

Model 650 Flame Ionization Detector (FID) Total Hydrocarbon Analyzer

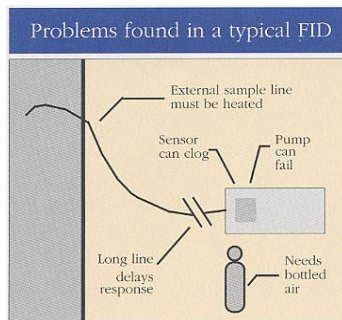


The Model 650 FID is the Only Total Hydrocarbon Analyzer Specifically Designed for Industrial Monitoring

The remarkable Model 650 from Control Instruments is the first continuous total hydrocarbon analyzer that solves all the sampling, measuring and reporting problems found in industrial applications.

Designed and manufactured specifically for industrial use, the Model 650 flame ionization detector (FID) is the ideal choice for process and stack monitoring in a wide range of applications. Applications include those requiring CFR 40 PART 60 METHOD 25A, such as catalytic and thermal oxidizers, solvent recovery systems, waste incinerators, and power plants. The 650 is also suited for inert process monitoring in chemical and petrochemical process applications.

In short, the Model 650 is a revolutionary product, unlike any other FID made.



Most FIDs are bench or rack-mounted instruments, originally designed for laboratory use. Efforts to modify these laboratory instruments for industrial use have been based on incomplete knowledge of the industrial environment. These systems suffer from weaknesses in their design, including the use of heated external sample tubing, failure-prone pumps, partially heated sensors, and reliance on bottled flame-support air.

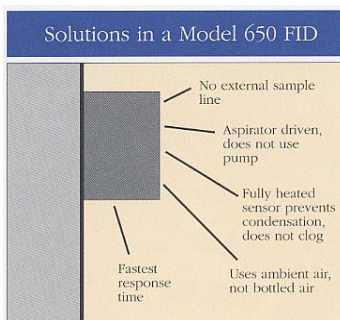
Mounts Directly Onto The Process Wall or Duct

The Model 650 is unique for two reasons. First of all, the complete system mounts directly to the process wall or ductwork, at the sample pickup point, indoors or out.

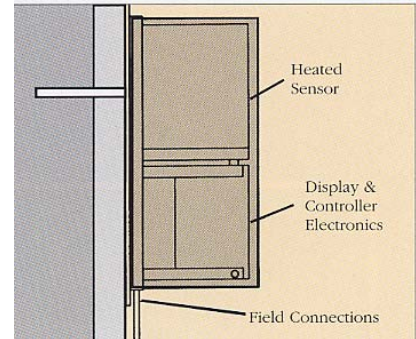
Fully Heated Up to 200° C

Second, the entire sensor assembly is fully heated – up to 200° C – and the sample probe runs from the sensor directly into the process without exposure to ambient temperatures.

The result? Installation and operation costs less, response time greatly improves, line clogging caused by sample condensation is eliminated, and maintenance time is sharply reduced.



Control Instruments' Model 650 FID replaces each of the rack-mount's design weaknesses with a superior solution. For example, the Model 650's duct mount design eliminates heated external sample lines. The entire sensor section is heated to avoid condensation during sampling. Its air-aspired sample draw system eliminates the use of failure-prone pumps. And the Model 650 uses ambient air – not bottled air – to support the flame.



Duct Mounting Simplifies Installation & Operation

The Model 650 FID easily mounts onto a wide variety of process walls and duct types. A special gasketed mounting system protects the assembly from the high process temperature.

The fully heated sensor's unique mounting and insulation method keeps the sensor assembly hot while preventing heat transfer to the display panel.

The display panel swings down, offering full access to the field wiring terminal connections.

The Model 650's NEMA 4 assembly is rated for outdoor installation in any kind of climate. All field pneumatic and electrical connections are easily accessed from the bottom of the assembly.

Low Maintenance and Outstanding Access

The Model 650's extremely efficient operation greatly reduces maintenance and downtime, two critical concerns when running any emission monitoring system.

When you do want to inspect or service the unit, the job is fast and easy. All parts are readily accessible, and the sample filters can be quickly replaced, even when the unit is hot.

*Flow Control Assures
Accurate Readings*

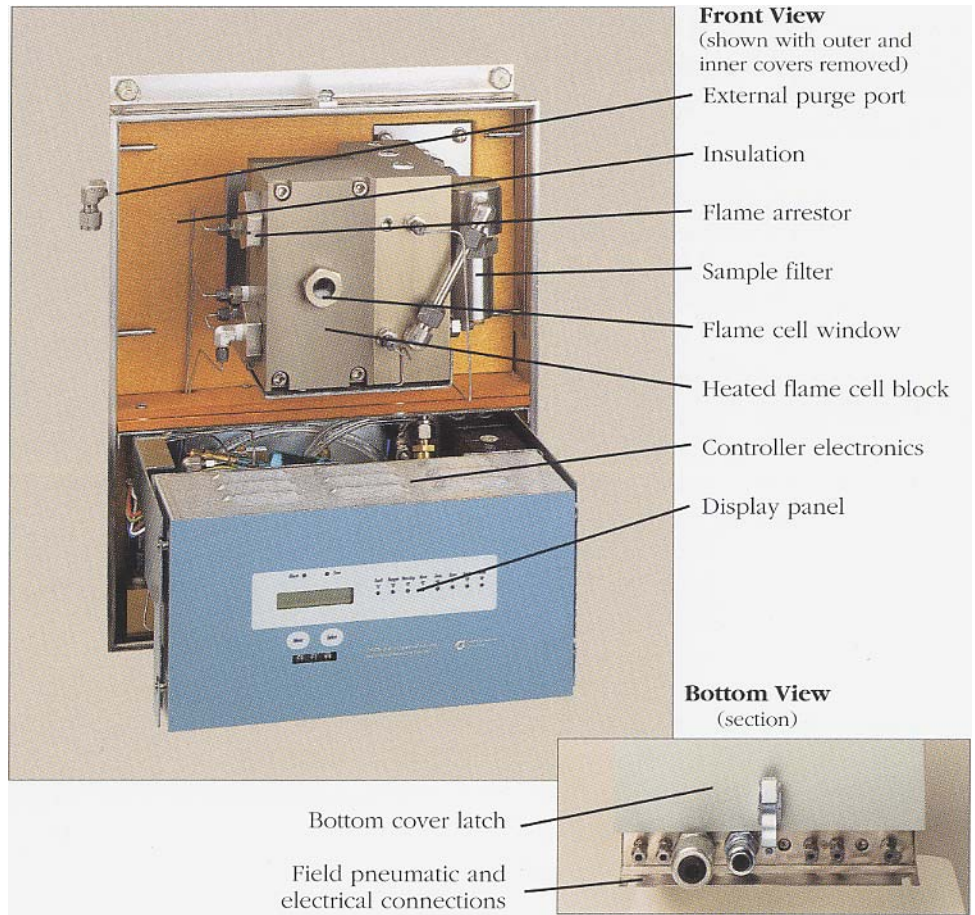
Sample delivery is a critical factor in obtaining accurate readings. Many FIDs, however, suffer from reading errors caused by mechanical pump fluctuations.

The Model 650 does not use a pump, but instead draws the sample using an aspirator driven by compressed air. Microprocessor control guarantees constant sample flow and pressure through the cell, assuring you the highest level of accuracy in final readings.

Front Panel Control

The Model 650's front panel includes a complete set of status indicators and an eight-character alpha-numeric LCD display. Using just two pushbuttons, the operator can access all calibration, programming and diagnostic routines right at the sensor.

A window in the outer cover lets you see the entire front panel- The window also permits non-intrusive access: the operator simply shines a flashlight at photo-transistors to initiate auto-calibration.



Local Alarm & Relays

The Model 650 also includes a complete set of integral alarm relays for Warning, Danger, Fault and Horn—and a fifth relay that indicates when the system is undergoing calibration.

Built-in relays ensure that relay action is initiated directly by the sensor. Direct action is more reliable than use of a secondary device or an intermediary connection.

Automatic Calibration

The Model 650 comes equipped with solenoid valves for both Zero and Span test gas. The integral microprocessor automatically makes all calibration adjustments - You can initiate calibration from the front panel or a remote location.

*Volume, Weight & Non-Methane
Hydrocarbon Measurement*

The Model 650 can display readings as Total Hydrocarbons by Volume or Weight (PPM Cv or mg/m³, respectively). An optional methane cutter enables measurement of non-methane hydrocarbons. Either calibration can be used to accurately read mixtures of solvent vapors.

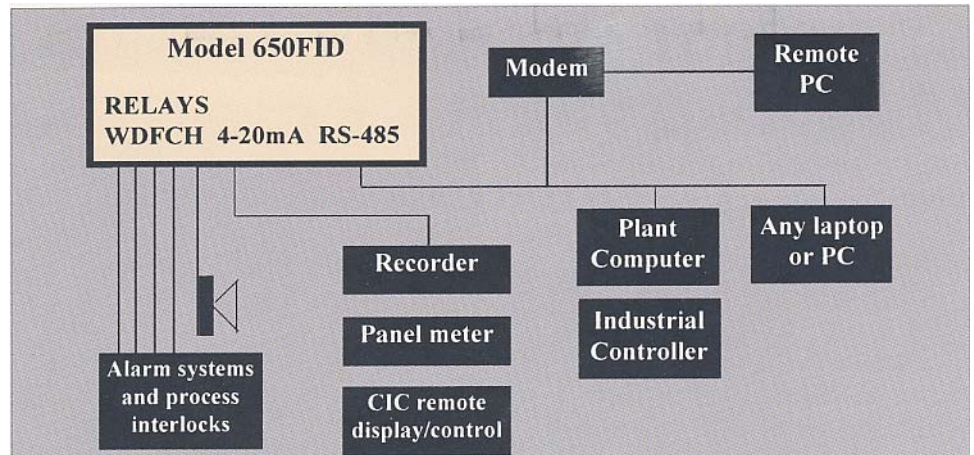


*Complete Access & Control From
Any Location*

You don't have to be at the analyzer to know its status or make adjustments. In fact, the Model 650 was designed to make remote access easy. The built-in 4-20mA analog output can be connected directly to your PLC, or to a simple display meter in the operator panel.

If you need true digital communication – either now or in the future – the Model 650 provides a Modbus compatible RS-485 serial port.

You can easily tie analyzers into your PLC, plant-wide data acquisition system or process control system. Or tie into any PC or laptop, either directly or through a modem. You can even add Control Instruments' operator interface for remote display and control.



*Proven, Reliable
Performance*

The Model 650 evolved from a family of time-tested, field proven Control Instruments products. Its rugged, duct-mount design represents the next generation of our advanced Model FTA sampling system – with over 1,000 systems now in operation. The Model 650's flame ionization cell is based on the highly reliable cell design we've been using on all our FIDs since 1985. And the display and digital communication systems evolved from our advanced, highly reliable, DataMax and SmartMax products.

Find Out More Today

Control Instruments has been engineering solutions to gas and vapor monitoring problems since 1969. We have the experience necessary to meet your specific application needs. For a detailed system proposal and pricing, please call us today.



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