



"Made to Measure" Process Instrumentation for Pressure and Temperature Measurement in the Food, Pharmaceutical, Bio-Technology, Chemical, Petro-Chemical, Power, Environmental and Maritime Industries.

## SIL-Declaration

Functional Safety according IEC/EN 61508

HE\_138

Manufacturer

**LABOM Mess- und Regeltechnik GmbH**  
Im Gewerbepark 13, 27798 Hude

for type series

Differential pressure gauge with diaphragm and switch function, type series BG2...  
SIL 2 compliant

In accordance with the specifications and safety instructions  
the devices are suitable for use in safety related systems as per IEC/EN 61508.

As described in the datasheet, ambient and media temperature ranges are limited to -20...60 °C.  
For devices with S3 safety case and liquid filling the temperature ranges are limited to -20...40 °C.

operation mode	low demand mode
safety function	switching initiators
architecture	1oo1
subsystem type	A
hardware fault tolerance	HFT = 0
proof test interval	T <sub>1</sub> =1 year
dangerous failure rate	$\lambda_{du}=2,37 \cdot 10^{-8}$ 1/h $\lambda_{dd}=1,14 \cdot 10^{-7}$ 1/h
safe failure rate	$\lambda_s=3,99 \cdot 10^{-7}$ 1/h
safe failure fraction	SFF=95,6%
probability of failure on demand	PFD=1,05·10 <sup>-4</sup>
safety integrity level	<b>SIL 2</b>

The regular proof test must check the accuracy at 0%, 50% and 100% of span and at the intended switch point to ensure that detectable failures are discovered. In addition, a visual check must be carried out.

Hude, 27.11.2018  
LABOM Mess- und Regeltechnik GmbH

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R & D Director