



# Gas leak detectors

For a quick overview

testo 317-2  
testo 316-1  
testo 316-2  
testo gas detector  
testo 316-Ex



CH<sub>4</sub>

C<sub>3</sub>H<sub>8</sub>

H<sub>2</sub>

## Gas leak testing

Over and over again, devastating explosions and fires are caused by leaky gas pipelines. However, even smaller leaks in the gas pipelines, some of which cannot be detected by odour, lead directly to higher consumption and, in the long run, increase the risk of accidents.

## How do leaks occur?

Leaks can be caused, for example, by hairline cracks (cracks which are hardly identifiable with the naked eye) in the pipelines. The often used hemp sealant can also, after many years of use, become leaky.

## Fast testing

Thanks to technological developments, it is today possible to use a test instrument to carry out a gas pipeline test (leak quantity test) in a very short time. If a leak is determined, the site of the gas leak can be identified very quickly and reliably with the help of the gas leak detector.

# Overview Testo gas leak detectors

Measuring instrument	testo 317-2	testo 316-1	testo 316-2	testo gas detector	testo 316-EX
	<b>The convenient gas leak detector for beginners</b>	<b>The detector for leaks in natural gas pipes</b>	<b>The gas leak detector with integrated pump for fast check measurements</b>	<b>Gas detector</b>	<b>Gas detector with EX-protection</b>
					
Meas. range					
Methane	0 to 20.000 ppm CH <sub>4</sub>	0 to 10,000 ppm CH <sub>4</sub>	10 ppm to 4,0 Vol. % CH <sub>4</sub>	1 to 999 ppm CH <sub>4</sub> 0,1 to 4,4 Vol. % CH <sub>4</sub>	0 ppm to 2.5 Vol. % CH <sub>4</sub>
Propane	0 to 10.000 C <sub>3</sub> H <sub>8</sub>	–	10 ppm to 1,9 Vol. % C <sub>3</sub> H <sub>8</sub>	1 to 999 ppm C <sub>3</sub> H <sub>8</sub> 0,1 to 1,9 Vol. % C <sub>3</sub> H <sub>8</sub>	0 ppm to 1.0 Vol. % C <sub>3</sub> H <sub>8</sub>
Hydrogen	–	–	10 ppm to 4,0 Vol. % H <sub>2</sub>	1 to 999 ppm H <sub>2</sub> 0,1 to 4,0 Vol. % H <sub>2</sub>	0 ppm to 2.0 Vol. % H <sub>2</sub>
Lower response thresholds	100 ppm CH <sub>4</sub> 50 C <sub>3</sub> H <sub>8</sub>	100 ppm	10 ppm	10 ppm	–
1st alarm limit	10.000 ppm CH <sub>4</sub> 5000 C <sub>3</sub> H <sub>8</sub> (20% LEL)	from 200 ppm CH <sub>4</sub> (LED yellow)	200 ppm CH <sub>4</sub> 100 ppm C <sub>3</sub> H <sub>8</sub> 200 ppm H <sub>2</sub>	–	–
2nd alarm limit	–	from 10.000 ppm CH <sub>4</sub> (LED red)	10.000 ppm CH <sub>4</sub> 5.000 ppm C <sub>3</sub> H <sub>8</sub> 10.000 ppm H <sub>2</sub>	–	–
Resolution	–	–	–	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %
Display	8 segment trend display	LED (3 colour)	18 segment bar display	ppm display	–
Battery life	4 h (LR03)	> 5 h	6 h	> 8 h	to 10 h
Other features	audible signal	Semi-conductor sensor	Earphone socket	· extendable probe · Inherently safe sensor according to DMT	Protection class IP54 EU guideline 94/9/EG (ATEX) 2004/108/EG EX-protection II 2G EEx ib IIC T1 (Ex Zone 1)

# The convenient gas leak detector for beginners

## testo 317-2

testo 317-2 gas leak detector including case with belt clip and wrist strap and batteries

Part no. 0632 3172



Highly practical gas leak detector for fast checks on gas pipe connections, with visual bar display.

- Optical bar display
- Sensor self-test after switching on
- Rising alarm tone with increasing gas concentration
- Continuous tone when alarm threshold is exceeded
- Audible confirmation of readiness to operate
- Battery monitoring with optical display

### Sensor types

	<b>Methane</b>	<b>Propane</b>
Meas. range	0 to 20.000 ppm CH <sub>4</sub>	0 to 10.000 C <sub>3</sub> H <sub>8</sub>
Lower response thresholds	100 ppm CH <sub>4</sub>	50 C <sub>3</sub> H <sub>8</sub>
1st alarm limit	10.000 ppm CH <sub>4</sub> (20% LEL)	5000 C <sub>3</sub> H <sub>8</sub> (20% LEL)

### General technical data

Storage temp.	-20 to +50 °C
Oper. temp.	-5 to +45 °C
Battery type	2 batteries type micro AAA 1.5 V (LR03)
Battery life	4 h (LR03)
Weight	< 300 g
Display	8 segment trend display

t90	< 5 s
Heat-up time	60 s
Other features	audible signal (85 dB(A))
Warranty	2 years Warranty conditions see internet page <a href="http://www.testo.com/warranty">www.testo.com/warranty</a>

# The detector for leaks in natural gas pipes

**testo 316-1**

testo 316-1 electronic gas leak detector with flexible probe and battery



Part no. 0632 0316

The testo 316-1 gas leak detector quickly detects even the smallest leaks.

- Flexible measurement probe for inaccessible pipes
- TopSafe case protects from dirt and impact (optional)
- Audible alarm if limit value is exceeded
- Optical alarm

## Sensor types

	<b>Methane</b>
Meas. range	0 to 10,000 ppm CH <sub>4</sub>
Lower response thresholds	100 ppm
1st alarm limit	from 200 ppm CH <sub>4</sub> (LED yellow)
2nd alarm limit	from 10.000 ppm CH <sub>4</sub> (LED red)

## General technical data

Storage temp.	-20 to +50 °C	Display	LED (3 colour)
Oper. temp.	+4 to +45 °C	t90	< 5 s
Oper. humidity	0 to 95 %RH	Heat-up time	< 30 s
Battery type	9V block battery	Other features	Semi-conductor sensor
Battery life	> 5 h	Warranty	2 years Warranty conditions see internet page <a href="http://www.testo.com/warranty">www.testo.com/warranty</a>
Weight	Approx. 300 g		
Dimensions	190 x 57 x 42 mm (without sensors)		

## Accessories

### Part no.

### Accessories for measuring instrument testo 316-1

testo 316-1 TopSafe; protection case, incl. stand, protects from dirt and impact	0516 0189	
Transport case; plastic; for transport and secure storage of measuring instrument and accessories	0516 3120	

# The gas leak detector with integrated pump for fast check measurements

## testo 316-2

testo 316-2 electronic gas leak detector with flexible measurement probe, incl. case, mains charger and earphones

Part no. 0632 3162



The testo 316-2 is extremely user-friendly and ideally suited to fast check measurements thanks to its integrated pump, its optical presentation of the gas concentrations detected, and the integrated rechargeable battery.

- Optical and audible alarm with bar display for increasing and dangerous gas concentrations
- Trend display shows maximum leakage
- Integrated pump
- Flexible measurement probe for inaccessible places
- Earphone connection for secure leakage localization in loud surroundings
- High duration of use thanks to rechargeable battery

### Sensor types

	Methane	Propane	Hydrogen
Meas. range	10 ppm to 4,0 Vol. % CH <sub>4</sub>	10 ppm to 1,9 Vol. % C <sub>3</sub> H <sub>8</sub>	10 ppm to 4,0 Vol. % H <sub>2</sub>
Lower response thresholds	10 ppm	10 ppm	10 ppm
1st alarm limit	200 ppm CH <sub>4</sub>	100 ppm C <sub>3</sub> H <sub>8</sub>	200 ppm H <sub>2</sub>
2nd alarm limit	10.000 ppm CH <sub>4</sub>	5.000 ppm C <sub>3</sub> H <sub>8</sub>	10.000 ppm H <sub>2</sub>

### General technical data

Storage temp.	-25 to +60 °C
Oper. temp.	-5 to +50 °C
Oper. humidity	20 to 80 %RH
Battery type	NiMH battery
Battery life	6 h
Weight	348 g
Dimensions	190 x 57 x 42 mm (without sensors)

Display	18 segment bar display
t90	< 2 s
Heat-up time	60 s
Other features	Earphone socket
Warranty	2 years Warranty conditions see internet page <a href="http://www.testo.com/warranty">www.testo.com/warranty</a>

### Accessories

### Part no.

#### Accessories for measuring instrument testo 316-2

Earphones, black, with ear cushions	0554 5001	
Mains unit 12V / DC / 300 mA	0554 1093	

# Gas detector

## testo gas detector

testo gas detector incl. flexible probe extension, rechargeable battery and mains unit for mains operation and battery recharging, with calibration protocol

Part no. 0632 0323



According to DVGW leaflet G 465-4, gas detectors are approved for above-ground gas detection up to the "lower explosive limit (LEL)". Testo's gas detector is a multi-range gas detector for the gas types methane, propane and hydrogen. Gas concentrations are measured by the semi-conductor sensor in the ppm range and are shown in the display with a resolution of 1 ppm.

- Audible signals if approaching lower explosion limit
- Continuous tone and warning in display if explosion limit is reached
- Flexible probe extension for difficult-to-access points

## Sensor types

	<b>Methane</b>	<b>Propane</b>	<b>Hydrogen</b>
Meas. range	1 to 999 ppm CH <sub>4</sub> 0,1 to 4,4 Vol. % CH <sub>4</sub>	1 to 999 ppm C <sub>3</sub> H <sub>8</sub> 0,1 to 1,9 Vol. % C <sub>3</sub> H <sub>8</sub>	1 to 999 ppm H <sub>2</sub> 0,1 to 4,0 Vol. % H <sub>2</sub>
Lower response thresholds	10 ppm	10 ppm	10 ppm
Resolution	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %

## General technical data

Storage temp.	-25 to +70 °C
Oper. temp.	-15 to +40 °C
Battery type	NiMH battery, 1600 mAh
Battery life	> 8 h
Weight	320 g
Dimensions	190 x 40 x 28 mm
Display	ppm display

t90	2-3 s
Heat-up time	40 s
Other features	· extendable probe · Inherently safe sensor according to DMT
Warranty	2 years on instrument 1 year on sensor Warranty conditions see internet page <a href="http://www.testo.com/warranty">www.testo.com/warranty</a>

# Gas detector with EX-protection

## testo 316-EX

testo 316-EX, electronic gas leak detector with EX-protection, incl. batteries, cases, Allen key and calibration protocol

Part no. 0632 0336



### Proof of gas and leakage localization on gas pipes and installations in indoor and outdoor areas

According to the DVGW information sheet, EX-protection is required in areas in which explosive gas mixtures have formed or are to be expected. The testo 316-EX, which conforms to the guideline 94/9/EG (ATEX), is a multi-range gas detector for the gases methane, propane and hydrogen. The gas concentrations are measured by the semi-conductor sensor in the ppm range and are shown in the display with a resolution of 1 ppm.

- Flexible measurement probe for inaccessible pipes
- 1 ppm resolution on display
- Indicator suppression for comfortable locating of the leak
- 94/9/EG (ATEX) conform

### Sensor types

	Methane	Propane	Hydrogen
Meas. range	0 ppm to 2.5 Vol. % CH <sub>4</sub>	0 ppm to 1.0 Vol. % C <sub>3</sub> H <sub>8</sub>	0 ppm to 2.0 Vol. % H <sub>2</sub>
Trigger threshold	1 ppm	1 ppm	1 ppm
Resolution	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %	1 ppm / 0,1 Vol. %

### General technical data

Storage temp.	-10 to +50 °C	Weight	Approx. 200 g
Oper. temp.	0 to +40 °C	Dimensions	135 x 45 x 25 mm
Oper. humidity	20 to 80 %RH (not condensed)	Protection class	IP54
Voltage supply	2 x 1,5 V (Mignon) / AA Type permitted for use in areas with danger of explosion: Camelion Plus Alkaline LR6 (see order data, order no. 0515 0316)	EU guideline	94/9/EG (ATEX) 2004/108/EG
Battery life	to 10 h	EX-protection	II 2G EEx ib IIC T1 (Ex Zone 1)
t <sub>90</sub>	14 s	Warranty	2 years on the instrument 1 year on the sensor Warranty conditions see internet page <a href="http://www.testo.com/warranty">www.testo.com/warranty</a>

### Accessories

### Part no.

#### Accessories for measuring instrument testo 316-EX

Sampling adapter for pressure test gas bottle	0554 0559	
Pressure test gas bottle 1 ltr., 1 Vol.% CH <sub>4</sub>	0554 0554	
Spare battery Camelion Plus Alkaline LR6 (AA), 1.5 V / 2600 mAh	0515 0316	

