

# LEAK PREVENTION TECHNOLOGY

For a clean and protected environment



## Pressure leak detector for pipes DLR-GS



Variants • Equipment • Accessories

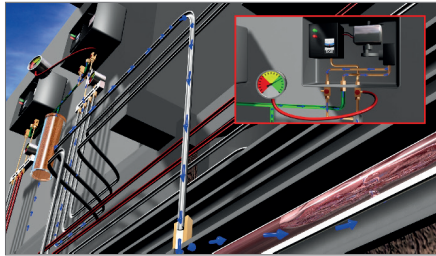
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## Pressure leak detectors for pipes – DLR

### Monitoring principle „overpressure“

With the DLR leak detectors an overpressure is built up in the interstitial space of the pipe. Therefore air or gas is used. The operating pressure and the alarm pressure of the leak detector are higher than the pressure of the transported good or the groundwater against the pipe's walls. In case of a leak in one of the two walls, air/gas escapes from the interstitial space. An escape of the transported material into the environment is thus reliably prevented!



> Leak detectors with refilling function like DLR-G or DLR-P compensate minor leaks in the system.

> Relevant leaks lead to a pressure drop. When the alarm pressure is reached, the visual and/or optical alarm is triggered.

### Naming of the leak detectors

- DLR-G .. = **D**ruck-**L**eckanzeiger **R**ohrleitung **G**as. This is a pressure leak detector for pipes working with gas. A pressure cylinder (nitrogen) is used for pressure built-up.
- DLR-GS .. = **D**ruck-**L**eckanzeiger **R**ohrleitung **G**as **s**tatisch. This is a pressure leak detector for pipes working with gas, static. For the pressure built-up a pressure generator must be brought to the building site. The leak detector has neither a pump nor an automatic refilling device.
- DLR-P .. = **D**ruck-**L**eckanzeiger **R**ohrleitung **P**umpe. This is a pressure leak detector for pipes with an integrated pump which is used for building up the pressure.
- DLR-P .. **CV** = **D**ruck-**L**eckanzeiger **R**ohrleitung **P**umpe und **R**ückschlagventil (**C**heck **V**alve). This is a pressure leak detector for pipes equipped with a pump and a check valve.
- .. = The ellipsis dots or the numerical value stand for the alarm pressure of the leak detector in bar.

## DLR-GS .. N



Static pressure leak detector without pressure generator. The operating pressure in the interstitial space is generated e.g. with a nitrogen bottle and then monitored by the leak detector. Especially designed for the monitoring of liquids which are highly explosive and liquids which react sensitive when in contact with air (e.g. cosmetics, foods). With re-filling indication „N“.

### The leak detector:

Leak detector DLR-GS is working with air or inert gas (nitrogen) as leak detection media in the interstice. The overpressure is built up manually. When monitoring liquids with a flash point > 55 °C, air can be used instead of nitrogen.

### Monitorable pipes:

- underground double-walled pipes and fittings
- for pipes with up to 15 bar operating pressure in the inner pipe

### Monitorable liquids:

Water-polluting liquids, even with a flash point ≤ 60 °C (for Germany ≤ 55 °C acc. to TRGS and TRBS). The conveyed product may not react with the leak detection medium used! Examples: petrol, methanol, diesel, chemicals, acids, lyes.

### Installation:

Outside Ex areas

### Conformity:

EN 13160 class I



DLR-GS .. N: with relay contact for refilling as standard



DLR-GS .. PMN in stainless steel housing

### Switching values (in bar):

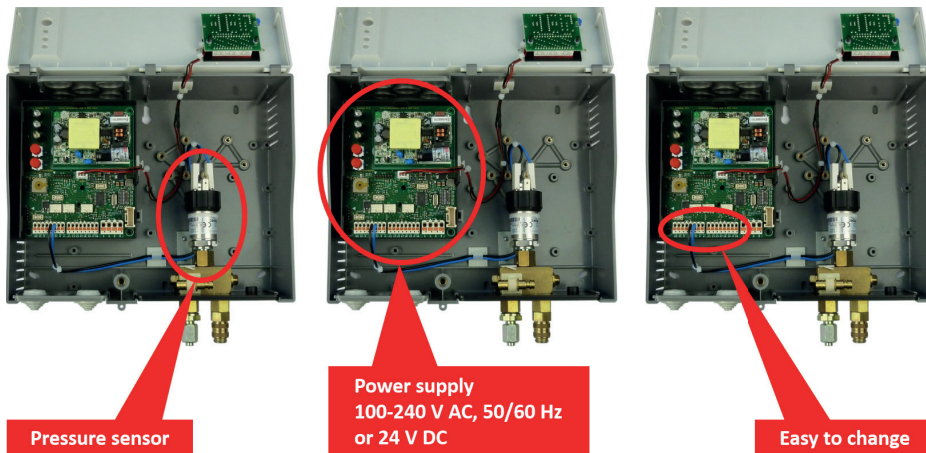
| DLR-GS<br>Type/alarm pressure | 1                 | 2     | 3     | 4    | 6    | 8    | 10   | 13   | 16   |
|-------------------------------|-------------------|-------|-------|------|------|------|------|------|------|
| Operating pressure inner pipe | pressu-<br>reless | < 1   | < 2   | < 3  | < 5  | < 7  | < 9  | < 12 | < 15 |
| Set pressure                  | 5                 | 6     | 7     | 8    | 10   | 12   | 14   | 17   | 20   |
| Test pressure interstice      | > 6,5             | > 8,0 | > 9,0 | > 10 | > 13 | > 16 | > 18 | > 22 | > 26 |

Special switching values on request

## Technical standard DLR-GS

- ▶ Standard design of the potential-free relay contact for the alarm message as a change-over contact
- ▶ Flexible power supply with 100 to 240 V AC, 50/60 Hz or 24 V DC
- ▶ If necessary, simple adjustment of the pressure level via DIP switch
- ▶ Quick and easy connection of the electrical connection lines using tension spring terminal technology
- ▶ Latest SMD electronic components

ALWAYS WITH  
PRE-ALARM  
FUNCTION „N“ =  
REFILLING NEEDED



## Proven advantages of the electronic version

- ▶ Electronic control of the pressure sensor
- ▶ Drilling patterns in the housing base (plastic housing)
- ▶ 2-pin port for querying/forwarding all operating states of the leak detector



## Options and additional functions

### Optional equipment

#### M (= Manometer/Pressure gauge)

The leak detector is equipped with a digital pressure display in the cover of the housing. It shows the current pressure of the system.



#### P (= Protected)

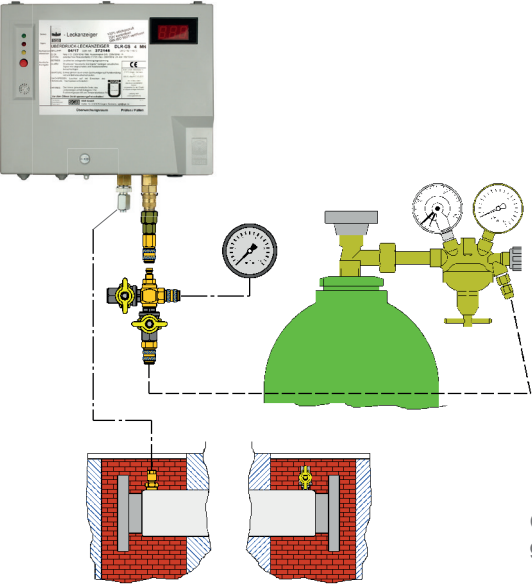
Protection against external weather influences like sunshine, rain, snow, salt water ... Also appropriate depending on the intended use (transported fluid, requirements of the systems).  
Material: stainless steel



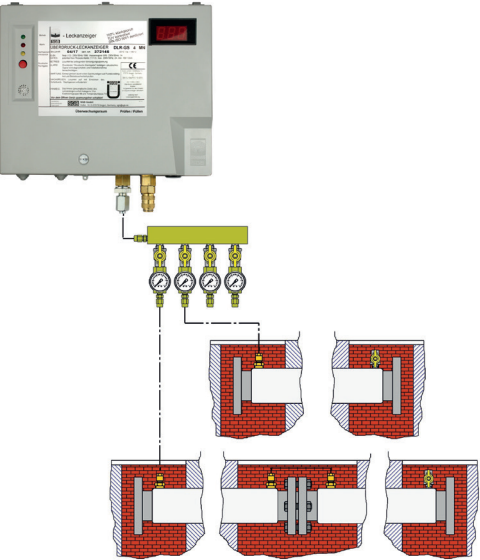
#### Si (= Service indication)

When commissioning the leak detector, the time for the prescribed functional test can be freely selected within the specified maintenance interval. There are time intervals from 1 up to 63 months. The service indicator (yellow LED) visually indicates the upcoming function test for the leak detector.




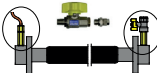



Commissioning with a pressure gas bottle





Leak detector, test device and installation kit

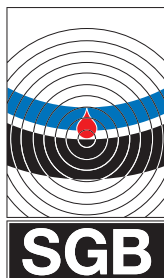
| Testing device  | Art-No. | Description           | Euro | Qty   |
|---|---------|-----------------------|------|-------|
|  | 115520  | Testing Device DLR-GS |      | 1 pce |

| Installation kit  | Art-No. | Description  | Euro | Qty   |
|---|---------|--|------|-------|
|  | 190721  | Inst. kit pipe, 1/4"m - CF6/4, for CU-pipe 6/4x1mm |      | 1 pce |

| Manifolds   | Art-No. | Description  | Euro | Qty   |
|---|---------|--|------|-------|
|  | 196280  | Manifold 2 pipes, shut-off valves, gauge till 25bar, CF6/4 |      | 1 pce |
|   | 196380  | Manifold 3 pipes, shut-off valves, gauge till 25bar, CF6/4 |      | 1 pce |
|   | 196480  | Manifold 4 pipes, shut-off valves, gauge till 25bar, CF6/4 |      | 1 pce |
|   | 196580  | Manifold 5 pipes, shut-off valves, gauge till 25bar, CF6/4 |      | 1 pce |
|   | 196680  | Manifold 6 pipes, shut-off valves, gauge till 25bar, CF6/4 |      | 1 pce |
|   | 196780  | Manifold 7 pipes, shut-off valves, gauge till 25bar, CF6/4 |      | 1 pce |
|   | 196880  | Manifold 8 pipes, shut-off valves, gauge till 25bar, CF6/4 |      | 1 pce |

| Testing devices   | Art-No.   | Description   | Euro | Qty   |
|---|---|---|------|-------|
|  | 115371  | Pressure Measuring Device CPH 6200 incl. suitcase, without Sensor |      | 1 pce |
|   | Digital hand-held pressure indicator with measuring ranges from 0...25 bar to -1000...0 mbar. The measuring range of the connected pressure sensor will be detected automatically. Incl. adapter for leak detector. |   |      |       |

| Pressure sensor   | Art-No. | Description  | Euro | Qty   |
|---|---------|--|------|-------|
|  | 115375  | Pressure sensor for CPH 6200 0...25 bar, process connection 1/2" |      | 1 pce |



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