

How to find the right product

The diagram will help you find the appropriate analyzer for your measurement task.

Gases to be measured (examples)

HF, HCl

H₂O

NH₃

O₂

CO, CO₂

NO_x, SO_x, H₂S

CH₄

C_nH_m

H₂

He, Ar

Measurement method

In-situ

Extractive

Analyzer

LDS 6

SITRANS SL

OXYMAT 7

ULTRAMAT 7

FIDAMAT 6

CALOMAT 7

Possible versions

Rack unit with in-situ laser
Ex version

Field devices
also in Ex version

Rack unit
Wall Mount

Rack unit
Wall Mount

Rack unit

Rack unit
Wall Mount

Published by
Siemens Industry, Inc.

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Subject to change without prior notice
Order No.: PIABR-00024-0521
Printed in USA
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Measuring properties	Extractive analyzers					Extractive and in-situ analyzers		Measuring properties
	OXYMAT 7	ULTRAMAT 7	ULTRAMAT 23	CALOMAT 7	FIDAMAT 6	LDS 6	SITRANS SL	
Measurement method	Extractive	Extractive	Extractive	Extractive	Extractive	In-situ / extractive	In-situ / extractive	Measurement method
Measuring method	Paramagnetism	NDIR two-beam principle	NDIR single-beam principle	Thermal conductivity	Flame ionization	TDLS	TDLS	Measuring method
Max. number of components	1	4	3 IR + O ₂ , H ₂ S	1	1	2	1	Max. number of components
Components	Oxygen	e.g. CO, CO ₂ , NO, SO ₂ , CH ₄ , hydrocarbons	e.g. CO, CO ₂ , NO, SO ₂ , CH ₄ , O ₂ , H ₂ S	e.g. H ₂ , He	Total hydrocarbons	O ₂ , NH ₃ , HF, H ₂ O, CO ₂ , CO, HCl	O ₂ , CO	Components
Smallest measuring range	0–0,5%	Component-specific: 0–5 / 0–100 ppm	Component-specific: 0–50 / 0–500 vpm	0–1 %	0–10 vpm	Component-specific: 0–5 ppm to 0–5 %	O ₂ : 0–1% @ 1 m effective opt. path length CO: 0–100 ppm @ 1 m effective opt. path length	Smallest measuring range
Detection limit	50 ppm	Component-specific: from 0.05 ppm	Component-specific: from 0.5 vpm	0.01 %	50 / 100 ppb	Component-specific: from 0.1 ppm @ 1 m effective opt. path length	O ₂ : 200 ppm @ 1 m effective opt. path length CO: 0.6 ppm @ 1 m effective opt. path length	Detection limit
Housing / material	Rack or Wall Mount	Rack or wall mount	19" rack unit	19" rack unit	19" rack unit	Central unit: 19" unit, sensors: field version	Field version	Housing / material
Degree of protection	IP20	IP20	IP20	IP20	IP20	Central unit: IP20, sensors: IP65	IP65	Degree of protection
Material of gas path	Viton, stainless steel, titanium	Viton, stainless steel, titanium	Viton, stainless steel	Stainless steel	Stainless steel	Purging tubes: stainless steel, special materials on request	Purging tubes: stainless steel	Material of gas path
Material of measuring chamber	Stainless steel, tantalum	Aluminum, TA layer	Aluminum	Stainless steel	Stainless steel	–	–	Material of measuring chamber
Connections	6 mm / ¼"	6 mm / ¼"	6 mm / ¼"	6 mm / ¼"	6 mm / ¼"	Sensor connections in DN 65 / PN6, ANSI 4"/150 lbs, DN 80 / PN 16	Sensor connections in DN 50 / PN 16, ANSI 4"/150 lbs	Connections
Heater option	–	–	–	–	up to 200° C	Extractive cell 200 °C		Heater option
Special applications	Further materials with special applications	Further materials with special applications	–	Further materials with special applications	–	Further materials and connections with special applications	Further materials and connections with special applications	Special applications
Certificates / signals	19" rack unit	Rack or wall mount	19" rack unit	19" rack unit	19" rack unit	Central unit: 19" unit, sensors: field version	Central unit: 19" unit, sensors: field version	Certificates / signals
TÜV	13./17. BlmSchV	13./17. BlmSchV	13./27./30. BlmSchV/Kyoto	n.a.	13./17. BlmSchV	NH ₃ , NH ₄ /H ₂ O, H ₂ O, HCl, HCl/H ₂ O applications: 17. BlmSchV	–	TÜV
Further approvals (emission)	QAL1, MCERTS	QAL1, MCERTS	QAL1, MCERTS	n.a.	QAL1, MCERTS	QAL1, MCERTS	–	Further approvals (emission)
EX	ATEX II 3G Class I Div 2	ATEX II 3G Class I Div 2	ATEX II 3G Class I Div 2	ATEX II 3G Class I Div 2	[ATEX II 3 G] with cabinet	ATEX II 1GD T 135° EEx ia IIC T4	ATEX II 2 G Ex de op is IIC T6 / , ATEX II 2 D Ex td A21 IP65 T85, FM Class I, II, III Div 1, FM Class I, Zone 1, FM Class II, Zone 21	EX
Analog output	0 / 2 / 4–20 mA	0 / 2 / 4–20 mA per component	0 / 2 / 4–20 mA per component	0 / 2 / 4–20 mA	0 / 2 / 4–20 mA	2 per channel (measurement spot) (up to 3 channels)	2	Analog output
Communication	PROFIBUS, MODBUS, RS 485/Ethernet	PROFIBUS, MODBUS RS 485/Ethernet	PROFIBUS, RS 485/Ethernet	PROFIBUS, RS 485/Ethernet	PROFIBUS, RS 485/Ethernet	Analog, Ethernet	Analog, PROFIBUS DP, Modbus RTU, Ethernet	Communication
Binary inputs / outputs	12 outputs, 8 inputs	12 outputs, 8 inputs	8 of each as standard, expandable	12 outputs, 8 inputs	–	6 per channel (measurement spot) (up to 3 channels)	2/2	Binary inputs / outputs
Sample gas conditions	19" rack unit	19" rack unit	19" rack unit	19" rack unit	19" rack unit	Central unit: 19" unit, sensors: field version	Central unit: 19" unit, sensors: field version	Sample gas conditions
Temperature	Below the gas dew point, but min. 0° C max. 50° C	Below the gas dew point, but min. 0° C max. 50° C	Below the gas dew point, but min. 0° C max. 50° C	Below the gas dew point, but min. 0° C max. 50° C	0–200° C	Depends on component and application: 0–1,200° C	Depends on component and application: –20–700° C	Temperature
Pressure (abs.)	500 to 1,500 hPa	500 to 1,500 hPa	unpressurized < 1,200 hPa	700 to 1200 hPa	FID-E: atm. / FID-G: 2,000 hPa	Depends on component: 0.8–5 bar, further ranges with special applications	Depends on component: 0,7–5 bar, further ranges with special applications	Pressure



Siemens offers a wide and innovative continuous gas analysis portfolio designed to meet all users expectations for comprehensive products and solutions.

ULTRAMAT 23 (extractive)

Single beam NDIR multi-component gas analyzer. Measures up to 3 IR active gases, measures O₂ with electrochem cell for many standard applications and emissions monitoring. Optional H₂S electrochem cell for biogas/landfill application.

SIPROCESS UV600 (UVRAS)

UV absorption principle with true reference measurement for individual or simultaneous measurement of up to three gas components: NO, NO₂, SO₂ and H₂S.

ULTRAMAT 7 (extractive)

Tough application multi-component dual beam NDIR analyzer for measuring infrared active gases in highly corrosive, chemical and hydrocarbon applications for ppm - % level and multi-component measurements based on infrared absorption principle.

Siemens NOxMAT 600 CLD & HCLD (Heated Version)

Gas analyzer for continuous measurement of NO and NOx based on chemiluminescence's principle.

LDS 6 (in-situ)

A multipoint, In-situ Tunable Diode Laser gas analysis for NH₃, O₂, CO, CO₂, H₂O, HCl, and HF in NH₃ slip, process control, combustion, and safety applications.

OXYMAT 7 (extractive)

Our time proven tough application oxygen analyzer based on alternating pressure paramagnetic principle. SIL 2 approved.

CALOMAT 7 (extractive)

Gas analyzer for corrosive application in the measurement of hydrogen and noble gases in binary gas mixtures based on thermal conductivity principles.

SITRANS SL (in-situ)

Single point, in-situ Tunable Diode Laser gas analysis for O₂ in combustion, process control and safety applications.

Continuous Emissions Monitoring System (CEMS)

The CEMS is designed to monitor nitrogen oxides, carbon monoxide and oxygen in process boilers and furnaces according to 40 CFR 60.