



# JFID-MK Total Hydrocarbon Analyzer



**JCT**  
Analysentechnik

## APPLICATION

- Continuous analysis of Total Hydro Carbons (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
- Automatic 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-MK safe area	Thermo-FID MK EEx p zone 1	Thermo-FID MK Ex pz 2/3 G zone 2
Description			
<b>Operation</b>			
Vacuum system	Injectors		
Measurement range	0,5 mg org. C/m <sup>3</sup> to 100 000 mg org. C/m <sup>3</sup>		
Detection limit	< 0,01 mg org. C/m <sup>3</sup>		
Linearity	< 4 % over measurement range		
Selectable units	ppm, mg/m <sup>3</sup> , Vol%, %LEL		
Signal output	0/4 to 20 mA; burden 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 1013 hPa optionally approx. 2 l/h; 5 l/h; 60 l/h		
Sample gas pressure	800 to 1600 mbara	800 to 1100 mbara	
Air humidity	< 90 % rel. humidity, 20 °C < 50 % rel. humidity, 40 °C		
Geographical altitude	0 to 1500 m above NN		
<b>Construction</b>			
Dimensions over all (W x H x D) [mm]	470 x 520 x 465 (IP54) 500 x 520 x 465 (IP65)	625 x 620 x 465	570 x 620 x 465
Weight	44 kg (IP54) 49 kg (IP65)	55 kg	53 kg
Detector temperature	adjustable up to 200 °C		
Catalyst temperature	400 °C		
<b>Utilities</b>			
Instrument air	3,0 to 3,9 bar / < 2 Nm <sup>3</sup> /h quality to ISO8573-1 1.2.1	3,0 to 3,9 bar / < 2 Nm <sup>3</sup> /h for prepurge 3,5 Nm <sup>3</sup> /h for normal operation 0,8 Nm <sup>3</sup> /h quality to ISO8573-1 1.2.1	
Fuel gas	Hydrogen 0,7 to 1,0 bar, < 80 ml/min, quality 5,0		
Combustion air	with internal catalyst or optional Synthetic air 1,0 to 1,5 bar, < 30 NI/h	Synthetic air 1,0 to 1,5 bar, < 30 NI/h	
Calibration gas	2,0 to 2,5 bar, < 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 2,0 to 2,5 bar, < 130 NI/h quality 5,0	Synthetic air 2,0 to 2,5 bar or Nitrogen 2,0 to 2,5 bar, < 130 NI/h quality 5,0	
Protection class	IP54 optional IP65	IP65	
Type of protection		 II 2G Ex px II T2-T4  II 2G Ex px IIC T2-T4 Gb  II 2G Ex d IIV	 II 2/3G Ex pz II T2-T4
Approvals / Signs	CE	BVS 04 ATEX E 039 X (ATEX 2014/34/EU) / CE	BVS 09 ATEX E 144 X (2014/34/EU) CE
<b>Electrics</b>			
Power supply	115 V ± 10 % or 230 V ± 10 %; 48 Hz to 62 Hz		
Power consumption with supplementary heating system	< 250 W < 1000 W		

## ORDER CODE

Part number	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

407.950033	Status- and alarmboard with 4 x 0/4 to 20 mA output, galvanically isolated
407.020048	Conversion kit for external zero air

### Options

407.950033	Status- and alarmboard with 4 x 0/4 to 20 mA output, galvanically isolated
407.030153	Dilution probe 1:10/1:20 heated without enclosure
407.030103	Flame trap ATEX
407.020047	Conversion kit for external zero air
407.020048	Conversion kit for external zero air and synthetic air for burner air
407.980094	Back purge sample filter N <sub>2</sub> or air
407.040204	Heated 2/3 way valve, max. 180 °C
907.050000	Vortex cooler safe area
615.012001	Vortex cooler ATEX
407.040190	Air pressure regulator with fine filter assembly
DAS 2	Instrument air purifier
DM003 P	Instrument air purifier for Ex area

Gas Sampling **Probes**



Heated Sample **Lines**



Sample Gas **Coolers**



**JCT**  
Analysentechnik

Gas Conditioning **Systems**



NOx **Converter**



and **solutions** for



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