

The manufacturer
may use the mark:



Reports:

KTEK 08-03-49 R001 V1R0
IEC 61508 Assessment
AT100 100s 200

Validity:

This assessment is valid for
the AT100, AT100S, and
AT200 Magnetostrictive
Level Transmitter.

This assessment is valid until
July 1, 2014

Revision 2.0 June 29, 2011



Certificate / Certificat Zertifikat / 合格証

KTEK 080349 C001

exida hereby confirms that the:

**AT100, AT100s, AT200
Magnetostrictive Level Transmitter**

**K-TEK an ABB Inc. business
18321 Swamp Road Prairieville, LA 70769
USA**

Has been assessed per the relevant requirements of:

IEC 61508:2000 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 AT100, AT100s, and AT200 Magnetostrictive Level Transmitter uses a probe with float to detect a fluid level in a vessel. It subsequently communicates this level to a logic solver.

Application Restrictions:

The unit must be properly designed into a Safety Instrumented Function per the Safety Manual requirements, only the 4-20mA output is certified for use in functional safety applications.



Evaluating Assessor

Certifying Assessor

KTEK 080349 C001

Systematic Integrity: SIL 3 Capable

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

AT100, AT100S, and
AT200 Magnetostrictive
Level Transmitter

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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
AT100, AT100S, AT200	0 FIT	99 FIT	377 FIT	45 FIT	91.3%

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	2.5-3	Aug 2010