



**ErsaTec**   
*process - analyzers*

**Hydrocarbon Analyzer SmartFID  
For Mobile Application**



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## // Our mobile SmartFID

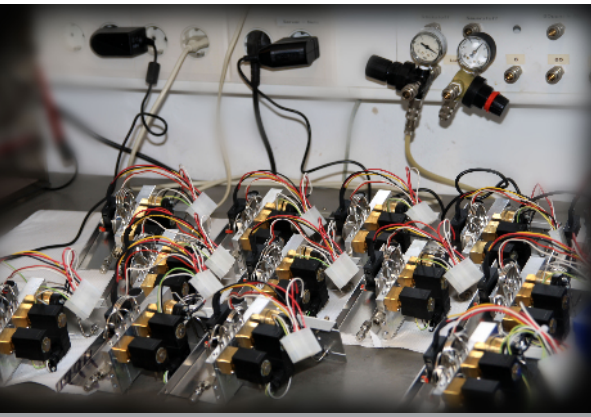
Our tried and tested FID-principle combined with modern SPS-technology. The result is a robust and reliable device with practical functions and an easy operation.

### Properties:

- large display
- Touch-Screen handling
- fires up automatically
- heats up automatically
- automatic fuel gas switch of
- automatic change of measuring range
- integrated catalytic converter for combustion air
- integrated datalogging and export via USB
- compact device for transport including gas for process (< 25 kg)
- diverse and comfortable opportunities to configure. for example alarm limits, logging interval ...

### Advantages:

- compact design
- automatic operation with extensive self-operated monitoring and security functions
- internal datalogging
- network-compatible
- approved detector-geometry
- low fuel gas consumption
- low operating cost
- internal temperature control for heated pipes



measuring components	hydrocarbons, chlorinated hydrocarbons
measuring principle	flame-ionization-detection (FID)
measuring ranges (relative to C <sub>3</sub> H <sub>8</sub> )	5 selectable ranges/ automatic measuring range change-over: standard: 0 ... 10 ppm bis 0 ... 10 Vol.% optionale probe measuring ranges: 0 ... 1 ppm bis 0 ... 1 Vol.%, additionally free configurable measuring ranges
detection limit	≤1,5% of upper range value
linearity	±1,0% of selected range
repeatability	≤1,0% at constant temperature and constant pressure
zero-point-drift	≤0,5% of upper range value per month
sensitivity-drift	≤2,8% of upper range value per week
O <sub>2</sub> -cross-sensitivity	<4% related to 80 ppm C <sub>3</sub> H <sub>8</sub>
warm-up time	25 min
T <sub>90</sub> -time	typ. 20 s
<b>measuring gas conditions</b>	
pressure	atmospheric ±0,05 bar
temperature	0-200 °C (optional up to 230 °C)
flow	0,8-1 l/min
sample gas connection	clamp collar screwing for stainless steel tube, OD 6 mm or quick fastener
<b>supporting gases</b>	
fuel gas	hydrogen, category 5.0, residual content of hydrocarbons <0,5 ppm, pressure: 3 bar, consumption in continuous operation: 1,2 l/h; alternatively H <sub>2</sub> /He-mixture, consumption: approx. 2,4 l/h
calibration gas	concentration of approx. 80% of range (typ. propane) in synthetic air, pressure: 3 bar, consumption during calibration process: 1,6 l/min
connector	quick coupling
energy supply	115 or 230 V AC 48 ... 63 Hz; power consumption: maximal 350 W on heating process typ. 120 W during operation (without catalytic converter); maximal 540 W on heating process typ. 150 W during operation (with cytalytic converter);
weight	analyser: 16 kg
dimensions (H x W x D)	420 mm x 470 mm x 310 mm
<b>signal outputs</b>	
analog outputs	2 free configurable 0...4 - 20 mA outputs
digital outputs	3 free configurable potential-free contacts, 250 V AC 1 A



### Fields Of Application:

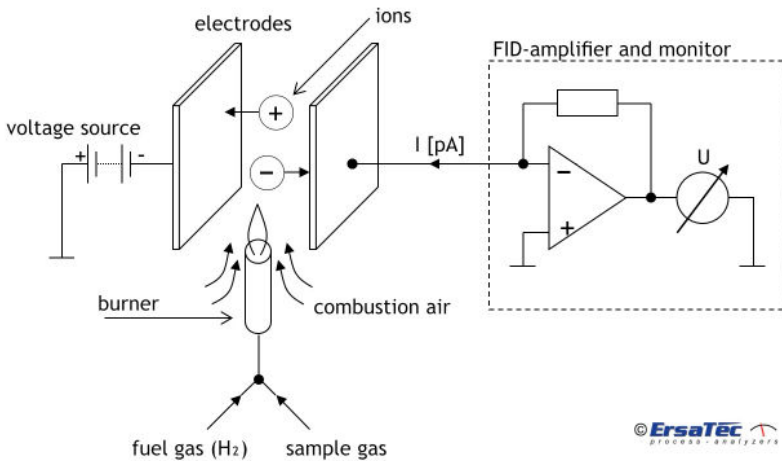
SmartFID is suitable for measurement of

- emissions from thermic, catalytic, biological, and activated charcoal exhaust air purification plants
- maximum work place concentration value
- hydrocarbon emission in crude gas and clean gas
- process monitoring and control of manufacturing plants
- emissions from (combustion) engines
- detection of hydrocarbon breakthroughs in exhaust air purifiers and chemical cleaning plants
- emissions on power plants, garbage incineration plants and mechanical waste treatment plants
- government agencies and supervision organizations

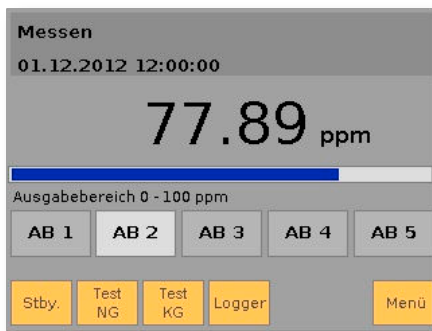
## // SmartFID Measuring Principle

Flame Ionisation Detectors (FID) are known to be reliable and robust analysers in the domain of volatile organic compounds (VOC) analysis..

In the measurement process the gas sample is continuously taken into the FID via a heated sample drawing. There the gas sample is burned up in a hydrogen diffusion flame. If the sample gas contains VOC the organic compounds will be cracked up in the combustion process when getting into the flame. This produces CH fragments that react with atomic oxygen so that CHO ions are generated. These ions are stripped in an electric field and a small electrical current is generated which is proportional to the amount of fed VOCs.



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## About Us:

ErsaTec is your reliable service partner in terms of analysing dangerous hydrocarbon with the FID measuring principle. We offer you our complete service, including to check your SmartFID devices. Also you'll find all the information you'll need about our modern products.

If you have problems with your product or need our help in general, just contact us!