air: 0.06...0.27 SCFM to 3.5...18.3 SCFM
t_{max} 140 °F; p_{max} 145 PSIG
Connection: 3/8"...1" NPT
or Socket Glue-in Connection
Accuracy: Cl. 4 According to VDI

KSM - All-Plastic Flowmeter with Optional Switch

- *Materials: Polyamide, Polysulfone*
- *For Liquid or Gas*
- *Direct Reading Scales for Water or Air*
- *Excellent Choice for Aggressive Media*
- *Large, Easy to Read Scale*
- *Shock and Corrosion Resistant*
- *Two Adjustable Markers*
- *Optional Reed Switch Contact*

Water: 0.06...0.66 GPM to 35...264 GPM
Air: 0.5...3 SCFM to 50...400 SCFM
t_{max} 140 °F; p_{max} 145 PSIG
Connection: 1"...2-1/2" NPT
or Socket Glue-in Connection
Accuracy: Cl. 4 According to VDI

URB - Glass Tube Flowmeter

- *Material: PVC*
- *Operates on the Suspended Float Principle*
- *Vertical Installation Position*
- *Flow from Bottom to Top*
- *Simple, Economical Solution*

Water: 2.6...26 GPH to 26...260 GPH
Air: 11...110 SCFH to 110...1,100 SCFH
t_{max} 150 °F; p_{max} 43 PSIG
Connection: 1/2"...1-1/4" NPT
Accuracy: ± 2 - 2.5%, q_G = 50%

KDF-2/KDG-2 - Micro-Flowmeter and Switch

- *Materials: Stainless Steel, Glass, FKM*
- *Integral Flow Control Valve*
- *Easy to Read Scale*
- *Compact Design*
- *Direct Reading Scales for Water or Air*
- *Low Flow Switching*
- *Precision Metering Valve*
- *Optional Panel Mount Kit*
- *Optional Adjustable Inductive Proximity Switches (NAMUR Relay Required)*

Water: 0.025...2.5 l/h to 16...160 l/h
Air: 0.5...5 Nl/h to 500...5,000 Nl/h
t_{max} 100 °C; p_{max} 16 bar
Connection: 1/4" NPT, G 1/4, 8 mm Hose
Accuracy: ±2.5 % q_G = 50 %

ATEX

KDF-9/KDG-9 - Micro-Flowmeter and Switch

- *Materials: Stainless Steel, Glass, FKM*
- *Integral Flow Control Valve*
- *Easy to Read Scale*
- *Compact Design*
- *Direct Reading Scales for Water or Air*
- *Low Flow Switching*
- *Precision Metering Valve*
- *Optional Panel Mount Kit*
- *Optional Adjustable Inductive Proximity Switches (NAMUR Relay Required)*

Water: 0.02...0.25 l/h to 10...100 l/h
Air: 2...20 Nl/h to 300...3000 Nl/h
t_{max} 100 °C; p_{max} 16 bar
Connection: 1/4" NPT, G 1/4, 8 mm Hose
Accuracy: ±3 % q_G = 50 %

ATEX

SWK - Compact Variable Area Flowmeter and Switches

- *Materials: Brass, Stainless Steel, PVC*
- *Compact Size*
- *Low Cost*
- *High Reliability*
- *Universal Mounting*
- *Adjustable Switch or Switch with Indicator*
- *Operates by the Suspended Float Principle*

Water: 0.05...0.1 L/min to 13...24 L/min
t_{max} 210 °F; p_{max} 3,600 PSIG
Connection: G 1/2
Accuracy: ± 4% of Full Scale

URM - Glass Tube Flowmeter

- *Material: Stainless Steel*
- *Measures Flow Rates in Closed Pipe Systems*
- *Designed for Low Operating Pressures*
- *Large Sight Glass for Direct Observation*
- *Optional Proximity Switches*
- *Common Applications: Cooling Circuits, Plant Engineering, Water Treatment, Machine Tools, Solar Heating, Welding, Glass Melting Pots, Extrusion Machines, and Induction Furnaces*

Water: 0.06...0.6 GPH to 11...110 GPM
Air: 0.11...1.1 SCFH to 30...300 SCFM
t_{max} 210 °F; p_{max} 230 PSI
Connection: 1/4"...3" NPT
Accuracy: ± 2 - 2.5%, q_G = 50%

URK - Variable Area Flowmeter with Fixed Flange

- *Material: Cast Iron, Stainless Steel*
- *Measures Flow Rates in Closed Pipe Systems*
- *Designed for Low Operating Pressures*
- *Large Sight Glass for Direct Observation*
- *Optional Proximity Switches*
- *Common Applications: Cooling Circuits, Plant Engineering, Water Treatment, Machine Tools, Solar Heating, Welding, Glass Melting Pots, Extrusion Machines, and Induction Furnaces*

Water: 0.004...0.04 GPM to 66...220 GPM
Air: 0.011...0.11 SCFM to 30...300 SCFM
t_{max} 210 °F; p_{max} 230 PSIG
Connection: 1/2"...3" ANSI
Accuracy: ± 2 - 2.5%, q_G = 50%

URL - Glass Tube Flowmeter with Flange

- *Materials: PVC, PTFE*
- *Plastic Version is Chemically Resistant*
- *Designed for Low Operating Pressures*
- *Large Sight Glass for Direct Observation*
- *Optional Proximity Switches*
- *Common Applications: Cooling Circuits, Plant Engineering, Water Treatment, Machine Tools, Solar Heating, Welding, Glass Melting Pots, Extrusion Machines, and Induction Furnaces*

Water: 0.26...2.6 GPH to 66...660 GPH
Air: 0.35...3.5 SCFH to 350...3,500 SCFH
t_{max} 212 °F; p_{max} 145 PSIG
Connection: 1/2"...1-1/2" ANSI
Accuracy: ± 2 - 2.5%, q_G = 50%

V31 - High Accuracy Variable Area Flowmeter/Switch

- *Materials: Stainless Steel, PVC, PVDF, PTFE*
- *For Liquids or Gas*
- *Scale Shows Flow Rate as Volume*
- *Borosilicate Glass Tube*
- *Up to 2 Optional Limit Switches*
- *Calibrated for Density and Viscosity*

Water: 0.3...3.3 GPH to 4.4...44 GPM
Air: 0.088...0.88 SCFM to 10.6...106 SCFM
t_{max} 176 °F; p_{max} 210 PSIG
Connection: 1/4"...2" NPT, 1/2"...1" ANSI
Accuracy: ± 1.6% Liquids, ± 2.5% Gases (VDI)

KDS - All Metal, Low Volume Variable Area Flowmeter

- *All-Metal Design in Stainless Steel*
- *For Liquids or Gases*
- *For Measurement of Low Flow Rates*
- *Compact Size*
- *Rugged Mechanical System with a Low Rate of Wear*
- *Horizontal or Vertical Connections*
- *Special Versions for High Pressures*

Water: 0.026...0.26 GPH to 5...50 GPH
Air: 0.1...1 SCFH to 20...200 SCFH
t_{max} 260 °F; p_{max} 580/910 PSIG
Connection: 1/4" NPT
Accuracy: ± 3% of Full Scale
Options: Analog Output, Inductive Contacts

BGK - All Metal, Low Volume Variable Area Flowmeter

- *Material: Stainless Steel*
- *Measures Low Flow Rates*
- *For Liquids or Gases*
- *Compact Size*
- *Provides Flow Rate in Volume or Mass per Unit of Time*
- *Rugged Mechanical System*
- *Low Rate of Wear*

Water: 0.026...0.26 GPH to 5...50 GPH
Air: 0.1...1 SCFH to 20...200 SCFH
t_{max} 260 °F; p_{max} 580 PSIG
Connection: 1/2"...1" ANSI
Accuracy: ± 3% of Full Scale
Options: Analog Output, Inductive Contacts

USR - Glass Tube Flowmeters with Manifold Valves

- *Material: Brass, PTFE, SS, FKM*
- *For Water and Water-based Liquids*
- *For Centralized Flow Measurement, Such as Cooling Systems*
- *Up to 24 Flowmeters Pre-assembled in a Block*
- *Glass Tube Allows for Direct Flow Observation*
- *Independent Control Valves*

Water: 0.01...0.1 GPM to 0.25...2.5 GPM
t_{max} 210 °F; p_{max} 230 PSIG
Inlet Connection: 1" NPT
Outlet Connection: 1/4" or 3/8" NPT, or Hose Conn.
Accuracy: ± 2 - 2.5%, q_G = 50%

UVR/UTR - Glass Tube Variable Area Flowmeter

- *Materials: Stainless Steel, POM*
- *For Liquids or Air*
- *Simple, Economical*
- *With or Without Needle Valve*
- *Low Pressure Loss*
- *Glass Tube Allows for Direct Observation*
- *Common Applications: Cooling Water, Gas Monitoring for Burners, Inert Gas Cooling*

Water: 2.6...26 GPH to 52.8...528 GPH
Air: 3.5...35 SCFH to 176...1,760 SCFH
t_{max} 210 °F; p_{max} 145 PSI
Connection: 3/8" NPT, 1/2" NPT
Accuracy: ± 2 - 2.5%, q_G = 50%

UMR/UXR/URA - Variable Area Flowmeter

- *Materials: Stainless Steel, POM*
- *For Liquids or Air*
- *Simple, Economical*
- *With or Without Needle Valve*
- *Low Pressure Loss*
- *Glass Tube Allows for Direct Observation*
- *Table-Top Mount Models Available*

Water: 1...10 LPH to 13...130 LPH
Air: 0.01...0.1 Nm^3/h to 0.25...2.5 Nm^3/h
t_{max} 100 °C; p_{max} 16 bar
Connection: 1/4" NPT
Accuracy: Cl. 4 Acc. to VDI/VDE

UTS - Variable Area Flowmeter for Gas Burners

- *Materials: Brass, Stainless Steel*
- *Ideal for Small Installation Spaces*
- *Easy to Change Measuring Tube*
- *Impact Resistant Polystyrene Protective Cover*
- *Vertical Installation Position, Flow From Bottom*
- *Protection: IP65*

Air: 0.35...3.5 SCFH to 10.6...105 SCFH
t_{max} 150 °F; p_{max} 45 PSIG
Connection: 1/4" NPT, G 1/4, M18x1.5
Accuracy: 4 Acc. VDI/VDE

BGN - All Metal, Armored Variable Area Flowmeter

TOP SELLER

- *Materials: SS, Special Materials on Request*
- *For Vertical Up Installations*
- *Ideal for Difficult Applications Requiring High Pressure or Temperature, or Low Pressure Loss*
- *Direct Reading Scales Calibrated for Viscosity, Density, Pressure, and Temperature*
- *Analog Output, HART®, Profibus-PA® Available*
- *316 SS, PTFE-lined SS, Hastelloy® C-22 Tubes*

Water: 0.002...0.02 GPM to 60...570 GPM
Air: 0.008...0.08 SCFM to 140...1,400 SCFM
t_{max} 660 °F; p_{max} 580 PSIG
Connection: 1/2"...6" ANSI, 1/4"...2" NPT
Options: Analog Output 4-20 mA, Contacts
Accuracy: ±1.6 - 2.2% of Full Scale

BGN - High Pressure Armored Flowmeter

- *Materials: SS, Special Materials on Request*
- *For Vertical Up Installations*
- *Ideal for Difficult Applications Requiring High Pressure or Temperature, or Low Pressure Loss*
- *Direct Reading Scales Calibrated for Viscosity, Density, Pressure, and Temperature*
- *Analog Output, HART®, Profibus-PA® Available*
- *316 SS, PTFE-lined SS, Hastelloy® C-22 Tubes*

Water: 0.002...0.02 GPM to 60...570 GPM
Air: 0.008...0.08 SCFM to 140...1,400 SCFM
t_{max} 660 °F; p_{max} 8,700 PSIG
Connection: 1/2"...6" ANSI
Options: Analog Output, BUS-Interface
Accuracy: ±1.6 – 2.2% of Full Scale

BGF - All Metal, Armored Flowmeter

- *Materials: SS, Special Materials on Request*
- *For Horizontal or Vertical Installations*
- *Unique Guided Float with Spring Return*
- *Ideal for Difficult Applications Requiring High Pressure or Temperature, or Low Pressure Loss*
- *Direct Reading Scales Calibrated for Viscosity, Density, Pressure, and Temperature*
- *Analog Output, HART®, Profibus-PA® Available*

Water: 0.044...0.44 GPM to 26.4...264 GPM
Air: 0.17...1.7 SCFM to 100...1000 SCFM
t_{max} 390 °F; p_{max} 580
Connection: 1/2"...3" ANSI, 1/4"...2" NPT
Options: Analog Output, BUS-Interface
Accuracy: ±1.6% of Full Scale

SV/DSV - Float Type Flowmeter and Switch

- *Materials: Brass, Stainless Steel*
- *Small, Compact Design*
- *Direct Reading Scales for Water or Air*
- *Wide Selection of Measuring Ranges*
- *Vertical Connections for Easy Installation*
- *Cylindrical Control Tube for Float*
- *Borosilicate Glass Measuring Tube*
- *N/O or SPDT Reed Contacts as Options*
- *Variety of Sealing Materials Available*

Water: 0.075...0.35 GPM to 2.5...40 GPM
Air: 0.25...1.25 SCFM to 10...150 SCFM
t_{max} 210 °F; p_{max} 145 PSIG
Connection: 1/4"...1-1/4" NPT
Accuracy: ± 5% of Full Scale

BVO - OEM Flowmeter with Switch

- *Materials: Brass, Stainless Steel*
- *Rugged Low Cost Design*
- *Repeatability of ± 2% of Full Scale*
- *Adjustable SPST Switch Standard*

Water: 0.1...1.0 GPM to 1...13 GPM
t_{max} 210 °F; p_{max} 145 PSIG
Connection: 1/4"...1" NPT
Accuracy: ± 10% of Full Scale

S/DSS-Series - All Metal Variable Area Flow Switch

- *Materials: Brass, Stainless Steel*
- *For Liquids or Gas*
- *Compact Design*
- *Cost Effective*
- *Reliable Operation*
- *Vertical Connections for Easy Installation*
- *Excellent at Ensuring Appropriate Flow*
- *NBR or FKM Seals*
- *Up to 4 Switch Points*

Water: 0.075...0.25 GPM to 1...14 GPM
Air: 0.2...1.1 SCFM to 3...70 SCFM
t_{max} 240 °F; p_{max} 5,000 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: ± 5% of Full Scale

SMV - High Pressure, All Metal Flowmeter and Switch

- *Materials: Brass, Stainless Steel*
- *Direct Reading Scales for Water or Air*
- *Small, Compact Design*
- *Easy to Install*
- *Optional Set-point Switches*
- *Switches Mounted in a Protective Housing*
- *High Resistance to Pressure and Shock*
- *Can Handle 120% of Max. Flow*

Water: 0.05...0.15 GPM to 4...40 GPM
Air: 0.25...1.2 SCFM to 5...130 SCFM
t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1/4"...1-1/4" NPT
Accuracy: ± 5% of Full Scale

SMO/SMW - High Pressure Flowmeter/Switch

- *Materials: Brass, Stainless Steel*
- *Direct Reading Scales for Water or Air*
- *Small, Compact Design*
- *Easy to Install*
- *Vertical or Horizontal Flows*
- *Optional Set-point Switches*
- *Switches Mounted in a Protective Housing*
- *High Resistance to Pressure and Shock*
- *Can Handle 120% of Max. Flow*

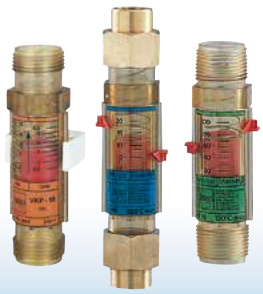
Water: 0.04...0.6 GPM to 8...34 GPM
Air: 0.2...3.5 SCFM to 30...130 SCFM
t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1/4" ...3/4" NPT
Accuracy: ± 5% of Full Scale

SMN - All Metal Flow Switch for Liquids

- *Materials: Brass, Stainless Steel*
- *Horizontal or Vertical Flow*
- *Low Switch Point*
- *Low Pressure Drop at High Flows*
- *All Metal Wetted Parts*
- *N/O or SPDT Reed Switch*
- *Typical Applications: Control of Water and Cooling Circuits, High Pressure Cleaning Devices, and Heating Systems*

Water: 0.4...13 GPM
t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1" NPT
Accuracy: ± 5% of Full Scale

VKP - Economical Plastic Flowmeter and Switch



- *Material: Polysulfone*
- *Compact Size*
- *Inexpensive Flow Measurement for Liquids*
- *Common Uses: Cooling Water, Lubrication Systems, Solar Heating*
- *Ideal Choice for OEM Applications*
- *Optional Reed Contacts*
- *Optional Union Fittings*

Water: 0.5...5 GPM to 5...26 GPM
Oil: 0.5...4.5 GPM to 3...20 GPM
t_{max} 250 °F; p_{max} 230 PSIG
Connection: 1/2", 3/4", 1" NPT,
Glue Connection Available
Accuracy: ± 5% of Full Scale

VKG - Viscosity Compensated Flowmeter and Switch

Top Seller

- *Materials: Brass, Stainless Steel, NBR, FKM*
- *For High or Low Viscosity Media*
- *Largely Insensitive to Viscosity and Density Changes During Operation*
- *Viscosity Compensated up to 540 cSt*
- *Density Compensated up to 30 lb/ft³*
- *Direct Reading Oil Scale*
- *Mounting Position Independent*
- *In-line Connections for Easy Installation*
- *Extremely Versatile*

Viscosity Range: 1...540 cSt
Oil: 0.03...0.12 GPM to 2...21 GPM
t_{max} 210 °F; p_{max} 175 PSIG
Connection: 1/4"...1" NPT
Accuracy: ± 5% of Full Scale

VKM - All Metal, Viscosity Compensated Flowmeter

Top Seller

- *Materials: Brass, Stainless Steel*
- *Direct Reading Scales*
- *Suitable for Oils and Compatible Liquids*
- *Install in any Position*
- *In-line Connections*
- *Viscosity Compensated up to 540 cSt*
- *Density Compensated up to 30 lb/ft³*
- *Optional: Reed Contacts, Analog Output, Compact Electronics*

Viscosity Range: 1...540 cSt
Oil: 0.03...0.12 GPM to 2...20 GPM
t_{max} 210 °F; p_{max} 5,000 PSIG
Connection: 1/4"...1" NPT
Accuracy: ± 5% of Full Scale

VKA - OEM Viscosity Compensated Flowmeter

- *Material: Brass*
- *Reliable Construction*
- *Affordable Pricing*
- *Viable Alternative to our VKG and VKM Flowmeters*
- *Optional Switches*
- *Protection: IP54 for Side Indication, IP65 Electrical Switch*

Viscosity Range: 30...540 cSt
Oil: 2...6.3 GPM to 8...26 GPM
t_{max} 210 °F; p_{max} 3,600 PSIG
Connection: 1/2", 3/4" NPT
Accuracy: ± 4% of Full Scale

BVB - Manifold Valves for Multiple Installations

- *Material: Aluminum*
- *For Use with VKG and VKM Flowmeters*
- *Join up to 8 Flowmeters*
- *Compact Solution for Centralized Flow Measurement and Distribution*
- *Easy to Install*
- *Total Throughput up to 6.3 GPM*

Suitable for Models VKG, VKM
t_{max} 210 °F; p_{max} 930 PSIG
Connection: 1/2" NPT

PSR - Inline Paddle Flow Switch

Top Seller

- *Materials: Brass, Stainless Steel*
- *Low Cost*
- *Easy to Install*
- *Simple, Reliable Design*
- *Adjustable Switch Point*
- *Contacts can be set N/O or N/C*
- *Standard SPST Switch*
- *Optional SPDT Switch*

Switching Ranges for Water:
0.9...1.3 GPM to 9.2...15 GPM
t_{max} 230 °F; p_{max} 1,450 PSIG
Connection: 1/4"...1-1/2" NPT

PS/PSE - Insertion Paddle Flow Switch

- *Materials: Brass, Stainless Steel*
- *Low Cost*
- *Easy to Install*
- *Simple, Reliable Design*
- *Adjustable Switch Point*
- *Contacts can be set N/O or N/C*
- *Standard SPST Switch*
- *Optional SPDT Switch*

Switching Ranges for Water:
16...22 GPM to 101...141 GPM
t_{max} 230 °F; p_{max} 1,450 PSIG
Connection: 1/2" NPT

PPS - Plastic Paddle Flow Switch

- *Material: Polysulfone*
- *Reliability at a Competitive Price*
- *Easy to Install*
- *Bi-directional*
- *Low Maintenance*
- *Low Pressure Drop*
- *For Pipes 1" and Larger*
- *Switch Status Visible through Housing*
- *N/O, N/C, or SPDT Contacts*
- *Requires Straight Run of 3x Pipe Diameter*

Water: 5...9.5 GPM to 19... 28.5 GPM
t_{max} 225 °F; p_{max} 145 PSIG
Connection: 1" NPT
Repeatability: ± 3% of Switchpoint

FPS - Insertion Paddle Switch for Liquids

- *Material: Brass, Stainless Steel*
- *Suitable for Water and Compatible Low-viscosity Liquids*
- *Used for Min/Max Flow Control, Pump Protection, and Monitoring Cooling Circuits*
- *High Capacity SPDT Mechanical Switch*
- *Position Independent Installation*
- *Externally Adjustable Switch Point*
- *Tolerates Dirty Media*

Water: 0.9...4.4 GPM to 375...760 GPM
t_{max} 250 °F; p_{max} 435 PSIG
Connection: 1" NPT

LPS - Air Flow Switch for HVAC Ducts

- *Material: Galvanized Steel, Brass, SS*
- *For Horizontal Square/Rectangular HVAC Ducts*
- *Dust-tight SPDT Micro-switch*
- *Adjustable Switch Point*
- *ABS and Polycarbonate Housing*
- *Common Uses: Air Ducts, Exhaust Gas Channels, Pneumatic Conveyors, Filters, Cooling and Drying Plants, Monitoring Ventilator Performance*

Air: 195...1575 FPM
t_{max} 185 °F; p_{max} Atmospheric
Connection: Flange

DWN/DWS/DPU - Paddle Bellows Flow Switch

- *Materials: Brass, Stainless Steel*
- *Ideal for Use in Applications where Dirt and Solid Grain Contaminants are a Concern*
- *Large Internal Clearances*
- *Orientation Independent*
- *High Current Switching Capability*
- *Insensitive to Magnetic Fields*

Liquid: 0.26...1.3 GPM to
4,950...19,800 GPM
t_{max} 210 °F; p_{max} 230 PSIG
Connection: 1/2"...2" NPT, 1/2"...2" ANSI,
Weld-on Flange for 1-1/2"...24" Pipe
Accuracy: ± 3 – 5% of Full Scale

DWU/DPU - Paddle Bellows Flowmeter and Switch

- *Materials: Brass, Stainless Steel*
- *Ideal for Use in Applications where Dirt and Solid Grain Contaminants are a Concern*
- *Large Internal Clearances*
- *Orientation Independent*
- *High Current Switching Capability*
- *Insensitive to Magnetic Fields*

Liquid: 0.26...1.3 GPM to
4,950...19,800 GPM
t_{max} 210 °F; p_{max} 230 PSIG
Connection: 3/8"...2" NPT, 1/2"...2" ANSI,
Weld-on Flange for 1-1/2"...24" Pipe
Accuracy: ± 3 – 5% of Full Scale

DPT - Target Type Flowmeter

- *Materials: Brass, Stainless Steel*
- *Unique, Patented Target System*
- *Simple, Reliable Design*
- *Virtually No Wear Components*
- *Low Pressure Loss*
- *Generally Immune to Problems Caused by Liquids with a High Solids Content*
- *Flow Rate Display, Adjustable Setpoint Switches, or an Analog Flow Signal*

Water: 1.5...8 GPM to 225...500 GPM
t_{max} 175 °F; p_{max} 580 PSIG
Connection: 3/8"...3" NPT
Accuracy: ± 3% of Full Scale

DWD - Paddle Bellows Flowmeter and Switch

- *Materials: Brass, Stainless Steel, PVC*
- *Very Low Pressure Loss*
- *Linear Output Signal*
- *Resistant to Dirt and Small Debris in the Media*
- *Universal Mounting*
- *Factory Configured According to Customer Specifications*
- *Optional RS-232C Serial Interface*

Water: 0.26...2.6 GPM to 1,580...15,800 GPM
t_{max} 250 °F; p_{max} 360 PSIG
Connection: 3/8"...2" NPT, 3/8"...2" ANSI, Weld-on Flange 1-1/2"...20" Pipe
Accuracy: ±1.5% of Full Scale

TSK - Flap Style Flowmeter

- *Materials: SS, PTFE, Hastelloy®*
- *Unique Design for Low Head Loss*
- *For Horizontal or Vertical Piping Runs*
- *Tolerates Dirty Liquids and Suspended Solids*
- *Superior Damping System for Stability*
- *Calibrations for Density Available*
- *Optional Set-point Switches, 4-20 mA with HART® or Profibus-PA®*

Water: 6.6...26.4 GPM to 880...6,600 GPM
t_{max} 570 °F; p_{max} 580 PSIG
Connection: 1-1/2"...20" ANSI Wafer
Accuracy: ± 2.5% of Full Scale

HND-F - Hand-Held Measuring Unit

- *Measures Flow, Humidity, and Temperature*
- *Large Selection of Electrodes and Accessories*
- *Serial Interface, MIN/MAX Memory*
- *Hold Function, Clock, Log Function*
- *User-Friendly*
- *Common Applications: Air Conditioning, Exhaust Ventilation Systems, and General Humidity Measurement*

Water: 0.16...16 ft/sec
Air: 1.8...65 ft/sec
Humidity: 0...100% rH
Temperature: -40...250 °F, -110...480 °F
Accuracy: from ±0.1% of Full Scale

DRS - OEM Turbine Flow Sensor

- *Materials: Brass, Stainless Steel, PPO*
- *Quality Solution at an Economical Price*
- *Ideal for OEM Applications*
- *For Clear or Opaque Liquids*
- *Pulse Frequency, 4-20 mA, Digital Display, Electronic Pointer Indicator*
- *Optional PT-100 RTD Output for Temperature Measurement*

Water: 0.6...10.5 GPM
t_{max} 300 °F; p_{max} 2,900 PSIG
Connection: 1/2" NPT, 3/4" NPT
Accuracy: ±1.5% of Full Scale

TUR - All-Plastic Turbine Flowmeter

- *Materials: PVC, PVDF*
- *For Water-like Liquids with Viscosities under 8 cSt*
- *High Resistance to Acids, Lyes, and Other Aggressive Media*
- *Installation in Any Orientation*
- *Pulse Outputs, Analog Outputs, Digital Totalizers and Batchers*

Water: 5...88 GPM to 11...440 GPM
t_{max} 160 °F; p_{max} 145 PSIG
Connection: 2" or 4" ANSI
Accuracy: ±1% of Full Scale

DPE - Paddle Wheel Flowmeter

- *Materials: Brass, Stainless Steel*
- *Unique Insertion Impeller Design*
- *Low Pressure Loss*
- *Outputs: Pulse Frequency, 4-20 mA Analog, Digital Display, and Switches*
- *Tolerates Dirty Liquids and Solids*
- *Common Uses: Cooling Water, Mechanical Engineering, Waste Water Treatment, and Chemical Industry*

Water: 1.5...8 GPM to 15...200 GPM
t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/2"...3" NPT
Accuracy: ± 2.5% of Full Scale

DRB - Paddle Wheel Flowmeter

- *Materials: Brass, Stainless Steel*
- *Unique Insertion Impeller Design*
- *Low Pressure Loss*
- *Outputs: Pulse Frequency, 4-20 mA Analog, Digital Display, and Switches*
- *Tolerates Dirty Liquids and Solids*
- *Common Uses: Cooling Water, Mechanical Engineering, Waste Water Treatment, and Chemical Industry*

Water: 1.5...8 GPM to 15...200 GPM
t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/2"...3" NPT
Accuracy: ± 3.0% of Full Scale

TUV - Turbine Flowmeter

- *Material: Stainless Steel*
- *For Low Viscosity Liquids*
- *Media Examples: Fuel, Liquified Gas, Solvents, Light Heating Oil, Tap and Demineralized Water*
- *Pulse Output*
- *Viscosity Range: 1...30 mm^2/s*
- *Calibrated by Factory for Viscosity*

Water: 0.3...1.5 l/min to 35...400 l/min
t_{max} 350 °C; p_{max} 640 bar
Connection: G 1/4...1-1/2
Linearity: ± 1% of Reading

SFL - High Precision Turbine Flow Sensor

- *Materials: PVDF, Stainless Steel*
- *For Clean, Transparent Media*
- *Infrared Sensing*
- *Bearingless Design for Long Life*
- *Universal Mounting Position*
- *Linear, Square Wave Pulse Output*
- *Very High Turndown Over Entire Range*
- *Compact Size*

Water: 0.5...20 l/min
t_{max} 90 °C; p_{max} 250 bar
Connection: G 3/8
Accuracy: ±1% of Full Scale

DOT - Turbine Flowmeter

- *Material: Stainless Steel*
- *For Low Viscosity Liquids*
- *Rugged and Reliable Turbine Meter*
- *Tungsten Carbide Bearings*
- *Long Service Life*
- *Low Pressure Drop*
- *Pulse and 4-20 mA Signal Outputs*
- *Optional LCD Display for Batching, Totalizing*

Water: 0.5...5 GPM to 240...2,400 GPM
t_{max} 250 °F; p_{max} 3,600 PSIG
Connection: 1/2"...2" NPT, 1/2"...6" ANSI, (Larger Sizes upon Request)
Accuracy: ± 0.5% of Full Scale

PEL - Low Volume Turbine Flowmeter

- *Materials: Stainless Steel, Aluminum*
- *Pelton Wheel Principle*
- *For Liquids*
- *High Reliability*
- *Long Service Life*
- *Pulse Output*
- *Media Examples: Fuel, Distilled Water, Hot Grease*

Water: 0.004...0.06 l/min to 0.1...28 l/min
t_{max} 135 °C; p_{max} 345 bar
Connection: R 1/4...R 1/2, Wafer Flange DN 40/50, 1/2" Glue-in Connection, Hose-Connection
Accuracy: ± 2% of Full Scale

DPM - Pelton Wheel Flow Sensor

- *Material: Brass, Stainless Steel*
- *For Water-based, Low Viscosity, Optically Transparent Liquids*
- *For Low Flow Rates*
- *Compact Design*
- *No Straight Piping Requirements*
- *Mount in any Orientation with Axle Remaining in the Horizontal Plane*
- *Long-life Sapphire Axle and Bearings*
- *Outputs: Pulse Frequency, 4-20 mA Analog, Transistor Switch Signal*

Water: 0.24...4.8 GPH to 0.8...80 GPH
t_{max} 175 °F; p_{max} 230 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: ±1 – 2.5% of Full Scale

DPL - All Plastic Low Flow Paddle Wheel Sensor

- *Material: Polypropylene*
- *Precision Water Flow Transmitter*
- *Accuracy at a Low Cost*
- *Compact Design*
- *Resistant to Aggressive Media*
- *Sapphire Bearings*
- *Standard Pulse Frequency Output*
- *Optional Analog Output and/or Digital Indication*

Water: 0.4...8 GPH to 16...400 GPH
t_{max} 160 °F; p_{max} 145 PSIG
Connection: G 1/2, Hose Barb
Accuracy: ± 2.5% - 5% of Full Scale

KFF/KFG-1 - Low Volume, Rotating Vane Flowmeter

- *Material: Brass, PTFE, PPS*
- *Can Measure Very Low Flow Rates*
- *Models for Liquid or Gas*
- *For a Wide Variety of Industrial, Commercial, or Laboratory Applications*
- *Pulse or 0-5 V_{DC} Output*
- *Highly Repeatable*
- *12.5 V_{DC} or 24 V_{DC} Input Power*
- *Local LCD Display for 3000 Series*

Water: 13...100 mL/min to 1...10 L/min
Air: 20...100 mL_N/min to 100...500 L_N/min
t_{max} 120 °F; p_{max} 500 PSIG
Connection: 1/8"...1/2" Compression
Accuracy: ± 3% of Full Scale

KFF/KFG-3 - Low Volume, Rotating Vane Flowmeter

- *Materials: Brass, PPS*
- *Can Measure Very Low Flow Rates*
- *Models for Liquid or Gas*
- *For a Wide Variety of Industrial, Commercial, or Laboratory Applications*
- *Pulse or 0-5 V_{DC} Output*
- *Highly Repeatable*
- *12.5 V_{DC} or V_{DC} Input Power*
- *Local LCD Display for 3000 Series*

Water: 13...100 mL/min to 1...10 L/min
Air: 20...100 mL_N/min to 100...500 L_N/min
t_{max} 120 °F; p_{max} 500 PSIG
Connection: 1/8"...1/2" Compression
Accuracy: ± 3% of Full Scale

DF - Paddle Wheel Flowmeters/Totalizers/Transmitters

- *Materials: Polysulfone, Brass, SS*
- *Available with Switches*
- *Easy to Install*
- *Rugged and Reliable*
- *No Straight Run Required*
- *Multiple Material Combinations*
- *NPN Frequency Output or Analog Output*
- *Compatible with Water-based, Low Viscosity Liquids and Aggressive Water-based Chemicals*

Water: 0.02...0.14 GPM to 1.5...36 GPM
t_{max} 180 °F; p_{max} 1,450 PSIG
Connection: 1/8"...1-1/2" NPT
Accuracy: ± 2.5% of Full Scale

DFT - Compact Paddle Wheel Flow Sensor

- *Material: Brass or PTFE*
- *Compact, Economical Design*
- *No Straight Run Requirements*
- *Standard Frequency Output*
- *Two Different Material Combinations*
- *Optional Analog and Controller Outputs, LCD Displays, Analog Flow Transmitters, Programmable Relays, Totalizers or Batch Controllers*

Water: 0.05...0.5 GPM to 0.8...15 GPM
t_{max} 180 °F; p_{max} 230 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: ± 2.5% of Full Scale

DRH - Paddle Wheel Flow Sensor

- *Materials: POM, PVDF, Brass, SS*
- *Economical Pricing*
- *Industrial or OEM Applications*
- *For a Wide Range of Water-like, Low-viscosity Liquids or Aggressive Chemicals*
- *Seven Material Combinations*
- *Frequency, 4-20 mA Analog, Transistor Switches, Digital/Analog Display*

Water: 0.05...0.2 GPM to 0.66...13.2 GPM
t_{max} 175 °F; p_{max} 580 PSIG
Connection: 3/8" NPT, 1" NPT
Accuracy: ± 2.5% of Full Scale

DRG - Paddle Wheel Flow Sensor

- *Materials: Polypropylene, Brass, SS*
- *Perfect OEM Flow Sensor*
- *Compact, Versatile, Economical*
- *Five Material Combinations*
- *All-plastic Version Suitable for High Purity Water and Aggressive Water-based Chemicals*
- *Outputs: Pulse Frequency, 4-20 mA Analog, Transistor Switches, Digital/Analog Display*

Water: 0.15...3 GPM to 3...37 GPM
t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/8"...1" NPT
Accuracy: ± 3% of Full Scale

DTK - Pelton Wheel Flow Sensor

- *Material: Stainless Steel*
- *Designed for High Volume OEM Market*
- *Economical Measurement of Low Flows*
- *For Clear or Opaque Liquids*
- *For Low Viscosity Liquids*
- *No Straight Run Requirements*
- *Highly Repeatable, Linear Output*
- *Common Applications: Volume Dosing, Laundry Machines, PCB Manufacturing, and Agricultural Machinery*

Water: 0.8...9.5 GPH to 16...190 GPH
t_{max} 280 °F; p_{max} 430 PSIG
Connection: 1/4" NPT
Accuracy: ± 2% of Full Scale

LFM - Dual-Ring Pendulum Flowmeter

- *Material: Stainless Steel*
- *For Low Viscosity Liquids*
- *Suitable for Filling/Batching Processes*
- *Typical Media: Additives, Perfumes, Water and Demineralized Water, Liquified Gas*
- *Repeatability of ± 0.1%*
- *IP65 Protection*

Water: 0.005...0.25 l/min
t_{max} 80 °C; p_{max} 100 bar
Connection: 1/8" NPT, G 1/8, Swagelok® 6 mm
Accuracy: ± 2.5 % of Reading

DRZ - Rotary Piston Flowmeter

- *Material: Brass*
- *Economy and High Performance*
- *For Clean, Lubricating Liquids*
- *For Viscosities from 5 to 100 cSt*
- *Low Pressure Drop*
- *Repeatabilty of ± 0.2%*
- *Maximum Throughput of 160 GPH*
- *Can be Combined with AUF Display*

Viscosity Range: 5...100 cSt
Oil: 1.6...110 GPH
t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/8" NPT, 1/4" NPT
Accuracy: ±1% of Reading

OVZ - Economical Oval-Gear Flowmeter

- *Materials: POM, Aluminum*
- *Positive-Displacement Technology at a Rotameter Price*
- *Maintains Precision with Viscosity Changes*
- *Five Material Combinations*
- *Minimal Wear Components*
- *Typical Applications: Lubrication Systems, Filling Transmission Fluids, Hydraulic Systems*
- *NPN, PNP, NAMUR Configurations*
- *4-20 mA and Different Display Options*

Viscosity Range: 10...800 cSt
Oil: 0.03...0.53 GPM to 0.42...10.6 GPM
t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4"...3/4" NPT
Accuracy: ± 2.5% of Full Scale

DON - Positive Displacement Flowmeter

TOP SELLER





- *Materials: Aluminum, Stainless Steel*
- *For Clean, High and Low Viscosity Liquids Like: Lubricating/Hydraulic Oils, Diesel Fuels, Resins, Pastes*
- *Precise Measurement over a Wide Viscosity Range*
- *Output Options: Analog, Frequency, LCD Totalizers, Batch Controllers*
- *Optional Quadrature Output*

Viscosity Range: up to 1,000,000 cP
Oil: 0.13...9.5 GPH to 40...660 GPM
t_{max} 300 °F; p_{max} 1,450 PSIG
Connection: 1/8"...4" NPT, ANSI 1"...4"
Accuracy: ± 0.2 - 1% of Reading

DON-H - High Pressure Flowmeter

TOP SELLER


- *Material: Stainless Steel*
- *For High Pressures, up to 5,800 PSIG*
- *For Clean Viscous Liquids*
- *Common Media: Hydraulic Oils, Diesel Fuel, Resins, and Pastes*
- *Pulse and 4-20 mA Signal Outputs*
- *Optional LCD Display for Batching, Totalizing*

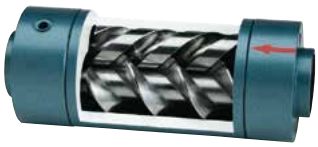
Viscosity Range: up to 1,000,000 cP
Oil: 0.13...9.5 GPH to 0.26...10.6 GPM
t_{max} 250 °F; p_{max} 5,800 PSIG
Connection: 1/8"...1/2" NPT
Accuracy: ± 0.2 - 1% of Reading

DOE - OEM Oval Gear Flowmeter

- *Material: Stainless Steel*
- *Designed for OEM Use*
- *PEEK or PPS Rotors*
- *Media Viscosities from 2 to 1000 cP*
- *Hall Sensor or Hall/Reed Switch*
- *Pulse Frequency Signal Output*
- *Common Media: Petroleum, Grease, Oil, Pastes, Fuels, Chemicals, Ink*
- *Optional Temperature Measurement*

Viscosity Range: up to 1,000 cP
Oil: 0.14...9.5 GPH to 16...634 GPH
Connection: 1/8"...1/2" NPT
Accuracy: ± 1 % of Reading

OMG - Helical Gear Flowmeter



- *Materials: Cast Iron, Stainless Steel*
- *Pulsation-free Principle of Measurement*
- *For Viscous, Non-abrasive Liquids*
- *Pulse Output*
- *High Reliability*
- *Self-cleaning Measuring Chambers*
- *Long Service Life*
- *Installation Position Independent*

Viscosity Range: up to 5,000 cSt
Oil: 0.026...2.6 GPM to 13...1,300 GPM
t_{max} 390 °F; p_{max} 6,000 PSIG
Connection: 1/2"...3" NPT, 1/2"...6" ANSI
Accuracy: ± 0.3% of Reading

OME - Helical Gear Flowmeter

- *Material: Aluminum*
- *Quiet, Non-pulsating Operation*
- *Low Pressure Loss*
- *For Non-abrasive, Lubricating Liquids*
- *Advanced Helical-gear Technology*
- *Bi-directional Measurement*
- *High Turndown Ratio of 150:1*
- *No Upstream or Downstream Flow Requirements*

Viscosity Range: up to 5,000 cSt
Oil: 0.03...2.6 GPM to 0.92...92 GPM
t_{max} 250 °F; p_{max} 580 PSIG
Connection: 1/2"...1-1/2" NPT
Accuracy: ± 0.3% of Reading

DZR - Spherical Gear Flowmeter

- *Materials: Cast Iron, Stainless Steel*
- *For Viscous Liquids*
- *Seals of FKM, EPDM, or FEP*
- *Application Specific Models for Flow Measurement, Oil Batching, Consumption Measurement, Ratio Control, and Batch Control*
- *Protection of IP65*

Viscosity Range: 20...5,000 cSt
Oil: 0.008...2 l/min to 3...700 l/min
t_{max} 150 °C; p_{max} 400 bar
Connection: G 1/8 ... 1
Accuracy: ± 0.3 - 1% of Reading

KZA - Spherical Gear Flowmeter

- *Material: Aluminum*
- *For Viscous, Non-abrasive Liquids*
- *Easy to Maintain*
- *Low Pressure Loss*
- *Low Noise Level*
- *Commonly Used in Mixing, Batching, and Hydraulics*

Viscosity Range: 20...4,000 cSt
Oil: 0.02...4 l/min to 1...200 l/min
t_{max} 80 °C; p_{max} 160 bar
Connection: G 1/4... 1
Accuracy: ± 0.3 - 3% of Reading

ZDM - Spherical Gear Flowmeter

- *Materials: Cast Iron, Stainless Steel*
- *Rugged Build for Demanding Conditions*
- *Common Media: Paraffin, Kerosene, Diesel, Mineral Oil, Hydraulic Oils, Inks, Dyes, Paints, Grease, Polyurethane, Glues, Pastes, Creams, Resins, and Waxes*
- *Can Detect Flow Direction*
- *Pulse Frequency Output*

Viscosity Range: 0.3...1,000,000 cSt
Oil: 0.0005...0.5 GPM to 0.4...138 GPM
t_{max} 410 °F; p_{max} 6,500 PSIG
Connection: 3/8"...1-1/2" NPT
Accuracy: ± 0.3% of Reading

KAL-D - Compact Thermal Flow Switch

Top Seller

- *Material: Stainless Steel*
- *Extensive Features, Compact Design*
- *For Non-viscous, Water-based Liquids*
- *Reliable, Insensitive to Dirt*
- *Minimal Pressure Loss*
- *Output: PNP/NPN, N/O, N/C*
- *Superior Compensation for Changes in Temperature*
- *LED Status Indicator*

Water: 0.15...6.6 ft/sec
t_{max} 175 °F; p_{max} 580 PSIG
Connection: 1/4" or 1/2" NPT, M12 x 1

KAL-K - Thermal Flow Switch

Top Seller

- *Material: Stainless Steel*
- *Flow Switch with LED Flow Trend and NPN/PNP Transistor, N/O Relay (Only with Optional 110 V_{AC} Version)*
- *Revolutionary Microprocessor-based Drift Stabilization*
- *Easy to Operate*
- *Extremely Low Pressure Loss*
- *Insensitive to Dirt*

Water: 0.15...6.6 ft/sec
t_{max} 250 °F; p_{max} 1,450 PSIG
Connection: 1/2"...3/4" NPT, Tri-Clamp®

KAL-A - Thermal Flow Transmitter

Top Seller

- *Material: Stainless Steel*
- *Flow Sensor with 4-20 mA Output, 3-wire (Non-linear), Optional Switch*
- *Revolutionary Microprocessor-based Drift Stabilization*
- *Easy to Operate*
- *Extremely Low Pressure Loss*
- *Insensitive to Dirt*

Water: 0.15...6.6 ft/sec
t_{max} 175 °F; p_{max} 1,450 PSIG
Connection: 1/2"...3/4" NPT, 1-1/2" Tri-Clamp®
Linearity: ±10% of Full Scale

KAL-L - Thermal Flow Switch for Air

Top Seller

- *Material: Brass, Polyamide*
- *Rapid Detection of Flow Rate Changes in Non-hazardous Gases*
- *Compensates for Thermal Changes*
- *Design Minimizes Erroneous Switching*
- *Negligible Pressure Loss*
- *Adjustable Response Time*
- *Common Applications: Air Conditioning Systems, Ventilation Systems, Conveying Plants*

Air: 3.3...65 ft/sec
t_{max} 250 °F; p_{max} 120 PSIG
Connection: 1/2" NPT, Duct Flange
Accuracy: ±10% of Reading

KAL/KAL-E - Thermal Flow Switch

- *Materials: Brass, Stainless Steel*
- *Continuous Monitoring of Liquids*
- *For Low or High Flow Velocities*
- *Temperature Compensation*
- *Minimal Pressure Loss*
- *High Reliability, No Moving Parts*
- *Remote Probe Allows Installation with Minimal Clearance*
- *Easy to Operate*
- *Insensitive to Dirt*
- *Optional Temperature Switch*

Water: 0.15...6.6 ft/sec
t_{max} 250 °F; p_{max} 1,450 PSIG
Connection: 1/4"...1-1/2" NPT

DVK - Calorimetric Switch, Flowmeter, and Totalizer

- *Material: Stainless Steel*
- *Designed for Air Flow in Pipes/Hoses*
- *Maintenance-Free Calorimetric Technology*
- *Minimal Pressure Loss*
- *Common Application Areas: Flow Monitoring of Air and Gases, Air Conditioning Systems, and Extraction Systems*

Air: 1...10 LPM to 50...500 LPM
t_{max} 50 °C; p_{max} 15 bar
Connection: G 1/4...G 2
Accuracy: ± 5% of Full Scale

KAH - Air Velocity Transmitter

- *Material: Polycarbonate*
- *Ideal for Accurate Ventilation Control*
- *Hot-Film Anemometer Principle*
- *Accuracy at Low Air Velocity*
- *Insensitive to Dust and Dirt*
- *High Reliability, Low Maintenance*
- *Adjustable Sensing Range, Insertion Length, Damping Time*
- *Easy to Install*

Air: 0...2,000/3,000/4,000 ft/min
Output Signal: 0-10 V_{DC} or 4-20 mA
Supply Voltage: 24 $V_{AC/DC}$
Connection: Mounting Adapter
Accuracy: ±(0.2 m/s + 3% of Reading)

DMS - Mass Flowmeter for Gases

- *Material: Stainless Steel*
- *For Gas Measurement*
- *Accurate, Reliable, Rugged*
- *Easy to Use Display*
- *No Moving Parts*
- *Common Application Areas: Gas Monitoring, Paint Lines, Laminator Systems, Semiconductor Industry, Analytic Devices, Exhaust Measurement, Engineering, and Boiler Controls*
- *Optional Regulator*

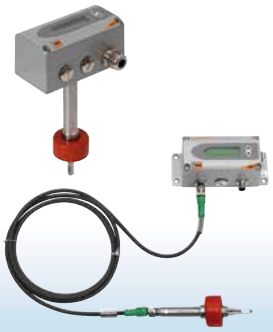
Air: 0.1...3.7 NL/min to 0...185 NL/min
t_{max} 50 °C; p_{max} 35 bar
Connection:
1/4" or 1/2" NPT, 1/8"...1/2" Compression
Accuracy: ±1% of Full Scale

KME - Compact Inline Flowmeter

- *Material: Aluminum, SS, Polycarbonate*
- *For Compressed Air and Technical Gases*
- *Hot Film Sensor Element*
- *Easy to Mount/Dismount without Opening any Pipes*
- *Long Term Stability, Fast Response Time*
- *Application-specific, Multi-point Factory Adjustment for Excellent Accuracy*
- *Optional Display*

Air: 0.12...44.4 SCFM to 1.3...500 SCFM
t_{max} 140 °F; p_{max} 230 PSIG
Connection: 1/2"...2" NPT
Accuracy: ± 3.0% of Reading, ± 0.3% of FS

KMT-1/-2/-3 - Thermal Mass Flowmeter



- *Material: Stainless Steel, Brass*
- *For Compressed Air and Gases*
- *Application Specific Adjustments Completed During Production*
- *Excellent Long-Term Stability*
- *Fast Response Time*
- *Integrated Counter for Consumption*
- *Optional Display*
- *Compact or Remote Mount Probes*

Air: 0.32...63 Nm/s to 3.5...1,400 Nm/s
t_{max} 176 °F; p_{max} 230 PSIG
Connection: 1/2"...2" NPT with Ball Valve
Accuracy: ±1.5% of Reading,
+ (0.5 - 0.8 of Full Scale)

KMT-4 - Thermal Mass Flowmeter

- *Material: Stainless Steel, Brass*
- *For Compressed Air and Gases*
- *Application Specific Adjustments Completed During Production*
- *Excellent Long-Term Stability*
- *Fast Response Time*
- *Integrated Counter for Consumption*
- *Optional Display*
- *Compact and Remote Mount Probes*

Air: 2.8...1397 Nm^3/s to 263...263,350 Nm^3/s
t_{max} 80 °C; p_{max} 16 bar
Connection: R 1/2, Male for Insertion (DN 65 ... DN 700)
Accuracy: ± 1.5% of Reading,
± 0.8% of Full Scale

KEC - Thermal Mass Flowmeter

- *Material: Stainless Steel*
- *Suitable for Demanding Industrial Use*
- *Calorimetric Measuring Principle*
- *Quick, Precise Measurements*
- *Standard Integrated Modbus® Output*
- *No Moving Parts*
- *2x 4-20 mA Analog Outputs*
- *Common Applications: Chemicals, Gas, Methane, Breweries, Power Plants, Semiconductors, Automotive Industry*

Air: 0.33...164 ft/sec to 0.33...735 ft/sec
t_{max} 350 °F; p_{max} 1,450 PSIG
Connection: 1/2"...2" NPT, 1/2"...3" ANSI
Accuracy: ± 0.3% of FS ± 1.5% of Reading

HPC - Mini Coriolis Mass Flowmeter

- *Material: Stainless Steel*
- *Innovative Design*
- *Revolutionary Dual Bend Measuring Tube*
- *4 Sensor Coils for High Resolution*
- *For Gases or Liquids*
- *High Accuracy*
- *Insensitive to Vibrations*
- *Modular Mounting Concept*
- *316-Ti SS Measuring Pipes*
- *316L SS Flow Body*

Water: 2...20 kg/h to 5...50 kg/h
t_{max} 350 °F; p_{max} 1,450/4,640/5,800 PSIG
Connection: 1/2" NPT, Gryolock/Swagelok®
Accuracy: ± 0.1% of Reading,
± Zero-point Stability

TM/UMC-3 - Coriolis Mass Flowmeter

- *Materials: SS, Hastelloy®, Monel® Tantalum, Nickel, Titanium*
- *Widest Range of Wetted Materials Available in the Industry*
- *Liquid or Gas Measurement*
- *Extreme Temp/Pressure Ratings*
- *Heat Jacketing Available*

Water: 0.003...0.3 lbs/min
to 220...2,400 lbs/min
t_{max} 500 °F; p_{max} 13,000 PSIG
Connection: 1/4"...1/2" NPT,
1/2"...4" ANSI
Accuracy: ± 0.1% of Reading,
± Zero-point Stability

TMU-W - High Pressure Coriolis Mass Flowmeter

- *Material: Stainless Steel*
- *Designed Specifically for Hydrogen Refueling Stations*
- *OIML R139 Accuracy Class 1.5*
- *Also for Other High Pressure Coriolis Application Areas*
- *2 Current Output Signals*
- *Pulse, Frequency, Status Output*

Mass Flow: 4 kg/min H_2
t_{max} 100 °C; p_{max} 1,000 bar
Connection: 1/2" NPT, Hofer, UNF
Accuracy: ± 0.5% of Flow Rate,
± Zero-point Stability (for Gas)

TMU/UMC-3 - Coriolis Mass Flowmeter

- *Materials: Stainless Steel, Hastelloy®*
- *For Liquids or Gases*
- *Accomodates Very High Flow Rates*
- *Available in Large Line Sizes*
- *Simultaneous Measurement of Mass Flow, Density, and Temperature Produces an Accurate Volumetric Flow Rate*
- *For Demanding Applications*

Water: 0...1,320 lbs/hr to 0...2,200 tons/hr
t_{max} 500 °F; p_{max} 580 PSIG
Connection: 1/2"...16" ANSI
Accuracy: ± 0.1% of Reading, ± Zero-point Stability

TMU/UMC-4 - Coriolis Mass Flowmeter

- *Materials: Stainless Steel, Hastelloy®*
- *For Liquids or Gases*
- *Can Accomodate Very High Flow Rates*
- *Available in Large Line Sizes*
- *Simultaneous Measurement of Mass Flow, Density, and Temperature Produces an Accurate Volumetric Flow Rate*
- *For Demanding Applications*

Water: 0...1,320 lbs/hr to 0...2,200 tons/hr
t_{max} 500 °F; p_{max} 580 PSIG
Connection: 1/2"...16" ANSI, 1/4" NPT, 1/2" NPT
Accuracy: ± 0.1% of Reading, ± Zero-point Stability

TMU-..AC - Coriolis Flowmeter with Heating Jacket

- *Materials: Stainless Steel, Hastelloy®*
- *For Liquids or Gases*
- *Accomodates Very High Flow Rates*
- *Available in Large Line Sizes*
- *Simultaneous Measurement of Mass Flow, Density, and Temperature Produces an Accurate Volumetric Flow Rate*
- *For Demanding Applications*

Water: 0...1,320 lbs/hr to 0...2,200 tons/hr
t_{max} 500 °F; p_{max} 580 PSIG
Connection: 1/2"...12" ANSI
Accuracy: ± 0.1% of Reading, ± Zero-point Stability

KPL - Differential Pressure Orifice Plate

- *Materials: Steel, SS, Hastelloy-C®, Titanium, Monel®, Tantalum*
- *Used to Measure Flow of Liquids, Gases, or Steam*
- *High Reliability, Minimal Maintenance*

Shown with Model PAD
Ranges: for Liquids, Gases, Steam According to ISO 5167-1
Connection: ANSI 2"...24", DN 50...600
t_{max} 500 °C; p_{max} PN 420/cl. 2500

KPL - Differential Pressure Orifice Plate

- *Materials: Steel, SS, Hastelloy-C®, Titanium, Monel®, Tantalum*
- *Used to Measure Flow of Liquids, Gases, or Steam*
- *High Reliability, Minimal Maintenance*

Shown with Model PAD
Ranges: for Liquids, Gases, Steam According to ISO 5167-1
Connection: ANSI 2"...24", DN 50...600
t_{max} 500 °C; p_{max} PN 420/cl. 2500

ANU - Differential Pressure Pitot Tube

- *Standard Material: Stainless Steel*
- *Used for Flow Measurement of Liquid, Gas, and Steam*
- *Measuring Principle Uses the Differences between the Dynamic Pressure on the Upstream Side and the Static Pressure on the Downstream Side*
- *Available in Many Special Materials*
- *Optional RTD or TC Temperature Sensor*

Shown with Model PAD
Connection: 1"... 1-1/2" NPT, G 1 ... 1-1/2, ANSI 1"...3", DN 25...80
Probe Length: 2"...315" (50...8000 mm)
t_{max} 1175 °C; p_{max} 400 bar

DUS - Differential Pressure Nozzle

- *Materials: Steel, Stainless Steel*

Shown with Model PAD
Nominal Diameter: 2"...24" (DN 50...600)
t_{max} 560 °C; p_{max} 420 bar

DVT - Differential Pressure Venturi Tube

- *Materials: Steel, Stainless Steel*

Shown with Model PAD
Nominal Diameter: 2"...48" (DN 50...1200)
t_{max} 560 °C; p_{max} 420 bar

KEL - Differential Pressure Flowmeters

- *Materials: Brass, Cast Iron, SS*
- *Designed for Difficult Environments*
- *Rugged Metal Housings*
- *Insensitive to Magnetic Fields*
- *Withstands Pressure Surges*
- *For Horizontal or Vertical Pipes*
- *Easy to Use and Maintain*
- *Ranges can be Modified in the Field*
- *Optional Alarms and 4-20 mA Output*

Water: 0.1...0.5 GPM to 400...2,000 GPM
t_{max} 250 °F; p_{max} 230 PSIG
Connection: 1/2"...1-1/2" NPT,
1/2"...8" ANSI Wafer
Accuracy: ± 2 - 5% of Full Scale

RCD - Differential Pressure Flowmeter

- *Materials: Brass, Stainless Steel*
- *For Water or Air*
- *High Reliability and Long Service Life*
- *Brass or 316-Ti Stainless Steel Bodies*
- *Custom Calibrations for Density/Viscosity*
- *Mechanical Pointer Indicator, Analog Output, Digital Display, Switches*
- *Common Uses: Machinery Manufacturing, Chemical Industry, and Process Equipment*

Water: 0.2...0.88 GPM to 100...600 GPM
t_{max} 210 °F; p_{max} 580 PSIG
Connection: 1/2"...3" NPT
Accuracy: ± 3% of Full Scale

RCM - Direct Reading Flowmeter

- *Materials: Bronze, Monel®, Stainless Steel*
- *Liquid or Gas, Low to Medium Viscosity, Low Solids Content*
- *Easy to Install, Compact Design*
- *Low Pressure Drop*
- *Optional Alarms and Signal Outputs*
- *Common Applications: Lube Oil and Cooling Water Monitoring, Blending Processes, Reverse Osmosis Systems, and Compressed Air Measurement*

Water: 0.3...2 GPM to 400...3,000 GPM
Air: 1.5...10 SCFM to 3,000... 20,000 SCFM
t_{max} 350 °F; p_{max} 400 PSIG
Connection:
1/4"...3" NPT, 1/2"...8" ANSI Wafer
Accuracy: ± 3% of Full Scale

MIK - Economical Magmeter

Top Seller

- *For a Wide Variety of Conductive Liquids, Acids, and Caustics*
- *Wetted Materials: PPS/SS/NBR, PPS/SS/FKM, PVDF/Hastelloy®/FFKM, PVDF/Tantalum/FFKM*
- *Frequency or Current Outputs, Adjustable Switches, Integral Totalizers or Batch Controllers*
- *Universal Mounting*
- *Versatile and Reliable*

Water: 0.18...7.8 GPH to 9.5...180 GPM
t_{max} 176 °F; p_{max} 145 PSIG
Connection: 1/4"...2" NPT or Glue Socket
Accuracy: ± 2% of Full Scale

MIM - All-Metal Electromagnetic Flowmeter

Top Seller

Water: 0.16...16 GPH to 0.4...90 GPM
Temp: -40...280 °F; p_{max} 230 PSIG
Connection: 1/4"...2" NPT, 2" Tri-Clamp
Accuracy: < ± (0.8% of Reading,
+ 0.5% of Full Scale

- *Material: Stainless Steel*
- *Flow and Temperature Measurement*
- *Switching, Transmitting, and Batching*
- *Grand and Resettable Totalizer*
- *2 Configurable Outputs*
- *Bi-directional Flow Measurement*
- *Color, Multi-parameter TFT Display*
- *Display Rotates in 90° Increments*
- *Intuitive Set-up via Optical Touch Keys*
- *Display is Operable with Hand Gloves*

MIS - Electromagnetic Flowmeter

Top Seller

IO-Link

Water: 3.3....33 ft/sec
t_{max} 158 °F; p_{max} 230 PSIG
Connection: ANSI 2"...8"
Accuracy: < ± (0.5% of Reading,
+ 0.5% of Full Scale

- *Switching, Transmitting, and Batching*
- *Grand and Resettable Totalizer*
- *2 Configurable Outputs*
- *Bi-directional Flow Measurement*
- *Display Rotates in 90° Increments*
- *Common Applications: Water and Wastewater, Filtration Systems, Water Distribution, Industrial Applications*

PIT - Insertion Magnetic Flowmeter

- *Materials: SS or PFA-Clad Probe*
- *SS, Hastelloy®, Platinum or Tantalum Electrodes*
- *For Flow Velocity in Large Diameter Pipes*
- *Cost-effective Insertion Design*
- *Optional Valve Assembly for Insertion/ Extraction Under Pressure*
- *Remote or Integral Transmitter*
- *4-20 mA/HART®, Pulse, Status*
- *For Conductive Media > 20 µs/cm*

Water: 3.3...33 ft/sec
t_{max} 284 °F; p_{max} 580 PSIG
Connection: Weld-on, 2" or 3" ANSI
Accuracy: ±1.5% of Reading,
± 0.5% of Full Scale

PITe - Economical Insertion Magnetic Flowmeter

- *Materials: SS, PTFE or PFA Clad*
- *Simple, Compact Design*
- *Maintenance-free*
- *Minimal Pressure Drop*
- *Not Affected by Pressure, Temperature Density, or Viscosity*
- *For Use with Conductive Media*
- *Not for Media with Particles or Bubbles*

Water: 3.3...33 ft/sec
t_{max} 100 °C; p_{max} PN 16
Connection: ANSI 3"...16",
Weld-on Nozzle ø 40 mm,
Sensor with Union Nut M52x2
for Pipelines DN 80...400
Accuracy: ± 1.5% of Full Scale

EPS - Electromagnetic Flowmeter

- *Lining Materials: Hard or Soft Rubber, EPDM, PTFE, or Ceramic*
- *Measures Volumetric Flow of Liquids, Slurries, and Pastes*
- *Electrodes in SS, Hastelloy®, Tantalum, Platinum-Iridium, or Titanium*
- *For Use in Harsh Environments*
- *Compact or Remote Versions*
- *No Pressure Drop*
- *Maintenance-free*

Water: 3.3...33 ft/sec
t_{max} 300 °F; p_{max} 580 PSIG
Connection: 1/2" NPT, ANSI 1/2"...24"
Accuracy: ± 0.3% of Measured Value
± 0.01% (Q at 33 ft/sec)

DVH - Multivariable Vortex Flowmeter

- *Material: Stainless Steel*
- *Cost-effective Volumetric Flow Measurement*
- *Fully Welded Sensor*
- *Field Configurable Ranges, Outputs and Display*
- *Optional Integrated Temperature and Pressure Measurement*

Water: 0.89...22 GPM to 141...4,270 GPM
Air: 1.8...18 SCFM to 2,071...203,000 SCFM
t_{range} -328...750 °F; p_{max} 1,450 PSIG
Connection: 1/2"...8" ANSI
Options: Integrated Temperature and Pressure Sensor, Wafer Type
Accuracy: ±1% Reading for Gas & Steam,
± 0.7% Reading for Liquids

DVE - Insertion Vortex Flowmeter

- *Material: Stainless Steel*
- *Fully Welded Sensor*
- *Optional Integrated Temperature and Pressure Sensor*
- *Field Configurable Range, Output, Display*

Water: 5.2...157 m³/h to 284...8,537 m³/h
Air: 889...1,463 Nm³/h to 26,915...2,467,081 Nm³/h
t_{max} 400 °C; p_{max} 100 bar
Connection: 2" NPT, ANSI 2"
Suitable for Pipe Sizes 3"...24"
Option: Integrated Temp. and Pressure Sensor, Installation/Removal Device
Accuracy: ±1.2% of Reading (Water),
±1.5% of Reading (Gas/Steam)

DVZ - Vortex Flowmeter, Switch, Transmitter, Totalizer

- *Materials: PPS/Brass, PPS/Stainless Steel*
- *Economical and Reliable*
- *For Low Viscosity Liquids and Aggressive, High-purity, or Salty Solutions*
- *Fixed or Rotatable Connections*
- *Outputs: Pulse Frequency, 4-20 mA, Adjustable Relay, Compact Electronics, Adjustable Transistor Switch*

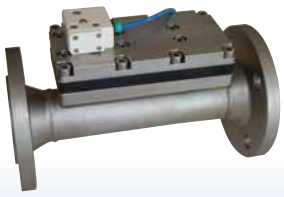
Water: 0.13...1.2 GPM to 2.6...26.5 GPM
t_{max} 176 °F; p_{max} 290 PSIG
Connection: 1/4"...1" NPT
Accuracy: ± 2.5% of Full Scale

DOG-4 - Oscillation Flowmeter for Gases

- *Material: Stainless Steel*
- *For Flow Measurement of Gases*
- *Platinum Sensor*
- *No Moving Parts*
- *Low Pressure Loss*
- *Wide Sensing Range*
- *Pulse Frequency, Digital Display for Flow Measurement and Totalization*

Air: 0.12...12 m³/h to 60...6,000 m³/h
Pressure Drop Max: 50 mbar
t_{max} 120 °C (for EX 60°C); p_{max} PN 40
Connection:
ANSI 1"...8", Flange DN 25...200
Accuracy: ± 1.5% of Reading

DOG-5 - Oscillation Flowmeter for Liquids



- *Material: Stainless Steel*
- *Non-contact Measurement of Low Viscosity Liquids*
- *Excellent Long-term Stability*
- *Design Resists Dirt*
- *Horizontal or Vertical Installation*
- *Not for Pulsating Flow*
- *Commonly Used in District Heat Supply*

Water: 0.075...3.75 m³/h to 70...3,500 m³/h
t_{max} 120 °C; p_{max} PN 40
Connection:
ANSI 1"...8", Flange DN 25...200
Accuracy: ± 1% of Measured Value

DUK - Compact Ultrasonic Flowmeter

TOP SELLER

- *Materials: Brass, Stainless Steel*
- *For Water and Low Viscosity, Water-based Liquids with Max. 1% Solids*
- *Measurement Independent of Density and Temperature Changes*
- *High Turndown Ratio of **250 to 1***
- *Very Small Pressure Loss*
- *Highly Repeatable*
- *Outputs: Analog, Frequency, Switching, Compact Electronics, Batching, Totalizing*

Water: 0.02...5 GPM to 0.6...160 GPM
t_{max} 194 °F; p_{max} 230 PSIG
Connection: 1/2"...3" NPT
Accuracy: ± 0.7% of Reading
± 0.7% of Full Scale

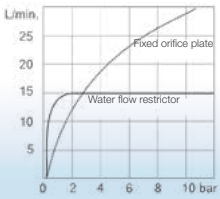
DUC - Clamp-On Ultrasonic Flowmeter

- *Quick Mount System with Space Bar*
- *DSP Technology Reduces Signal Echoes and Dispersion Effects*
- *Easy to Read User Interface with LED Back-light, QVGA Display*
- *Common Application Areas: Power Plants, Water/Wastewater, Chemical Processing, Facility Management, Food and Beverage*
- *AFC and Reynolds Compensation*

t_{range} -40...300 °F
Flow Velocities: 0...98 ft/sec
Pipe Sizes: 3/8"...20 ft
For Common Pipe Materials with Ultrasonic Conductive Properties like Steel and Plastic
Heat Quantity Measurement
Accuracy: up to 1%

REG - Automatic Flow Regulating Valve

TOP SELLER



- *Materials: Brass, Stainless Steel*
- *For Water or Compatible Water-like Liquids*
- *Self-actuating, Requires No Power*
- *Automatically Regulates Flow in System*
- *No Manually Operated Parts*
- *Constant Flow Regardless of Pressure Fluctuations*
- *No Maintenance*
- *Universal Mounting*
- *Passively Activated*
- *Compact Design*

Flow Rates: 0.13...10.56 GPM
t_{max} 572 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT, G 1/2, G 3/4

REG-8/-9 - Automatic Flow Regulating Valve

- *Material: Stainless Steel*
- *For Water or Compatible Water-like Liquids*
- *Self-actuating, Requires No Power*
- *Automatically Regulates Flow in System*
- *No Manually Operated Parts*
- *Constant Flow Regardless of Pressure Fluctuations*
- *No Maintenance*
- *Universal Mounting*
- *Passively Activated*

Flow Rates: 0.13...147 GPM
t_{max} 570 °F; p_{max} 2,900 PSIG
Connection: 3/4"...4" ANSI Wafer, 1-1/2"...2-1/2" G, DN 20...100

DAA/DAH - Flow Indicator

- *Materials: Brass, Stainless Steel*
- *Visual Flow Indicator with or without Rotor*
- *Self-cleaning Mechanism Ensures Visibility for DAA Models*
- *Simple Twist Motion for Integral Wipers*
- *Build-up is Removed by the Media Flow*
- *No Fuss, No Downtime*

Water: 0.1...1.0 GPM to 2.12...26.4 GPM
t_{max} 212 °F; p_{max} 232 PSIG
Connection: 1/4"...1-1/2" NPT

DAF - Paddle Wheel Flow Indicator For Liquids

- *Materials: Brass, SS, Polysulfone*
- *Clearly Visible Flow Indication*
- *Simple Design*
- *Low Minimum Indicated Flow*
- *For a Wide Variety of Media*
- *Can be Installed in Any Position*
- *Can be Rotated Along Long Axis During Operation (Except Material Comb. IV)*

Water: 0.16...1.6 GPH to 100...2,400 GPH
t_{max} 230 °F; p_{max} 235 PSIG
Connection: 1/8"...1-1/2" NPT

DIH - Rotating Vane Flow Indicator

- *Materials: Brass, SS, POM*
- *Compact Design*
- *High Visibility Orange Paddle Wheel*
- *Choice of Three Housing Materials*

Water: 0.05...0.13 GPM to 0.26...13.2 GPM
t_{max} 176 °F; p_{max} 230 PSIG
Connection: 3/8" or 1" NPT

DIG - Rotating Vane Flow Indicator

- *Materials: PP, Brass, Stainless Steel*
- *Clearly Visible Flow Indication*
- *Choice of Three Housing Materials*
- *All-plastic Version Available*

Water: 0.13...3.2 GPM to 0.79...21 GPM
t_{max} 176 °F; p_{max} 230 PSIG
Connection: 1/8"...1" NPT

DKB - Flow Indicator with Ball

- *Material: Brass*
- *Economical*
- *Gas or Liquid Flow Applications*
- *High Reliability*
- *High Visibility Float*
- *Domed Sight Glass*
- *For Horizontal Installations*

Water: 0.014...4 GPM to 0.047...27 GPM
Air: 0.11...14 SCFM to 0.32..88 SCFM
t_{max} 250 °F; p_{max} 85 PSIG
Connection: 1/8"...1" NPT

DKF - Paddle Wheel Flow Indicator for Liquids

- *Material: Brass*
- *Economical*
- *For Low Viscosity Liquids*
- *Easily Seen from an Elevated Position*
- *Domed Sight Glass*
- *360° Visibility*
- *Bright Paddle Wheel*
- *Horizontal or Vertical Installations*

Water: 0.04...0.5 GPM to 0.5...22 GPM
t_{max} 250 °F; p_{max} 85 PSIG
Connection: 1/8"...1" NPT

DAZ - Referencing Flap Flow Indicator

- *Material: Red Brass*
- *Flap-style Flow Indicator*
- *Provides Flow Quantity on a Relative Scale*
- *For Horizontal or Vertical Installation*
- *Large Glass Windows on Both Sides*
- *Economical Pricing*
- *Durable Stainless Steel Flap*

t_{max} 390 °F; p_{max} 230 PSIG
Connection: 1/2"...1" NPT

DAK - Flow Indicator with Flap

- *Materials: Grey Cast Iron, Cast Steel, Stainless Steel*
- *Rugged Build for Industrial Applications*
- *Features a Flap for Indication*
- *Soda-Lime or Borosilicate Glass Windows*

t_{max} 530 °F; p_{max} 580 PSIG
Connection: 1/4"...2" NPT, 1/2"...8" ANSI

DAT - Flow Indicator with Drip Tube

- *Materials: Grey Cast Iron, Cast Steel, Stainless Steel*
- *Rugged Build for Industrial Applications*
- *Features a Drip Tube for Indication*
- *Soda-Lime or Borosilicate Glass Windows*

t_{max} 530 °F; p_{max} 580 PSIG
Connection: 1/4"...2" NPT, 1/2"...8" ANSI

DAR - Flow Indicator with Rotor

- *Materials: Grey Cast Iron, Cast Steel, Stainless Steel*
- *Rugged Build for Industrial Applications*
- *Features a Rotor for Indication*
- *Soda-Lime or Borosilicate Glass Windows*

t_{max} 500 °F; p_{max} 580 PSIG
Connection: 1/4"...2" NPT, 1/2"...8" ANSI

DAB - Flow Indicator with Ball

- *Material: Red Cast Iron*
- *Borosilicate Glass Tube*
- *PTFE Seals*

t_{max} 100 °C; p_{max} 6 bar
Connection: G 1/2...G 3

UFJ - Flow Indicator and Sight Glass

- *Material: Stainless Steel, PVC, POM-C*
- *Borosilicate Glass Tube*
- *For Liquids or Gases*
- *Vertical Installation, Flow from Bottom*
- *Float Appears when Flow Meets Pre-set Custom Value*
- *Optional PNP Contact*

t_{max} 120 °C; p_{max} 6 bar
Connection: G 1/4...G 1-1/2
Accuracy: ± 4% of Set Value

KOBOLD Flow Instrumentation/Media Cross Reference Chart

KOBOLD Technology Category	Specific Technology Type	Model	Product Description	Media*												Flow Range	Page
				Liquid								Gas			Steam		
				Clean	Dirty	Aggressive	Viscous	Abrasive	Oil-Based	Ultra-Pure H_2O	Slurries	Clean	Dirty	Aggressive			
Variable Area - Low Volume	Variable Area - Low Volume	BGK	All-Metal, Low Volume Variable Area Flowmeter	✔	◆	◆	◆	✖	◆	◆	✖	✔	◆	◆	✖	0.026...0.26 GPH to 5...50 GPH (0.1...1 SCFH to 20...200 SCFH)	13
		KDF/ KDG	Micro-Flowmeter and Switch	✔	✖	◆	✖	✖	✖	✔	✖	✔	✖	◆	✖	0.02...2.5 LPH to 16...160 LPH (0.5...5 Nl/h to 500...5,000 Nl/h)	12
		KDS	All Metal, Low Volume Variable Area Flowmeter	✔	✖	◆	◆	✖	◆	◆	✖	✔	✖	◆	✖	0.026...0.26 GPH to 5...50 GPH (0.1...1 SCFH to 20...200 SCFH)	13
		KFR	Acrylic Flowmeter	✔	✖	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.02...2 GPH to 2...20 GPM (0.1...1 SCFH to 10...100 SCFM)	12
		KSK	All-Plastic Low-Flow Flowmeter and Switch	✔	◆	✔	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.006...0.05 GPM to 11.8...60 GPM (0.06...0.27 SCFM to 3.5...18.3 SCFM)	12
		KSR/ SVN	Low Volume Flow Switch	✔	✖	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.03...4 GPH (0.1...13 SCFH)	12
		KSV	Economical Micro-Flowmeter	✔	✖	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.04...0.4 GPH to 2...20 GPH (0.3...3 SCFH to 10...100 SCFH)	12
		SWK	Compact Flowmeter and Switch	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.05...0.1 LPM to 13...24 LPM	13
		UMR/ UXR/ URA	Glass Tube Variable Area Flowmeter	✔	✖	◆	✖	✖	◆	◆	✖	✔	✖	◆	✖	1...10 l/h to 13...130 l/h (0.01...0.1 Nm^3/h to 0.25...2.5 Nm^3/h)	14
		UTS	Variable Area Flowmeter for Gas Burners	✖	✖	✖	✖	✖	✖	✖	✖	✔	✖	◆	✖	0.35...3.53 SCFH to 10.59...105 SCFH	14
Variable Area	Variable Area	BGF	All-Metal Armored Flowmeter	✔	✖	◆	◆	✖	◆	◆	✖	✔	✖	◆	◆	0.002...0.02 GPM to 60...570 GPM (0.008...0.08 SCFM to 140...1,400 SCFM)	14
		BGN	All-Metal Armored Flowmeter	✔	✖	◆	◆	✖	◆	◆	✖	✔	✖	◆	◆	0.044...0.44 GPM to 26.4...264 GPM (0.17...1.7 SCFM to 100...1000 SCFM)	14
		BVO	OEM Flowmeter and Switch	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.1...1.0 GPM to 1...13 GPM	14
		KSM	All-Plastic Flowmeter and Switch	✔	◆	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.06...0.66 GPM to 35...264 GPM (0.5...3 SCFM to 50...400 SCFM)	12
		S-Series	All-Metal Flow Switch	✔	✖	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.075...0.25 GPM to 1...14 GPM (0.2...1.1 SCFM to 3...70 SCFM)	15
		SM	High Pressure All-Metal Flowmeter and Switch	✔	✖	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.04...0.6 GPM to 4...40 GPM (0.2...1 SCFM to 5...130 SCFM)	15
		SMN	Flow Switch	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.4...13 GPM	15
		SV	Float-Type Flowmeter and Switch	✔	✖	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.075...0.35 GPM to 2.5...40 GPM (0.25...1.25 SCFM to 10...150 SCFM)	14
		URK/ URM	Glass Cone Variable Area Flowmeter	✔	✖	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.004...0.4 GPM to 66...220 GPM (0.011...0.11 SCFM to 30...300 SCFM)	13
		USR	Glass Tube Variable Area Flowmeters and Manifold Valves	✔	✖	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	0.01...0.1 GPM to 0.25...2.5 GPM	13
		UVR/ UTR	Glass Tube Variable Area Flowmeter and Needle Valve	✔	✖	◆	✖	✖	✖	◆	✖	✔	✖	◆	✖	2.6...26 GPH to 52.8...528 GPH (3.5...35 SCFH to 176...1,760 SCFH)	14
		VKA	OEM Viscosity-Compensated Flowmeter	✔	✖	✖	✔	✖	✔	✖	✖	✖	✖	✖	✖	2...6.3 GPM to 8...26 GPM	15
		VKG	Viscosity-Compensating Flowmeter and Switch	✔	✖	◆	✔	✖	✔	✖	✖	✖	✖	✖	✖	0.03...0.12 GPM to 2...21 GPM	15
		VKM	All-Metal Viscosity-Compensating Flowmeter and Switch	✔	✖	◆	✔	✖	✔	✖	✖	✖	✖	✖	✖	0.03...0.12 GPM to 2...20 GPM	15
		VKP	Plastic Flowmeter and Switch	✔	✖	◆	✔	✖	✔	✖	✖	✖	✖	✖	✖	0.5...5 GPM to 5...26 GPM	15

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KOBOLD Technology Category	Specific Technology Type	Model	Product Description	Media*												Flow Range	Page
				Liquid								Gas			Steam		
				Clean	Dirty	Aggressive	Viscous	Abrasive	Oil-Based	Ultra-Pure H_2O	Slurries	Clean	Dirty	Aggressive			
Paddle Type	Target-Type	DPT	Target Type Flowmeter	✔	◆	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	1.5...8 GPM to 225...500 GPM	17
	Paddle-Bellows	DW	Paddle-Bellows Flowmeter	✔	◆	◆	◆	✖	◆	◆	✖	✖	✖	✖	✖	0.26...6.6 GPM to 1,850...19,800 GPM	16
		DWD	Paddle-Bellows Flowmeter	✔	◆	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.26...2.6 GPM to 1,580...15,800 GPM	17
	Paddle-Type	FPS	Insertion Paddle Flow Switch	✔	◆	◆	◆	✖	◆	◆	✖	✖	✖	✖	✖	0.9...4.4 GPM to 375...760 GPM	16
		LPS	Flow Switch for HVAC	✖	✖	✖	✖	✖	✖	✖	✖	✔	✖	✖	✖	195...1,575 FPM	16
		PPS	Plastic Paddle Flow Switch	✔	✖	✖	✖	✖	✖	◆	✖	✖	✖	✖	✖	5...9.5 GPM to 19...28.5 GPM	16
		PSR/ PS	Paddle Flow Switch	✔	◆	◆	✖	✖	◆	◆	✖	✖	✖	✖	✖	0.6...1.2 GPM to 101...140 GPM	16
	Flap-Type	TSK	Flap-Style Flowmeter	✔	◆	◆	✖	✖	◆	◆	✖	✖	✖	✖	✖	6.6...26.4 GPM to 880...6,600 GPM	17
Rotating Vane	Positive Displacement - Helical Gear	OME	Helical Gear Flowmeter	✔	✖	◆	✔	✖	✔	✖	✖	✖	✖	✖	✖	0.03...2.6 GPM to 0.92...92 GPM	20
	Positive Displacement - Spherical Gear	ZDM	Positive-Displacement Flowmeter	✔	✖	◆	✔	✖	✔	✖	✖	✖	✖	✖	✖	0.0005...0.5 GPM to 0.4...138 GPM	21
	Positive Displacement -Oval Gear	DOE	Oval Gear Flowmeter	✔	✖	◆	✔	✖	✔	✖	✖	✖	✖	✖	✖	0.14...9.5 GPH to 16...634 GPH	20
		DON	Positive Displacement Flowmeter	✔	✖	◆	✔	✖	✔	✖	✖	✖	✖	✖	✖	0.13...9.5 GPH to 40...660 GPM	20
		DON-H	Oval Gear Flowmeter for High Pressures	✔	✖	◆	✔	✖	✔	✖	✖	✖	✖	✖	✖	0.13...9.5 GPH to 0.26...10.6 GPM	20
		OVZ	Oval-Gear Flowmeter	✔	✖	◆	✔	✖	✔	✖	✖	✖	✖	✖	✖	0.08...2.1 GPM to 0.42...10.6 GPM	19
	Paddle-Wheel	DF-Series	Flowmeters and Flow Sensors	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.02...0.14 GPM to 1.5...36 GPM	19
		DFT	Paddle-Wheel Flow Sensor	✔	✖	✔	✖	✖	✖	✔	✖	✖	✖	✖	✖	0.05...0.5 GPM to 0.8...15 GPM	19
		DPE	Paddle-Wheel Flowmeter	✔	◆	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	1.5...8 GPM to 15...200 GPM	17
		DPL	All-Plastic, Low Flow Sensor	✔	✖	✔	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.4...8 GPH to 16...400 GPH	18
		DRB	Paddle-Wheel Flowmeter	✔	◆	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	1.5...8 GPM to 15...200 GPM	17
		DRG	Paddle-Wheel Flow Sensor	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.15...3 GPM to 3...37 GPM	19
		DRH	Paddle-Wheel Flow Sensor	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.05...0.2 GPM to 0.66...13.2 GPM	19
	Pelton Wheel	DPM	Pelton Wheel Flow Sensor	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.24...4.8 GPH to 0.8...80 GPH	18
		DTK	Pelton Wheel Flow Sensor	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.8...9.5 GPH to 16...190 GPH	19
		KFF/ KFG	Low Volume Rotating Vane Flowmeter	✔	✖	◆	✖	✖	✖	✔	✖	◆	✖	◆	✖	13...100mL/min to 1...10 L/min (20...100 mL_N/min to 100...500 L_N/min	18
	Turbine	DOT	Turbine Flowmeter/Monitor	✔	✖	◆	✖	✖	◆	◆	✖	✖	✖	✖	✖	0.5...5 GPM to 240...2,400 GPM	18
		DRS	OEM Turbine Flow Sensor	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.6...10.5 GPM	17
		SFL	Turbine Flow Sensor	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.5...20 l/min	18
		TUR	All-Plastic Turbine Flowmeter	✔	◆	✔	✖	✖	◆	◆	✖	✖	✖	✖	✖	5...88 GPM to 11...440 GPM	17
	Rotary Piston	DRZ	Rotary Piston Flowmeter	✔	✖	✖	✔	✖	✔	✖	✖	✖	✖	✖	✖	1.6...110 GPH	19

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				Liquid								Gas			Steam		
				Clean	Dirty	Aggressive	Viscous	Abrasive	Oil-Based	Ultra-Pure H_2O	Slurries	Clean	Dirty	Aggressive			
Without Moving Parts	Coriolis	HPC	Mini Coriolis Mass Flow Meter	✔	◆	◆	◆	◆	◆	◆	✖	✖	✖	✖	◆	2...20 kg/h to 5...50 kg/h	22
		TM	Universal Special Purpose Coriolis Flowmeter	✔	◆	✔	◆	◆	◆	◆	◆	✖	✖	✖	◆	0.003...0.3 lbs/min to 220...2,400 lbs/min	22
		TMU	High Performance Coriolis Flowmeter	✔	◆	✔	◆	◆	◆	◆	◆	✖	✖	✖	◆	0...1,320 lbs/hr to 0...2,200 tons/hr	23
		TMU-W	High Pressure Coriolis Flowmeter	✔	◆	✔	◆	◆	◆	◆	◆	✖	✖	✖	◆	Max. 4 kg/min H_2	
	Differential Pressure	KEL	Heavy Duty DP Flowmeters	✔	✖	✔	◆	✖	◆	◆	✖	✖	✖	✖	✖	0.1...0.5 GPM to 400...2,000 GPM	24
		RCD	Ultra-Rugged DP Flowmeter	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.2...0.88 GPM to 100...600 GPM	24
		RCM	Direct-Reading Flowmeter	✔	✖	✔	◆	✖	◆	◆	✖	✔	✖	◆	✔	0.3...2 GPM to 400...3,000 GPM (1.5...10 SCFM to 3,000...20,000 SCFM)	24
	Hot-Film Anemometer	KAH	Air Velocity Sensor	✖	✖	✖	✖	✖	✖	✖	✖	✔	✖	✖	✖	0...2,000/3,000/4,000 ft/min	21
	Magnetic-Inductive (Electro-magnetic)	EPS	Magnetic-Inductive Flowmeter	✔	✔	✔	✔	✔	✖	✖	✔	✖	✖	✖	✖	0.5...10 m/sec	25
		MIK	Economical Magmeter	✔	✔	✔	◆	✖	✖	✖	✖	✖	✖	✖	✖	0.18...7.8 GPH to 9.5...180 GPM	24
		MIM	All-Metal Electromagnetic Flowmeter	✔	✔	✔	◆	✖	✖	✖	✖	✖	✖	✖	✖	0.16...16 GPH to 0.4...90 GPM	24
		MIS	All-Metal Electromagnetic Flowmeter	✔	✔	✔	◆	✖	✖	✖	✖	✖	✖	✖	✖	3.3...33 ft/sec	24
		PIT	Insertion Magnetic Flowmeter	✔	✔	✔	✔	✔	✖	✖	◆	✖	✖	✖	✖	3.3...33 ft/sec	25
		PITe	Magnetic Inductive Flowmeter	✔	✔	✔	✔	✔	✖	✖	◆	✖	✖	✖	✖	3.3...33 ft/sec	25
	Thermal	DOG	Oscillation Flowmeter	✖	✖	✖	✖	✖	✖	✖	✖	✔	✖	◆	✖	0.12...12 m^3/h to 60...6,000 m^3/h	25
		KAL	Temperature-Compensating Thermal Flow Switch	✔	✔	✔	✖	✔	✖	◆	✖	✖	✖	✖	✖	0.15...6.6 ft/sec	21
		KAL-A	Thermal Flow Sensor	✔	✔	✔	✖	✔	✖	◆	✖	✖	✖	✖	✖	0.15...6.6 ft/sec	21
		KAL-D	Compact Thermal Flow Switch	✔	✔	✔	✖	✔	✖	◆	✖	✖	✖	✖	✖	0.15...6.6 ft/sec	21
		KAL-K	Thermal Flow Switch with Flow Trend Indication	✔	✔	✔	✖	✔	✖	◆	✖	✖	✖	✖	✖	0.15...6.6 ft/sec	21
		KAL-L	Thermal Air Flow Switch	✖	✖	✖	✖	✖	✖	✖	✖	✔	✖	✖	✖	3.3...65 ft/sec	21
		KME	Compact Inline Flowmeter	✖	✖	✖	✖	✖	✖	✖	✖	✔	✖	◆	✖	0.12...44.4 SCFM to 1.3...500 SCFM	22
		KMT	Thermal Mass Flowmeter	✖	✖	✖	✖	✖	✖	✖	✖	✔	✖	◆	✖	0.32...63 Nm^3/h to 263...263,350 Nm^3/h	22
	Ultrasonic - Clamp-on	DUC	Clamp-on Ultrasonic Flowmeter	✔	◆	✔	✔	✔	✔	✔	◆	✖	✖	✖	✖	0...98 ft/sec	26
	Ultrasonic - Inline	DUK	Compact Ultrasonic Flowmeter	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.02...5 GPM to 0.6...160 GPM	26
	Vortex - Multivariable	DVE	Multi-Variable Insertion Design Flowmeter	✔	◆	◆	◆	✖	◆	◆	✖	✔	✖	✔	✔	5.2...157 m^3/h to 284...8,537 m^3/h (889...1,463 to 26,915...2,467,081 Nm^3/h)	25
		DVH	Multivariable Flowmeter	✔	◆	◆	◆	✖	◆	◆	✖	✔	✖	✔	✔	0.89...22 GPM to 141...4,270 GPM (1.8...18 SCFM to 2,071...203,000 SCFM)	25
	Vortex	DVZ	Vortex Flowmeter and Switch	✔	✖	◆	✖	✖	✖	◆	✖	✖	✖	✖	✖	0.13...1.2 GPM to 2.6...26.5 GPM	25

✔ = Normally ◆ = Possibly (Consult Factory) ✖ = Not Suitable/Applicable

**This chart is a guide for a generalized overview of the flow instrumentation line. Each application is unique and all factors should be carefully considered when selecting the appropriate technology. For more in-depth assistance, contact our engineering staff at 412-788-2830. Purchaser assumes all responsibility and accompanying liability in the final product selection.*

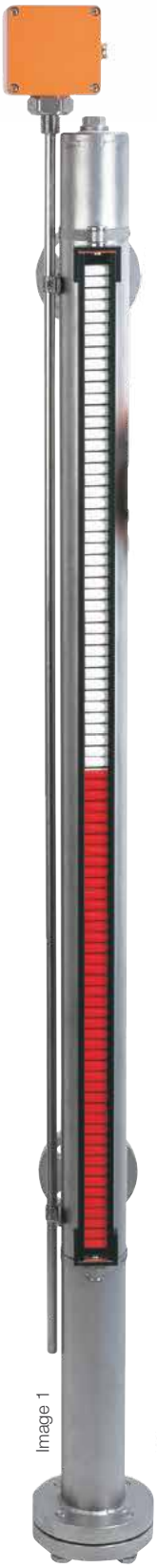


Image 1

NBK Industrial Bypass Level Indicators

KOBOLD NBK Series bypass level gauges are used in applications requiring visual indication, continuous measurement, and/or control of liquid levels. Any free-flowing, compatible media with a viscosity less than 200 cPs is a candidate. The NBK bypass level indicator's design relies on the hydrostatic pressure principle to display tank level in a side-mounted measuring chamber. A float, which contains a ring magnet, rises and falls with the liquid level in the bypass tube. This approach allows the NBK bypass level indicators to be built with an all-metal construction, eliminating the breakage and leakage problems frequently experienced with glass tube designs. Visual indication, signal transmission, or switching may be achieved by mounting these magnetically-sensitive devices on the exterior of the bypass tube. These devices then track or are activated by the ring magnet located inside the float as it moves with changes in fluid level.

The KOBOLD NBK-M mini bypass level indicator provides many of the unique features of our standard NBK Series bypass level indicators but at a fraction of the cost. Similar to the full-sized NBK Series, the NBK-M level indicator uses KOBOLD's ring magnet float design, allowing the user full flexibility in adding roller indicators, switches and other options almost anywhere on the periphery of the bypass tube. The use of lighter gauge materials and a streamlined manufacturing process make the KOBOLD NBK-M mini bypass level indicator a very economical choice for lower pressure and shorter length level measuring applications.


Image 2 Image 3 Image 4

Image 1: *Standard NBK (-03 to -33)*

Image 2: *NBK-M (Mini-NBK)*

Image 3: *NBK-04 (Top-Mount NBK)*

Image 4: *NBK Combined with NGM Guided Wave Radar Level Transmitter*

The KOBOLD NBK-04 top-of-the-tank mounted level indicator combines the rugged simplicity of our NBK series bypass level indicators with above-the-tank liquid level indication.

Learn More on Page 37

NIR-9

Reliable, Heavy-Duty Rotating Vane Level Switch for Bulk Media

The NIR-9 is an industrial workhorse, setting the standard for superior engineering in rotating vane bulk level switches. Unlike other models in the marketplace, the NIR-9 is designed with longevity and dependability in mind. It offers three distinct advantages over similar models. One, the heavy duty motor is built of metal and provides years of service, unlike others in the industry that are built of plastic. Two, once the rising media impedes the rotating paddle, a switch disengages the motor. Other models are not built with this feature and continue to strain the motor, significantly shortening the instrument's lifespan and increasing overall application costs because of the frequent need for replacements. Three, the switch within the NIR-9 offers easily adjustable sensitivity settings, to allow for even more customization for the exact demands of the application. With a modular design concept and a variety of vanes, the NIR-9 truly offers a superior solution for almost any bulk level application.

- For Bulk Media and Solids in Silos and Hoppers
- Superior Performance and Reliability
- Direct Replacement for Models Prone to Motor Burnout
- High Quality Motor
- Superior Switch Design Avoids Damage to Motor
- Switch Sensitivity is Field-Adjustable
- Aluminum Housing
- Unaffected by Humidity or Conductivity
- Easy to Install, Economical Pricing
- Different Mounting Options
- Modular Design Offers Flexibility
- Rod or Cable Versions
- Custom Temperatures up to 900 °F

Ideal for a wide variety of media like:

- Cereal
- Grain
- Flour
- Sand
- Sugar
- Animal Feed
- Cement
- Gravel

The NIR-9 operates via a motor that drives a rotating vane. As soon as the media reaches the vane, its rotation is stopped. The restoring force moves the pivoted motor away from its original position. A micro-switch is actuated, which gives out an alarm signal. A second microswitch turns off the motor. If the level is decreased, the vane is released and the force of a spring pulls the motor back to its original position, restarting the motor.

Learn More on Page 35

M-Series

Custom Magnetic Float Switch
Brass, Stainless Steel, PVC, PP, NBR, PVDF

Density: 0.55 kg/dm³
t_{max} 300 °F; p_{max} 1,450 PSIG
Connection: NPT, DIN/ANSI Flange

NCS

Magnetic Float Switch
Stainless Steel

Specific Gravity$_{min}$: 0.65
t_{max} 300 °F; p_{max} 400 PSIG
Connection: 1/8" NPT, 1/4" NPT

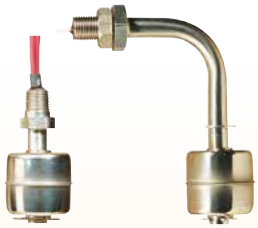
NCP

Magnetic Float Switch
Polypropylene

Specific Gravity$_{min}$: 0.81
t_{max} 225 °F; p_{max} 100 PSIG
Connection: 1/8" NPT, 1/4" PF

OEM

OEM Level Switches
Stainless Steel, Polypropylene, NBR, PVDF



Specific Gravity$_{min}$: 0.55
t_{max} 250 °F; p_{max} 425 PSIG
Connection: 1/2" NPT, 1/8" PF

NKP

Side-Mount Plastic Level Switch
Polypropylene, PVDF

Specific Gravity$_{min}$: 0.6
t_{max} 212 °F; p_{max} 145 PSIG
Connection: 1/2" NPT, Bulkhead

RFS

Side-Mount Level Switch
Stainless Steel

Specific Gravity$_{min}$: 0.8
t_{max} 248 °F; p_{max} 72 PSI/145 PSI (ATEX)
Connection: 1/2" NPT

NV

Side-Mount Level Switch
Brass, Stainless Steel

Specific Gravity$_{min}$: 0.63
t_{max} 230 °F; p_{max} 230 PSIG
Connection: 3/4" NPT

NCM

Custom Mini Multipoint Switch
Brass, NBR, PP, Stainless Steel

Specific Gravity$_{min}$: 0.47...0.70
t_{max} 300 °F; p_{max} 400 PSIG
Connection: 1/8"...1" NPT,
5/16 Tube End

NCG

Custom Multipoint Level Switch
PVC, Stainless Steel, NBR, PP

Specific Gravity$_{min}$: 0.55...0.85
t_{max} 300 °F; p_{max} 400 PSIG
Connection: 1/2"...2" NPT,
3" ANSI Flange, 1/2" Tube End

NBA/NBE

Bypass Level Switch
Aluminum, Stainless Steel

Density: 0.65 kg/dm³
t_{max} 150 °C; p_{max} 10 bar
Connection: G 3/8 Female, R 1/2 Male

NSP/NSM

Float Level Switch
Polypropylene

Specific Gravity$_{min}$: 0.6
t_{max} 185 °F; p_{max} 30 PSIG
Connection: Cable

NEC/NAB

Float Level Switch
Polypropylene, Hypalon®

Specific Gravity$_{min}$:0.7
t_{max} 194 °F; p_{max} 58 PSIG
Connection: Cable

NST

Float Level Switch
PTFE

Specific Gravity$_{min}$: 0.79
t_{max} 302 °F; p_{max} 15 PSIG
Connection: Cable

NSE

Float Level Switch
Stainless Steel

Specific Gravity$_{min}$: 0.8
t_{max} 302 °F; p_{max} 220 PSIG
Connection: 1/2" NPT

NGS

Heavy Duty Level Switch
Stainless Steel

Specific Gravity$_{min}$: 0.7
t_{max} 480 °F; p_{max} 360 PSIG
Connection: 2" NPT,
Square Flange, DIN-Flange

NEK/NEL/NES

Conductive Level Switch
Fitting: SS, Polypropylene, PTFE
Electrode: SS, Hastelloy®, Titanium
Electrode Coating: Polyolefin, PTFE

t_{max} 300 °F; p_{max} 440 PSIG
Connection: 1/2" NPT, 1-1/2" NPT
Up to Six Switch Points

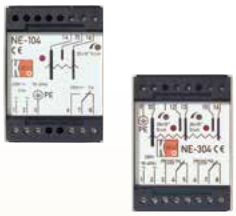
NEH

Cable-Suspended Conductive Level Switch
Fitting: Polypropylene, PTFE
Electrode: SS, Hastelloy®, Titanium
Electrode Coating: Neoprene, PTFE

t_{max} 300 °F; p_{max} 90 PSIG
Connection: 1/2" NPT, 1-1/2" NPT
Up to Six Switch Points

NE-104/-304

Power Supply Relays for Conductive Switches



1 or 2 Limit Contacts or
1 or 2 Min/Max Control Switches
Switch Capacity: Max. 250 V_{AC},
5 A, 600 VA

NEK

Compact Conductive Level Switch
Polypropylene, PPS

Conductivity$_{min}$: 100 µS/cm
t_{max} 185 °F; p_{max} 290 PSIG
Connection: 3/4" NPT, R 3/4
Open-Collector or Relay

LNK

Conductive Level Switch
Stainless Steel, E-CTFE

Conductivity$_{min}$: 10 µS/cm
t_{max} 212 °F; p_{max} 145 PSIG
Connection: G 1/2, G 1, Tri-Clamp®
Up to Four Electrodes

LNR

Level Module for Conductive Level Probes
Makrolon®

Direct PLC Connection
PNP Switch Output
Short Circuit Proof
Adjustable Sensitivity
Electrode Supply: AC Voltage

LNK-K

Compact Conductive Level Switch
Stainless Steel, PEEK

Conductivity$_{min}$: 10 µS/cm
t_{max} 300 °F; p_{max} 145 PSIG
Connection: G 1/2, Tri-Clamp®

LNM

Microwave Level Switch
Stainless Steel, PEEK

Dielectric Constant$_{min}$: 20
t_{max} 212 °F; p_{max} 145 PSIG
Connection: G 1/2, Tri-Clamp®
Open-Collector

LNZ

Capacitive Level Limit Switch
Stainless Steel, PEEK

Dielectric Constant$_{min}$: 20
t_{max} 212 °F; p_{max} 145 PSIG
Connection: G 1/2, Tri-Clamp®
Open-Collector

NCW/NCW-H

Capacitive Level Switch
Stainless Steel, PVDF, PTFE

Dielectric Constant$_{min}$: 1.5
t_{max} 194/257 °F; p_{max} 145/435 PSIG
Connection: 1" NPT, G 1, G 2
Adapter: 2" NPT, G 1-1/4,
G 1-1/2, Weld-in Sleeve
Relay

OPT

Optical Switch for Liquids
Stainless Steel, Polypropylene
Sensor: Polysulfone

t_{max} 176 °F; p_{max} 145 PSIG
Connection: 1/2" NPT,
G 1/2, M14 Bulkhead
Open-Collector

NSD

Economical Optical Level Switch
Stainless Steel, Polysulfone

t_{range} 15...250 °F
p_{max} 140/550 PSIG
Connection: 3/8“ NPT

NK-8000

Ultrasonic Level Switch
Stainless Steel

t_{max} 176/212 °F; p_{max} 1,000 PSIG
Connection: 3/4" NPT

NWP

Plastic Vibrating Fork Level Switch for Liquids
Glass Filled PPS

t_{range} -40...176 °F; p_{max} 150 PSIG
Connection: 3/4" NPT
SPST Relay Output

NWS

Vibrating Level Switch
Stainless Steel

t_{max} 265 °F; p_{max} 650 PSIG
Viscosity$_{max}$: 5,000 cSt
Connection: 3/4" NPT, 1" NPT,
1-1/2" or 2" Tri-Clamp®,
1" or 2" ANSI Flanges

NDT

Static Pressure Level Switch
Polyamide, NBR

t_{range} 15...185 °F; p_{max} Atmospheric
Switchpoint: 4“ Above End of Pipe
Connection: Hose Clamp for
1" Sch 40 Pipe

NSV

Vibrating Fork Level Switch for Bulk Media
Stainless Steel

Switching Range: 9" ...118"
Minimum Media Density: 3.75 lb/ft^3
t_{max} 176 °F; p_{max} Atmospheric
Connection: 1-1/2“ NPT, G 1-1/2
1 Relay SPDT

NVI

Vibrating Rod Level Switch for Bulk Media
Stainless Steel

Switching Range: 8.15"
and Special Lengths
Minimum Media Density: 3.1 lb/ft^3
t_{max} 320 °F; p_{max} 360 PSIG
Connection: 1-1/2“ NPT, G 1-1/2

NMF

Static Pressure Level Switch for Dry Bulk Media
NBR, FKM, Stainless Steel

t_{max} 390 °F
Minimum Media Density: 3.2 lb/ft^3
p_{max} 14.5 PSI (Over-pressure Protected)
Connection: Flange

PLS

Pendulum Level Switch for Bulk Media
Aluminum, NBR

Length$_{max}$: 78.7"
t_{max} 176 °F; p_{max} 7 PSIG
Connection: Aluminum Flange
SPDT Microswitch 250 V_{AC}/15 A

NIR-9

Rotating Vane Level Switch for Bulk Media
Stainless Steel

Switching Range: 2.5"...390"
t_{max} 392 °F; p_{max} 7.25 PSI
Connection: 1“ NPT, 1-1/2" NPT, Others
SPDT Microswitch 250 V_{AC}/2 A

NSC

Capacitive Level Switch for Bulk Media
Stainless Steel, PTFE, Polycarbonate, PP

Dielectric Constant$_{min}$: 1.5
Switching Range: 10"... 49 ft
t_{range} -4 ...176 °F; p_{max} 7 PSIG
Connection: 1" NPT, 2" NPT, G 1
Adapter: G 1-1/4,
G 1-1/2, Round Flange

NGM

Guided Wave Radar Level Transmitter
Stainless Steel, PTFE

t_{max} 480 °F; p_{max} 580 PSIG
Connection: Thread, Flange
Rigid Probe, Concentric Probe, Cable
Analog Output and Switching Output
Accuracy: ±3 mm of Measured Value

NGR

Guided Wave Radar Level Transmitter
Stainless Steel, PTFE

Measuring Range: 4"...78"
t_{max} 212 °F; p_{max} 145 PSIG
Connection: 3/4" NPT, G 3/4 Male
Analog Output, Switching Outputs
Sensor Accuracy: ±0.2

MM

Reed Chain Resistive Level Sensor
Stainless Steel, PVC, PP, PVDF

Max. Measuring Length: 19.6 ft
Density: 0.4 kg/dm³
t_{max} 265 °F; p_{max} 435 PSI
Connection: 3/8" … 2" NPT,
1-1/2" … 4" ANSI
Accuracy: ± 0.5% for L < 6.2 Feet

NML-308

Liquid Level Transmitter
Polyethylene, PVC, PP, PTFE

Specific Gravity$_{min}$: 0.9
Length$_{max}$: 6"...48"
t_{max} 250 °F; p_{max} 25 PSIG
Connection: 1-1/4" NPT or 1-1/2" NPT

NML-310

Liquid Level Transmitter
Polyethylene, PVC, PP, PTFE

Specific Gravity$_{min}$: 0.8
Length$_{max}$: 12"...108"
t_{max} 250 °F; p_{max} 40 PSIG
Connection: 2" NPT, 2" ...4" ANSI

NMT

Magnetostrictive Level Transmitter
Stainless Steel

Specific Gravity$_{min}$: 0.7...1.0
Measuring Range: 12"...157"
t_{range} -4 ...158 °F; p_{max} 145 PSIG
Connection: 2" NPT, G 2
Output: Analog 4-20 mA, 4-wire

NMC

Capacitive Level Transmitter
Stainless Steel, PVDF, PTFE

Measuring Range: 11"...157"
Dielectric Constant$_{min}$: 1.5
t_{max} 257 °F; p_{max} 435 PSIG
Connection: 1" NPT, 2" NPT, G 1, G 2
Adapter: G 1-1/4, G 1-1/2,
Weld-in Sleeve
Output: Analog 4-20 mA, 2 Wire

NRF

Capacitive Level Transmitter
Stainless Steel, PTFE

Rigid Probe and
Suspended Cable Designs
Length$_{max}$: 200 ft.
t_{range} -100...350 °F; p_{max} 500 PSIG
Connection: 3/4" NPT,
1-1/2" NPT, 1-1/2" ...2" Tri-Clamp®

NRF-1F

Capacitive Level Transmitter - with Integrated Concentric Grounding Probe
Stainless Steel, PTFE

Max. Length: 10 ft
t_{max} 350 °F; p_{max} 14.5...100 PSIG
Connection: 3/4" or 1-1/2" NPT
Output: 4-20 mA
Accuracy: ± 1% of Span

NRF-2/-3

Capacitive Level and Temperature Transmitter
Stainless Steel, PTFE

Measuring Length$_{max}$ 12 ft
t_{range} -100...350 °F; p_{max} 100 PSIG
Connection: 3/4" NPT,
1-1/2"...3" Tri-Clamp®
Output: 4–20 mA, RTD

PAD-N

Differential Pressure Transmitter with Diaphragm Seal
Stainless Steel

Level: 0...2,500 mmWC to
0...150 mWC
t_{max} 200 °C
Connection: Flange via Neck Tube
DN 50 or Bigger
Accuracy: ±0.075% of Calibrated Span
+ Influence of Diaphragm Seal

NBK-M

TOP SELLER

Economical Mini Bypass Level Indicator
Stainless Steel

Measuring Length$_{range}$: 8"...9.8 ft
Specific Gravity: 1.0 or 0.8
Viscosity$_{max}$: 200 cP
t_{max} 390 °F; p_{max} 580 PSIG
Connection: 1/2"...1" NPT,
1/2"...1" ANSI Flange

NBK-03 TO -33

TOP SELLER

Bypass Level Indicator
Stainless Steel

Measuring Length$_{range}$:
1 ft...18 ft (or longer)
Specific Gravity$_{min}$: 0.54
Viscosity$_{max}$: 200 cP
t_{max} 750 °F; p_{max} Class 1500
Connection: 1/2"...1-1/4" NPT,
1/2"...2" ANSI Flange

NBK-04

Tank-Top Mounted Level Indicator
Stainless Steel

Measuring Length$_{range}$: 1 ft ...13 ft
Specific Gravity$_{min}$: 0.55
Viscosity$_{max}$: 200 cP
t_{max} 250 °F; p_{max} 230 PSIG
Connection: 2" or 2-1/2" ANSI Flange

NBK-16/-17

Plastic Bypass Level Indicator
Polypropylene, PVDF

Measuring Length$_{range}$: 8"... 13 ft
Specific Gravity$_{min}$: 0.59
Viscosity$_{max}$: 200 cP
t_{max} 176 °F; p_{max} 58 PSIG
Connection: 3/4"...2" ANSI Flange

SZM

Bypass Level Indicator
Stainless Steel

Measuring Length$_{range}$ 15"...121"
t_{max} 212 °F; p_{max} 145 PSIG
Connection: 1/2" NPT,
ANSI 1/2"...2"

NZJ

Micro Bypass Level Indicator with Switch Options
Aluminum, Stainless Steel

Installation Length: 4"...22"
t_{max} 210 °F; p_{max} 230 PSIG
Connection: 1/4" NPT
Up to Two Limit Contacts Available

BA

Displacer-Type Level Gauge
Stainless Steel

Measuring Length$_{range}$: 1...19.7 ft
Specific Gravity$_{min}$: 0.4 ...2.0
t_{range} -40...480 °F; p_{max} 580 PSIG
Connection: 2...4" ANSI Flange

NEO

Ultrasonic Level Transmitter
PVDF

Measuring Length: 19.6' or 39.3'
t_{range} -40...176 °F; p_{max} 30 PSIG
Connection: 2" or 3" NPT
Narrow 3" Beam Width

NUS-4

Ultrasonic Level Transmitter
PP, PVDF

Measuring Range: up to 80 feet (Liquids)
t_{max} 190 °F; p_{max} 40 PSIG
Connection: 1-1/2", 2" NPT;
3", 5", or 6" ANSI Flange

NUS-7

Ultrasonic Level Transmitter
PP, PVDF

Measuring Range: Liquids up to 20 ft
t_{max} 194 °F; p_{max} 40 PSIG
Connection: 2" NPT, G 2
Analog Output
Accuracy: ± 0.2% of Reading
±0.05% of Full Scale

KPW

Submersible Pressure Transducer
Stainless Steel

Measuring Depth$_{max}$: 50" WC
to 1,000 PSI
t_{range} 14... 122 °F
Proof Pressure: 2x Depth Range

NTB

Deep Well Level Probe
Stainless Steel

Measuring Range: 0...200 m (WC)
t_{range} 14...140 °F
Cable Length: Max. 300 m
Analog Output

MAN-R/Q

Bourdon Tube Pressure Gauges
Brass

Measuring Range:
-30"...0" Hg to 0...14,500 PSIG
Housing Ø: 63, 80, 100, 160 mm
Overload Protection: 1.15 - 1.3 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ±1.0% or ±1.6% of Full Scale

MAN-R

Bourdon Tube Pressure Gauges
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...14,500 PSIG
Housing Ø: 63, 80, 100, 160 mm
Overload Protection: 1.15 - 1.3 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ±1.0% or ±1.6% of Full Scale

MAN-N...S

Bourdon Tube Pressure Gauges
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...30,000 PSIG
Housing Ø: 63, 100, 150 mm
Overload Protection: 1.15 - 1.25 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ±1.0% or ±1.6% of Full Scale

MAN-T

Bourdon Tube Pressure Gauges for Refrigeration
Brass, Stainless Steel

Measuring Range: -1...9 to -1...40 bar
Housing Ø: 63, 100, 160 mm
Overload Protection: 1.3 Times
Connection: 7/16-20 UNF, G 1/4
Accuracy: ±1.0% or ±1.6% of Full Scale

MAN-K

Capsule Element Pressure Gauge
Brass, Stainless Steel

Measuring Range: -10...0 to 0...600 mbar
Housing Ø: 63, 80, 100, 160 mm
Overload Protection: 1.3 - 10 Times
Connection: G 1/4, G 1/2
Accuracy: ±1.6% of Full Scale

MAN-P

Diaphragm Pressure Gauge
Stainless Steel

Measuring Range: -16...0 to 0...40 bar
Housing Ø: 100, 160 mm
Overload Protection: 1.3 Times
Connection: 1/2" NPT
Optional: Contact
Accuracy: ±1.6% of Full Scale

MAN-C

Diaphragm Pressure Gauge for Chemicals
Stainless Steel, ECTFE, PTFE

Measuring Range: -25...0 mbar to 0...25 bar
Housing Ø: 100, 160 mm
Overload Protection: 1.3 Times
Connection: ANSI Flange
Accuracy: ±1.6% of Full Scale

MAN-ZF

Pressure Gauge with Transducer
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...8,700 PSIG
Housing Ø: 100 mm
Overload Protection: 0.9 - 1.0 Times
Connection: 1/2" NPT
2-wire, 4-20 mA Output
Accuracy: ±1.0% of Full Scale

MAN-F

Test Pressure Gauge with Bourdon Tube
Aluminum, SS, Brass

Measuring Range:
-8.5"...0" Hg to 0...8,700 PSIG
Housing Ø: 160, 250 mm
Overload Protection: 0.9 - 1.3 Times
Connection: 1/2" NPT
Accuracy: ± 0.25% or
± 0.6% of Full Scale

MAN-U

Differential Pressure Gauge with Double Diaphragm
Stainless Steel

Measuring Range:
0...100 mbar to 0...25 bar
Static Pressure on Both Sides: 200 bar
Housing Ø: 100 or 150 mm
Connection: 1/4" NPT, 1/2" NPT
Accuracy: Cl. 1.6

MAN-LD/DSD

LCD Pressure Gauge with Ceramic Sensing Element Externally Powered
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...23,000 PSIG
Housing Ø: 74 mm
Overload Protection: 1.5 - 3 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.5% of Full Scale

MAN-SD/DSD

LCD Pressure Gauge with Ceramic Sensing Element Battery Powered
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...23,000 PSIG
Housing Ø: 74 mm
Overload Protection: 1.5 - 3 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.5% of Full Scale

MAN-SC/LC

Digital Pressure Gauge with Ceramic Sensor
Stainless Steel

Measuring Range:
-1...0 bar to 0...1600 bar
Housing Ø: 80 mm
Overload Protection: 1.3 - 3 Times
Connection: 1/2" NPT
Analog Output, Alarm Output
Accuracy: ± 0.2 - 0.5% of Full Scale

MAN-DG12R

Differential Pressure Gauge with Bourdon Tube
Aluminum, Steel

Measuring Range:
0...15 PSID to 0...870 PSID
Housing Ø: 160 mm
Optional: Contacts
Accuracy: ±1.6% of Full Scale

DRM

Diaphragm, Capsule, and In-Line Diaphragm Seals for Pressure Gauges and Transmitters
Stainless Steel, Special Materials upon Request

Measuring Range:
-30"...0" Hg to 0...23,000 PSIG
Fill Liquids: Glycerine, Paraffin, or Silicone
Connection: NPT, BSP, ANSI, Tri-Clamp®, or Other Sanitary Connections

DRM

Flange Diaphragm Seals
Stainless Steel, Monel®, Tantalum, PTFE

Standard Version up to 350 °C / 40 bar:
ANSI 1" … 4", DN 25 … DN 100
Special Version up to 400 bar:
ANSI 8", up to DN 200
Flanges According to BS, JIS, and GOST Standards
Optional: Extended Diaphragm

DRM 626/627

Membrane Diaphragm Seals
Stainless Steel, Tantalum, ECTFE

Measuring Range: 0...0.6 to 0...250 bar
Housing Ø: 90 mm
Filling: Glycerine, Paraffin, Silicone Oil
Membrane Option: Tantalum, ECTFE

MAN/MZB/DRM

Pressure Gauge with Sanitary Diaphragm Seal and Cooling Element
Stainless Steel

MAN-RF..MZB-711..DRM-602
Meas. Range: 0...15 to 0...580 PSIG
Housing Ø: 100 mm
Connection: Tri-Clamp®, DIN 11851, Hygienic Connection, IDF, SMS
Accuracy: ±1.6% of Full Scale

MAN/DRM

Pressure Gauge with Tri-Clamp® Diaphragm Seal
Stainless Steel

MAN-RF...DRM-613
Meas. Range: 0...15 to 0 ...145 PSIG
Housing Ø: 100 mm
Connection: 1"...3" Tri-Clamp®
Accuracy: ±1.6% of Full Scale

MAN/DRM

Pressure Gauge with Membrane Diaphragm
Stainless Steel

MAN-RF...M1...DRM-620
Meas. Range: 0...1 to 0...40 bar
Housing Ø: 100 mm, 160 mm
Connections: Threaded, Flange, Tri-Clamp®, DIN 11851, SMS and IDF Norm
Accuracy: ±1.6% of Full Scale

MAN/DRM

Pressure Gauge with Inline Diaphragm
Stainless Steel

MAN-RF...DRM-502
Meas. Range: 1.6...40 to 2.5...40 bar
Housing Ø: 100 mm, 160 mm
Connection: 1/2"...2" Tri-Clamp®, Hygenic ISO DN 15...50
Accuracy: ±1.6% of Full Scale

MAN/DRM

Pressure Gauge with Membrane Diaphragm Seal
Stainless Steel

MAN-RF...DRM-603
Meas. Range: 0...1 to 0...40 bar
Housing Ø: 100 mm
Connection: DIN 11851, DN 25...100
Accuracy: ±1.6% of Full Scale

MAN/DRM

All Stainless Steel Bourdon Tube Pressure Gauge with Membrane Diaphragm
Stainless Steel

MAN-RD..DRM-600
Meas. Range: 0...85 to 0...14,500 PSIG
Housing Ø: 63 mm
Connection: 1/2"...1-1/4" NPT
Accuracy: ±1.6% of Full Scale

MAN/DRM

Pressure Gauge with Membrane Diaphragm Seal - Plastic
PVDF

MAN-RD...DRM-632
Meas. Range: 0...20 to 0...230 PSIG
Housing Ø: 63 mm
Connection: 1/2" NPT
Accuracy: ±1.6% of Full Scale

DSD/SEN/DRM

Pressure Gauge or Sensor with Membrane Diaphragm Seal
PVC or Polypropylene

DSD...DRM-630 and SEN...DRM-631
Meas. Range: 0...20 to 0...145 PSIG
Housing Ø: 74 mm
Connection: 1/2" NPT
Accuracy: ±1.0% of Full Scale

SEN/DRM-600

Pressure Sensor with Diaphragm Seal
Stainless Steel

Measuring Range: 0...6 to 0...600 bar
t_{max} 70 °C
Connection: G 1/2....G 1-1/2 (SS)
Optional AUF Plug-on Display
Accuracy: ±1.0% of Full Scale

PUM

U-Pipe Pressure Indicator
Glass, Aluminum

Indicating Ranges:
-125 up to 750 mm WC or
-5" up to 30" WC
Scale Division: 2 mm
Hose Connection Ø: 7 mm

MZB

Pressure Sensing Accessories
Brass, Steel, Stainless Steel

Block and Bleed Valves, Gauge Swivels, Snubbers, Cooling Elements, and Steam Siphons

MZB-712

Pressure Sensing Accessories
Stainless Steel, Brass

Fittings: 1/4"...1/2" NPT;
G 1/4...G1/2, 7/16-20 UNF DIN 3866,
G 1/2 DIN 3852-E, M 20x1.5

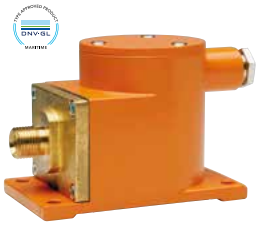
PMP

Differential Pressure Sensor and Controller for Filters

Measuring Range: 0...20" H_2O
Power Supply: 24 $V_{AC/DC}$,
110 V_{AC}, 230 V_{AC}
Display: 4-Digit LED
Connection: 1/4" NPT or 6x8 mm Tube
Accuracy: ±1.0% of Full Scale

PNK

Pressure Transmitter for High Vibration
Brass, Aluminum



Measuring Range:
-30...0" Hg to 0...1,450 PSIG
Overload Protection: 1.6 Times
Connection: M16 x 1.5
(NPT with Adapter)
Accuracy: ±1.0% of Full Scale

PAD-N

Differential Pressure Transmitter with Diaphragm Seal
Stainless Steel

Measuring Range:
0 ... 250 mbar to 0 ... 206.80 bar
t_{max} 200 °C
Connection: Flange, Threaded, Clamp-on, and In-line Diaphragm Seal (Nominal Size 15 ... 100)
Accuracy: ± 0.075% of Calibrated Span + Influence of Diaphragm Seal

PAD - Differential Pressure Transmitter

TOP SELLER

Measuring Range:
0.3"...6" WC to 60...6,000 PSIG
Power Supply: 12-45 V_{DC}
Connection: 1/4" or 1/2" NPT
Accuracy: ± 0.075% of Full Scale
Material: Stainless Steel
Media Temp: -40...248 °F
Rangeability: 100 to 1
Output: 4-20 mA, 2-wire with HART®
CE EMC Conformity

- *Continuous Self-Diagnostic Function*
- *Standard 5-digit Local Display*
- *Various Diaphragm Seals Available*
- *Zero Point Adjustment*
- *Automatic Ambient Temperature Compensation*
- *EEPROM Write Protection*
- *Fail Mode Process Function*
- *Sensor Inputs: Differential, Gauge, or Absolute Pressure*

PDA

Pressure Transmitter with Ceramic Sensing Element
Stainless Steel

Measuring Range:
-30...0" Hg to 0...5,800 PSIG
Display: 3-Digit LED
Power Supply: 24 V_{DC}
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.5% - 1.0% of Full Scale

HND-P105/-210

Hand-Held Pressure Indicator for External Sensors

Measuring Range:
-14.5...40 PSIG to 0...5,800 PSIG
(Dependent on Associated Sensor)
Optional: Data Log, Alarm,
Control Functions
Accuracy: ± 0.1% of Full Scale

HND-P121/-123

Hand-Held Differential Pressure Indicator with 2 Integrated Sensors

Measuring Range: -0.0145...0.36 PSID
to -1.45...29 PSID
Optional: Data Log, Alarm, Control
Functions
Accuracy: ± 0.2% - 0.4% of Full Scale

HND-P129/-239

Hand-Held Differential Pressure Indicator with 1 Integrated Sensor

Measuring Range: 0...15 PSIG
Optional: Data Log, Alarm,
Control Functions
Accuracy: ± 0.2% of Full Scale

KPG

Pressure Transmitter with Thin Film Sensing Element
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...145,000 PSIG
Overload Protection: 1.2 - 3 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.125% - 0.25%
of Full Scale

KPK

Pressure Transmitter with Thin Film Sensing Element
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...15,000 PSIG
Overload Protection: 1.5 - 2 Times
Connection: 1/4" NPT
Accuracy: ± 0.25% - 0.5% of Full Scale

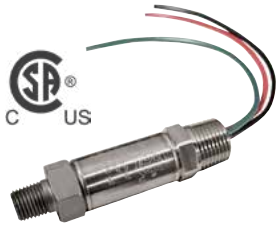
KPA

OEM Pressure Transmitter with Heat-Fused Sensing Element
Stainless Steel

Measuring Range:
0...50 PSIG to 0...10,000 PSIG
Overload Protection: 2 Times
Connection: 1/4" NPT
Accuracy: ± 0.25% of Full Scale

KP46

Explosion Proof Pressure Transmitter CSA/US Approved
Stainless Steel



Measuring Range:
0...50 PSIG to 0...20,000 PSIG
Overload Protection: 2 Times
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.25% BFSL

SEN-86/-87

Pressure Transmitter with Ceramic Element
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...10,000 PSIG
Optional AUF Display: 4-Digit LED
Overload Protection: 1.5 - 2 Times
Connection: 1/2" NPT, 1/4" NPT
Accuracy: ± 0.5% - 1.0% of Full Scale

SEN-96

Pressure Sensor with Ceramic Element
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...6,000 PSIG
Output: 4-20 mA, 0-5 V_{DC}, 0-10 V_{DC}
Connection: 1/4" NPT, 1/2" NPT,
G 1/4, G 1/2
Accuracy: ± 0.5 - 0.75 % of Full Scale

SEN-98/-99

Pressure Sensor with Ceramic Element
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...8,700 PSIG,
0...14.5 to 0...360 PSIA
Overload Protection: 1.3 - 5 Times
Connection:
1/4" NPT, 1/2" NPT, G 1/4, G 1/2
Accuracy: ± 0.5% of Measuring Range

AUF

Compact In-line Display for Transmitters

For Transmitters with DIN 43650A Plugs
Input: 4-20 mA, 2-wire or 3-wire
User Programmable
Optional Transistor Switch
Custom Housing Colors
for OEM Quantities

Pressure

PAS

Pressure Transmitter
High Accuracy
Stainless Steel

Measuring Range:
-14.5...21.7 to 0...8,700 PSIG
Power Supply: 12 - 45 V_{DC}
Connection: 1/2" NPT
Accuracy: ± 0.075% of Full Scale

PAS-N

Pressure Transmitter with
Diaphragm Seal
Stainless Steel

Measuring Range:
0...250 mbar to 0...600 bar
t_{max} 350 °C
Connection: Thread or Flange
(Nominal Size 15 ... 100)
Accuracy: ±0.075% of Calibrated Span
+ Influence of Diaphragm Seal

PAS-N

Pressure Transmitter with
Diaphragm Seal
Stainless Steel

Measuring Range:
0...250 mbar to 0...600 bar
t_{max} 350 °C
Connection: Thread or Flange
(Nominal Size 15 ... 100)
Accuracy: ±0.075% of Calibrated Span
+ Influence of Diaphragm Seal

PSD

Electronic Pressure
Transmitter/Switch
Stainless Steel

Range: 0...30 to 0...7,500 PSI
Output: 4-20 mA or 0-10 V_{DC}
Output: 2x PNP Switches
Display: 4-Digit LED
Connection: 1/4" NPT
Accuracy: ± 0.5% of Full Scale

PDD

Pressure Switch with
Ceramic Sensing Element
Stainless Steel

Measuring Range:
-30"...0" Hg to 0...5,800 PSIG
Display: 3-Digit LED
Power Supply: 24 V_{DC}
Connection: 1/4" NPT, 1/2" NPT
Accuracy: ± 0.5% - 1.0% of Full Scale

KPH

Pressure Switch - Industrial
Diaphragm/Piston Type
Aluminum

Switching Range:
-14.5...0 PSIG to 580...6,100 PSIG
Overpressure: 1.4 - 5 Times
Connection: 1/4" NPT
Repeatability: ± 3 - 4% of Full Scale

KPH300

Pressure Switch - OEM
Diaphragm Type
Zinc-Plated Steel, NBR

Switching Range:
3...30 PSIG to 450...4,600 PSIG
Overpressure: 1.2 - 9 Times
Connection: 1/4" NPT
Repeatability: ± 2% of Setpoint

KPF

Pressure Switch - OEM
Diaphragm Type
Brass, Stainless Steel

Switching Range:
4.3...13 PSIG to 725...1,450 PSIG
Overpressure: 1,450 PSIG
Connection: 1/4" NPT
Repeatability: ± 5% of Full Scale

SCH-PSB

Mechanical Pressure
Switch
PA, PS, Silicone

For Overpressure, Vacuum Pressure
and Differential Pressure
Ranges: 20...300 Pa to 200...1000 Pa
Connection: Hose Barb

SCH

Mechanical Pressure
Switch
Brass, SS, NBR

Ranges: -15...6 mbar to -1...0.1 bar
t_{max} 85 °C
Connection: R Threaded
Micro-Switch, Optional Proximity Switch

SCH-27

Mechanical Pressure Switch
Stainless Steel

Switching Range:
0.7...6 mbar to 8...160 bar
Switching Function: Micro Switch
Connection: 1/2" NPT Female,
1/4" NPT Female,
1/2" NPT Male, G 1/2 Male
Repeatability: < 1% of Full Setting Value

SCH-28

Mechanical Differential
Pressure Switch
Stainless Steel

Switching Range:
0.1...1 bar to 0.2...10 bar
Switching Function: Micro Switch
Connection: 1/2" NPT Female,
1/4" NPT Female,
1/2" NPT Male, G 1/2 Male
Repeatability: < 1% of Full Setting Value

TWR

Temperature Switch for Liquids
Brass, Stainless Steel

Switching Range: 86...248 °F
t_{max} 250 °F; p_{max} 920 PSIG
Connection: 3/4" NPT

TBS

Thermal Reed Temperature Switch
Brass, Stainless Steel

Switching Range: 14...212 °F
t_{range} -40...250 °F; p_{max} 360 PSIG
Connection: 1/4"...1-1/2" NPT

TDD

Digital Temperature Switch
Stainless Steel

Switching Range: -58...250 °F
t_{max} 250 °F; p_{max} 1,150 PSIG
Connection: 1/2" NPT, 3/4" NPT, G 1/2, G 3/4
2 Transistor Switches

TDD-..D6

Digital Temperature Switch
Stainless Steel

Switching Range: -58...250 °F
t_{max} 250 °F; p_{max} 1,150 PSIG
Connection: 6 mm dia. Smooth Probe
2 Transistor Switches

TNS

Gas Filled Rigid Stem Thermometer
Stainless Steel

Measuring Range: -40...1,100 °F
Housings: 2.5"...10"
Overload Protection: FS Value, 1.3x FS Optional
Accuracy: 1.0% or 1.6%

TNF

Gas Filled Capillary Thermometer
Stainless Steel

Measuring Range: -40...1,100 °F
Housings: 2.5"...10"
Overload Protection: FS Value, 1.3x FS Optional
Accuracy: 1.0% or 1.6%

TSH

Thermowells for Stem and Capillary Thermometers
Stainless Steel

p_{max} 360 PSIG
Connection: 1/2"...1" NPT, Weld Stub

TDA

Digital Temperature Transmitter
Stainless Steel

Measuring Range: -58...250 °F
p_{max} 1,150 PSIG
Connection: 1/2" NPT, 3/4" NPT, G 1/2, G 3/4
Output: 4-20 mA, 3-wire, Transistor Switch

TDA-..D6

Digital Temperature Transmitter
Stainless Steel

Measuring Range: -58...250 °F
p_{max} 1,150 PSIG
Connection: 6 mm dia. Smooth Probe
Output: 4-20 mA, 3-wire, Transistor Switch

TNK

RTD Temperature Sensors
Brass, Bronze, Stainless Steel

Measuring Range: -112...302 °F
t_{max} 302 °F; p_{max} 725 PSIG
Connection: 1/2" NPT, G 1/2, M18x1.5

TSP

Temperature Transmitter for Pipes
Brass, Stainless Steel

Measuring Range: -40...300 °F
p_{max} 750 PSIG
Connection: 1/4"...1-1/2" NPT
Output: 4-20 mA, Pt 100 RTD

TSR

RTD Temperature Probes
Stainless Steel

Measuring Range: -320...400 °F
p_{max} 1,450 PSIG
Connection: 1/2" or 3/4" NPT, 1-1/2" Tri-Clamp®
Output: 4-20 mA, Pt 100 RTD

TST

Integrated Programmable Temperature Transmitter
Stainless Steel

Measuring Range: -58...1,100 °F
p_{max} 1,500 PSIG
Connection: 1/4" or 1/2" NPT,
1-1/2"...3" Tri-Clamp®
Output: 4–20 mA, 2-wire

TSA

Resistive Temperature Sensor
Brass, Stainless Steel

Measuring Range: -40...150 °C
p_{max} 25 bar
Connections: 1/4...1-1/2 NPT,
G 1/4...1-1/2

TGK

Glass Thermometer
Aluminum or Plastic Casing, Brass

Measuring Range: -76...390 °F
Connection: 1/2" NPT, G 1/2
Accuracy: ±1% of Full Scale

TGL

Glass Thermometer
Aluminum or Plastic Casing, Brass

Measuring Range: -76...390 °F
Connection: 1/2" NPT, G 1/2
Accuracy: ±1% of Full Scale

DTB

Digital Thermometer - High Accuracy, Battery Powered
Stainless Steel

Measuring Range: -50...400 °F
(-50...200 °C)
Display in Either °F or °C
Connection: 1/4"...3/4" NPT
Battery Life: up to 5 years

TIR-FA

Stationary Infrared Thermometer
Stainless Steel

Measuring Range:
0...120 °C to 100...500 °C
10 mV/K or Voltage Model J, K
Accuracy:
±1.5 % of Measuring Range or 2.5 °C

TIR-SN

Stationary Infrared Thermometer
Stainless Steel

Measuring Range:
-20...500 °C
Analog Output
Uncertainty: 1.5 % of Meas. Range °C
Repeatability: % of Measuring Range

HND-T120/-125

Precision Hand-Held Thermometer

Measuring Range: -50...1,150 °C
Sensor: Type K Thermocouple
Power Supply: Battery
Accuracy: 1.0% of Reading

HND-T105/-T205

Precision Hand-Held Thermometers

Measuring Range: -220...1372 °C to
-50...1768 °C
Sensor: Thermocouple or Pt 100
Supply: 9V Battery
Accuracy: ± 0.03% of Reading

TWL-ST

Room Thermometer
Polycarbonate, Aluminum

Measuring Range: -40...85 °C
Wall Socket
Pt 100, 4-20 mA
Accuracy: Cl. A or B

TBE

Bi-Metal Thermometer
Stainless Steel

Measuring Ranges: -50...50 °C
to 0...600 °C
p_{max} 15 bar
Fittings: 1/2"...3/4" NPT, G 1/2...G 3/4,
(Fixed, Rotatable, Slidable)
Accuracy: Cl. 1.0

TND

Shaft Thermometer for Diesel Engines
Steel, Stainless Steel

Measuring Range: 0...800 °C
p_{max} 25 bar
Fittings: G 1/2, G 3/4
Accuracy: Cl. 1.0 or 1.6

TMA/MMA (AUF)

Temperature Transmitters
Stainless Steel

Measuring Range: -358...1,112 °F
p_{max} 1,450 PSIG
Connection: 1/4" NPT, 1/2" NPT
Output: 4–20 mA, 2-wire

MMA/AUF/KUG

Screw-in Resistance Thermometer
Stainless Steel

Measuring Range: -200...400 °C
p_{max} 36 bar
Accuracy: < 0.5% of Span

LTS

Resistance Temperature Probe

Measuring Range: -50...250 °C
p_{max} 145 PSIG
Sensor: Pt100, 4-20 mA
Connection: G 1/2, M12x1.5

KM

Temperature Transducer

Measuring Range: -200...250 °C to -50...1768 °C
Input: RTD, TC Ω, mV
Analog Output
For Head, Rail, or Wall Mounting

MWD

Industrial Resistance Thermometer
Stainless Steel

Measuring Ranges:
from -324 up to 1112 °F
p_{max} 435 PSI
Accuracy: Cl. A or B

DTE

Digital Thermometer
Stainless Steel

Measuring Ranges: -200...850 °C
p_{max} 34 bar
Display: 6-Digit LCD
Fittings: 1/4"...1/2" NPT,
G 1/4...G 1/2, Compression Fitting
Accuracy: ± 0.1% of Reading + 0.2°C

MWE

Screw-in Resistance Thermometer
Stainless Steel

Measuring Range: -70...250 °C
p_{max} 30 bar
Accuracy: Class A or B

TWL/TTL

Resistance Thermometers
Stainless Steel

Measuring Range: -200...1,100 °C
p_{max} 3,625 PSIG
Sensor: Pt100, 4-20 mA
Connection: 1/2"...1" NPT,
G 1/2...1, DIN 15...50 Flanges
Output: Analog 4-20 mA

TTE

Screw-in Thermocouples with Compensating Lead
Stainless Steel

Measuring Range: -200...600 °C
Connection: G 1/2, M10x1
Accuracy Class 1.0

TWM

Sheath Resistance Thermometer
Stainless Steel

Measuring Range: -20...600 °C
Sensor: Pt100, 2-, 3-, or 4-wire
Connection: Cable, Connector, Connection Head

TWA

Contact Resistance Thermometer
Brass, Stainless Steel

Measuring Range: -20...260 °C
Accuracy: Pt 100, Class B

TWL

Thermowells for Thermometers
Stainless Steel, Special Materials

t_{max} 800 °C
p_{max} 250 bar
Types: Thread, Flange, Welding Sleeve

Accessories

REG

TOP SELLER

Automatic Flow Regulating Valve
Brass, Stainless Steel

t_{max} 572 °F; p_{max} 2,900 PSIG
Connection: 3/4" NPT, G 1/2, G 3/4

REG-8

Automatic Flow Regulating Valve
Stainless Steel

t_{max} 570 °F; p_{max} 2,900 PSIG
Connection: 3/4"...4" ANSI Wafer,
DN 20...100, G 1/2...2-1/2

NVM/NAD

Needle Valve
Stainless Steel

t_{max} 250 °F; p_{max} 3,600 PSIG
Connection: 1/8"...1-1/4" NPT, G 1/8...G 1-1/4

NVN

Needle Valve
Stainless Steel, Brass, Carbon Steel

Hard Seat, Soft Seat, and Mini Models
Easy to Adjust T-Handle
Designed for Strength and Smooth Operation
Bonnet Pin Lock Prevents Loosening
Connections: 1/8"...1-1/2" NPT

MFR

Magnetic Filter
Brass, SS, Bronze, Cast Iron

t_{max} 392 °F; p_{max} 580 PSIG
Connection: G 1/4...G 4

RL

Power Supply, Latching, and Isolation Relay

Power: 110 V_{AC}, 230 V_{AC}, 24 V_{DC}
Excitation: 24 V_{DC}, 120 mA Regulated
Input: Dry Contact or NPN/PNP, 15mA Max
Output: SPDT Relay, 10A@240V_{AC} 8A@24V_{DC}

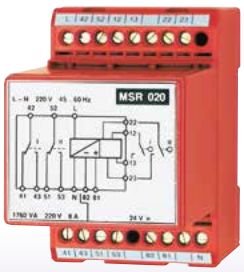
KFD-2/KFA-5

Instrinsically Safe Relay/Power Supply

For Dry Contacts or NAMUR-Type Switches
Single or Dual Channel
Standard Rail Mounting
24 V_{DC} or 110 V_{AC} Power
SPDT Relay Output

MSR

Contact Protection and Latching Relay



For Protection of Reed Contacts
8A Max. Switching Capability
1 or 2 SPDT Contacts

AUF

Compact In-line Display for Transmitters

For Transmitters with DIN 43650A Plugs
Input: 4-20 mA, 2-wire or 3-wire
User Programmable
Optional Transistor Switch
Custom Housing Colors for OEM Quantities

Accessories

MPT

Universal/Process Panel Display Ratemeter

Accepts Current, Voltage, TC, and RTD Inputs
Max/Min Display
Relays and 4-20 mA Options
Modbus®

MPV

Dual-Line Process Panel Display

Pulse or Analog Outputs
Displays both Rate and Total
32 Point Linearization
Modbus®
Gate Function
Open Channel Flow

DAG-T4

Universal Digital Indicator/Controller

Input: Current, Voltage, Pt 100, Thermocouples
Limit Contacts
Sensor Supply

DAG-Z2

Counter/Preset Counter

Input: Frequency
Limit Contacts
Sensor Supply

ZED

LCD Indicating Display and Controller

Input: Frequency
Output: Analog, 2 Limit Contacts, Sensor Supply

ZOK

Totalizer, Batching, and Monitoring Electronics

Input: Frequency
Analog Output, Impulse Output, Limit Contacts,
Sensor Supply, Battery Powered

ADI-1

Universal Input LED Display Controller

Display: 5-digit with 270° Bargraph
Input: Current, Voltage, Frequency
Analog Output, 2 Limit Contacts, Sensor Supply

ZLS-2

Multi-Channel Datalogger Display

8x Input: 4 - 20 mA, or Pt 100, Pt 500, Pt 1000
Interface: 1x USB, 1x RS485
Sensor Supply

ZOE

Rate and Totalizing Display

Frequency Input, Pulse Output
Sensor Supply or Battery Powered

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