The manufacturer may use the mark:

Certificate / Certificat

Zertifikat / 合格証

FRS 091023 C003

exida hereby confirms that the:

DeltaV SIS ETA Relay Module
DeltaV SIS DTA Relay Module
DeltaV SIS Relay Diode Module

Emerson Process Management
Fisher Rosemount Systems, Inc.
Austin, TX USA

Has been assessed per the relevant requirements of:

IEC 61508 Parts 1, 2, 3

and meets requirements providing a level of integrity to:

Systematic Integrity: SIL 3 Capable
Random Integrity for Type A Device:
SIL 3 @ HFT=0
Therefore can be used as part of a safety instrumented system as per IEC 61511

Safety Function:

The DeltaV SIS Relay Modules will control a relay in accordance with the input signal.

Application Restrictions:

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

Reports:

FRS 04/09-22 R001 FMEDA Report V3 R3

FRS 09-10-23 R001 IEC 61508 Functional Safety Assessment Report V1 R1

Validity:

This assessment is valid for the DeltaV SIS ETA Relay Module, DTA Relay Module, and Relay Diode Module

This assessment is valid until May 11, 2013.

Revision 1.5 May 27, 2010

Product Assessor

Auditor

Certificate / Certificat / Zertifikat / 合格証

FRS 091023 C003

Systematic Integrity: SIL 3 Capable

Random Integrity for Type A Device: SIL 3 @ HFT=0

DeltaV SIS ETA Relay Module

DeltaV SIS DTA Relay Module

DeltaV SIS Relay Diode Module

Emerson Process Management

Austin, TX

SIL 3 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 without “prior use” justification by end user or diverse technology redundancy in the design.

IEC 61508 Failure Rates in FIT*

Failure Categories	λ_{sd}	λ_{su}	λ_{dd}	λ_{du}
ETA Relay Module	21	93	10	40
DTA Relay Module	21	93	10	40
Relay Diode Module	6	6	10	11

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.

* FIT = 1 failure / 10^9 hours

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Sellersville, PA 18960

Form	Version	Date
C61508	2.3	May 2010