Certificate / Certificat
Zertifikat / 合格証

MAG 2506143 C001

exida hereby confirms that the:

E4 Modulevel Liquid Level Displacer Transmitter
AMETEK Magnetrol USA, LLC
Aurora, IL - 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 2 (SIL 2 Capable)

Random Capability: Type B Element

SIL 2 @ HFT=0; Route 2_H

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

Certified Models:

Only the following Model numbers are included:
E4M-51xx-xxx-xx-xxx
E4T-51xx-xxx

Safety Function:

The E4 will detect and convert liquid level changes into a stable 4–20 mA output signal

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 1.1 August 6, 2026
Surveillance Audit Due
June 1, 2029

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

exida Certification

Evaluating Assessor

Certifying Assessor

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Systematic Capability: SC 2 (SIL 2 Capable)

Random Capability: Type B Element

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E4 Modulevel Liquid Level Displacer Transmitter

Systematic 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.

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.

Versions

E4 Local	The electronics and display are mounted at the displacer assembly
E4 Remote	The electronics and display are mounted remotely from the displacer assembly

IEC 61508 Failure Rates in FIT*

Application/Device/Configuration	λ_{SD}	λ_{SU}[3]	λ_{DD}	λ_{DU}	#	E	DC
E4 Local	0	93	1045	133	242	28	89%
E4 Remote	0	93	1075	133	251	28	89%

[3] It is important to realize that the No Effect failures are no longer included in the Safe Undetected failure category according to IEC 61508, ed2, 2010.

* 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: MAG 25-06-143 R002 V1 R0 (or later)

Safety Manual: 48-652.1 E4 Modulevel SIL2 Safety Manual (June 2026)

80 N Main St
Sellersville, PA 18960