

## Thermo-FID MK and MK IP65

Flameionisationdetector – Measuring head

### Technical Data

Models	MK
	MK IP65
Weight MK	44 kg
Weight MK IP65	49 kg
Dimension MK	W = 470 mm H = 520 mm D = 465 mm
Dimension MK IP65	W = 500 mm H = 520 mm D = 465 mm
Measured value display	selectable
	ppm
	mg/m <sup>3</sup>
	g/m <sup>3</sup>
	Vol%
	%LEL
Linearity	< 4% above measurement range
Measured value output	0(4)mA to 20mA; burden 600Ω not galvanically isolated
Ambient temperature	-5°C to 40°C
Air humidity	< 90% rel. humidity, + 20°C
	< 50% rel. humidity, + 40°C
Geographical altitude	0 bis 1500 m above NN
Protection class (DIN40050) MK	IP54
Protection class (DIN40050) MK IP65	IP65
Probe tube	300 mm (optional up to 1500<mm)



*Completely mounted analyser in a fieldhousing for the rough applications in the field. With a measuring head attached directly without any filter or sample gas conditioning to a DIN gauge connection. Over a status signal or by the remotecontrol function it is possible to control and see the analyser function in real-time. The housing is available in protection class IP 54 or in protection class IP65. (Exhaust Emission control; Plant monitoring)*

### General application

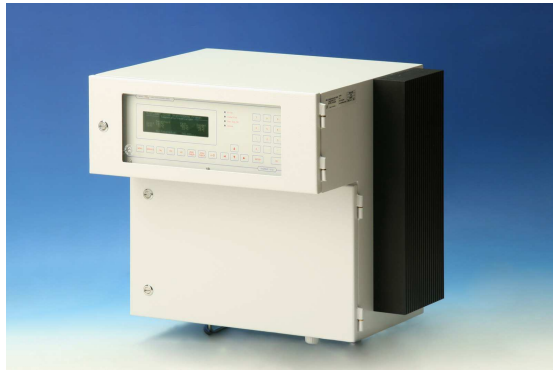
The Thermo-FID is applied in a variety of applications for all kind of industries, environmental protection and as well for research and development. The implementations reach from a LEL-control, over emission and immission control to analytical exhaust control for the chemical industry and in the field of engine-development. Furthermore there is process optimisation and the FID is also used in the field of analytical control of TLV- and TRC- values.

### Technical design

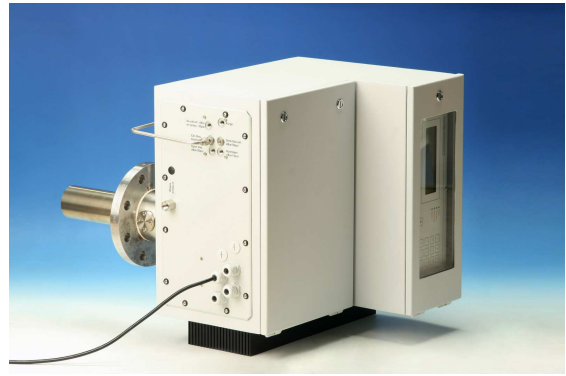
The electronic system of the FID allows several extra functions. The integrated CPU allows a menu-driven handling as well as a full automatic self-control and failure analysis of the system. On the alphanumeric display are shown several operation and service instructions in clear text which give an easy maintenance process. The process-controlled and dynamic amplifier analysis always within the optimum range. The amplified signals are digitised directly at the detector and get transmitted as digital data to the CPU for the analysis. Therefore there is no distortion of the little currents because of badly shielded or too long signal ways.

Accreditation	17. BImSchV / TA Air (936/806016) QAL 1 (DIN EN 14181 and DIN EN ISO 14956) MCerts (Sira MC 050062/00)
Vacuum system	Injectors
Measurement range	0.5 mg org.C/m <sup>3</sup> to 100000 mg org.C/m <sup>3</sup>
Detection limit	< 0.01 mg org.C/m <sup>3</sup>
Dilution probe	1:10/1:20
Response time (T90)	< 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>
Samplegas (self-drawn)	ca. 25 l/h with 1013 hPa alternative ca. 2l/h; ca. 5l/h; ca.60l/h
Samplegas-pressure	800 mBar to 1600 mBar
Detector-temperature	T2: 110 °C to 200 °C T3: 130 °C to 165 °C T4: 95 °C to 100 °C
Supplementary heating system (PT100) at the measuring head for the probe	T2: 0 °C to 260 °C T3: 0 °C to 180 °C T4: 0 °C to 110 °C
Catalyst-temperature	400 °C
Instrumentair	3.0 Bar to 3.9 Bar / < 2 Nm <sup>3</sup> /h Quality to ISO8573-1 minimum 1.2.1
Fuel gas	Hydrogen 0.7 Bar to 1.0 Bar / < 80 ml/min Quality 5.0
Burnerair	Over internal catalyst or optional Synthetic air 1.0 Bar to 1.5 Bar
Calibrationgas	2.0 Bar to 2.5 Bar / < 130 NI/h concentration 60 % to 80 % of the measurement range in relation to C3H8
Zeropointgas	Over internal catalyst or optional Nitrogen 2.0 Bar to 2.5 Bar/ < 130NI/h Quality 5.0
Nominal Voltage	115 V ± 10 % or 230 V ± 10 %; 48 Hz to 62 Hz; < 880 W

## Additional Information for MK and MK IP65



Front MK IP65



Lower side FID MK IP65

### Order data

Thermo-FID Measuring head ,MK'	With measuring head IP 54	207.040000
Thermo-FID Measuring head ,MK IP65'	protection class IP65	207.041000
Thermo-FID ,MK IP65' with vortexcooler	Ambient Air > 40°C	207.041001

### Options

Status- and alarmboard	4 x 0/4-20mA galv. separation/ 4 potentialfree alarmcontacts	407.950033.D
Dilution probe 1:10/ 1:20	Dilution probe MK	407.030059.B
External Zerogas	Conversion kit zerogas external	407.020047
Synthetic Air for Burnerair	Conversion kit zerogas external and synthetic air as burnerair	407.020048
Back Purge Sample Filter	N2 or air for MK	407.980094

