Certificate / Certificat
Zertifikat / 合格証

MMI 2212121 C001

exida hereby confirms that the:

Model 4700 Field-Mount Transmitter

Micro Motion Inc.
Boulder, CO - USA

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

Safety Function:

The primary safety function 4700 Coriolis Flowmeter shall provide continuous representation of the mass flow rate or density or volume flow rate to its safety certified output.

Application Restrictions:

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

The manufacturer may use the mark:

Revision 1.3 April 24, 2024
Surveillance Audit Due
May 1, 2027

ANSI National Accreditation Board
ACCREDITED
ISO/IEC 17065
PRODUCT CERTIFICATION BODY
#1004

Evaluating Assessor

Certifying Assessor

Certificate / Certificat / Zertifikat / 合格証

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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

Model 4700 Field-Mount Transmitter

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 element meets *exida* criteria for Route 2_H.

Application / Device Configuration	SD	SU	DD	DU
Model 4700 Field-Mount Transmitter 9 Wire Power Board - Internal Core	12	54	3310	183
Model 4700 Field-Mount Transmitter 4 Wire Power Board - 700 Core	613	168	3901	181
Model 4700 Field-Mount Transmitter 4 Wire Power Board - 800 Core	900	229	4218	241

IEC 61508 Failure Rates in FIT*

* FIT = 1 failure / 10^9 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: MMI 22-12-121 R003 V1R2 (or later)

Safety Manual: 4700SIS_8_11 Safety Manual.pdf Rev AA Aug'23

80 N Main St
Sellersville, PA 18960

T-002, V7R2