SK-ELEKTRONIK GMBH
LEVERKUSEN

Thermo-FID TG

Flameionisationdetector - tablehousing

Technical data

Weight Injectors	9 kg
Weight Membrane pump	10 kg
Dimension Injectors	W = 483 mm H = 135 mm D = 310 mm
Dimension Membrane pump	W = 445 mm H = 154 mm D = 320 mm
Measured value display	selectable
	ppm
	mg/m³
	g/m³
	Vol%
	%UEG
Linearity	< 4% above measurement range
Measured value output	0(4)mA to 20mA; burden 600Ω not galvanically isolated
Ambient temperature with injectors	-5°C to 40°C
Ambient temperature with membrane pump	+5°C to 40°C
Air humidity	< 90% rel. humidity, + 20°C
	< 50% rel. humidity, + 40°C
Geographical altitude	0 to 1500 m above NN
Protection class (DIN40050)	IP20

The Thermo-FID TG is a Totalhydrocarbon-analysor in a table housing. Burnerair and zerogas are standardised over catalyst. The sample gas conveyance takes place with injectors over the external instrument air.
(Leakage control; Exhaust Emission control; Plant monitoring; Methanefree Measurements)

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 an 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

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	Membrane pump
Measurement range	0.5 mg org.C/m³ to 100000 mg org.C/m³	2 mg org.C/m³ to 100000 mg org.C/m³
Detection limit	< 0.01 mg org.C/m³	< 0.05 mg org.C/m³
Response time (T90)	< 0.5 s if measured value > 20 mg org.C/m³ < 5.0 s if measured value < 20 mg org.C/m³	
Samplegas (self-drawed)	ca. 25 l/h with 1013 hPa alternative ca. 2 l/h; ca. 5 l/h; ca. 60 l/h	ca. 25 l/h with 1013 hPa
Samplegas-pressure	800 mBar to 1600 mBar	800 mBar to 1200 mBar
Detector-temperature	T2: 110 °C to 170 °C T3: 130 °C to 165 °C T4: 95 °C to 100 °C	
Supplementary heating system (PT100)	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 Nm³/h Quality to ISO8573-1 minimum 1.2.1	Ambient air over Membrane pump
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 Nl/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 / < 130 Nl/h Qualität 5.0	
Nominal voltage	115 V ± 10 % or 230 V ± 10 %; 48 Hz to 62 Hz; < 250 W	
Supplementary heating system (Probe, external catalyst)	115 V ± 10 % or 230 V ± 10 %; 48 Hz to 62 Hz; < 1000 W	

Additional Information for TG

Back side FID TG with methane catalyst

Front FID TG with methane catalyst and stand

Order data

Thermo-FID 'TG'	Desk Top	207.01000

Options

Status- and alarmboard	4x 0/4-20mA galv. separation/ 4 potentialfree alarmcontacts	407.950033.D
Module Methanefree-Methane	inclusive Status-/Alarmboard	407.060071.A
Internal Membrane pump	Set membrane pump internal sample-gas pump	407.990085
External Membrane pumpe	Set membrane pump external sample-gas pump	407.990085
Dilution probe 1:10/ 1:20	Dilution Probe heated without enclosure	407.040203
External Zerogas	Conversion kit Zero gas external	407.020047
Heated 2/3 Direction Control Valve 180°C max. For E S, TG and FE	to measure two measuring streams	407.040204
MSU 4/8x HT	On request	-
MSU Ambientair 8/16-times	8-times 3HE 1x 407.950045.B	407.970085
	16-timesh EHE 2x 407.950045.B	407.970086
Inlinestripper	-	207.930000
Flame Trap ATEX 94/9/EG	In Line Flame Trap FS30 Eex d IIC	407.030103

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