

The manufacturer
may use the mark:



Reports:

FLO 09-11-42 R003 Logix
3200MD Assessment Report
V1 R1

FLO 09-11-42 R001 V1 R1
FMEDA 3200MD

Validity:

This assessment is valid for
the 3200MD series Digital
Positioners with software
version 2.05 or later and an
Analog Output board

This assessment is valid until
August 1, 2013.

Revision 1.0 July 28, 2010



Certificate / Certificat Zertifikat / 合格証

FLO 091142 C001

exida hereby confirms that the:

Logix 3200MD Digital Positioner

**Flowserve Corporation
Springville, Utah
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 2 Capable
Random Integrity for Type B Device:
SIL 2 @ HFT=0**

Safety Function:

The Logix 3200MD Digital Positioner is a smart valve positioner that will operate an actuator/valve based on an analog input signal.

Application Restrictions:

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



Product Assessor

Auditor

Certificate / Certificat / Zertifikat / 合格証

FLO 091142 C001

Systematic Integrity: SIL 2 Capable

Random Integrity for Type B Device:

SIL 2 @ HFT=0

Logix 3200MD Digital
Positioner

Flowserve Corporation,
Springville, Utah – USA

SIL 2 Capability:

The product has met manufacturer design process requirements of Safety Integrity Level (SIL) 2. 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*

Device	λ_{sd}	λ_{su}^1	λ_{dd}	λ_{du}	SFF ²
Single Acting, Shutdown function	184 FIT	1027 FIT	236 FIT	67 FIT	-
Single Acting, Shutdown function, PVST	368 FIT	843 FIT	244 FIT	59 FIT	-
Double Acting, Shutdown function	184 FIT	978 FIT	390 FIT	85 FIT	-
Double Acting, Shutdown function, PVST	315 FIT	847 FIT	414 FIT	61 FIT	-

¹ It is important to realize that the "residual effect" and annunciation failures are included in the "safe undetected" failure category according to IEC 61508. Note that these failures on their own will not affect system reliability or safety, and should not be included in spurious trip calculations

² The Safe Failure Fraction (SFF) needs to be evaluated for the complete final element subsystem

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 / 10⁹ hours



Form	Version	Date
C61508	2.4-2	July 2010