



Ersatec 
process - analyzers

**Hydrocarbon Analyzer SmartFID
for mobile use**

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// Our mobile SmartFID

Proven FID technology is combined with modern PLC technology. The result is a robust and reliable device with convenient functions and simple operation. With various, individually selectable options, the SmartFID can be perfectly customised to your measuring task.



Available options:

<i>Trend display</i>	Graphical display of the measured value curve Measuring range
<i>0-1 ppm Option</i>	package for maximum accuracy with very small measuring ranges
<i>Low Flow</i>	Reduced sample gas flow rate (0,1-0,5 l/min)
<i>Integrated catalyser</i>	for zero and combustion air preparation
<i>Fuel gas H²/He</i>	for the use of an H ² /He mixture as fuel gas

Features:

- Operation via touchscreen
- Automatic ignition
- Internal fresh air preparation
- Automatic heating up
- Automatic combustion gas switch-off
- Automatic measuring range changeover
- Integrated data recording with export option via USB interface
- Compact housing with integrated compartments for the operating gases
- Wide range of convenient configuration options: e.g. alarm limits, potential-free alarm contacts, logging interval ...

measuring components	hydrocarbons, chlorinated hydrocarbons
measuring principle	flame-ionization-detection (FID)
measuring ranges (relative to C3H8)	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
O2-cross-sensitivity	<4% related to 80 ppm C3H8
warm-up time	25 min
T90-time	typ. 20 s
measuring gas conditions	
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
supporting gases	
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 H2/He-mixture, consumption: 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 catalytic converter);
weight	analyser: 16 kg
Dimensions (H x W x D)	420 mm x 470 mm x 310 mm
signal outputs	
analog outputs	2 free configurable 0...4 - 20 mA outputs
digital outputs	3 free configurable potential-free contacts, 250 V AC 1 A



Areas of application:

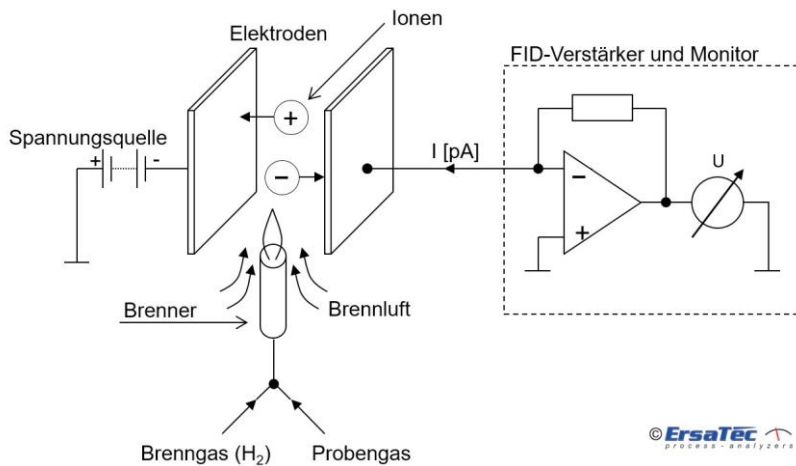
The SmartFID is suitable for a wide range of applications.

- emissions from thermal, catalytic, biological and activated carbon exhaust air purification systems
- maximum workplace concentrations
- Hydrocarbon emissions in raw and clean gas
- Process monitoring and control of production plants
- Detection of hydrocarbon breakthroughs in exhaust air purification and chemical cleaning systems
- Authorities and monitoring organisations
- Emissions in power plants, waste incineration plants and mechanical waste treatment plants

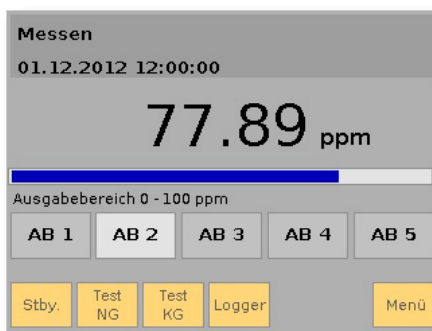
// The SmartFID measuring principle

In the field of total hydrocarbon gas analysis, flame ionisation detectors (FID) are recognised as reliable and robust measuring devices.

During the measurement, a sample gas is continuously drawn in under negative pressure and fed to the FID via a heated sampling line. There, the sample gas is burnt in a hydrogen diffusion flame. If hydrocarbons enter the flame with the sample gas, these organic compounds are decomposed in the combustion process (cracking). This produces CH fragments, which oxidise with atomic oxygen to form CHO ions. These ions are separated in an electric field (stripping). The resulting current is proportional to the amount of hydrocarbons added.



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 PRODUKT - ANALYTIK



For further information: www.ersatec.com

Our company

ErsaTec has been your competent partner in the field of analysing volatile hydrocarbons using flame ionisation detectors since 2005. We support you with service and maintenance of your measuring devices of the brands Bernath Atomic, SICK Maihak and of course the SmartFID systems from our company. We are also happy to assist you with our expertise in the planning and project management of complex measuring systems.