



Certificate / Certificat Zertifikat / 合格証

P+F 1601040 P0006 C016

exida hereby confirms that the:

6500 series

Purge and Pressurization System

Revisions dated May 2018 and September 2020

**Pepperl+Fuchs GmbH
Mannheim, Germany**

Has been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-7

and meets requirements providing a level of integrity to:

Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; Route 1_H

Safety Function:

The 6500 Series Purge and Pressurization System:

- detects a drop of pressure when the enclosure is pressurized
- performs the rapid exchange function before the enclosure is pressurized

Application Restrictions:

The system must be used / configured per the Safety Manual requirements.



Evaluating Assessor

Certifying Assessor

The manufacturer may use the mark:



Revision 1.1 September 6, 2021

Surveillance Audit Due
September 15, 2024



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Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; Route 1_H

6500 Series Purge and Pressurization System

Systematic Capability:

The Product has met manufacturer design process requirements of Safety Integrity Level (SIL) 2. These are intended to achieve sufficient integrity against systematic errors of design by the manufacturer.

Random Capability:

The SIL limit imposed by the Architectural Constraints must be met for each element.

IEC 61508 Failure Rates in FIT*

	Rapid Exchange	Minimum Pressure	Minimum Pressure
Safety output	Enclosure power relay	Auxiliary relay	
λ_s	514 FIT	523 FIT	448 FIT
λ_{dd}	533 FIT	391 FIT	296 FIT
λ_{du}	45 FIT	65 FIT	76 FIT
λ_{total}	1092 FIT	983 FIT	820 FIT
$\lambda_{no\ effect}$	594 FIT	625 FIT	560 FIT
$\lambda_{not\ part}$	2576 FIT	2658 FIT	2881 FIT
λ_{total}	4261 FIT	4261 FIT	4261 FIT
SFF	95 %	93 %	90 %
PFH	$4.48 * 10^{-8}$ 1/h	$6.51 * 10^{-8}$ 1/h	$7.62 * 10^{-8}$ 1/h

In case of an internal fault, the fault detection and reaction time is 300 s.

* FIT = 1 failure / 10^9 hours

The following documents are a mandatory part of certification:

Assessment Report: P+F 16/01-040 R044 V1R2

Safety Manual: DOCT-B1U3 04/18



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