

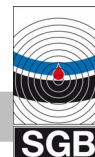
# Datasheet

## VLD

### Explosion-protected Vacuum Loss Detector with Indicating Unit(s)



Please read instructions prior to commencing any work!  
As of: 04/2024



## 1. Technical Data

### 1.1 General Data

Dimension sensor:	Ø 80 mm; L 200 mm (without cable)
Drilling patterns:	see section 2
Weight leak detector, HV sensor:	2.6 kg
Weight indicating unit:	
- Single version:	4.1 kg
- Double version:	6.3 kg
Storage temperature:	-40 °C to +90 °C
Operating temperature:	-40 °C to +90 °C (T1 ... T4)
Measuring substance temperature:	-40 °C to +105 °C
Air pressure:	860 ... 1060 mbar
Process connection:	Sealing cone for ultra-high vacuum, application-specific special flange
Leak detector safety class:	IP 67
Indicating device safety class:	IP 66
Vibration resistance leak detector:	10 g
Shock resistance leak detector:	100 g

### 1.2 Leak detector data

Pressure range (absolute):	0 ... 1.6 bar
Overpressure resistance:	10 bar
Vacuum resistance:	Yes
Non-linearity as per BFSL:	≤ 0.2 % of the range
Accuracy:	≤ 0.5 % of the range
Non-reproducibility:	≤ 0.1 % of the range
Transient time (IEC61298-2):	≤ 10 ms
Long-term stability:	≤ 0.2 % of the range

### 1.3 Leak detector explosion data (see also 3.4)

Explosion group:	II A and II B
Temperature class:	T1 ... T4
Marking:	⊕ II 1/2 G Ex db II B T4 Ga/Gb

### 1.4 Leak detector electrical data

Version:	I = 4 ... 20 mA
Load:	≤ (auxiliary energy – 10 V)/0.02 A
Auxiliary energy:	DC 10 ... 30 V
Maximum power input:	1 W
Short-circuit resistance:	S+ against U-
Reverse polarity protection:	U+ against U-
Insulation voltage:	DC 500 V

### 1.5 Switching Values

Two switching value settings are available ex works that can be selected with DIP switch 1 (standard switching values) and 8 (special switching values). DIP switch 10 is set the same in both variants.

	<b>Standard (DIP 1 + 10 to "On")</b>	<b>Special (DIP 8 + 10 to "On")</b>
<b>Warning ON</b>	> 100 mbar (abs)	> 100 mbar (abs)
<b>Warning OFF</b>	< 80 mbar (abs)	< 80 mbar (abs)
<b>Alarm ON</b>	> 1100 mbar (abs)	> 800 mbar (abs)
<b>Alarm OFF</b>	< 1050 mbar (abs)	< 750 mbar (abs)

A pressure of 10 mbar (abs) or lower is recommended to ensure functional leak monitoring. The operating pressure of the system complies with the specifications of the pipe manufacturer.

### 1.6 Field of Application

Monitoring of suitable double-walled pipes to convey liquid gas (e.g., liquefied natural gas LNG, cryogenic H<sub>2</sub>) that is usually used at loading stations.

The monitored pipe must not be operated with a CCP system (cathode corrosion protection).

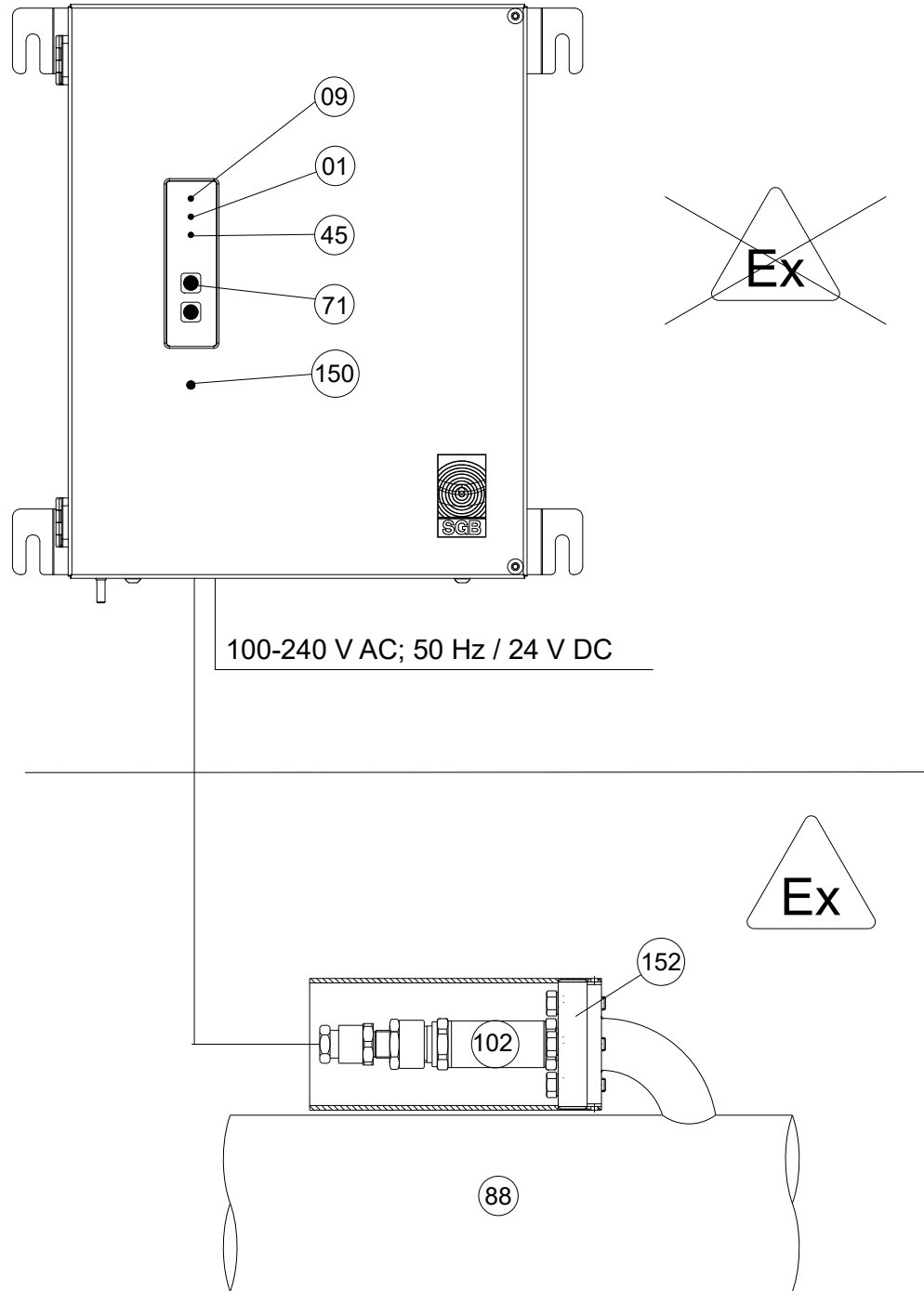
Other applications are conceivable, provided the conditions of this documentation and the approval are complied with, and the application is agreed with SGB GmbH.

### 1.7 Materials/resistance

The material CrNi steel (or equivalent) must be resistant to the relevant vapors and liquids.

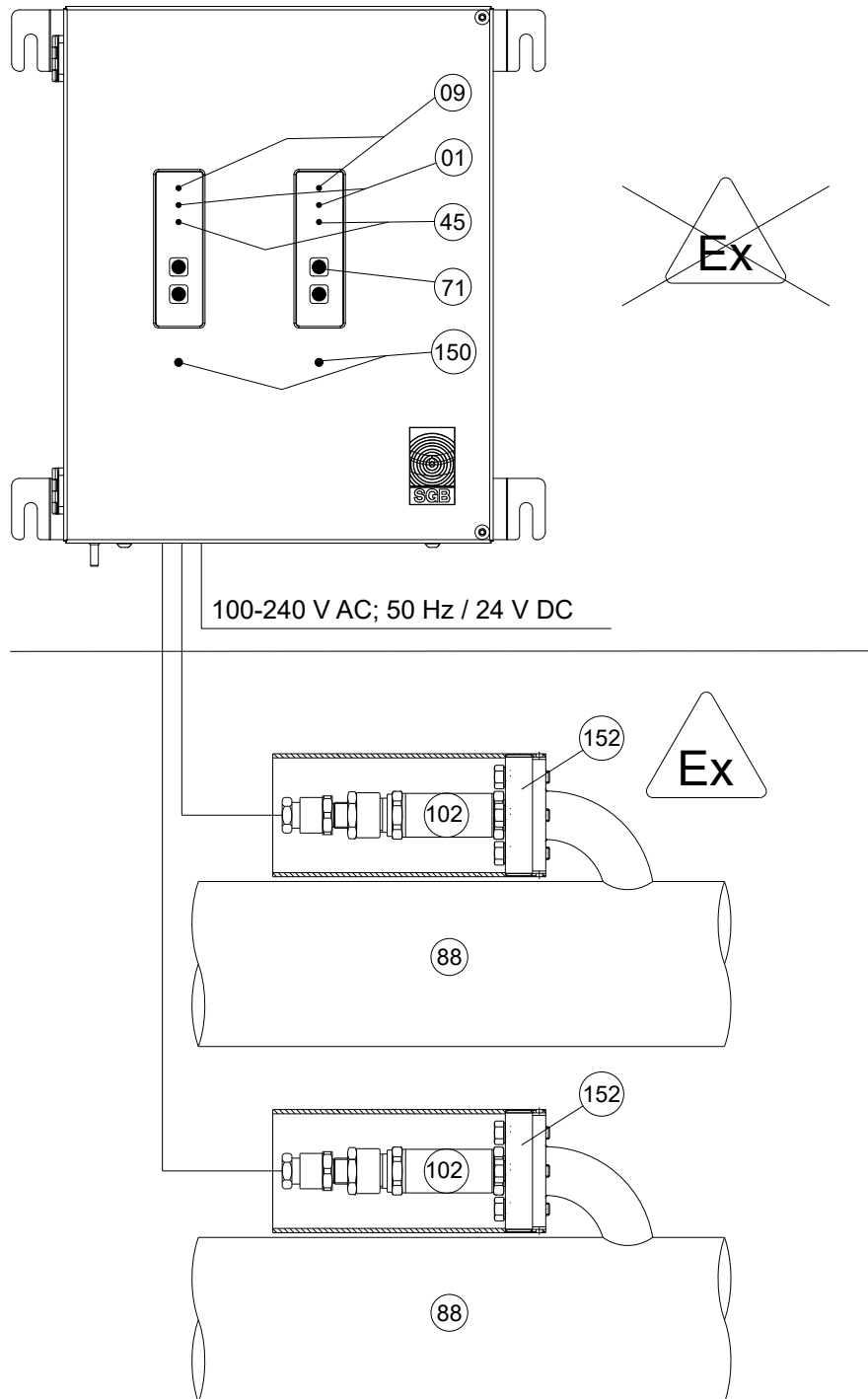
## 1.8 Installation examples

### 1.5.1 VLD single version with installation kit to one double-walled pipe



- 01 "Alarm" signal light, red
- 02 Shut-off valve
- 09 Signal lamp "Operation", green
- 45 "Warning" signal light, yellow
- 71 "Mute" button
- 88 Double-walled pipe
- 102 Pressure sensor
- 150 Maintenance display
- 152 Connection flange

1.5.2 VLD double-version with two MBS to two double-walled pipes

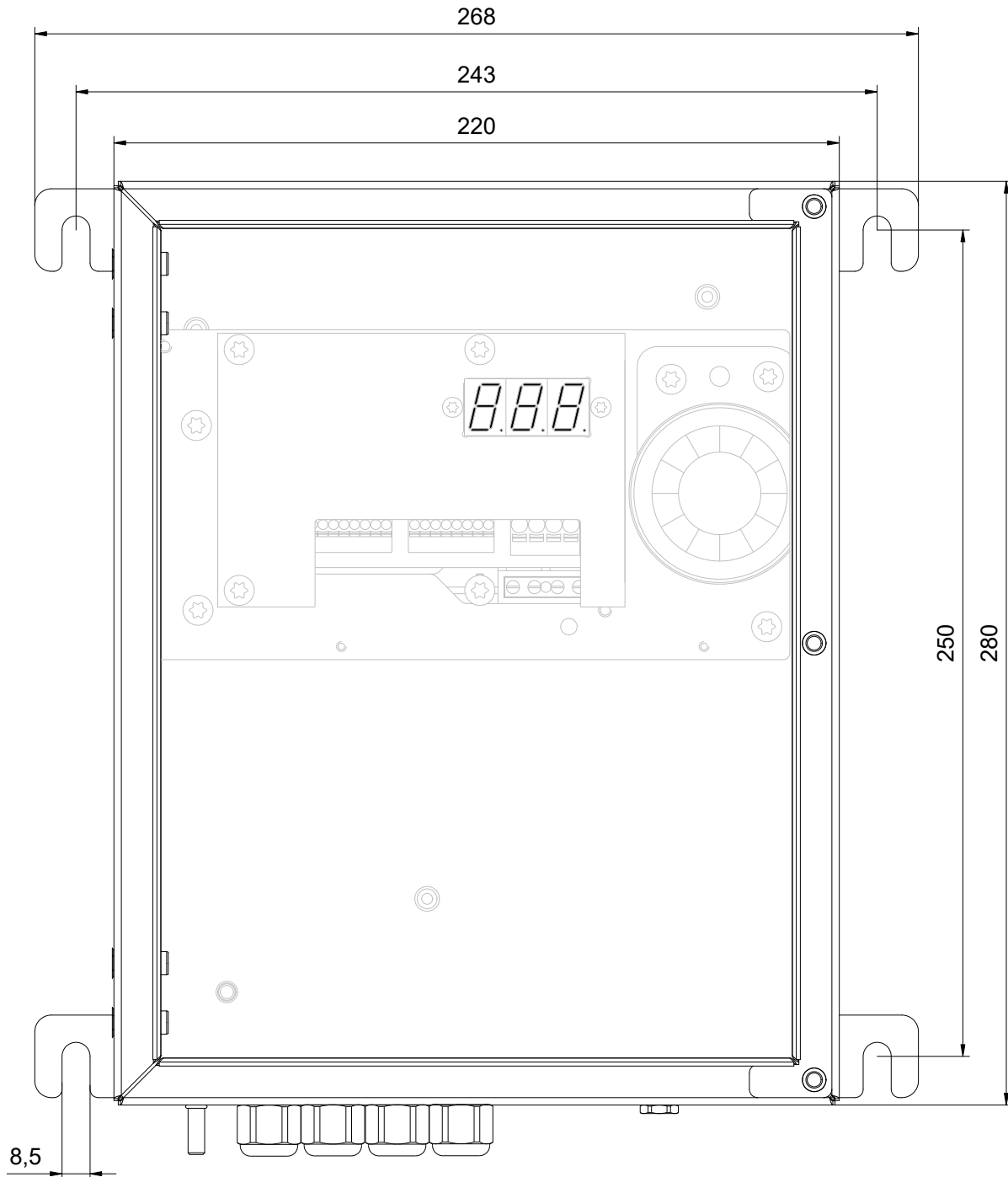


- 03 "Alarm" signal light, red
- 04 Shut-off valve
- 09 Signal lamp "Operation", green
- 45 "Warning" signal light, yellow
- 71 "Mute" button
- 88 Double-walled pipe
- 102 Pressure sensor
- 150 Maintenance display
- 152 Connection flange

## Dimensions

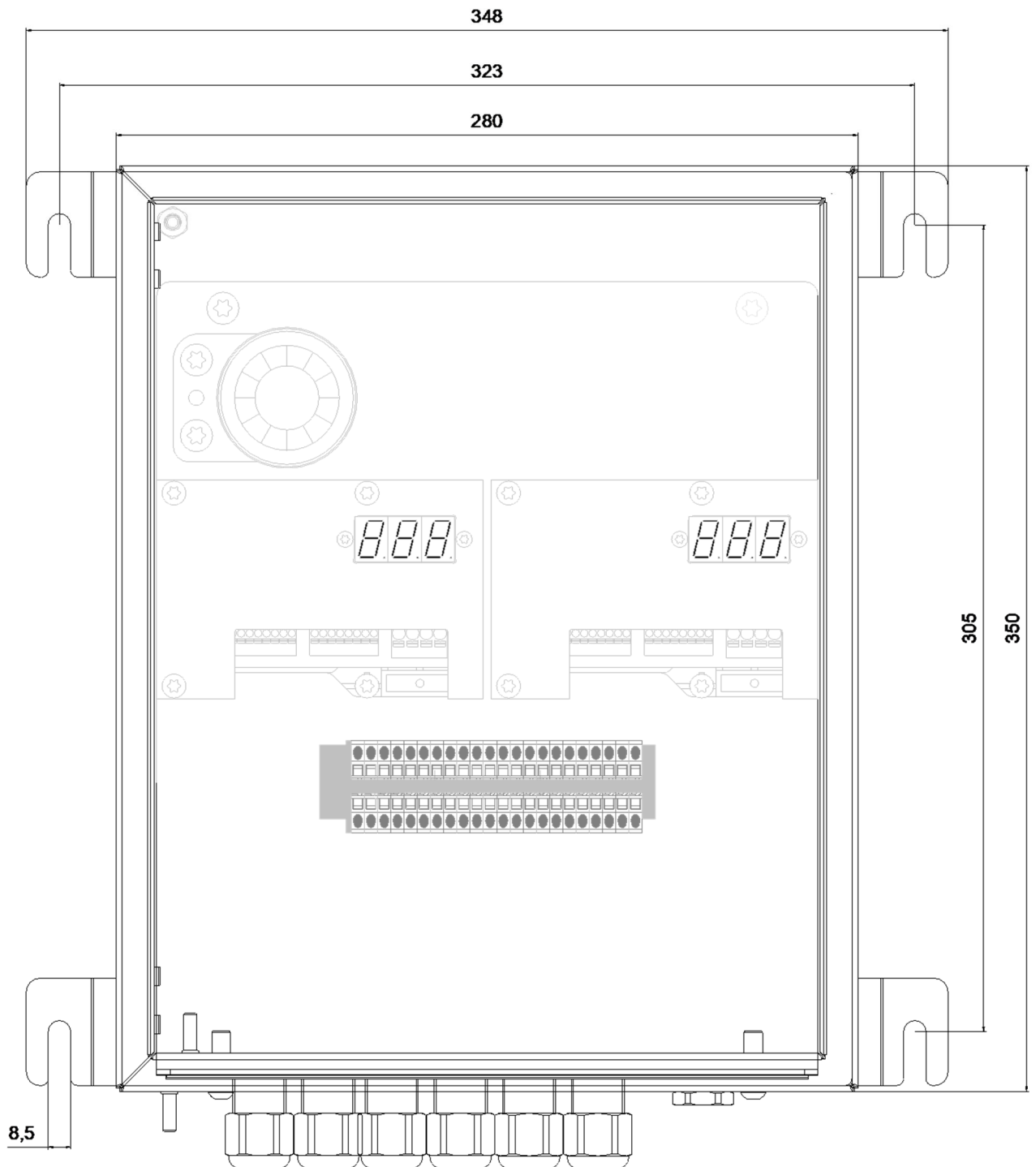
### 2 Dimension and drilling patterns stainless-steel housing

#### 2.1 Indicating unit, single version

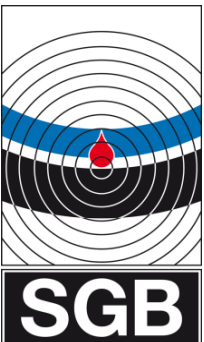


D = 120 mm

2.2 Indicating unit, double version



D = 140 mm



**Legal notice**

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