

Data sheet

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testo 316-2 / testo gas detector /
testo 316-EX



Gas leak detectors

For a quick overview

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



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 |
|---------------------------|---|---|--|--|--|
| | The convenient gas leak detector for beginners | The detector for leaks in natural gas pipes | The gas leak detector with integrated pump for fast check measurements | Gas detector | Gas detector with EX-protection |
| |  |  |  |  |  |
| Measuring range | | | | | |
| Methane | 100 to 20.000 ppm CH ₄ | 100 to 10,000 ppm CH ₄ | 10 ppm to 4,0 Vol. % CH ₄ | 10 to 999 ppm CH ₄ 0,1 to 4,4 Vol. % CH ₄ | 1 ppm to 2.5 Vol. % CH ₄ |
| Propane | 50 to 10.000 C ₃ H ₈ | – | 10 ppm to 1,9 Vol. % C ₃ H ₈ | 10 to 999 ppm C ₃ H ₈ 0,1 to 1,9 Vol. % C ₃ H ₈ | 1 ppm to 1.0 Vol. % C ₃ H ₈ |
| Hydrogen | – | – | 10 ppm to 4,0 Vol. % H ₂ | 10 to 999 ppm H ₂ 0,1 to 4,0 Vol. % H ₂ | 1 ppm to 2.0 Vol. % H ₂ |
| Lower response thresholds | 100 ppm CH ₄ 50 C ₃ H ₈ | 100 ppm | 10 ppm | 10 ppm | – |
| 1st alarm limit | 10.000 ppm CH ₄ 5000 C ₃ H ₈ (20% LEL) | from 200 ppm CH ₄ (LED yellow) | 200 ppm CH ₄ 100 ppm C ₃ H ₈ 200 ppm H ₂ | – | – |
| 2nd alarm limit | – | from 10.000 ppm CH ₄ (LED red) | 10.000 ppm CH ₄ 5.000 ppm C ₃ H ₈ 10.000 ppm H ₂ | – | – |
| 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

| | Methane | Propane |
|---------------------------|--------------------------------------|--|
| Measuring range | 100 to 20.000 ppm CH ₄ | 50 to 10.000 C ₃ H ₈ |
| Lower response thresholds | 100 ppm CH ₄ | 50 C ₃ H ₈ |
| 1st alarm limit | 10.000 ppm CH ₄ (20% LEL) | 5000 C ₃ H ₈ (20% LEL) |

General technical data

| | |
|-----------------------|---|
| Storage temperature | -20 to +50 °C |
| Operating temperature | -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)) |

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

| | Methane |
|---------------------------|---|
| Measuring range | 100 to 10,000 ppm CH ₄ |
| Lower response thresholds | 100 ppm |
| 1st alarm limit | from 200 ppm CH ₄ (LED yellow) |
| 2nd alarm limit | from 10.000 ppm CH ₄ (LED red) |

General technical data

| | |
|-----------------------|------------------------------------|
| Storage temperature | -20 to +50 °C |
| Operating temperature | +4 to +45 °C |
| Oper. humidity | 0 to 95 %RH |
| Battery type | 9V block battery |
| Battery life | > 5 h |
| Weight | Approx. 300 g |
| Dimensions | 190 x 57 x 42 mm (without sensors) |

| | |
|----------------|-----------------------|
| Display | LED (3 colour) |
| t90 | < 5 s |
| Heat-up time | < 30 s |
| Other features | Semi-conductor sensor |

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 | |
|--|-----------|--|

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, 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 |
|---------------------------|--------------------------------------|--|-------------------------------------|
| Measuring range | 10 ppm to 4,0 Vol. % CH ₄ | 10 ppm to 1,9 Vol. % C ₃ H ₈ | 10 ppm to 4,0 Vol. % H ₂ |
| Lower response thresholds | 10 ppm | 10 ppm | 10 ppm |
| 1st alarm limit | 200 ppm CH ₄ | 100 ppm C ₃ H ₈ | 200 ppm H ₂ |
| 2nd alarm limit | 10.000 ppm CH ₄ | 5.000 ppm C ₃ H ₈ | 10.000 ppm H ₂ |

General technical data

| | |
|-----------------------|------------------------------------|
| Storage temperature | -25 to +60 °C |
| Operating temperature | -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 |

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 | |
| Case for secure storage of measuring instrument | 0516 0191 | |

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



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

| | Methane | Propane | Hydrogen |
|---------------------------|--|--|--|
| Measuring range | 10 to 999 ppm CH ₄ 0,1 to 4,4 Vol. % CH ₄ | 10 to 999 ppm C ₃ H ₈ 0,1 to 1,9 Vol. % C ₃ H ₈ | 10 to 999 ppm H ₂ 0,1 to 4,0 Vol. % H ₂ |
| 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 temperature | -25 to +70 °C |
| Operating temperature | -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 |

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

The testo 316-EX, which conforms to the guideline 94/9/EG (ATEX), is a multi-range gas detector with Ex protection 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 1ppm.

- 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 |
|-------------------|-------------------------------------|---|------------------------------------|
| Measuring range | 1 ppm to 2.5 Vol. % CH ₄ | 1 ppm to 1.0 Vol. % C ₃ H ₈ | 1 ppm to 2.0 Vol. % H ₂ |
| 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 temperature | -10 to +50 °C |
| Operating temperature | -10 to +40 °C |
| Oper. humidity | 20 to 80 %RH (not condensed) |
| 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) |
| Battery life | to 10 h |
| t ₉₀ | 14 s |

| | |
|------------------|---------------------------------|
| Weight | Approx. 200 g |
| Dimensions | 135 x 45 x 25 mm |
| Protection class | IP54 |
| EU guideline | 94/9/EG (ATEX) 2004/108/EG |
| EX-protection | II 2G EEx ib IIC T1 (Ex Zone 1) |

Accessories

Part no.

Accessories for measuring instrument testo 316-EX

| | | |
|---|-----------|--|
| Spare battery Camelion Plus Alkaline LR6 (AA), 1.5 V / 2600 mAh | 0515 0316 | |
|---|-----------|--|

