



The manufacturer  
may use the mark:



Revision 3.1 March 11, 2021  
Surveillance Audit Due  
February 1, 2024



# Certificate / Certificat Zertifikat / 合格証

FRS 091023 C003

*exida* hereby confirms that the:

## DeltaV SIS Modules:

Aux. ETA Relay Module, Aux. DTA Relay Module,  
Relay Diode Module, Relay Module, Voltage Monitor  
Module, End of Line Resistance Module, RC Compensator  
Module Current Limiter

**Fisher Rosemount Systems, Inc.**  
(an Emerson Automation Solutions company)  
**Round Rock, TX USA**

have been assessed per the relevant requirements of:

**IEC 61508 : 2010 Parts 1-7**

and meet requirements providing a level of integrity to:

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

**Random Capability: Type A Device**

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

## Safety Function:

The DeltaV SIS Aux. Relay Modules will control a relay in accordance with the input signal. The DeltaV SIS Voltage Monitor, Relay, Current Limiter and RC Compensator Modules will control their output state in accordance with their input signal.

## Application Restrictions:

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



*John C. Yozallinas*  
Evaluating Assessor

*Paul Smith*  
Certifying Assessor

FRS 091023 C003

**Systematic Capability: SC 3 (SIL 3 Capable)****Random Capability: Type A Device****PFH/PFD<sub>AVG</sub> and Architecture Constraints  
must be verified for each application****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\***

Failure Categories	$\lambda_{SD}$	$\lambda_{SU}$	$\lambda_{DD}$	$\lambda_{DU}$
Aux. ETA Relay Module	21	40	10	40
Aux. DTA Relay Module	21	40	10	40
Relay Diode Module	6	0	10	11
Relay Module	0	36.3	0	.018
Voltage Monitor	1	68	0	.72
End of Line Resistance Module	0	0	4	4
RC Compensator (ETA)	0	0	9	1
RC Compensator (DTA)	9	1	0	0
Current Limiter (ETA)	0	10	9	19
Current Limiter (DTA)	9	19	0	1

\* 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:** FRS 09-10-23 R001 V3 R1 (or later)

**Safety Manual:** D800032X012



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