

Certificate



Product Safety
Functional
Safety

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ID 060000000

No.: 968/EZ 559.04/18

Product tested	Infra-red point gas detector, Searchpoint Optima Plus with optional HART® output	Certificate holder	Life Safety Distribution GmbH Javastrasse 2 8604 Hegnau Switzerland
Type designation	2108B2XXYZ XX: Version Y: Gas Type Z: Optional HART® output: H: with HART® output N: without HART® output		
Codes and standards	IEC 61508 Parts 1-7:2010	EN 50270:2015 + AC:2016	
Intended application	The Infra-red point gas detector complies with the requirements of SIL 2 and systematic capability SC 2 acc. to IEC 61508 and can be used in applications up to SIL 2. The product was also reviewed for the use in the application area of IEC 61511-1 up to SIL 2. The safety related output is the 4..20 mA interface.		
Specific requirements	The instructions of the associated Operating Manual and the Safety Manual must be considered.		
Valid until	2023-01-09		

The issue of this certificate is based upon an examination, whose results are documented in Report No. 968/EZ 559.04/18 dated 2018-01-09.
This certificate is valid only for products which are identical with the product tested.

TÜV Rheinland Industrie Service GmbH
Bereich Automation
Funktionale Sicherheit
Am Grauen Stein, 51105 Köln

Köln, 2018-01-09

Certification Body Safety & Security for Automation & Grid

Dipl.-Ing. Stephan Häb

Safety function: Safe detection of a gas concentration of specific gas types and safe analogue output signal 4 – 20mA proportional to the gas concentration. The downstream safety device must be configured to recognize the configured high alarms or low alarms as malfunction detection.

Characteristics as per IEC 61508	Value
SIL	SIL 2
HFT	0
Device Type	B
Mode of operation	Low demand mode
SFF	SFF > 90 % (per channel)
Recommended time interval for proof-testing T1	1 year
PFD _{avg} for T1 = 1 year	2.6 * 10 ⁻⁴ 2.6 % of SIL 2
PFH	5,8*10 ⁻⁸ $\frac{1}{h}$ 5.8 % of SIL 2
λ_{sd}	1063 FIT
λ_{su}	113 FIT
λ_{dd}	531 FIT
λ_{du}	57 FIT
λ_{tot}	2481 FIT

$$1 \text{ FIT} = 1 \cdot 10^{-8} \frac{1}{h}$$

Remark: Failure rates of the electronic components as per Siemens SN 29500, calculated based upon an ambient temperature of 40 °C.