

• CAMBUSTION •

HFR500 Fast FID

*Real-Time Sub-Millisecond Response
Hydrocarbon Concentration Measurement*



- **Ultra-fast response time (0.9ms)**
- **Continuous two channel sampling**
- **Turn-key user-interface**
- **Auto-calibration**

Ultra-Fast Real-time Hydrocarbon Measurement

In 1987 Cambustion Ltd introduced the HFR series Fast Flame Ionisation Detector (FID). There are now over 200 units in operation around the world.

The HFR500 control unit supports two independent detectors via flexible cables 10m in length. A PC user-interface is provided which enables turn-key operation, and auto-calibration of each channel independently, via an RS485 serial link. The control unit can be rack-mounted separately, and incorporates the remote calibration system, and flexible heated line controller.

The HFR500 Fast FID benefits from a simple PC user interface, an improved sampling system, enhanced stability and noise characteristics, and closed-loop feedback control of FID operating parameters. Hydrocarbon concentration fluctuations as fast as **0.9ms** can now be resolved in real-time.

Annual maintenance agreement included for first year and renewable on request. A full range of spares and accessories for various applications are available.

Suggested Applications

Gasoline, diesel, 2-stroke, or gaseous fuel engine applications include:

- Pre- and post-catalyst measurement
- Exhaust port measurement
- In-cylinder sampling

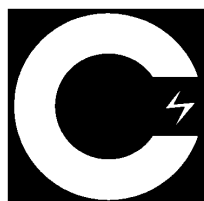
Contact Cambustion for specimen data, and list of technical publications.

HFR500 Specification

Measurement principle	-	Flame Ionisation Detector (FID)
Components measured	-	Total Hydrocarbons (THC)
Number of channels	-	2
Measurement ranges	-	0-1,000 to 0-200,000 ppmC ₃
Response Time T_{90-10%}	-	< 0.9ms (200mm sample tube length)
Repeatability	-	< ±1% FS
Zero drift	-	< ±1% FS/hour
Span drift	-	< ±1% FS/hour
Linearity	-	< ±1% FS (@ 50,000 ppmC ₃)
Ambient sampling conditions	-	0 - 40°C (sub-zero option available)
Sample gas flow	-	~3 l/min (@ atmospheric pressure)
FID fuel gas	-	H ₂ /He as standard
Output (analogue)	-	0 - 10V, 47Ω
Power supply	-	AC 50/60 Hz, 110/230V

Cambustion Ltd reserve the right to change this specification without notice

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