



Certificate / Certificat Zertifikat / 合格証

MII 1604145 C002

exida hereby confirms that the:

SFY Frequency Transmitter Moore Industries – International North Hills, CA 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 2_H

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

Safety Function:

The SFY Series Transmitter receives an AC or DC signal and transmits a signal, within its stated safety accuracy, that represents one of several configured frequency measurements (frequency, period, pulse width).

Application Restrictions:

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



David G. Smith

Evaluating Assessor

John C. Yozallinas
Certifying Assessor

The manufacturer
may use the mark:



Revision 1.1 June 21, 2016
Surveillance Audit Due
July 1, 2019



ANSI Accredited Program
PRODUCT CERTIFICATION
#1004

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Random Capability: Type B Element

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must be verified for each application**

SFY Frequency
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 device meets *exida* criteria for Route 2_H.

IEC 61508 Failure Rates in FIT*

Device	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
SFY AC	0	0	346	106
SFY DC	0	0	336	106

* 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 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: MII 16-04-145 R005 V1 R1

Safety Manual: 165-740-00



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