



# JFID-FE

## Total Hydrocarbon Analyzer



### APPLICATION

- Continuous analysis of Total Hydrocarbons (THC/VOC), e.g. at
  - emission monitoring
  - safety monitoring LEL
  - VOC monitoring
  - scrubber efficiency
  - process gas analysis
  - leak detection
  - solvent recovery
  - abatement equipment
  - carbon absorbers
  - coating process control
  - purity monitoring in O<sub>2</sub>, N<sub>2</sub>, Ar, H<sub>2</sub>, CO<sub>2</sub>

### BENEFITS

- No sample conditioning system
- Quick analyzing results
- Response time < 1 sec
- Low maintenance
- Maintenancefree pump system
- Independent of pressure fluctuation

### FEATURES

- Proven heated FID (Flame Ionization Detector)
- For safe area or Ex area zone 1 or 2
- Fast response time & automatic start-up
- Automatic calibration with span check
- Automatic flame ignition & fuel shut-off
- Electronic flow control
- Simultaneous display in ppm and mg/m<sup>3</sup>
- Integrated combustion and zero air
- Heated corrosion proof detector
- Complete diagnostics of all utilities
- Remote control and remote service



## TECHNICAL DATA

Model	JFID-FE	Thermo-FID-FE	Thermo-FID-FE
Description	safe area	EEx p zone 1	Ex pz 2/3 G zone 2



### Operation

Vacuum system	injectors	
Measurement range	1 mg org. C/m <sup>3</sup> to 100,000 mg org. C/m <sup>3</sup>	
Detection limit	< 0.1 mg org. C/m <sup>3</sup>	
Linearity	< 4 % over entire measurement range	
Selectable units	ppm, mg/m <sup>3</sup> , Vol%, %LEL	
Signal output	0/4 mA to 20 mA; load resistance 600 Ω not galvanically isolated	
Ambient temperature	−5 °C to 40 °C	
Response time (T <sub>90</sub> )	< 0.5 s if measured value > 20 mg org. C/m <sup>3</sup> , < 5.0 s if measured value < 20 mg org. C/m <sup>3</sup>	
Sample gas (self-drawn)	approx. 25 l/h with 1,013 hPa, optionally approx. 2 l/h; 5 l/h; 60 l/h	
Sample gas pressure	800 to 1,600 mbara	800 to 1,100 mbara
Air humidity	< 90 % rel. humidity, +20 °C; < 50 % rel. humidity, +40 °C	
Geographical altitude	0 to 1,500 m above sea level	

### Construction

Dimensions over all (W x H x D)	470 x 505 x 410 mm (IP54) 500 x 505 x 410 mm (IP65)	625 x 540 x 410 mm	570 x 590 x 410 mm
Weight	28 kg (IP54) / 33.5 kg (IP65)	41 kg	38 kg
Housing	mild steel powder-coated		
Detector temperature	adjustable up to 200 °C		
Catalyst temperature	400 °C		

### Utilities

Instrument air	3 to 3.9 barg, < 2 Nm³/h quality to ISO 8573-1 1.2.1	3 to 3.9 barg < 2 Nm³/h, for prepurge 3.5 Nm³/h for normal operation 2.8 Nm³/h quality to ISO 8573-1 1.2.1	
Fuel gas	hydrogen 0.7 to 1 barg < 80 ml/min, quality 5.0		
Combustion air	with internal catalyst or optional synthetic air 1 to 1.5 barg < 30 NI/h	synthetic air 1 to 1.5 barg < 50 NI/h	
Calibration gas	2 to 2.5 barg < 130 NI/h during calibration concentration 60 % to 80 % of the measurement range in relation to C <sub>3</sub> H <sub>8</sub>		
Zero gas	with internal catalyst or optional nitrogen 2 to 2.5 barg, < 130 NI/h quality 5.0	synthetic air or nitrogen 2 to 2.5 barg, < 130 NI/h quality 5.0	
Protection class	IP54 optional IP65	IP65	
Type of protection		 II 2G Ex px IIC T2-T4 Gb	 II 2/3G Ex pz IIC T2-T4 Gc
Approvals / Signs	CE	BVS 09 ATEX E 119 X CE	BVS 09 ATEX E 144 X (2014/34/EU) CE

### Electrics

Power supply	115 V ± 10 % or 230 V ± 10 %; 48 Hz to 62 Hz		
Power consumption with supplementary heating system	< 500 W < 1,000 W if applicable		

**NOTE:** for more detailed specification please consult factory

## ORDER CODES

dimensions in mm

Part No.	Description
207.020000	JFID-FE IP54
207.021000	JFID-FE IP65
207.021100	Thermo-FID-FE II 2G Ex px II T2-T4 zone 1
207.021200	Thermo-FID-FE II 2/3G Ex pz II T2-T4 zone 2

**Standard included for systems for Zone 1 or 2**

Part No.	Description
407.950033	Status and alarm board with 4 x 0/4 to 20 mA output, galvanically isolated
407.020048	Conversion kit for external zero air

**Options**

Part No.	Description
407.950033	Status and alarm board with 4 x 0/4 to 20 mA output, galvanically isolated
407.040203	Dilution probe 1:10 / 1:20 heated without enclosure
207.930000	Inline stripper (safe area)
407.020047	Conversion kit for external zero air
407.020048	Conversion kit for external zero air and synthetic air for burner air
407.140213	Multi sampling MSU-pneumatic control HT-2 for model "FE"
407.140214	Multi sampling MSU-pneumatic control HT-4 for model "FE"
407.140215	Multi sampling MSU-pneumatic control HT-6 for model "FE"
407.140216	Multi sampling MSU-pneumatic control HT-8 for model "FE"
407.160149	Multi sampling MSU-block HT-2 steam for model "FE"
407.160150	Multi sampling MSU-Block HT-4 steam for model "FE"
407.160151	Multi sampling MSU-Block HT-6 steam for model "FE"
407.160152	Multi sampling MSU-Block HT-8 steam for model "FE"
407.040204	Heated 2/3 way valve, max. 180 °C
907.050000	Vortex cooler safe area
615.012001	Vortex cooler ATEX zone 2
407.040190	Air pressure regulator with fine filter assembly
DAS 2	Instrument air purifier
DM003 P	Instrument air purifier for Ex area
407.040182	Gas cylinder pressure regulator for hydrogen
407.040183	Gas cylinder pressure regulator for calibration gas
407.040184	Gas cylinder pressure regulator for nitrogen

