



The manufacturer  
may use the mark:



Valid until May 1, 2017  
Revision 1.0 April 14, 2014



ANSI Accredited Program  
PRODUCT CERTIFICATION  
#1004

# Certificate / Certificat Zertifikat / 合格証

UEC 1210073 C001

*exida* hereby confirms that the:

## One Series Safety Transmitter

**United Electric Controls  
Watertown, MA - 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<sub>H</sub>**

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

Safety Function:

The One Series Safety Transmitter will measure pressure or temperature within the stated safety accuracy.

Application Restrictions:

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



*John C. Yozallinas*  
Evaluating Assessor

*Griff Irons*  
Certifying Assessor

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UEC 1210073 C001

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One Series Safety  
Transmitter

## 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. This Element meets *exida* criteria for Route 1<sub>H</sub>.

## IEC 61508 Failure Rates in FIT\*

Output Type	$\lambda_{SD}$	$\lambda_{SU}$	$\lambda_{DD}$	$\lambda_{DU}$	SFF
Pressure Current with IAW	0	76	3429	42	98.8%
Temperature Current with IAW	0	76	3442	42	98.8%
Pressure Current no IAW	0	78	3400	48	98.6%
Temperature Current no IAW	0	76	3409	45	98.7%
Pressure Relay with IAW	1755	76	1700	80	97.8%
Temperature Relay with IAW	1755	76	1719	80	97.8%
Pressure Status with IAW	1694	106	1690	46	98.7%
Temperature Status with IAW	1696	106	1710	46	98.7%

\* 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 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 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: UEC 1210073 R002 V1R1

Safety Manual: OneST-SM-02, ver. 02



64 N Main St  
Sellersville, PA 18960

T-002, V3R3-3