

The manufacturer
may use the mark:



Certificate / Certificat

Zertifikat / 合格証

EMM 080467 C001

exida hereby confirms that the:

**1700 / 2700 Coriolis Flowmeter series
with Standard 700 Core**

**Micro Motion, Inc.
Emerson Process Management
Boulder, CO 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 B Device:
SIL 3 @ HFT=1 / SIL 2 @ HFT=0**

Safety Function:

The 1700 / 2700 Coriolis Flowmeter will measure flow and / or density within the stated safety accuracy.

Application Restrictions:

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

Reports:

MiMo 04/06-22 R004

FMEDA Report V2 R3

MM 08/04-67 R004

Assessment Report V1 R1

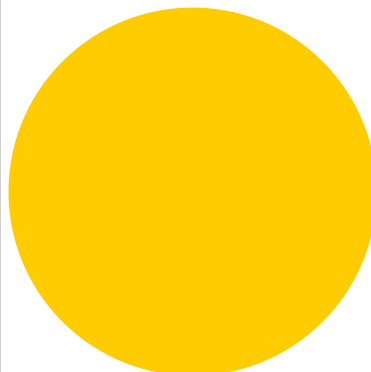
Validity:


This assessment is valid for
the 1700 and 2700 series
Flowmeters with Standard
Core and Output options A,
B, C, or D.

This assessment is valid
until December 1, 2011.

Revision 1.1 December 5, 2008


exida[®]
Certification S.A.




Product Assessor


Auditor

EMM 080467 C001

Systematic Integrity: SIL 3 Capable

**Random Integrity for Type B Device:
SIL 3 @ HFT=1 / SIL 2 @ HFT=0**

1700 / 2700 Coriolis
Flowmeter series with
Standard 700 Core

Micro Motion, Inc.,
Boulder, CO USA

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

Device	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}	SFF
Model Elite, T, F or DT sensor – 1700/2700 analog output (output code A)	0	593	1886	172	93.5%
Model D600 sensor – 1700/2700 analog output (output code A)	0	711	2158	172	94.3%
Model Elite, T, F or DT sensor – 1700/2700 intrinsically safe analog output (output code D)	0	600	1882	169	93.6%
Model D600 sensor – 1700/2700 intrinsically safe analog output (output code D)	0	717	2154	170	94.4%
Model Elite, T, F or DT sensor – 2700 analog output (output code B and C)	0	589	1880	168	93.6%
Model D600 sensor – 2700 analog output (output code B and C)	0	707	2153	169	94.4%

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



Form	Version	Date
C61508	2.01	July 2008