

# TESTO 340

The new 4-sensor flue gas analyzer for emission measurement in industry



Rising fuel costs for thermal systems highlight more and more the need for efficiency monitoring using emission measurements. A practical, easy-to-use emission analyzer for a variety of applications is therefore ideal.

testo 340 is the hand-held analyzer for industrial flue gas analysis and offers benefits such as:

- The unique measuring range extension feature facilitates unlimited measurements even at high gas concentrations.
- testo 340 is equipped with an O<sub>2</sub> sensor as standard. 3 additional gas sensors can be individually configured at any time so your analyzer is optimally adapted to your measurement job.
- Compact design combined with reliable engineering makes testo 340 the ideal analyzer for commissioning, service and maintenance work as well as measurements for monitoring purposes.
  - Industrial burners
  - Stationary industrial engines
  - Gas turbines
  - Thermal processes

**Automatic sensor protection at high gas concentrations: Measuring range extension**

## THE BENEFITS OF THIS PROTECTION FUNCTION

- The measuring ranges of your CO, CO<sub>low</sub>, NO, NO<sub>low</sub> or SO<sub>2</sub> sensor is increased 5 times by automatic measuring range extension.  
At high gas concentrations the sensor is then not stressed any more than it would be at low concentrations.
- As an option, the measuring ranges of all the sensors in the analyzer can be extended simultaneously by a factor of 2.
- Measurements up to, for example max. 50,000 ppm (CO), or max. 15,000 ppm (NO), or max. 25,000 ppm (SO<sub>2</sub>), without overloading the sensor.
- No additional sensors and costs with different measuring ranges.
- Automatic sensor protection from overloading, without interrupting the measurement.

## SPACE FOR 4 GAS SENSORS

testo 340 is fitted with an O<sub>2</sub> sensor as standard. Three additional toxic gas sensors such as CO, CO<sub>low</sub>, NO, NO<sub>low</sub>, NO<sub>2</sub> or SO<sub>2</sub> can be selected by the user. This guarantees highest flexibility when adapting to changing applications and measurement jobs.

The sensor can be changed or upgraded in an additional gas parameter by the user directly on-site...

The main advantage of this is that adjustment data is saved in the gas sensors. In this way, time-consuming test gas adjustment when changing sensors is dispensed with.

## TESTO 340 MEANS:

Simply select, change and add to, at any time, the gas sensors required. For this purpose, select from these 7 pre-calibrated gas sensors

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## WIRELESS READING OUT, TRANSMISSION AND PRINTING OF READINGS

The new communication interface: Bluetooth® 2.0 Wireless connection via Bluetooth® 2.0 to testo BLUETOOTH® printers and direct communication to Notebook/PC over a distance of up to 10m (free field) are features of the new testo 340 option. Readings and configurations are transmitted wirelessly to your Notebook/PC for storage and analysis.



## TESTO PRINTERS

Print data is transmitted wirelessly to the printer by infrared interface (visual contact required) or by new BLUETOOTH® wireless transmission. This saves time since the analyzer is ready for use again immediately following data transmission.

## CONVENIENT MEASUREMENT DATA MANAGEMENT WITH “EASYEMISSION”

Data can be read out, easily edited, filed and managed using “easyEmission” software:

- Direct transmission to Excel and pdf formats
- Easy implementation of individual formulae for your own calculations
- Calculation of fuel factors when using customer-specific fuels

## BENEFITS OF EASYEMISSION:

- Readings are shown in table or graph form
- User-defined measurement spacing (from one measurement / second to one measurement / hour)
- Online measurements via BLUETOOTH® wireless transmission or USB connection
- Customer and application-specific measurement logs
- Data structure and measurement information can be transmitted from computer to analyzer
- All instrument configurations and settings can be easily carried out with easyEmission



## TESTO 340

**SPECIFICATIONS** Specifications subject to change without notice

	Meas. range	Accuracy	Resolution	Response time
<b>O<sub>2</sub> measurement</b>	0 to 25 Vol. %	±0.2 Vol. %	0.01 Vol. %	t <sub>90</sub> <20 s
<b>CO measurement (H<sub>2</sub> compensated)</b>	0 to 10.000 ppm	±10 ppm or ±10% of mv (0 to 200 ppm) ±20 ppm or ±5% of mv (201 to 2.000 ppm) ±10% of mv (2.001 to 10.000 ppm)	1 ppm	t <sub>90</sub> <40 s
<b>CO<sub>low</sub> measurement (H<sub>2</sub> compensated)</b>	0 to 500 ppm	±2 ppm (0 to 39.9 ppm) ±5% of mv (remaining range)* * data corresponds to 20°C ambient temperature. Additional temperature coefficient 0.25% of reading/K.	0.1 ppm	t <sub>90</sub> <40 s
<b>NO measurement</b>	0 to 3.000 ppm	±5 ppm (0 to 99 ppm) ±5% of mv (100 to 1.999 ppm) ±10% of mv (2.000 to 3.000 ppm)	1 ppm	t <sub>90</sub> <30 s
<b>NO<sub>low</sub> measurement</b>	0 to 300 ppm	±2 ppm (0 to 39.9 ppm) ±5% of mv (remaining range)	0.1 ppm	t <sub>90</sub> <30 s
<b>NO<sub>2</sub> measurement*</b>	0 to 500 ppm	±10 ppm (0 to 199 ppm) ±5% of mv (remaining range)	0.1 ppm	t <sub>90</sub> <40 s
<b>SO<sub>2</sub> measurement*</b>	0 to 5.000 ppm	±10 ppm (0 to 99 ppm) ±10% of mv (remaining range)	1 ppm	t <sub>90</sub> <40 s
<b>Temperature meas. Probe type Type K (NiCr-Ni)</b>	-40 to +1.200 °C	±0.5 °C (0 to +99 °C) ±0.5 % of mv (remaining range)	0.1 °C	
<b>Draught measurement</b>	-40 to +40 hPa	±0.03 hPa (-2.99 to +2.99 hPa) ±1.5 % of mv (remaining range)	0.01 hPa	
<b>Differential pressure measurement</b>	-200 to 200 hPa	±0.5 hPa (-49.9 to 49.9 hPa) ±1.5 % of mv (remaining range)	0.1 hPa	
<b>Absolute pressure measurement</b>	600 to +1.150 hPa	±10 hPa	1 hPa	
<b>Derived parameters</b>	0 to 120 %		0.1 %	
<b>Efficiency</b>	0 to 99.9 %		0.1 %	
<b>Flue gas loss</b>	0 to 99.9 °C		0.1 °C	
<b>Flue gas dewpoint</b>				
<b>CO<sub>2</sub> measurement (calculation from O<sub>2</sub>)</b>	0 to CO <sub>2</sub> max.	±0.2 Vol. %	0.1 Vol. %	

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

## TESTO 340

**SPECIFICATIONS** Specifications subject to change without notice**Measuring range extension****Single dilution, factor 5 (standard)**

CO measurement (H <sub>2</sub> compensated)	Meas. range	700 ppm to 50.000 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	1 ppm
COlow measurement (H <sub>2</sub> compensated)	Meas. range	300 ppm to 2.500 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	0.1 ppm
NO measurement	Meas. range	500 ppm to 15.000 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	1 ppm
NOlow measurement	Meas. range	150 ppm to 1.500 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	0,1 ppm
SO <sub>2</sub> measurement	Meas. range	500 ppm to 25.000 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	1 ppm

**Dilution of all sensors, factor 2 (option, Part no. 0440 3350)**

With measuring range extension switched on over all sensors:

O <sub>2</sub> measurement	Meas. range	0 to 25 vol.%
	Accuracy	±1 vol.% additional error (0 to 4.99 vol.%) ±0.5 vol.% additional error (5 to 25 vol.%)
	Resolution	0.01 vol.%
CO measurement (H <sub>2</sub> compensated)	Meas. range	700 ppm to 20.000 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	1 ppm
COlow measurement (H <sub>2</sub> compensated)	Meas. range	300 ppm to 1.000 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	0.1 ppm
NO measurement	Meas. range	500 ppm to 6.000 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	1 ppm
NOlow measurement	Meas. range	150 ppm to 600 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	0.1 ppm
NO <sub>2</sub> measurement	Meas. range	200 ppm to 1.000 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	0.1 ppm
SO <sub>2</sub> measurement	Meas. range	500 ppm to 10.000 ppm
	Accuracy	±10 % of mv (additional error)
	Resolution	1 ppm

## TESTO 340

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<b>Memory</b>	Maximum 100 folders Per folder Max. 10 sites Per site Max. 200 logs The max. number of logs is determined by the number of folders or sites
<b>Regulated diaphragm pump</b>	Pump flow 0.6 l/min (regulated) Hose length max. 7.8 m (corresponds to two probe hose extensions) Max. pos. pressure/ flue gas +50 mbar Max. neg. pressure/ flue gas -200 mbar
<b>User-defined fuels</b>	10 user-defined fuels incl. test gas as fuel
<b>Weight</b>	960 g
<b>Dimensions</b>	283 x 103 x 65 mm
<b>Storage temperature</b>	-20 to +50 °C
<b>Operating temperature.</b>	-5 to +50 °C
<b>Display</b>	Graphic display 160 x 240 pixels
<b>Power supply</b>	Battery block 3.7 V / 2.4 Ah Mains unit 6.3 V / 2 A
<b>Material/Housing TPE PC</b>	TPE PC
<b>Protection class IP40</b>	IP40
<b>Warranty</b>	Analyzer: 2 years (excluding working parts, e.g. sensors, sensor replacement filter) Rechargeable. battery.: 1 year Sensors: CO, NO, COlow, NOlow, NO <sub>2</sub> , SO <sub>2</sub> : 1 year O <sub>2</sub> : 1.5 years



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