ERM Certificate No.: 0793640_CT001 rev. 2
Date: 03/07/2026
Revision No.: 2

Functional Safety Certificate

ERM Certificate No.:
0793640_CT001 rev. 2

Initial date:
03 July 2026

Valid:
13 October 2025 -
13 October 2028

This certificate consists of 3 pages

This is to certify that the Functional Safety Capability of

KMS-3-SIL

Manufactured by:

WIKA Instruments Limited, Unit 7, Goya Business Park, The Moor Road, Sevenoaks, TN14 5GY, United Kingdom

have been assessed by **ERM**, and found to confirm to the Functional safety standards and sub-clauses:

IEC 61508-1: 2010 CLAUSE 6
IEC 61508-2: 2010 CLAUSE 7
IEC 61508-3: 2010 CLAUSE 7

When assessed using:
The CASS Scheme for Functional Safety Capability

The Product and its associated data contained herein can be considered for use in the design of safety functions up to and including

SIL 2

When used in accordance with the scope and conditions of this certificate.

* The Safety Integrity Level (SIL) relates to the complete safety System, not the individual elements, therefore this certificate only demonstrates the capability of the product to be implemented into a safety system of a required integrity level as defined above.

It should be noted that the assessment to IEC 61508-3: 2010 was performed against MuTech and not WIKA Instruments Limited.

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Product Details

Safety function under consideration	Ability to monitor liquid level via detection of float position within a pre-defined accuracy (set up by the user) and generate a representative 4-20mA output
Product Name	KMS-3-SIL
Architectural Constraints	Type B / HFT = 0 / SFF = 94%
Values used to demonstrate achieved PFD[4]	PTI = 1 year / PTC = 93.6% / MTTR = 72 hours
Random Hardware Failure Rates	λ_{DD} = 2.05E-07 / λ_{DU} = 2.03E-08 / λ_S = 1.13E-07)
Probability of Failure on Demand	2.3E-03
Hardware Safety Integrity Compliance[1]	Route 1_H
Systematic Safety Integrity Compliance[1]	1_S
Systematic Capability[2]	SC 2
Overall SIL Capability Achieved[3]	SC 2
Applicable Documents	KMS-SIL Functional Safety Project Plan Rev. E KMS-3-SIL Safety Manual Rev. D
Hardware	Input Protection Board (PCB720) – Rev. I Loop Controller (PCB721) Rev. O Microcontroller Board (PCB722) – Rev. K Display Board (PCB723) – Rev. E Pulse Generator (PCB724) – Rev. H Pulse Amplifier (PCB725) – Rev. B
Firmware	TC01SW01 – Rev. #1.0

[1] According to IEC 61508:2010 Part 2 Clause 7.4.2 & 7.4.4

[2] According to IEC 61508:2010 Part 4 Clause 3.5.9

[3] Lowest SIL indicated

[4] According to IEC 61508 Part 2 section 7.4.2 & 7.4.4

Conditions of Safe Use

1. User shall comply with the detail contained in the manufacturer user manual as well as the information provided above.
2. Selection of this equipment for use in a safety application shall only be made by a competent person.
3. The collection of any data associated with this type for equipment during operations shall be collected and reported to the manufacturer.
4. The product should be tested at regular intervals to identify any malfunctions in accordance with the product safety manual.

For ERM:

Andrew Derbyshire

Andrew Derbyshire
Certification Manager for the Project

cass
Assessor ID: 23001

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Conditions of Certificate

1. This certificate is based on the assessment carried out by ERM as recorded in assessment report J002_FM001 rev 1, 0779888_FSM001_Rev. 3, 0793636_FSM002_Rev. 2 and 0793640_FSM003_Rev. 1.
2. Printed copies of the certificates are not a controlled version.
3. WIKA Instruments Limited shall ensure the Management of Functional Safety is maintained.
4. ERM shall be notified of any changes to the product that may impact on this certificate during the period of validity.
5. The use of this certificate is subject to the 'certificate agreement' for Functional Safety Certification.
6. This certificate remains the property of ERM and shall be returned upon request.

END OF CERTIFICATE