



Certificate / Certificat Zertifikat / 合格証

EMM 1402064 C001

exida hereby confirms that the:

Micro Motion 5700 Coriolis Flowmeter Emerson Boulder, CO USA

The manufacturer
may use the mark:



Has been assessed per the relevant requirements of:

IEC 61508 : 2010 Parts 1-3

and meets requirements providing a level of integrity to:

Systematic Capability: SC 3 (SIL 3 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; SIL 3 @ HFT = 1; Route 2_H

**PFH/PFD_{avg} and Architecture Constraints
must be verified for each application**

Revision 3.1 June 2, 2023
Surveillance Audit Due
August 1, 2025

Safety Function:

The 5700 Coriolis Flowmeter provides direct, high accuracy mass flow measurement for liquids, gases or slurries and transmits a proportional signal within a safety accuracy.

Application Restrictions:

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



Valerie Motto

Evaluating Assessor

JF Moore

Certifying Assessor

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Systematic Capability: SC 3 (SIL 3 Capable)**Random Capability: Type B Element****SIL 2 @ HFT=0; SIL 3 @ HFT = 1; Route 2_H****PFH/PFD_{avg} and Architecture Constraints
must be verified for each application**Micro Motion 5700
Coriolis Flowmeter**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. This device meets *exida* criteria for Route 2_H.

IEC 61508 Failure Rates in FIT*

Device Options	λ_{SD}	λ_{SU}	λ_{DD}	λ_{DU}
5700CIO with internal core	0	72	2941	107
5700CIO with standard core	0	71	2522	78
5700CIO with enhanced core	0	132	3124	138
5700IS with internal core	0	78	3030	114
5700IS with standard core	0	77	2615	84
5700IS with enhanced core	0	138	3214	145

* FIT = 1 failure / 10⁹ hours**SIL Verification:**

The Safety Integrity Level (SIL) of an entire Safety Instrumented Function (SIF) must be verified via a calculation of PFH/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 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: EMM 14-02-064 R003 V3R1 (or later)

Safety Manual: MMI-20029788 Rev AF and later

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