Data sheet
testo 340

Be sure. testo

Flue gas analyzer for industry

testo 340 – Portable measuring instrument for industrial emission measurement

- Measuring range extension for unrestricted measurement at high gas concentrations
- Flue gas analysis with up to 4 gas sensors – freely configurable
- Large selection of probes
- Bluetooth interface
- Convenient measurement data management
- TÜV-tested /EN norm

O_2 CO CO_{low} NO NO_{low} NO_2 SO_2

The handy, easy-to-operate emission measuring instrument testo 340 is the right tool for many different emission measurements. The compact design and the reliable technology make it the ideal measuring instrument for commissioning, service and maintenance work and in test measurements on industrial burners, stationary industrial engines, gas turbines and thermal processes.

The unique measuring range extension allows unrestricted measurements to be carried out even at high gas concentrations. The testo 340 is equipped with an O_2 sensor as standard. Three further gas sensors can be configured individually, in order to be able to adapt the instrument optimally to the respective measurement task. The instrument can also be operated remotely from your Andrroid Smartphone or tablet using the free App.

Ordering data

testo 340

testo 340 flue gas analyzer, incl. rechargeable battery, calibration protocol and carrying strap, equipped with O_2 sensor, integrated flow/differential pressure measurement, single dilution and dilution of all sensors

Part no. 0632 3340

testo 340 must be equipped with a second gas sensor otherwise the analyzer cannot function. Max. 3 additional sensors can be fitted.

Options	
Option CO sensor, 0 to 10000 ppm, Resolution 1 ppm	
Option CO_{low} sensor, 0 to 500 ppm, Resolution 0.1 ppm	
Option NO sensor, 0 to 4000 ppm, Resolution 1 ppm	
Option NO_{low} sensor, 0 to 300 ppm, Resolution 0.1 ppm	
Option NO_2 sensor, 0 to 500 ppm, Resolution 0.1 ppm	
Option: SO_2 sensor, 0 to 5,000 ppm, Resolution 1 ppm	
Option: BLUETOOTH® module	

Accessories	**Part no.**	
Transport case for flue gas analyzer and probes	0516 3400	
Mains unit international 100-240 V AC / 6.3 V DC for mains operation or battery charging in instrument, for mains operation or battery charging in instrument	0554 1096	
Software „easyEmission“, incl. USB connection cable instrument-PC	0554 3334	
Multiple license/“easyEmission“ software	0554 3338	
Testo fast printer IrDA with wireless infrared interface; 1 roll thermal paper; 4 AA batteries	0554 0549	
Testo Bluetooth®/IRDA printer incl. 1 roll of printer paper, rechargeable battery and mains unit	0554 0620	
Spare thermal paper for printer, permanent ink	0554 0568	
Replacement filter for NO sensor (1 pcs.), blocks transverse gas SO_2	0554 4150	
Replacement CO sensor (1 off.), blocks transverse gas SO_2 and NO	0554 4100	

Calibration Certificates	**Part no.**	
ISO calibration certificate/flue gas	0520 0055	
ISO calibration certificate velocity, hot wire, vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034	

Ordering suggestions

Your low-budget entry into industrial emission measurement

	Part no.
testo 340 flue gas analyzer	0632 3340
Option CO (H_2 compensated) measurement module, 0 to 10,000 ppm	
Option BLUETOOTH® module	
Flue gas probe modular 335 mm immersion depth	0600 9766
International mains unit 100-240 V	0554 1096
testo BLUETOOTH® printer	0554 0620
Transport case for measuring instrument and probes	0516 3400

Monitoring and adjustment work on stationary industrial engines

	Part no.
testo 340 flue gas analyzer	0632 3340
Option CO (H_2 compensated) measurement module, 0 to 10,000 ppm	
Option NO measurement module, 0 to 4,000 ppm	
Option NO_2 measurement module, 0 to 500 ppm	
Flue gas probe for industrial engines, 335 mm immersion depth*	0600 7555
International mains unit 100-240 V	0554 1096
Software „easyEmission“	0554 3334
Transport case for measuring instrument and probes	0516 3340

*For measurement on stationary diesel engines, we recommend the flue gas probe with probe pre-filter (0600 7556).

Service and maintenance work on industrial burners and furnaces

	Part no.
testo 340 flue gas analyzer	0632 3340
Option CO (H_2 compensated) measurement module, 0 to 10,000 ppm	
Option NO measurement module, 0 to 4,000 ppm*	
Option SO_2 measurement module, 0 to 5,000 ppm	
Flue gas probe modular 700 mm immersion depth	0600 8765
Software „easyEmission“	0554 3334
Transport case for measuring instrument and probes	0516 3340

*For the measurement of low NO values, we recommend the NO_{low} sensor (0393 1152).

Measurements on turbines

	Part no.
testo 340 flue gas analyzer	0632 3340
Option CO (H_2 compensated) measurement module, 0 to 10,000 ppm*	
Option NO_{low} measurement module, 0 to 300 ppm	
Option NO_2 measurement module, 0 to 500 ppm	
Flue gas probe for industrial engines, 335 mm immersion depth	0600 7555
International mains unit 100-240 V	0554 1096
Software „easyEmission“	0554 3334
Transport case for measuring instrument and probes	0516 3340

*For the measurement of low CO values, we recommend the CO_{low} sensor (0393 1102).

Gas sampling probes

Standard gas sampling probes: Modular flue gas probes, available in 2 lengths, incl. probe stop, NiCr-Ni thermocouple, 2.2 m hose and particle filter	Part no.	
Modular flue gas probe 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (Tl) Tmax 500 °C and NO_2/SO_2 special hose 2.2 m	0600 9766	
Modular flue gas probe 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (Tl) Tmax 500 °C and NO_2/SO_2 special hose 2.2 m	0600 9767	
Modular flue gas probe 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (Tl) Tmax 1000 °C and NO_2/SO_2 special hose 2.2 m	0600 8764	
Modular flue gas probe, 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (Tl) Tmax 1000 °C and NO_2/SO_2 special hose 2.2 m	0600 8765	
Modular flue gas probe with pre-filter Ø 14 mm 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (Tl) Tmax 1000°C and NO_2/SO_2 special hose 2.2 m	0600 8766	
Modular flue gas probe with pre-filter Ø 14 mm 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (Tl) Tmax 1000°C and NO_2/SO_2 special hose 2.2 m	0600 8767	

Probe accesories modular gas sampling probes	Part no.	
Hose extension; 2.8 m; extension cable for probe	0554 1202	
Probe shaft with pre-filter Ø 14 mm, length selectable up to 2500 mm, incl. cone, Ø 8 mm, thermocouple NiCr-Ni (Tl) Tmax. 500 °C	On request	
Probe shaft with pre-filter Ø 14 mm, length selectable up to 2500 mm, incl. cone, Ø 8 mm, thermocouple NiCr-Ni (Tl) Tmax. 1000 °C	On request	
Spare probe pre-filter (sinter filter) 2 off	0554 3372	
Spare dirt filter, modular probe; 10 off	0554 3385	
Probe shaft, length 700 mm, incl. cone, Ø 8 mm, Tmax 500 °C	0554 9767	
Probe shaft, length 335 mm, incl. cone, Ø 8 mm, Tmax 1000 °C	0554 8764	
Probe shaft, length 700 mm, incl. cone, Ø 8 mm, Tmax. 1000 °C	0554 8765	

Gas sampling probe for measurement on industrial engines	Part no.	
Flue gas probe for industrial engines, 335 mm immersion depth incl. probe stop and heat protection plate, Tmax. +1,000 °C, special hose for NO_2-/SO_2 measurements, length 4 m	0600 7555	
Flue gas probe for industrial engines with probe shaft preliminary filter, 335 mm immersion depth incl. probe stop and heat protection plate, Tmax. +1,000 °C, special hose for NO_2-/SO_2 measurements, length 4 m	0600 7556	
Thermocouple for flue gas temperature measurement, NiCr-Ni, length 400 mm, Tmax +1,000 °C, with 4 m connecting cable and additional heat protection	0600 8898	

Temperature probes	Part no.	
Mini ambient air probe; for separate ambient air temperature measurement; 0 to +80 °C	0600 3692	
Combustion air temperature probe, immersion depth 60 mm	0600 9797	

Pitot tubes	Part no.	
Pitot tube, 350 mm long, stainless steel, measures flow velocity	0635 2145	
Pitot tube, 1000 mm long, stainless steel, measures flow velocity	0635 2345	
Connection hose; silicone; length 5 m; max. load 700 hPa (mbar)	0554 0440	
Pitot tube, stainless steel, 750 mm long, measures flow velocity with temperature, 3x hoses (5 m long) and heat shield	0635 2042	

Gas sampling probes

Industrial probes	Details	Part no.	
Industrial probe set 1200 °C consisting of: - unheated handle - unheated probe shaft up to 1200 °C flue gas temperature - unheated gas sampling hose incl. inline filter, length 4 m - thermocouple Type K, length 1.2 m The set can optionally come with an extension tube and probe preliminary filter.	Probe shaft: $T_{max.}$ +1200 °C Length 1.0 m, Ø 12 mm Material 2.4856 alloy 625 Handle: $T_{max.}$ +600 °C Material: 1.4404 stainless steel Gas sampling hose: 2-chamber hose with PTFE inner core; length 4.0 m TC: Type K, Length 1.2 m, Ø 2 mm Tmax. +1200 °C	0600 7610	
Industrial probe set 1800 °C consisting of: - unheated handle - unheated probe shaft up to 1800 °C flue gas temperature - unheated gas sampling hose incl. inline filter, length 4 m For temperature measurements > +1370 °C, we recommend a thermocouple Type S.	Probe shaft: $T_{max.}$ +1800 °C Material Al2O3 > 99.7% Length 1.0 m, Ø 12 mm Gas sampling hose: 2-chamber hose with PTFE inner core; length 4.0 m Handle: $T_{max.}$ +600 °C Material: 1.4404 stainless steel	0600 7620	
Heated industrial probe set consisting of: - heated probe shaft up to 600 °C flue gas temperature - heated gas sampling hose, length 4 m - thermocouple Type K, length 1.2 m The set can optionally come with an extension tube and probe preliminary filter.	Probe shaft: temperature-proof up to +600 °C Voltage supply 230 V / 50 Hz Length 1.0 m, Ø 25 mm Heating temperature range +200 °C Material stainless steel 1.4571 Gas sampling hose: corrugated hose with PTFE inner core Length 4.0 m; outside diameter 34 mm Heating temperature range > +120 °C TC: Type K Length 1.2 m, Ø 2 mm $T_{max.}$ +1200 °C	0600 7630	
Extension tube 1200 °C for extending the industrial probe set 1200 °C (0600 7610) and heated industrial probe set (0600 7630) The extension tube can be screwed directly onto the unheated probe shaft up to +1200 °C and the heated probe shaft up to +600 °C.*	Probe shaft: $T_{max.}$ +1200 °C Length 1.0 m, Ø 12 mm Material 2.4856 alloy 625	0600 7617	
Thermocouple Type K, length 2.2 m	Type K Length 2.2 m, Ø 2 mm $T_{max.}$ +1200 °C	0600 7615	
Industrial probe preliminary filter for dust-laden flue gas The probe preliminary filter can be screwed directly onto the unheated probe shaft up to +1200 °C and the heated probe shaft up to +600 °C.*	Material porous silicon carbide $T_{max.}$ +1,000 °C, Length 105 mm, Ø 30 mm Filtration grade 10 µm	0600 7616	
Heated gas sampling hose	Corrugated hose with PTFE inner core Length 4.0 m; outside diameter 34 mm Heating temperature range > +120 °C	on request	
Transport case for probes Suitable for all probes with a total length > 335 mm.		0516 7600	
Spare dirt filter (10 off)		0554 3371	

*For ease of tightening and releasing, we recommend the use of ceramic paste on the thread. This is available from retailers.

Technical data

	Measuring range	Accuracy ±1 digit	Resolution	Adjustment time t_{90}
O_2 measurement	0 to 25 Vol. %	±0.2 Vol. %	0.01 Vol. %	< 20 sec
CO measurement (H_2 compensated)	0 to 10.000 ppm	±10 ppm or ±10% of m.v. (0 to 200 ppm) ±20 ppm or ±5% of m.v. (201 to 2.000 ppm) ±10% of m.v. (2.001 to 10.000 ppm)	1 ppm	< 40 sec
CO_{low} measurement (H_2 compensated)	0 to 500 ppm	±2 ppm (0 to 39.9 ppm) ±5% of m.v. (remaining range)[X] [X] data corresponds to 20°C ambient temperature. Additional temperature coefficient 0.25% of reading/K.	0.1 ppm	< 40 sec
NO measurement	0 to 4.000 ppm	±5 ppm (0 to 99 ppm) ±5% of m.v. (100 to 1.999 ppm) ±10% of m.v. (2.000 to 4.000 ppm)	1 ppm	< 30 sec
NO_{low} measurement	0 to 300 ppm	±2 ppm (0 to 39.9 ppm) ±5% of m.v. (remaining range)	0.1 ppm	< 30 sec
NO_2 measurement*	0 to 500 ppm	±10 ppm (0 to 199 ppm) ±5% of m.v. (remaining range)	0.1 ppm	< 40 sec
SO_2 measurement*	0 to 5.000 ppm	±10 ppm (0 to 99 ppm) ±10% of m.v. (remaining range)	1 ppm	< 40 sec
Temperature meas. Probe type Type K (NiCr-Ni)	-40 to +1.200 °C	±0.5 °C (0 to +99 °C) ±0.5 % of m.v. (remaining range)	0.1 °C	
Draught measurement	-40 to +40 hPa	±0.03 hPa (-2.99 to +2.99 hPa) ±1.5 % of m.v. (remaining range)	0.01 hPa	
Differential pressure measurement	-200 to 200 hPa	±0.5 hPa (-49.9 to 49.9 hPa) ±1.5 % of m.v. (remaining range)	0.1 hPa	
Absolute pressure measurement	600 to +1.150 hPa	±10 hPa	1 hPa	
Derived parameters				
Efficiency	0 to 120 %		0.1 %	
Flue gas loss	0 to 99.9 %		0.1 %	
Exhaust gas dewpoint	0 to 99.9 °C		0.1 °C	
CO_2 measurement (Calculated from O_2)	0 to CO_2 max.	±0.2 Vol. %	0.1 Vol. %	< 40 sec

*To avoid absorption, a maximum measurement duration of 2 hours should not be exceeded.

Country permits BLUETOOTH® wireless transmission for testo 340
The BLUETOOTH® radio module used by Testo is permitted for the following countries and may only be used in those countries, i.e. the BLUETOOTH® wireless transmission may not be used in any other country!

Europe including all EU member states
Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Great Britain, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden and Turkey

European countries (EFTA)
Iceland, Liechtenstein, Norway, Switzerland

Non-European countries
Canada, USA, Japan, Ukraine, Australia, Columbia, El Salvador, Mexico, Venezuela, Ecuador, New Zealand, Bolivia, Dominican Republic, Peru, Chile, Cuba, Costa Rica, Nicaragua, Korea, Belarus.

Technical data

Measuring range extension

Single dilution, factor 5 (standard)	Measuring range	Accuracy	Resolution
CO measurement (H_2 compensated)	700 ppm to 50.000 ppm	±10 % of m.v. (additional error)	1 ppm
CO_{low} measurement (H_2 compensated)	300 ppm to 2.500 ppm	±10 % of m.v. (additional error)	0.1 ppm
NO measurement	500 ppm to 20.000 ppm	±10 % of m.v. (additional error)	1 ppm
NO_{low} measurement	150 ppm to 1.500 ppm	±10 % of m.v. (additional error)	0,1 ppm
SO_2 measurement	500 ppm to 25.000 ppm	±10 % of m.v. (additional error)	1 ppm
Dilution of all sensors, factor 2 (standard)			
O_2 measurement	When measuring range extension switched on, over all sensors: 0 to 25 Vol.%	±1 Vol.% additional error (0 to 4.99 Vol.%) ±0.5 Vol.% additional error (5 to 25 Vol.%)	0.01 Vol.%
CO measurement (H_2 compensated)	700 ppm to 20.000 ppm	±10 % of m.v. (additional error)	1 ppm
CO_{low} measurement (H_2 compensated)	300 ppm to 1.000 ppm	±10 % of m.v. (additional error)	0.1 ppm
NO measurement	500 ppm to 8.000 ppm	±10 % of m.v. (additional error)	1 ppm
NO_{low} measurement	150 ppm to 600 ppm	±10 % of m.v. (additional error)	0.1 ppm
NO_2 measurement	200 ppm to 1.000 ppm	±10 % of m.v. (additional error)	0.1 ppm
SO_2 measurement	500 ppm to 10.000 ppm	±10 % of m.v. (additional error)	1 ppm

General technical data

Memory Maximum Per folder Per site	 100 folders Max. 10 sites Max. 200 logs The max. number of logs is determined by the number of folders or sites
User-defined fuels	10 user-defined fuels incl. test gas as fuel
Regulated diaphragm pump Pump flow Hose length Max. pos. press./flue gas Max. neg. press./flue gas	 0.6 l/min (regulated) max. 7.8 m (corresponds to two probe hose extensions) +50 mbar -200 mbar
Weight	960 g
Dimensions	283 x 103 x 65 mm
Storage temperature	-20 to +50 °C
Operating temperature	-5 to +50 °C

Display	Graphic display 160 x 240 pixels
Power supply	Battery block 3.7 V / 2.4 Ah Mains unit 6.3 V / 2 A
Housing material	TPE PC
Protection class	IP40
Guarantee Measuring instrument Gas sensors Pumps Solenoid valves Thermocouples Rechargeable batteries Probes Guarantee conditions	 2 years CO, NO, CO_{low}, NO_{low}, NO_2, SO_2: 1 year O_2: 1.5 years 0,5 years 0,5 years 1 year 1 year 2 years https://www.testo.com/guarantee

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Subject to change without notice.