Certificate





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.

The instructions of the associated Operating Manual and the Safety Manual Specific requirements

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.

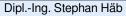
TÜV Rheinland Industrie Service GmbH

Bereich Automation Funktionale Sicherheit Am Grauen Stein, 51105 Köln

Köln, 2018-01-09

Certification Body Safety & Security for Automation & Grid

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Safety function: Safe detection of a gas concentration of specific gas types

and safe analogue output signal 4 – 20mÅ 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 | В |
| 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 |
| λsu | 113 FIT |
| λdd | 531 FIT |
| λ_{du} | 57 FIT |
| λ_{tot} | 2481 FIT |

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

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