

# Flue gas analyzer for industry

testo 350 - Professional measurement system for portable, industrial emission measurement

Application-guided operation with useful instrument pre-settings

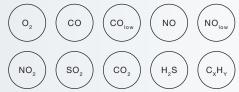
Large colour graphical display

Industrial-standard design:

- insensitive to impact and dirt thanks to integrated impact protection
- robust plug-in connections
- closed chambers protect the interior of the instrument from dirt

Easy exchange of gas sensors and quick access to wearing parts





The portable flue gas analyzer testo 350 is the ideal tool for professional flue gas analysis. The Control Unit is the removable operation and display unit of the testo 350. The presentation of the measurement values takes place via the colour graphic display. Thanks to the internal memory, measurement data can be transferred from the analyzer box to the Control Unit. If required, several analyzer boxes can be operated and controlled with one Control Unit. The measurement technology is situated in the analyzer box. The robust housing has integrated impact protection.

Downtimes due to contamination of the instrument are almost completely eliminated. Inherently closed chambers protect the interior of the instrument from dirt from the surroundings. Operation can also be carried out in direct connection to a PC or notebook or via Android smartphone or tablet with the free App, as an alternative to the Control Unit. After programming, the analyzer box is able to carry out measurements and store measurement data independently.



# Ordering data

### testo 350 Control Unit

testo 350 Control Unit, displays measurement values and controls analyzer box, incl. rech. battery, measurement data store, USB interface and connection for Testo databus

**Accessories testo 350 Control Unit** 



Part no. 0632 3511

# testo 350 analyzer box

testo 350 analyzer box, equipped with O2, incl. differential pressure sensor, temperature probe input Type K NiCr-Ni and Type S Pt10Rh-Pt, connection Testo databus, rech. battery, integrated combustion air probe (NTC), trigger input, measurement data store, USB interface, updatable to max. 6 gas sensors selected from CO, CO<sub>low</sub>, NO, NO<sub>low</sub>, NO<sub>2</sub>, SO<sub>2</sub>, CO<sub>2</sub> NDIR, C<sub>x</sub>H<sub>y</sub>, H<sub>z</sub>S, Carrying strap set for analyzer unit and control unit



Part no.

Part no. 0632 3510

The testo 350 analyzer box must be equipped with a second gas sensor, otherwise the instrument cannot f	unction.	
Mains unit international 100-240 V AC / 6.3 V DC for mains operation or battery charging in instrument	0554 1096	
Option BLUETOOTH® wireless transmission		
Option PLUETOOTH® wireless transmission		

# A maximum of five additional sensors can be fitted. Option CO sensor (H<sub>2</sub>-compensated), 0 to 10,000 ppm, resolution 1 ppm Option CO<sub>low</sub> sensor (H<sub>2</sub>-compensated), 0 to 500 ppm, resolution 0.1 ppm Option NO sensor, 0 to 4,000 ppm, resolution 1 ppm Option NO<sub>low</sub> sensor, 0 to 300 ppm, resolution 0.1 ppm Option NO2 sensor, 0 to 500 ppm, resolution 0.1 ppm Option SO<sub>2</sub> sensor, 0 to 5,000 ppm, resolution 1 ppm Option CO<sub>2</sub>(NDIR) sensor, 0 to 50 Vol %, resolution 0.01 Vol %, infrared measurement principle, incl. absolute pressure measurement and CO2-absoption filter with refill pack. For long-term measurements >15 minutes measurement time, the additional Peltier $\bar{\text{g}}\text{as}$ preparation option is recommended. Option C<sub>x</sub>H<sub>v</sub> sensor, methane 100 to 40,000 ppm, propane 100 to 21,000 ppm, butane 100 to 18,000 ppm, resolution 10 ppm. Pellisfor is adjusted to methane ex-works. Option H<sub>2</sub>S sensor, 0 to 300 ppm, resolution 0.1 ppm Option BLUETOOTH® wireless transmission Option Peltier gas preparation incl. peristaltic pump for automatic condensate trap evacuation Option fresh air valve for long-term measurement, incl. measuring range extension with dilution factor 5 for all sensors. For long-term measurements >2 hours measurement time, the additional Peltier gas preparation option is recommended.

Option automatic zeroing of pressure sensor for continuous flow velocity/differential pressure measurement	
Option special gas pump for long-term measurements with extended warranty. For long-term measurements >2 hours measurement time, the additional Peltier gas preparation option is recommended.	
Option DC voltage input 11 V to 40 V	
Option measuring range extension for single slot with the following selectable dilution factors: 0, 2, 5, 10, 20, 40	

Accessories testo 350 analyzer box	Part no.	
Exchangeable filter NO sensor (1 off), blocks cross-gas SO <sub>2</sub>	0554 4150	
Transport case for secure and tidy storage of testo 350 flue gas analyzer, flue gas probe and accessories, dimensions 570 x 470 x 210 mm (LxWxH)	0516 3510	
Spare particle filter for testo 350 analyzer box (20 pcs.)	0554 3381	
Cable with battery clips and adapter for connection to DC voltage input testo 350 analyzer box	0554 1337	



# Ordering data

PC software and Testo databus	Part no.
Software "easyEmission", incl. USB connection cable instrument-PC Functions: user-defined measurement intervals, transfer of measurement values to Microsof EXCEL in seconds, user-defined fuels, presentation of measurement values as a table or graph, easy configuration of customer-specific reports, etc.	0554 3334
Software "easyEmission" for testo 350 incl. Testo databus controller with USB connection instrument-PC, cable for Testo databus and terminal plug. If several testo 350 flue gas analyzers are connected to the Testo databus, they can then be controlled and read out on a PC (possible measurement interval in databus of 1 measurement per second).	0554 3336
Connection cable for Testo databus between Control Unit and analyzer box or between several analyzer boxes, with bayonet connection, length 2 m.	0449 0075
Connection cable for Testo databus between Control Unit and analyzer box or between several analyzer boxes, with bayonet fitting, length 5 m	0449 0076
More cable lengths up to 800 m on request	
Set Analog output box, 6 channels, 4 to 20 mA, for output of the measurement values on for example an analog recorder, set consists of analog output box, connection cable Testo databus, length 2 m, Testo databus terminal plug	0554 3149
Printer and Accessories	Part no.
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
Calibration Certificates	Part no.
ISO calibration certificate/flue gas	0520 0003
ISO calibration certificate velocity; hot wire, vane anemometer, Pitot tube; calibration points 5; 10; 15; 20 m/s	0520 0034



# 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 (TI) Tmax 500 $^{\circ}$ 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 (TI) Tmax 500 °C and $\rm NO_2/SO_2$ special hose 2.2 m	0600 9767
Modular flue gas probe 335 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000 $^{\circ}$ 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 (TI) Tmax 1000 $^{\circ}$ 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 (TI) Tmax $1000^{\circ}$ C and $NO_2/SO_2$ special hose 2.2 m	0600 8766
Modular flue gas probe with pre-filter $\emptyset$ 14 mm 700 mm immersion depth, incl. cone, thermocouple NiCr-Ni (TI) Tmax 1000°C and NO <sub>2</sub> /SO <sub>2</sub> 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 (TI) 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 (TI) Tmax. 1000 $^{\circ}$ 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 probes for 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 <sub>2</sub> -/SO <sub>2</sub> 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
SO <sub>2</sub> low probes for measurements after flue gas post-treatment systems (e.g. scrubbers)	Part no.
SO <sub>2</sub> low set unheated, consisting of: SO <sub>2</sub> low sensor, measuring range 0 to 200 ppm, resolution 0.1 ppm, special SO <sub>2</sub> low gas sampling probe, probe shaft length 735 mm, Tmax. probe shaft 220 °C, hose length 2.35 m, Ø probe shaft 8 mm, incl. cone, thermocouple NiCr-N (TI)	0563 1251
Spare thermocouple	0430 0053
Spare SO <sub>2</sub> sensor	0393 0251
$SO_2$ low set heated, consisting of: $SO_2$ low sensor, measuring range 0 to 200 ppm, resolution 0.1 ppm, industrial probe set heated 0600 7630, heated probe shaft, heated gas sampling hose, thermocouple NiCr-Ni (TI)	0563 2251
Spare SO <sub>2</sub> sensor	0393 0251
Temperature probes	Part no.
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,	0635 2042
3x hoses (5 m long) and heat shield	



# 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	Probe shaft: T <sub>max</sub> +1200 °C Length 1.0 m, Ø 12 mm Material 2.4856 alloy 625 Handle: T <sub>max</sub> +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
The set can optionally come with an extension tube and probe preliminary filter.		
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	Probe shaft: T <sub>max</sub> +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 <sub>max</sub> +600 °C Material: 1.4404 stainless steel	0600 7620
For temperature measurements $> +1370$ °C, we recommend a thermocouple Type S.		
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	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 <sub>max.</sub> +1200 °C	0600 7630
The set can optionally come with an extension tube and probe preliminary filter.		
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: T <sub>max</sub> +1200 °C Length 1.0 m, Ø 12 mm Material 2.4856 alloy 625	0600 7617
probe shaft up to +1200 °C and the heated probe shaft up to +600 °C.*		
Thermocouple Type K, length 2.2 m	Type K Length 2.2 m, Ø 2 mm T <sub>max.</sub> +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 <sub>max.</sub> +1,000 °C, Length 110 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
Extension cable, 5 m long, between plug-in head cable and instrument		0409 0063
Spare dirt filter (10 off)		0554 3371

 $<sup>^{\</sup>star}$ For ease of tightening and releasing, we recommend the use of ceramic paste on the thread. This is available from retailers.



# Technical data

### testo 350 Control Unit

	testo 350 Control Unit	Analog output box (mA Out)
Operating temperature	-5 to +45 °C	-5 to +45 °C
Storage temperature	-20 to +50 °C	-20 to +50 °C
Battery type	Lithium battery	-
Battery life	5 h (without wireless connection)	-
Memory	2 MB (250,000 meas. values)	-
Weight	440 g	305 g
Dimensions	88 x 38 x 220 mm	200 x 89 x 37 mm
Protection class	IP40	-
Warranty	2 years	3 years

### Country permits BLUETOOTH® wireless transmission for testo 350

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

Iceland, Liechtenstein, Norway, Switzeriand
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 testo 350 analyzer box

	Measuring range	Accuracy ±1 digit	Resolution	Reaction time t <sub>g</sub>
O <sub>2</sub> measurement	0 to +25 Vol. % O <sub>2</sub>	$\pm 0.8\%$ of fsv (0 to +25 Vol. % $\mathrm{O_2})$	0.01 Vol. % O <sub>2</sub> (0 to +25 Vol. % O <sub>2</sub> )	20 s (t <sub>95</sub> )
CO measurement (H <sub>2</sub> compensated)*	0 to +10.000 ppm CO	±5% of m.v. (+200 to +2.000 ppm CO) ±10% of m.v. (+2.001 to +10.000 ppm CO) ±10 ppm CO (0 to +199 ppm CO)	1 ppm CO (0 to +10.000 ppm CO)	40 s
CO <sub>low</sub> measurement (H <sub>2</sub> compensated)*	0 to 500 ppm CO	±5% of m.v. (+40 to +500 ppm CO) ±2% ppm CO (0 to +39,9 ppm CO)	1 ppm CO (0 to +500 ppm CO)	40 s
NO measurement	0 to +4.000 ppm NO	2) ±5% of m.v. (+100 to +1.999 ppm NO) ±10% of m.v. (+2.000 to +4.000 ppm NO) ±5 ppm CO (0 to +99 ppm CO) ±1 ppm NO (0 to +4.000 ppm NO)		30 s
NO <sub>low</sub> measurement	0 to +300 ppm NO	±5% of m.v. (+40 to +300 ppm NO) ±2 ppm NO (0 to +39.9 ppm NO)	±0.1 ppm NO (0 to +300 ppm NO)	30 s
NO <sub>2</sub> measurement	0 to +500 ppm NO <sub>2</sub>	$\begin{array}{cccccccccccccccccccccccccccccccccccc$		40 s
SO <sub>2</sub> measurement	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$		±1 ppm SO <sub>2</sub> (0 to +5.000 ppm SO <sub>2</sub> )	30 s
CO <sub>2</sub> measurement (IR)	0 to +50 Vol. % CO <sub>2</sub>	±0.3 Vol. % CO <sub>2</sub> + 1% of m.v. (0 to 25 Vol. % CO <sub>2</sub> ) ±0.5 Vol. % CO <sub>2</sub> + 1.5% of m.v. (>25 to 50 Vol. % CO <sub>2</sub> )	0.01 Vol. % CO <sub>2</sub> (0 to 25 Vol. % CO <sub>2</sub> ) 0.1 Vol. % CO <sub>2</sub> (>25 Vol. % CO <sub>2</sub> )	10 s
H <sub>2</sub> S measurement	0 to +300 ppm H <sub>2</sub> S	±5% of m.v. (+40 to +300 ppm) ±2 ppm (0 to +39.9 ppm)	0.1 ppm (0 to +300 ppm)	35 s

<sup>\*</sup> H<sub>2</sub> only as an indicator

	Single dilution with selectable dilution factor (x2, x5, x10, x20, x40)			Dilution of all sensor When dilution of all sensors CO <sub>2</sub> -(IR) and C <sub>X</sub> H <sub>Y</sub> are not sh	is activated, the measureme	nt values of O <sub>2</sub> ,
	Measuring range	Accuracy ±1 digit	Resolution	Measuring range	Accuracy ±1 digit	Resolution
CO measurement (H <sub>2</sub> compensated)	depending on selected factor		1 ppm	2.500 to 50.000 ppm		1 ppm
CO <sub>low</sub> measurement (H <sub>2</sub> compensated)			0.1 ppm	500 to 2.500 ppm		0.1 ppm
NO measurement	depending on selected dil. factor	±2% of m.v. (additional error)	1 ppm	1.500 to 20.000 ppm	±5 % of m.v. (additional error)	1 ppm
NO <sub>low</sub> measurement			0.1 ppm	300 to 1.500 ppm		0.1 ppm
SO <sub>2</sub> measurement			1 ppm	500 to 25.000 ppm	Press. range -100 to 0 mbar at probe	1 ppm
C <sub>x</sub> H <sub>y</sub> measurement	Methane: 100 to 40,000 ppm Propane: 100 to 21,000 ppm Butane: 100 to 18,000 ppm		10 ppm		tip	
NO <sub>2</sub> measurement				500 to 2.500 ppm		0.1 ppm
H <sub>2</sub> S measurement				200 to 1.500 ppm		0.1 ppm



# Technical data

## Technical data testo 350 analyzer box

Measuring range	Accuracy ±1 digit	Resolution	Reaction time t <sub>9</sub>
0 to +120 %	_	0.1 % (0 to +120 %)	
0 to +99.9 % qA		0.1 % qA (-20 to +99.9 % qA)	
0 to CO <sub>2 max</sub> Vol. % CO <sub>2</sub>	calculated from O <sub>2</sub> ±0.2 Vol.%	0.01 Vol. % CO <sub>2</sub>	40 s
-40 to +40 hPa	±1.5% of m.v. (-40 to -3 hPa) ±1.5% of m.v. (+3 to +40 hPa) ±0.03 hPa (-2.99 to +2.99 hPa)	0.01 hPa (-40 to +40 hPa)	
-200 to +200 hPa	±1.5% of m.v. (-200 to -50 hPa) ±1.5% of m.v. (+50 to +200 hPa) ±0.5 hPa (-49.9 to +49.9 hPa)	0.1 hPa (-200 to +200 hPa)	
0 to +40 m/s		0.1 m/s (0 to +40 m/s)	
-600 to +1.150 hPa	±10 hPa	1 hPa	
0 to 99.9 °C td		0.1 °C td (0 to 99.9 °C td)	
-200 to +1.370 °C	±0.4 °C (-100 to +200 °C) ±1 °C (-200 to -100.1 °C) ±1 °C (+200.1 to +1370 °C)	0.1 °C (-200 to +1.370 °C)	
0 to +1.760 °C	±1 °C (0 to +1.760 °C)		
-20 to +50 °C	±0.2 °C (-10 to +50 °C)	0.1 °C (-20 to +50 °C)	
	0 to +120 %  0 to +99.9 % qA  0 to CO <sub>2 max</sub> Vol. %  CO <sub>2</sub> -40 to +40 hPa  -200 to +200 hPa  0 to +40 m/s  -600 to +1.150 hPa  0 to 99.9 °C td  -200 to +1.370 °C	±1 digit  0 to +120 %  0 to +99.9 % qA  0 to CO <sub>2 max</sub> Vol. % CO <sub>2</sub> -40 to +40 hPa  ±1.5% of m.v. (-40 to -3 hPa) ±1.5% of m.v. (+3 to +40 hPa) ±0.03 hPa (-2.99 to +2.99 hPa)  -200 to +200 hPa  ±1.5% of m.v. (+50 to +200 hPa) ±1.5% of m.v. (+50 to +200 hPa) ±1.5% of m.v. (+50 to +40 hPa) ±0.5 hPa (-49.9 to +49.9 hPa)  0 to +40 m/s  -600 to +1.150 hPa  ±10 hPa  0 to 99.9 °C td  -200 to +1.370 °C  ±0.4 °C (-100 to +200 °C) ±1 °C (-200 to -100.1 °C) ±1 °C (+200.1 to +1370 °C)  0 to +1.760 °C  ±1 °C (0 to +1.760 °C)	±1 digit  0 to +120 %  0.1 % (0 to +120 %)  0 to +99.9 % qA  0.1 % qA (-20 to +99.9 % qA)  0 to CO <sub>2</sub> max Vol. %  CO <sub>2</sub> -40 to +40 hPa  ±1.5% of m.v. (-40 to -3 hPa) ±1.5% of m.v. (+3 to +40 hPa) ±0.03 hPa (-2.99 to +2.99 hPa)  -200 to +200 hPa  ±1.5% of m.v. (+50 to +200 hPa) ±1.5% of m.v. (+50 to +200 hPa) ±0.5 hPa (-49.9 to +49.9 hPa)  0.1 hPa (-200 to +200 hPa)  1 hPa  0 to +40 m/s  0 to 99.9 °C td  0.1 °C td (0 to 99.9 °C td)  0 to +1.370 °C ±0.4 °C (-100 to +200 °C) ±1 °C (-200 to -100.1 °C) ±1 °C (+200.1 to +1370 °C)  0 to +1.760 °C  ±1 °C (0 to +1.760 °C)  0.1 °C (0 to +1.760 °C)

# **Technical data CxHy sensor**

Meas. parameter	Measuring range <sup>1</sup>	Accuracy ±1 digit	Resolution	Min. O <sub>2</sub> requirement in flue gas	Reaction time t <sub>90</sub>	Response factor <sup>2</sup>
Methane	100 to 40.000 ppm	<400 ppm (100 to 4.000 ppm) <10% of m.v.		2% + (2 x m.v. methane)		1
Propane	100 to 21.000 ppm		10 ppm	2% + (5 x m.v. propane)	‹40 s	1.5
Butane	100 to 18.000 ppm	(>4.000 ppm)		2% + (6.5 x m.v. butane)		2

<sup>&</sup>lt;sup>1</sup> Lower explosion limit (LEL)must be adhered to.

### **General technical data**

Dimensions	330 x 128 x 438 mm
Weight	4800 g
Storage temperature	-20 to +50 °C
Operating temperature	-5 to +45 °C
Housing material	ABS
Memory	250,000 readings
Power supply	AC mains unit 100V to 240V (50 to 60 Hz)
DC voltage input	11 V to 40 V
Max. dust load	20 g/m³ dust in flue gas
Dewpoint calculation	0 to 99 °Ctd
Max. positive pressure	max. +50 mbar
Max. negative pressure	min300 mbar
Pump through-flow	1 l/min. with through-flow monitoring
Hose length 16.2 m (corr	responds to 5 probe hose extensions)
Max. humidity load	+70 °C dewpoint temperature

Trigger input	Voltage 5 to 12 Volt (rising or trailing edge) pulse width > 1 sec load: 5 V/max, 5 mA, 12 V/max. 40 mA
Warranty	Measuring instrument 2 years (excepting wearing parts e.g. gas sensors)  Gas sensors  CO/NO/NO <sub>2</sub> /SO <sub>2</sub> /H2 <sub>2</sub> /C <sub>x</sub> H <sub>v</sub> : 1year  O <sub>2</sub> sensor: 1 1/2 years  CO <sub>2</sub> -IR sensors: 2 years  The warranty applies to average sensor load.  Rech. battery: 1 year
Protection class	IP40
Battery life	Maximum load approx. 2.5 h

<sup>&</sup>lt;sup>2</sup> The HC sensor is adjusted to methane ex-works. It can be adjusted to a different gas (propane or butane) by the user.



# Ordering suggestions

Emission measurement on industrial engines	
on moustrial engines	Part no.
testo 350 control unit	0632 3511
Option BLUETOOTH® wireless transmission	
testo 350 analyzer unit	0632 3510
Option CO (H2-compensated) sensor, 0 to 10,000 ppm	
Option NO sensor, 0 to 4,000 ppm	
Option NO2 sensor, 0 to 500 ppm	
Option Peltier gas preparation incl. hose pump	
Option BLUETOOTH® wireless transmission	
Option fresh air valve for long-term measurement	
Option measuring range extension	
Flue gas probe for industrial engines	0600 7555
testo BLUETOOTH® printer	0554 0620
easyEmission software	0554 3334
International mains unit for control unit	0554 1096
Transport case	0516 3510

Emission measurement	
on burners	Part no.
testo 350 control unit	0632 3511
Option BLUETOOTH® wireless transmission	
testo 350 analyzer unit	0632 3510
Option CO (H2-compensated) sensor, 0 to 10,000 ppm	
Option NO sensor, 0 to 4,000 ppm	
Option NO2 sensor, 0 to 500 ppm	
Option SO2 sensor, 0 to 5,000 ppm	
Option Peltier gas preparation incl. hose pump	
Option BLUETOOTH® wireless transmission	
Option measuring range extension	
Gas sampling probe, modular	0600 8764
testo BLUETOOTH® printer	0554 0620
easyEmission software	0554 3334
International mains unit for control unit	0554 1096
Transport case	0516 3510

Emission measurement			
on gas turbines	Part no.		
testo 350 control unit	0632 3511		
Option BLUETOOTH® wireless transmission			
testo 350 analyzer unit	0632 3510		
Option COlow (H2 compensated) sensor, 0 to 500 ppm			
Option NOlow sensor, 0 to 300 ppm			
Option NO2 sensor, 0 to 500 ppm			
Option Peltier gas preparation incl. hose pump			
Option BLUETOOTH® wireless transmission			
Option fresh air valve for long-term measurement			
Option measuring range extension			
Flue gas probe for industrial engines	0600 7555		
testo BLUETOOTH® printer	0554 0620		
easyEmission software	0554 3334		
International mains unit for control unit	0554 1096		
Transport case	0516 3510		

Emission measurement on thermal processes			
<u> </u>	Part no.		
testo 350 control unit	0632 3511		
Option BLUETOOTH® wireless transmission			
testo 350 analyzer unit	0632 3510		
Option CO (H2-compensated) sensor, 0 to 10,000 ppm			
Option CO2 (NDIR) sensor, 0 to 50 Vol%			
Option NO sensor, 0 to 4,000 ppm			
Option NO2 sensor, 0 to 500 ppm			
Option Peltier gas preparation incl. hose pump			
Option BLUETOOTH® wireless transmission			
Industrial probe set 1200 °C	0600 7610		
easyEmission software	0554 3334		
International mains unit for control unit	0554 1096		
Transport case	0516 3510		