



"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\_088

Manufacturer

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

for type series

**SIL 2 Compliant Gas expansion thermometer with electrical contact device,  
Type Series FU... and GF...**

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

Individual devices are part of an overall safety related system.

operation mode	low demand mode
safety function	switching initiators
architecture	1oo1
subsystem type	A
hardware fault tolerance	HFT = 0
proof test interval	$T_1=1$ Jahr
dangerous failure rate	$\lambda_{du}=4,01 \cdot 10^{-8}$ 1/h $\lambda_{dd}=1,22 \cdot 10^{-7}$ 1/h
safe failure rate	$\lambda_s=1,63 \cdot 10^{-7}$ 1/h
safe failure fraction	SFF=87,70%
probability of failure on demand	PFD= $1,77 \cdot 10^{-4}$
safety integrity level	<b>SIL 2</b>

The regular proof test must ensure that detectable failures are discovered.

Hude, 04.03.2014  
LABOM Mess- und Regeltechnik GmbH

i.V.  
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