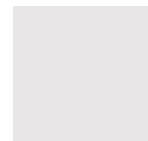
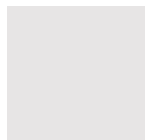
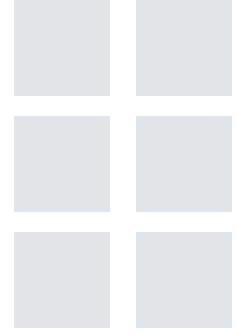


# **FCT** FLUID COMPONENTS INTERNATIONAL LLC

## Air & Gas Mass Flow Meters Gas & Liquid Flow Switches, Level Switches





**CONTENTS**

Introduction..... 3

Flow Meters ..... 4

Thermal Dispersion..... 4

Flow Switches ..... 4

Level Switches ..... 5

Vortab® Flow Conditioners..... 5

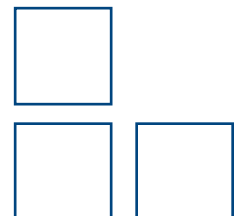
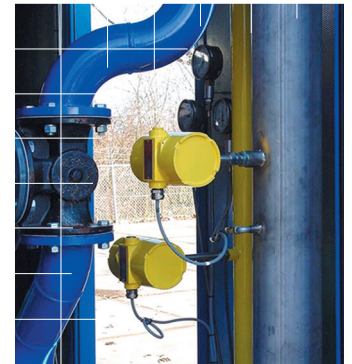
OEM and Custom Solutions..... 5

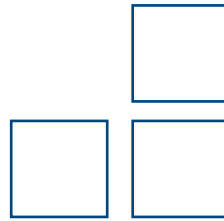
Flow Meter Selector..... 6

Flow and Level Switches Selector..... 8

Calibration Capabilities ..... 10

Sales and Service Support..... 11





# Flow and Level Instrumentation Solutions for Industrial Processes

- **Air, Gas, Liquid, Slurry Applications**
- **Mass Flow Meters**
- **Solutions for Line Sizes 1/4" [6 mm] to 33' [10 m] Ducts**
- **Thermal Dispersion Mass Flow Technologies**
- **Global Sales and Service**
- **Extensive Product Selection to Optimize Application Solutions**
- **Accuracy Assurance with Calibration in Your Actual Fluid and Process Conditions**
- **Lowest Maintenance, No Moving Parts**
- **Fast, Easy Installation**
- **Compliance and System Approvals to Global Standards**
- **Analog and Digital Bus Communications**
- **Exclusive Flow Conditioners Solve Installation Constraints**

**Fluid Components International** solves flow and level measurement applications for industrial process and plant applications using patented thermal dispersion flow measurement technologies. With more than five decades of experience and the world's largest installed base of thermal dispersion instruments, you can count on FCI to know your application and have proven solutions that will save you time and expense. From off-the-shelf products to custom engineered products and systems, FCI has the selection and an unequalled record of innovations to supply the optimal product for your application. From single-point to multi-point flow meters, from basic air flow to complex mixed, variable flare gas compositions, from water to the harshest of chemicals, FCI products will deliver superior accuracy, repeatability and long-term reliability at the lowest installed cost.

Chemical

Wastewater Treatment

Power & Energy

Oil & Gas

Petroleum

Pulp & Paper

Metals

Nuclear Power

Mining

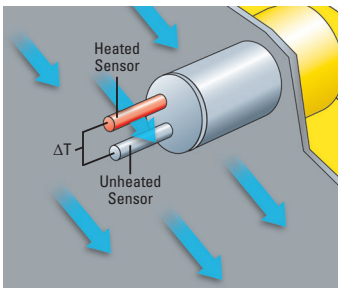
Food & Beverage



## Mass Flow Meters— Thermal Dispersion

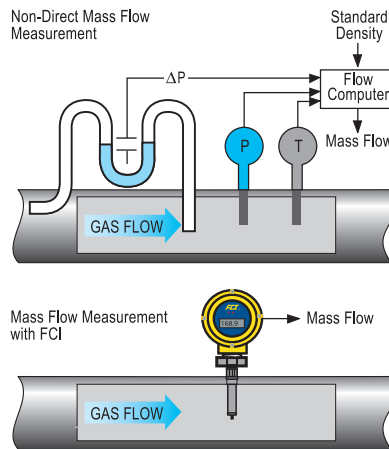
- Air and Gas Applications
- Direct Mass Flow Measuring
- No Moving Parts
- Low Cost Solution for Large Line Sizes
- Wide Turn-Down Ratio, to 1000:1
- Apply in Air/Gases to 850 °F [454 °C]
- SIL1 and SIL2 Compliance

Thermal dispersion provides a gas flow measuring solution that is easy to install and virtually maintenance-free to save you time and costs. It has no moving parts and is inherently multivariable, measuring both flow and temperature. Insertion styles are particularly well suited for larger line size applications because probe length and the number of sensors are easily and economically added. Thermal dispersion technology places two thermowell protected platinum RTD temperature sensors in the process stream. One RTD is heated while the other senses the actual process temperature. The temperature difference between these sensors is measured and is proportional to the mass flow rate of the fluid.



## FCI Air/Gas Mass Flow Meter Solution

FCI flow meters feature a patented no-moving parts flow element design that provides direct mass flow measurement with just a single process penetration. This saves space and eliminates unnecessary installation, expense, and performance degradation associated with separate temperature and pressure sensors, and density calculation devices needed with inferred mass flow techniques. With no moving parts to plug or foul, FCI flow meters deliver extensive cost savings over alternative high maintenance technologies. The result is an accurate and highly repeatable mass flow measurement at the lowest total installed cost. In today's complex process control schemes, FCI flow meters provide accurate gas flow measurements essential for process consistency, quality and safe plant operation.



## Flow Switches

- Air, Gas, Liquid, Slurry Applications
- Dual and Single Relay Output Models
- No Mechanical Parts to Maintain
- Apply in Fluids to 850 °F [454 °C]
- Easy to Install and Set-up
- SIL 2 Compliance

FCI flow switches utilize thermal dispersion technology to provide fast response, accurate fluid flow sensing. FCI's FLT® Series and FS10 flow switch products provide an extensive selection for performance, features, functions and environmental packaging options to meet a wide range of flow applications and installation requirements. The Model FS10A is specifically designed for flow monitoring in analyzers and sampling systems.



MODBUS



## Level Switches

- High Reliability, No Moving Parts
- Dual Function, Level and Temperature
- AC, DC and Loop Powering Options
- 3-Phase Detection
- Interface Between Two Non-Miscible Fluids
- SIL 2 Compliance

FCI liquid level and interface switches provide fast responding and accurate fluid level alarm or setpoint control. They sense the temperature difference between a heated sensor and an unheated reference sensor, where the difference is greatest in the absence of liquid and decreases proportionally as the elements are submerged in various fluids with varying thermal conductivities. When submerged the heated sensor cools as it dissipates heat and in turn, a change in magnitude of the temperature difference. Because all fluids exhibit different heat transfer characteristics FCI's highly sensitive level switch technology can detect historically difficult interface applications between fluids such as liquids, gases, emulsions, slurries and foam, regardless of their physical properties.

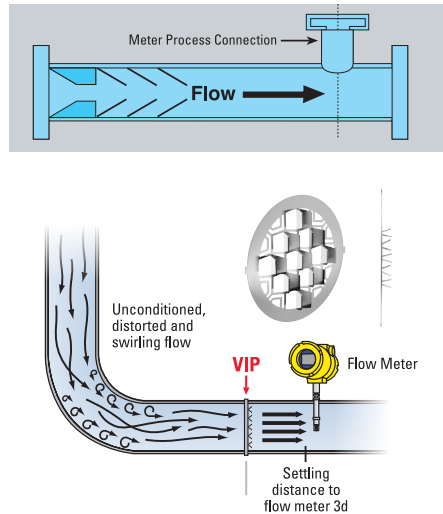
## OEM and Custom Solutions

For unique applications or installation conditions, FCI has the technology, engineering capabilities and production capability to meet your needs. Whether you need a slight modification to a standard FCI product or a totally unique product solution designed from the ground up, FCI will work closely with you on a solution. FCI has produced an extensive array of OEM flow and level measuring solutions.



## Exclusive Flow Conditioners Solve Tough Installations

For plant conditions with limited piping straight-run or significant flow disturbances, FCI ensures accurate and repeatable flow measurements using Vortab and patented Vortab VIP flow conditioners. Proven Vortab technology is widely recommended by industry experts, to be the single most effective solution for flow conditioning and flow straightening. FCI is the only thermal dispersion flow technology supplier authorized to provide Vortab flow conditioners with its products.



## Beyond and Behind the Products

Included in your investment in FCI products are certifications, agency approvals, pedigrees and quality validations to meet and exceed your expectations. FCI products carry "full instrument" approvals for HazEx installations and are certified to regional standards throughout the world. For Safety Instrumented Systems (SIS), per IEC 61508 and 61511, FCI has more independently validated SIL compliant thermal dispersion technology solutions than any other manufacturer. FCI manufacturing is certified to the latest ISO-9001 standards, and your instrument will be calibrated on flow stands with equipment traceable to NIST and ISO/IEC 17025 (also see page 10). Certified material test reports, NACE certification, Oxygen cleaning, air or hydro pressure testing, dye penetrant or radiography test, positive material identification reports and more, are available as you may require. FCI post-sale support includes start-up assistance and site services, performed by thermal dispersion technology experts, FCI service technicians stationed throughout the world, depot service, repair and recalibrations. FCI goes beyond the product to ensure the most reliable, safe and longest service life solutions available.

## Got an application challenge?

You will find FCI offers an extensive array of options and special solutions that ensure an optimal product for your installation or conditions.

Examples include:

- Extended temperature service
- Packing glands and ball valves for hot tap installations and easy retractability
- Exotic wetted materials and protective coatings
- VeriCal™, industry exclusive in-situ calibration verification system available for ST100A Series
- Nuclear qualified products



# Flow Meters



Air/Gases	■	■	■	■	■
Insertion Type	■	■	■	■	■
In-line (Spool Piece)	■				
Model/Series	<b>FS10i</b>	<b>ST50</b>	<b>ST51/ST51 A</b>	<b>ST80</b>	<b>ST100A Series</b>
Line Size Compatibility	1", 2", >2" to 20" [25mm, 51mm, >51 mm to 510 mm]	>2" to 24" [>51 mm to 610 mm]	>2" to 24" [>51 mm to 610 mm]	>2" to 99" [>51 mm to 2500 mm]	>2" to 99" [>51 mm to 2500 mm]
Key Features and Applications	<ul style="list-style-type: none"> <li>• Small, compact</li> <li>• Air, compressed air, natural gas</li> <li>• Analog output and relay</li> <li>• SIL2 rated</li> <li>• 10-segment LED</li> </ul>	<ul style="list-style-type: none"> <li>• Easy to install</li> <li>• Easy to specify</li> <li>• Small, compact package</li> <li>• Air and nitrogen applications</li> <li>• Dual analog outputs</li> <li>• Ideal for aeration and larger compressed air lines</li> </ul>	<ul style="list-style-type: none"> <li>• Easy to install</li> <li>• Easy to specify</li> <li>• Small, compact package</li> <li>• Biogas, digester gas, methane, natural gas applications</li> <li>• Dual analog outputs</li> <li>• Division 1 [Zone 1] approved</li> </ul>	<ul style="list-style-type: none"> <li>• High accuracy</li> <li>• HART, FOUNDATION™ Fieldbus, PROFIBUS, Modbus RS-485</li> <li>• Graphical display</li> <li>• Up to 2 unique calibrations</li> <li>• Adaptive Sensing Technology</li> <li>• Fast response</li> <li>• Wet gas solution</li> <li>• 3-point calibration test</li> </ul>	<ul style="list-style-type: none"> <li>• Highest accuracy</li> <li>• HART, FOUNDATION™ Fieldbus, PROFIBUS, Modbus RS-485</li> <li>• Graphical display</li> <li>• Up to 5 unique calibrations</li> <li>• Dual-element systems</li> <li>• VeriCal</li> <li>• Adaptive Sensing Technology</li> <li>• 3-point calibration test</li> </ul>
Flow Rate	■	■	■	■	■
Total Flow		■ (opt)	■	■	■
Temperature Measurement		■	■	■	■
Pressure Measurement					■ (opt)
Flow Range <sup>1,2</sup>	1.25 SFPS to 400 SFPS [0,4 NMPS to 122 NMPS]	0.75 SFPS to 400 SFPS [0,2 NMPS to 122 NMPS]	0.3 SFPS to 400 SFPS [0,08 NMPS to 122 NMPS]	0.25 SFPS to 1,000 SFPS <sup>4</sup> [0,08 NMPS to 305 NMPS]	0.25 SFPS to 1,000 SFPS <sup>4</sup> [0,08 NMPS to 305 NMPS]
Turndown Ratio	100:1	100:1	100:1	100:1 to 1000:1	100:1 to 1000:1
Accuracy	±1.5% rdg, 0.5% FS	±1% rdg, 0.5% FS	±1% rdg, 0.5% FS	1.0% rdg, ±0.5% FS	0.75% rdg, ±0.5% FS
Repeatability	±0.5% rdg	±0.5% rdg	±0.5% rdg	±0.5% rdg	±0.5% rdg
Temp (max operating)	-40 °F to 250 °F [-40 °C to 121 °C]	0 °F to 250 °F [-18 °C to 121 °C]	0 °F to 350 °F [-18 °C to 177 °C]	-40 °F to 850 °F [-40 °C to 454 °C]	-40 °F to 850 °F [-40 °C to 454 °C]
Pressure (max operating) <sup>3</sup>	500 psig [34 bar (g)]	500 psig [34 bar (g)]	500 psig [34 bar (g)]	1,000 psig [70 bar (g)]	1,000 psig [70 bar (g)]
Flow Element Wetted Materials	Stainless steel with Hast-C tips	Stainless steel with Hast-C tips	Stainless steel with Hast-C tips	Stainless steel, Hast-C276	Stainless steel, Hast-C276
Transmitter					
Outputs (standard)	4-20 mA; SDPT Relay (1A)	(Dual) 4-20 mA; RS232C	(Dual) 4-20 mA; 0-500 Hz pulse of total flow; RS232C	(Dual) 4-20 mA with HART and Modbus, USB	(Triple) 4-20 mA with HART, Modbus 0-1kHz or 0-10 kHz, USB, Ethernet
Outputs (optional)		0-500 Hz pulse of total flow	HART (ST51 A) Modbus (ST51 A)	FOUNDATION Fieldbus; PROFIBUS-PA, PROFIBUS-DP, Modbus	FOUNDATION Fieldbus; PROFIBUS-PA
Integral or Remote Mounting	■ (integral only)	■	■	■	■
Digital Display Option		■	■	■	■
Power Supply	24 Vdc	AC, DC	AC, DC	AC, DC	AC, DC
Enclosure	Metal, NEMA 4X, IP64-66	Metal, NEMA 4X, IP66/67	Metal, NEMA 4X, IP66/67	Metal, NEMA 4X, IP67	Metal, NEMA 4X, IP67
Hazardous Location and Other Agency Approvals	FM, FMc, ATEX, IECEx, EAC, ECAS, UKCA, CE <i>Refer to product brochure for approval details</i>	FM, CSA EAC, ECAS, UKCA, CPA, CE, PED <i>Refer to product brochure for approval details</i>	FM, FMc, ATEX, IEC EAC, ECAS, UKCA, NEPSI, CE, PED <i>Refer to product brochure for approval details</i>	FM, FMc, ATEX, IECEx, EAC, ECAS, UKCA, NEPSI, CE <i>Refer to product brochure for approval details</i>	FM, FMc, ATEX, IECEx, EAC, (ECAS, UKCA pending), CPA, NEPSI, CE, Inmetro CRN, PED; <i>Refer to product brochure for approval details</i>
Other Features, Options	<ul style="list-style-type: none"> <li>• Div 2/Zone 2 approvals</li> <li>• SIL 2 compliance</li> <li>• M12 or watertight cable connection</li> <li>• Namur NE43 fault output</li> <li>• Hysteresis and time delays</li> </ul>		<ul style="list-style-type: none"> <li>• Namur NE43 fault output</li> <li>• SIL compliance (ST51A)</li> </ul>	<ul style="list-style-type: none"> <li>• Namur NE43 fault output</li> <li>• Optical keypad option</li> <li>• SIL compliance</li> </ul>	<ul style="list-style-type: none"> <li>• Namur NE43 fault output</li> <li>• VeriCal in-situ calibration verification</li> <li>• Dual-element averaging</li> <li>• On-board data logger</li> <li>• Optical keypad</li> <li>• SIL compliance</li> </ul>

## Thermal Dispersion Flow Meters

FCI offers the widest selection of thermal dispersion technology flow meters to provide solutions for industrial measurement of air and virtually any gas. They are direct mass flow measuring that will save you cost and installation time over other flow devices, that require installation of additional temperature and/or pressure sensors to merely “infer” mass flow. The meters are inherently dual-function, flow and temperature, to provide the lowest cost, best value for applications where fluid temperature is also required. With no moving parts or orifices to clog, these

FCI flow meters provide long life with minimal maintenance.

There are seven core models with features, functions and packaging designed to optimize measurements in an array of applications and conditions. For line sizes greater than 2 inches [50 mm], FCI’s “insertion” styles provide the economical, easy-to-install solution via a single tap point. For smaller lines, 2 inches [50 mm] or smaller, select the “in-line” styles.

**FS10i** is a small, light-duty economy meter for air, compressed air, or natural gas flow in line sizes from 1 inch to 20 inches [25 mm to 510 mm] in Div 2/Zone 2 and/or SIL 2 rated installations.

**ST50, ST51, and ST51 A** are compact and economical, yet full-featured insertion meters that are easy to install and specify. Model ST50 is designed for air, compressed air and nitrogen applications requiring Division 2 [Zone 2] or lower ratings. Model ST51A is designed for biogas, digester gas and other methane composition gases, or air and compressed air applications in Division 1 [Zone 1].



# Flow Switches & Level Sensors



## FLT Series

	FLT93 B	FLT93 F	FLT93 S	FLT93 L	FLT93 C
<b>Air/Gas Flow Switch</b>	■	■	■	■	■
<b>Liquid Flow Switch</b>	■	■	■	■	■
<b>Level/Interface Switch</b>	■	■	■	■	■
<b>Model/Series</b>	<b>FLT93 B</b>	<b>FLT93 F</b>	<b>FLT93 S</b>	<b>FLT93 L</b>	<b>FLT93 C</b>
<b>Line Size Compatibility (in flow applications)</b>	1" to 100" [25 mm to 2500 mm]	1" to 100" [25 mm to 2500 mm]	1" to 100" [25 mm to 2500 mm]	1/4" to 1" [6 mm to 25 mm]	1" to 100" [25 mm to 2500 mm]
<b>Key Features and Applications</b>	<ul style="list-style-type: none"> <li>• General Purpose</li> <li>• Dual, Heavy-duty Relay Outputs</li> <li>• SIL 2</li> </ul>	<ul style="list-style-type: none"> <li>• Fast Response</li> <li>• Small Process Connection</li> <li>• Dual, Heavy-duty Relay Outputs</li> <li>• SIL 2</li> </ul>	<ul style="list-style-type: none"> <li>• Heavy-duty</li> <li>• Highest Temperature Service</li> <li>• Retractable Packing Glands</li> <li>• Dual, Heavy-duty Relay Outputs</li> <li>• SIL 2</li> </ul>	<ul style="list-style-type: none"> <li>• In-line Style</li> <li>• Small Line Sizes</li> <li>• Superior Low Flow Detection</li> <li>• Dual, Heavy-Duty Relay Outputs</li> <li>• SIL 2</li> </ul>	<ul style="list-style-type: none"> <li>• Sanitary Applications</li> <li>• Meets 3A Requirements</li> <li>• Dual, Heavy-Duty Relay Outputs</li> <li>• SIL 2</li> </ul>
<b>Flow Capabilities<sup>1,2</sup></b>					
Range-Air/Gas	0.25 FPS to 120 FPS [0,08 MPS to 37 MPS]	0.25 FPS to 120 FPS [0,08 MPS to 37 MPS]	0.25 FPS to 120 FPS [0,08 MPS to 37 MPS]	0.6 cc/sec to 20,000 cc/sec	0.25 FPS to 120 FPS [0,08 MPS to 37 MPS]
Range-Liquids: Water/Water based	0.01 FPS to 3.0 FPS [0,003 MPS to 0,9 MPS]	n/a	0.01 FPS to 3.0 FPS [0,003 MPS to 0,9 MPS]	0.015 cc/sec to 50 cc/sec	0.01 FPS to 3.0 FPS [0,003 MPS to 0,9 MPS]
Range-Liquids: Hydrocarbon based	0.01 FPS to 5.0 FPS [0,003 MPS to 1,5 MPS]	n/a	0.01 FPS to 5.0 FPS [0,003 MPS to 1,5 MPS]	0.033 cc/sec to 110 cc/sec	0.01 FPS to 5.0 FPS [0,003 MPS to 1,5 MPS]
Accuracy	±5% rdg; ±2% of Setpoint	±5% rdg; ±2% of Setpoint	±5% rdg; ±2% of Setpoint	±5% rdg; ±2% of Setpoint	±5% rdg; ±2% of Setpoint
Repeatability	±0.5% rdg	±0.5% rdg	±0.5% rdg	±0.5% rdg	±0.5% rdg
<b>Level Capabilities</b>					
Accuracy	±0.25 inch ±[6,4 mm]	±0.1 inch ±[2,5 mm]	±0.25 inch ±[6,4 mm]	±0.25 inch ±[6,4 mm]	±0.25 inch ±[6,4 mm]
Repeatability	±0.125 inch ±[3,2 mm]	±0.05 inch ±[1,3 mm]	±0.125 inch ±[3,2 mm]	±0.125 inch ±[3,2 mm]	±0.125 inch ±[3,2 mm]
<b>Temperature Compensation</b>	■	■	■	■	■
<b>Sensor Operating Temp Range</b>	-40 °F to 350 °F [-40 °C to 177 °C]	-40 °F to 350 °F [-40 °C to 177 °C] opt: 100 °F to 500 °F [-73 °C to 260 °C]	-40 °F to 350 °F [-40 °C to 177 °C] opt: 100 °F to 500 °F [-73 °C to 260 °C] opt: -100 °F to 850 °F [-73 °C to 454 °C]	-40 °F to 350 °F [-40 °C to 177 °C] opt: 100 °F to 500 °F [-73 °C to 260 °C]	-40 °F to 350 °F [-40 °C to 177 °C] opt: 100 °F to 500 °F [-73 °C to 260 °C]
<b>Sensor Operating Pressure<sup>3</sup></b>	2,350 psig [162 bar (g)]	2,350 psig to 3,500 psig [162 bar (g) to 241 bar (g)]	1,450 psig to 3,500 psig [100 bar (g) to 241 bar (g)]	2,350 psig to 3,500 psig [162 bar (g) to 241 bar (g)]	1,500 psig [103 bar (g)]
<b>Flow Element Wetted Materials</b>	Stainless Steel	Stainless Steel, SSI-Electropolish, Hastelloy, Monel	Stainless Steel, Hastelloy, Monel, Titanium	Stainless Steel, Hastelloy, Monel, Titanium	Stainless Steel (20Ra Polished)
<b>Transmitters</b>					
Outputs/Control Circuit	Dual SPDT or Single DPDT Relays, 6A DC Voltage Output for Calibration, DC Voltage of Temperature	Dual SPDT or Single DPDT Relays, 6A DC Voltage Output for Calibration, DC Voltage of Temperature	Dual SPDT or Single DPDT Relays, 6A DC Voltage Output for Calibration, DC Voltage of Temperature	Dual SPDT or Single DPDT Relays, 6A DC Voltage Output for Calibration, DC Voltage of Temperature	Dual SPDT or Single DPDT Relays, 6A DC Voltage Output for Calibration, DC Voltage of Temperature
Remote Mountable Electronics	■	■	■	■	■
Power Supply	AC, DC	AC, DC	AC, DC	AC, DC	AC, DC
Enclosure	Metal, NEMA 4X, IP67	Metal, NEMA 4X, IP67	Metal, NEMA 4X, IP67	Metal, NEMA 4X, IP67	Metal, NEMA 4X, IP67
Hazardous Location and Other Agency Approvals	FM, FMc, ATEX, IECEx, Inmetro, EAC, ECAS, UKCA, CE, CRN, PED, SIL 2; Refer to product brochure for approval details	FM, FMc, ATEX, IECEx, Inmetro, EAC, ECAS, UKCA, CE, CRN, PED, SIL 2; Refer to product brochure for approval details	FM, FMc, ATEX, IECEx, Inmetro, EAC, ECAS, UKCA, CE, CRN, PED, SIL 2; Refer to product brochure for approval details	FM, FMc, ATEX, IECEx, Inmetro, EAC, ECAS, UKCA, CE, CRN, PED, SIL 2; Refer to product brochure for approval details	FM, FMc, ATEX, IECEx, Inmetro, EAC, ECAS, UKCA, CE, CRN, PED, SIL 2; Refer to product brochure for approval details
<b>Other Features, Options</b>	<ul style="list-style-type: none"> <li>• Precheck Fail Guard</li> <li>• RoHS Compliant</li> <li>• 3-Year Warranty</li> </ul>	<ul style="list-style-type: none"> <li>• Precheck Fail Guard</li> <li>• RoHS Compliant</li> <li>• Nuclear Qualified Versions</li> <li>• 3-Year Warranty</li> </ul>	<ul style="list-style-type: none"> <li>• Precheck Fail Guard</li> <li>• RoHS Compliant</li> <li>• Nuclear Qualified Versions</li> <li>• 3-Year Warranty</li> </ul>	<ul style="list-style-type: none"> <li>• Precheck Fail Guard</li> <li>• RoHS Compliant</li> <li>• Nuclear Qualified Versions</li> <li>• 3-Year Warranty</li> </ul>	<ul style="list-style-type: none"> <li>• Precheck Fail Guard</li> <li>• RoHS Compliant</li> <li>• Nuclear Qualified Versions</li> <li>• 3-Year Warranty</li> </ul>

## FLT Series

FCI's FLT93 family sets the standard for industrial flow and level switch performance, reliability and value. FLT93 combines all-welded, thermal dispersion sensors with precision electronics protected in a robust industrial enclosure to ensure superior flow or level sensing and long life in the rigors of industrial plant installations. All FLT93 Series switches feature field configurable, dual setpoints

for any combination of high and low trip points or as a dual function flow (or level) and temperature switch. All applications encounter temperature variations and unlike other thermal dispersion switches, all FLT93s include temperature compensation to ensure proper switch operation regardless of fluid or ambient temperature changes. Further, all FLT93s uniquely feature analog voltage outputs to set and validate trip points as well as FCI's exclusive

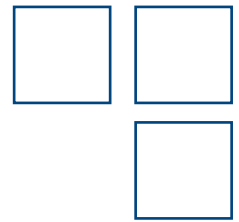
pre-check circuit which allows the user to verify system setpoint/trip operation at anytime via a simple contact closure.

## FS10A

FS10A is a flow switch/monitor specially designed for gas or liquid analyzer sampling systems. FS10A has simple screw-in installation in standard tube tee or NeSSI (SP76) manifolds. The line is small in size



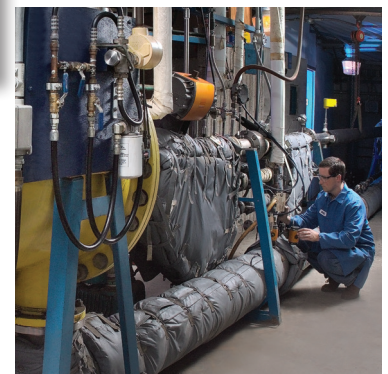




# Calibrated To Your Application



More than 19 precision flow stands to match fluids, fluid conditions, flow rates and line sizes with your application



## FCI Calibration Ensures Installed Accuracy

All FCI products are tested and calibrated to rigorous standards to ensure you get the instrument that does the job you specified. To design and produce the highest quality flow instrumentation, FCI operates a world-class, flow calibration laboratory with calibrations performed on more than 19 different flow stands, using equipment traceable to NIST (US National Institute of Standards and Technology), and ISO/IEC 17025 (International Standards for test lab quality systems) and that is certified to meet such stringent standards as ANSI/NCSL Z-540.3. Other suppliers are often limited to air and water calibrations then rely on un-validated theoretical equivalencies for other

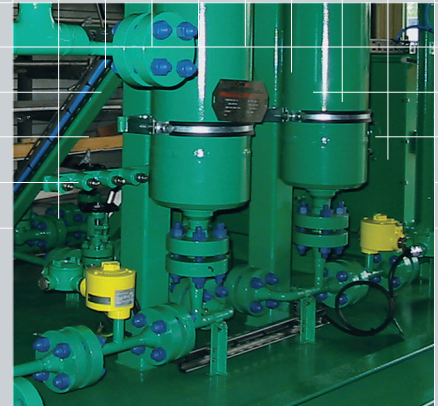
fluids. FCI has proven this procedure to be inadequate and may result in installed errors well outside published specifications. For most fluids, FCI thermal dispersion flow meters are calibrated using the actual fluid, as well as the actual temperature and process conditions of your application. The result is a flow meter you can install with total confidence and assurance that it meets your application. For other suppliers to perform an actual gas calibration equal to FCI's, they typically must send their final product to an outside laboratory that will result in extra charges and shipment delays to you.

## Choosing FCI is Easy

- Pre-Sale Support Gets You the Right Product
- Post-Sale Service to Ensure Continuous Operation
- Product Training Workshops

In addition to the broad range of products and superior calibration you can count on FCI to provide superior pre-sale and post-sale service and support to ensure the right product and long-term operation. With FCI you get pre-sale support and applications assistance by qualified, trained and process experienced engineers. And FCI takes the guess work out of specifying the right flow meter for your applications. AVAL is FCI's exclusive program that ensures our sales engineering representatives select and recommend optimum solutions, as well as advise of engineering and installation considerations for your flow meter applications.

FCI's post-sale support is unmatched. On site field service, field start-up assistance, recalibration, 24-hour service and technical support hot line, instrument maintenance plans and FCI sponsored product knowledge workshops are all available to you as an FCI customer.



**FCI** FLUID COMPONENTS  
INTERNATIONAL LLC





# **FCI** FLUID COMPONENTS INTERNATIONAL LLC

Locally Represented By:

Visit FCI online at [www.FluidComponents.com](http://www.FluidComponents.com) | FCI's Quality Management System is ISO 9001 and AS9100 Certified

### FCI World Headquarters

1755 La Costa Meadows Drive | San Marcos, California 92078 USA

Phone: 760-744-6950 Toll Free (US): 800-854-1993

### FCI Europe

Persephonestraat 3-01 | 5047 TT Tilburg, The Netherlands | Phone: 31-13-5159989

### FCI Measurement and Control Technology (Beijing) Co., LTD

Room 107, Xianfeng Building II, No.7 Kaituo Road, Shangdi IT Industry Base, Haidian District | Beijing 100085, P. R. China

Phone: 86-10-82782381

