



# JFID-MK

## 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

### 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 (non Ex)



## TECHNICAL DATA

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



### OPERATION

Vacuum system	educator		
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 (23° to 104 °F)		
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 (68 °F); < 50 % rel. humidity, +40 °C (104 °F)		
Geographical altitude	0 to 1,500 m (0 to 4,921 ft) above sea level		

### CONSTRUCTIONS

Dimensions over all (W x H x D)	IP54: 470 x 520 x 465 mm (18.5 x 20.5 x 18.3 in) IP65: 500 x 520 x 465 mm (19.7 x 20.5 x 18.3 in)	625 x 520 x 465 mm (24.6 x 20.5 x 18.3 in)	570 x 620 x 465 mm (22.4 x 24.4 x 18.3 in)
Weight	IP54: 44 kg / 97 lbs IP65: 49 kg / 108 lbs	55 kg / 121.3 lbs	53 kg / 116.8 lbs
Housing	mild steel powder-coated		
Detector temperature	adjustable up to 200 °C (392 °F)		
Catalyst temperature	400 °C (752 °F)		

### UTILITIES

Instrument air	3 to 3.9 barg, < 2 Nm <sup>3</sup> /h quality to ISO 8573-1 1.2.1	3 to 3.9 barg < 2 Nm <sup>3</sup> /h, for prepurge 3.5 Nm <sup>3</sup> /h for normal operation 2.8 Nm <sup>3</sup> /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 (94/9/EC) CE	BVS 09 ATEX E 144 X (94/9/EC) 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

Part No.	Description
207.040000	JFID-MK IP54
207.041000	JFID-MK IP65
207.041100	Thermo-FID-MK duct mounting EEx p zone 1
207.041200	Thermo-FID-MK duct mounting EEx p zone 2

### Standard included for systems for zone 1 or 2

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

### Options

Part No.	Description
407.020047	Conversion kit for external zero air
407.020048	Conversion kit for external zero air and synthetic air for combustion air
407.030103	Flame arrester ATEX
407.030153	Dilution probe 1:10/1:20 heated without enclosure
407.040190	Air pressure regulator with fine filter assembly
407.040204	Heated 2/3 way valve, max. 180 °C
407.950033	Status- and alarm board with 4 x 0/4 to 20 mA output, galvanically isolated
407.980094	Back purge sample filter N <sub>2</sub> or air
615.012001	Vortex cooler ATEX
907.050000	Vortex cooler safe area
DAS 2	Instrument air purifier
DM003 P	Instrument air purifier for Ex area