

CERTIFICATE



FOX 100755 P0009 C02

exida Certification S.A. hereby confirms that the

SRD991 Positioner - Shutdown Mode

Hardware Revision 3.5 and 3.6

Foxboro Eckardt GmbH

Stuttgart, Germany

Has been assessed per the relevant requirements of

IEC 61508

Parts 1 - 2, and meets requirements providing a level of integrity to

Systematic Integrity : SIL 3 Capable

Random Integrity : Type A device, PFD_{AVG} and architecture constraints must be verified for each application

Safety Function

The SRD991 Positioner in Shutdown Mode will vent pressure on a single acting, fail-safe (spring return) pneumatic actuator when the input is below the threshold current level.

Application Restrictions

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



Assessor



Certifying Assessor

Date: 26 July 2010

exida Certification SA, Nyon, Switzerland



Systematic Integrity: SIL 3 Capable

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 the statement.

Summary for the SRD991 Positioner

Pneumatic assembly - Type A

Type A device

IEC61508 failure rates

	λ_{safe}	λ_{dd}	λ_{du}	$\lambda_{no\ effect}$
SRD991 as shutdown device, threshold 0,2mA	176	0	20	151
Pneumatic Booster Relay LEXG-F as shutdown device	118	0	22	304

All failure rates are given in FIT=10⁻⁹/h

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 mandatory parts this certificate:

Foxboro 0408-16 R001 FMEDA Report V1R1
 Foxboro 0503-29 R004 FMEDA Report Booster V0R4
 Foxboro 0612-36 R006 Assessment Report V0 R4
 Safety Manual SRD991, TI EVE0105 S 10.08
 Safety manual LEXG-F, TI EVE0100 S 10.08

The holder of this certificate may use this mark.

