



## LEVEL SENSORS

### Electro-Optic

Industry's largest selection of electro-optic liquid level sensors. Solid-state switching and no moving parts ensures dependability over long service life.



### Warrick Conductivity

Single or multi-point sensors with no moving parts. Stainless steel electrodes can be cut to desired length. Gems conductivity controls provide alarm, pump-up or pump-down control in electrically conductive liquid



### Float

Available in a vast range of sizes, mountings and materials. Gems offers the broadest selection of float type level switches anywhere. Using a proven reed switch design, float type switches deliver long, trouble-free service with precise repeatability. They are available in both single point and multi-point configurations. Multi-point switches monitor up to five levels with Canadian approvals, with a single unit; lengths from a few inches (centimeters) to 10 feet (3 m).



### High Purity

Gems high purity sensors are designed for ultra-pure applications. PTFE and PVDF resist built-up of foreign material and sticky media. These high purity level sensors come in single, multi-point, float and electro-optic types.



### Capacitive

Gems Capacitance sensors are available either factory or field calibrated for liquid detection. Available in both contact and non-contact models, sensing from outside a fluid vessel's wall. These sensors operate accurately with both aqueous and non-aqueous liquids. Other models are available that are specifically designed for coolant applications.



## INDICATORS

### DIPTAPE<sup>™</sup> AND DRUMTAPE<sup>™</sup>

Pop the cap, pull the tab and up comes the tape to tell you exactly how much liquid remains in the tank or drum. Ideal for hazardous areas, DIPTAPE and DRUMTAPE indicators are non-electric, plus liquids and vapors remain sealed from the atmosphere. DIPTAPE indicators are designed for tanks. DRUMTAPE indicators fit 30 or 55 gallon storage drums.

## TRANSMITTERS

**Float:** Standard lengths offer measurement from a few inches (centimeters) to 18 feet (5.5 m). Choose from a variety of materials for mountings, stems and floats that include PVC, polypropylene, PVDF, stainless steel, brass and Buna N.



## FLOW SENSORS/INDICATORS

### Paddle Wheel

**RotorFlow<sup>®</sup>:** These highly visible, paddle wheel designs offer accurate visual indication, flow rate sensing and switching. The visual indication is combined with a choice of either pulsed DC output 0-10V DC analog or adjustable 1 Amp switched output. Available with brass, stainless steel or hydrolytically stable polypropylene housings.

**TurboFlow<sup>®</sup>:** Ultra-compact TurboFlow<sup>®</sup> low flow rate sensors provide continual measurement ranging from 0.1 to 8 GPM (0.5 to 30 lpm). Their Hall-effect sensor delivers accuracy to ±3% of reading and 0.5% repeatability.

### Piston Switch

Proven piston switch technology delivers high repeatability and precise calibration for liquids or gases. Special capability versions offer viscosity compensation and high pressure handling to 1,500 PSIG (103 bar). Brass, plastic or stainless steel bodies.

### Paddle Switch

Flow/No Flow detection for pipes with 1-1/4" (3 cm) diameter and up. Paddles are cut to length for desired actuation setting (from 1-1/4" to 5-1/2" (3 to 14 cm)).

### Shuttle Switch

For monitoring water and oil – in line sizes 1/2" to 3" (2.5 to 7.6 cm). Accurate with 1% repeatability and low-pressure drop. Plastic, bronze, stainless steel and marine grade housings.



## PRESSURE SENSORS/ TRANSDUCERS

### Sputtered Thin Film

Sputtered thin film technology provides years of worry-free measurements under demanding conditions. Ideal for harsh applications demanding long-term service where precise laboratory type measurements are required.

### Chemical Vapor Deposition

Gems Chemical Vapor Deposition (CVD) pressure transducers and transmitters are based on a proven technology. CVD instruments provide an effective method of overcoming the often severe limitations of other low-cost pressure measuring products. A state-of-the-art ASIC chip in each transducer provides greater linearity correction than traditional thermal compensation methods.

### Capacitive

Capacitive transducers are simple, durable and fundamentally stable. Variable capacitor technology, a rugged physical configuration and stainless steel wetted parts, repeatable transducers with low hysteresis and only .5% long-term-drift full scale per year, for low pressure applications. This large family of sensors includes models for positive pressures to 10,000 psi (700 bar), absolute vacuums, differential pressures, barometric pressures (0-15 psi/0-1 bar) and clean in place 3A sanitary applications.

### Submersible

The 5000 Series pressure transducer features a sturdy ceramic diaphragm that detects minute pressure variations, while withstanding large pressure spikes. Low pressure ranges from 0-10 to 0-415 inches of water column. The tough ceramic sensor is housed in a duplex stainless steel case to ensure performance in the most demanding applications, such as sea water. Both voltage and 4-20 mA outputs are available at time of order. A switch and potentiometer can be accessed for field adjustment of range with 3:1 ranging capability.

## SWITCHES

### Piston/Diaphragm

From compact cylindrical models for OEM use, to larger enclosed units for rugged process applications. A piston/diaphragm design, incorporating the high proof pressure of piston technology allows these switches to operate with the sensitivity and accuracy of a diaphragm design. Repeatability ranges from 0.2 to 2% of the highest set point.

### Solid-State

Utilizing proven pressure sensor and ASIC design, Gems solid state pressure switches offer greater accuracy and repeatability in high shock and vibration environments. They also provide an advantage over electromechanical switches when actuations exceed 50 cycles/minute and a broad frequency response is needed.

## SOLENOID VALVES

### General Purpose

Providing 2- and 3-way functions and available in miniature and sub-miniature sizes, Gems general purpose solenoid valves deliver Flow Coefficients (CV) of .018 to .880. Select from NPT port, manifold or barbed connection types. Body materials include brass, stainless steel, acetal aluminum and polypropylene. Versions within this group will control operating pressure differentials up to 1000 psi (70 bar).

## CONTROLS

### Solid State - Intrinsically Safe Relays and Controls

Render any non-voltage producing sensor, switch or conductivity electrode intrinsically safe with these relays and barriers from Gems. They amplify sensor load-handling capabilities in a wide range of AC and DC control switching applications. The amount of energy they send to sensors and switches within hazardous areas is insufficient to cause ignition of a specific hazardous atmospheric mixture in its most ignitable concentration.

