



The manufacturer may use the mark:



Revision 1.2 April 1, 2016
Surveillance Audit Due
September 1, 2018



ANSI Accredited Program
PRODUCT CERTIFICATION
#1004

Certificate / Certificat Zertifikat / 合格証

HON 1306004 C001

exida hereby confirms that the:

SmartLine STT850 Temperature Transmitter with HART®

**Honeywell International Inc.
Honeywell Field Products
Fort Washington, PA 19034 - USA**

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 3 (SIL 3 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; SIL 3 @ HFT = 1; Route 1_H

**PFD_{AVG} and Architecture Constraints
must be verified for each application**

Safety Function:

The SmartLine STT850 Temperature Transmitter with 4-20 mA 2-wire interface will measure temperature within the stated safety accuracy. A digital output is also available as a safety output when a detected internal fault exists.

Application Restrictions:

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



John C. Yozallinas
Evaluating Assessor

Griff Francis
Certifying Assessor

HON 1306004 C001

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Random Capability: Type B Element

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SmartLine STT850
Temperature Transmitter
with HART 4-20 mA 2-wire
interface

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*

Device	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}	SFF
STT850 Temperature Transmitter - HART	0	252	299	54	91.1%
STT850 Temperature Transmitter - DO	198	75	215	50	90.7%

* FIT = 1 failure / 10⁹ hours

SIL Verification:

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFD_{AVG} 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 subsystem 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 13-06-004 R002 V2 R1

Safety Manual: Doc # 34-TT-25-05, Dec 2015 and later



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