



# Certificate / Certificat Zertifikat / 合格証

HCC 1901116 C001

*exida* hereby confirms that the:

## Honeywell 7823 Flame Switch

**Honeywell Process Solutions**  
**Honeywell Thermal Solutions (HTS)**  
**Houston, TX USA**

The manufacturer  
may use the mark:



Has been assessed per the relevant requirements of:

**IEC 61508 : 2010 Parts 1-3**

and meets requirements providing a level of integrity to:

**Systematic Capability: SC 3 (SIL 3 Capable)**

**Random Capability: Type B Element**

**SIL 3 @ HFT = 0; Route 1<sub>H</sub>**

**PFH/PFD<sub>avg</sub> and Architecture Constraints  
must be verified for each application**

Revision 2.0 December 28, 2023  
Surveillance Audit Due  
December 1.2026

### Safety Function:

The Honeywell 7823 Flame Switch will de-energize a relay output for loss of flame and transition to the safe state.

### Application Restrictions:

The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements.



*Rudolf P. Chalupa*  
Evaluating Assessor

*ChOB*  
Certifying Assessor

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**Random Capability: Type B Element**

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**PFH/PFD<sub>avg</sub> and Architecture Constraints  
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Honeywell 7823  
Flame Switch

**Systematic Capability:**

The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 3. These are intended to achieve sufficient integrity against systematic errors of design by the manufacturer.

A Safety Instrumented Function (SIF) designed with this product must not be used at a SIL level higher than stated.

**Random Capability:**

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

**IEC 61508 Failure Rates in FIT\***

Options	$\lambda_{SD}$	$\lambda_{SU}$	$\lambda_{DD}$	$\lambda_{DU}$
7823 using Ampli-Check™	246	189	117	3.1
7823 using Self-Check™	272	189	130	3.7

\* FIT = 1 failure / 10<sup>9</sup> hours

**SIL Verification:**

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFH/PFD<sub>avg</sub> considering redundant architectures, proof test interval, proof test effectiveness, any automatic diagnostics, average repair time and the specific failure rates of all products included in the SIF. Each element must be checked to assure compliance with minimum hardware fault tolerance (HFT) requirements.

The following documents are a mandatory part of certification:

**Assessment Report:**

HON 17-02-010 R002 V2R1 (or later)

**Safety Manual:**

RM 7800 Burner Controller Safety Manual, V3R2 and higher



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