



Notified Body authorised by
BSH 0800-S23/4822:013

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Certificate No: LR23358222MB
Issue Date: 21/12/2023
Expiry Date: 20/12/2028

EC Type Examination (Module B) Certificate

This is to certify that:

LLOYD'S REGISTER Marine Deutschland GmbH (LRMD), designated as a “notified body” based on the notification of the Federal Maritime and Hydrographic Agency of Germany, did undertake the relevant type approval procedures for the type of equipment identified below which was found to be in compliance with the requirements of Marine Equipment Directive (MED) 2014/90/EU and the valid Commission Implementing Regulation (EU) in force indicating design, construction and performance requirements and testing standards for marine equipment, subject to the conditions below and the attached Schedule which also forms part of this Certificate.

Manufacturer	Sensitron Srl
Address	Viale della Repubblica, 48, Cornaredo (MI), 20010, Italy
Reference	Marine Equipment Directive (MED) 2014/90/EU, Regulation (EU) 2023/1667
Regulation Item (No. & Item Designation)	MED/3.54b Fixed Oxygen Analysis And Gas Detection Equipment (explosive gas atmospheres)
Product Type	Gas detection control panel: “Multiscan ++ MED” Gas detector: “Smart S –MS MED”
Product Description	Fixed gas detection equipment (control panel and detector)
Specified Standard	Type approval requirements: SOLAS 74 Reg. II-2/4, SOLAS 74 Reg. VI/3 Carriage and performance requirements: SOLAS 74 Reg. II-2/4, SOLAS 74 Reg. VI/3, IMO Res. MSC.98(73) - (FSS Code) 15 IEC 60092-504: 2016 IEC 60533: 2015 EN IEC 60079-0: 2018 including AC: 2020 EN 60079-29-1: 2016 + A11: 2022

Lloyd's Register Marine Deutschland GmbH, Überseeallee 10, D-20457 Hamburg, Germany.
A member of the Lloyd's Register group

Andrei Petrov

Electrical & Control - Senior Specialist
For and on behalf of Lloyd's Register Marine Deutschland GmbH (2923)

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BSH
BUNDESAMT FÜR
SCHIFFFAHRT
UND
HYDROGRAPHIE

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Row of the Regulation Item Row 3 of 3

Trade Name Gas detection control panel: "Multiscan ++ MED" Gas detector: "Smart S –MS MED"

The attached Design Appraisal Document (schedule) forms part of this certificate. This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

This certificate will not be valid if the manufacturer makes any changes or modifications to the approved type of equipment, which have not been notified to and agreed with the notified body named on this certificate. The manufacturer should notify LRMD of any modification or changes to the equipment in order to obtain a valid Certificate.

Should the specified regulations or standards be amended during the period of validity of this certificate, the product is to be re-approved prior being placed on the market and on board vessels to which the amended regulations or standards apply.

The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-control phase module (D,E, or F) of ANNEX II of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.

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ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. LR23358222MB

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and European Union legislation for the EC Type Examination of Marine Equipment for use on Merchant Ships Registered in the European Economic Area.

This Design Appraisal Document (schedule) forms part of the Certificate.

This Certificate is a Renewal of Certificate Number LR2276084MB.

Approval Documentation

Specification No.DP3794, rev 0 for "Smart S-MS" gas detectors	Undated
Specification No.DP2620_S1, rev 4.1 for "Multiscan++S1" control unit	13.12.2013
Specification No.DP2620_S2, rev 4 for "Multiscan++S2" control unit	13.02.2013
Specification No.DP2620_MED for "Multiscan++MED Marine" control unit	29.03.2018
Production Quality Assessment Form No.MLN1680182	07.07.2016
SENSITRON SRL Control unit "Multiscan ++" Certificate No. IMQ 12 ATEX 002 X	03.05.2018
SENSITRON SRL Gas detector series ST/. Certificate No. IECEx CES 13.0018X	06.11.2013
SENSITRON SRL Gas detector type NET./E Certificate No. CESI 02 ATEX 084	16.09.2002
SENSITRON SRL Gas detectors series ST, Extension n.01/08 to CESI 02 ATEX 084	23.10.2008
SENSITRON SRL Gas detectors series ST, Extension n.02/13 to CESI 02 ATEX 084	26.02.2013
SENSITRON SRL Gas detectors series ST, Extension n.03 to CESI 02 ATEX 084	25.10.2017
SENSITRON SRL Gas detector type NET/ Certificate No. CESI 01 ATEX 053	29.06.2001
SENSITRON SRL Gas detectors type NET/, Extension n.01/04 to CESI 01 ATEX 053	31.12.2004
SENSITRON SRL Gas detectors type ST, Extension n.02/08 to CESI 01 ATEX 053	10.01.2008
SENSITRON SRL Gas detectors type ST, Extension n.03/11 to CESI 01 ATEX 053	31.10.2011
SENSITRON SRL Gas detectors series ST, Extension n.04/12 to CESI 01 ATEX 053	21.12.2012
SENSITRON SRL Gas detectors series ST, Extension n.05/14 to CESI 01 ATEX 053	01.04.2014
SENSITRON SRL Gas detectors series ST, Certificate CESI 17 ATEX 003X	10.02.2017
TUV ITALIA Srl Certificate No. C-IS-213297-01 for control unit "Multiscan++"	23.09.2013
TUV ITALIA Srl Certificate No. C-IS-245120-01 for gas detectors "Smart S"	23.05.2014
Technical Note No. NT3680, rev. 3	24.11.2016
Sensitron Multiscan gas detection System Marine	June 2016
SENSITRON: MULTISCAN ++ RIO OUTPUT MOD. [SE2473]	12.04.2010
SENSITRON: MULTISCAN ++ RIO INPUT MOD. [SE2472]	12.04.2010
SENSITRON: RIO OUTPUT 8 RELAYS EXP. BOARD [SE2407]	12.04.2010
SENSITRON: MULTISYSTEM 8 RELAYS EXP. BOARD [SE1620]	17.09.2007
SENSITRON: OTPOISOLATED RS485 INTERFACE [SE 1618]	13.11.2006
SENSITRON: MULTISCAN ++ 128 MAIN BOARD [SE3103]	31.03.2013

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Scheda Espansione 8 Relè per Centrale Multiscan++ 128 AS3294	17.01.2014
MAIN BOARD MULTISCAN ++ 128 CSSE3103 REV.1 L.C. AS2366	08.05.2013
Scheda Espansione 8 Relè per modulo OUT AS2496	14.06.2010
MODULO RIO OUT 16 SIL AS2475	03.07.2017
MODULO RIO-IN S 8 SIL AS2474	03.07.2017
Scheda Seriale Rs485 Optoisolata (Multisystem) AS1756	20.11.2006
SENSITRON: SMARTS LITE BASE BOARD [SE3367]	25.09.2013
SENSITRON: SMART-SL 3 RELAYS AUX BOARD [SE3580]	05.11.2015
SCHEDA TRE RELE' PER SMART-SL/3G/3G+ AS3584	24.11.2015
BASE BOARD SMART S-LITE AS3369	04.11.2013
Accreditation Certificate Centrotecnica s.r.l. No. 1439L, rev. 04	18.01.2022
Centrotecnica s.r.l. accreditation schedule No. 1439L, rev.8	21.05.2020
ATEX Witness testing agreement CESI S.p.A. and SEAL S.r.L., rev.1	27.01.2020
Declaration by Sensitron S.r.L.	29.11.2021
Technical Note No. GAEX4083, Rev.1	05.05.2020
Gap analysis by Sensitron S.r.L. for IEC 60079-29-1	Undated
Technical report No. EMCRT_172177-0	12.09.2017
Sensitron S.r.L. ATEX certificate No. CESI 02 ATEX 084 X/04	19.05.2020
Technical Note NTEX3723 (Hazards (risk) analysis), rev. 1	13.05.2022
Declaration by Sensitron SrL	07.02.2022
Sensitron S.r.L. ATEX certificate No. IMQ 12 ATEX 002 X	18.07.2023
Technical Note NTEX4083 (Hazards (risk) analysis), rev. 1	01.09.2021
GAP ANALYSIS No. GP4219, rev. 1	22.11.2023
Sensitron S.r.L. ATEX certificate No. CESI 17 ATEX 003 X/02	14.11.2022
Technical Note NT4216 (Firmware revision history), rev. 0	20.11.2023
Multiscan ++ MED Configuration covered:8, 16, 32, 64, 128 and 256 inputs	
Firmware revision history Bug fixing during type testing, rev. 3	10.05.2021
Accreditation Certificate IMQ SpA No. 0121L, rev. 04	24.02.2022
ISO Certificate 9001:2015 No. 9115.SENT	20.10.2023
Test Reports	
TEST REPORT No. CLITR_171424-0	10.11.2017
TEST REPORT No. CLITR_171437-0	10.11.2017
TEST REPORT No. EMCTR_170613-2	29.11.2017
TEST REPORT No. IPTR_171427-0	13.11.2017
TEST REPORT No. IPTR_171440-0	13.11.2017
TEST REPORT No. 845-QL17-R01 ver. 0	29.11.2017
Accreditation certificate QUALILAB S.r.l. No.1235 L	18.12.2019

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Accreditation certificate PRS LAB. Srl No.1347L	31.03.2023
Test report RPSEAL-02.20, rev.3	15.05.2020
Test report RPSEAL-03.20, rev.3	15.05.2020
Gas detector vibration test report No. VR1987401STRG_1, Issue 1	29.01.2020
TEST REPORT No. EMCTR_182098-0	19.12.2022
TEST REPORT No. EMCTR_182090-0	19.12.2022
TEST REPORT No. EMCTR_181527-0	24.06.2022
TEST REPORT No. VR2270301SERG, Issue 0	23.01.2023
TEST REPORT No. EMCTR_183978-0	12.12.2023
TEST REPORT No. 1557-QL23-R01, ver. 0	13.12.2023

Conditions of Certification

1. Production items of the subject equipment are to be manufactured in accordance with either an approved Production Quality Assurance system (Module D), a Product-Quality assurance system (Module E) or a Product Verification Process (Module F). The wheelmark cannot be affixed to the product until a conformity assessment module is in place
2. Each item, batch or lot of the equipment is to be issued with a "Declaration of Conformity" and have the "Mark of Conformity" affixed after a conformity assessment module is in place
3. The manufacturer shall keep a copy of the EC type-examination certificate, its annexes and additions together with the technical documentation at the disposal of the national authorities for at least 10 years after the wheel mark has been affixed on the last product manufactured and in no case for a period shorter than the expected life of the marine equipment concerned.
4. The gas detector "Smart S-MS MED" (IR/Pellistor) is suitable to detect the following flammable gases (by means of infrared or pellistor gas sensor technology) that are representative to their specific gas groups: Methane, Methanol, Acetylene, Acetone, Ethyl alcohol, Ammonia, Ammonia (20000 ppmv full scale), Diethyl ether, Ethylene, Hydrogen, Propane, Propylene and refrigerant gases (R32, R125, R134A, R143, R227, R404A, R407A, R407F, R410A, R417A, R422D, R449A, R452B, R507A, R1234YF, R1234ZE, R513A).
5. Power supply detector: 12-24 VDC.
6. Rated voltage control panel: 24 VDC (rack version)
230 VAC (box version)
7. Standard EN 50104: 2019 is not applicable for this equipment as it can't measure Oxygen.

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FIRMWARE VERSIONS

SMART S-MS Ver. FW04.00.09

Control panel MULTISCAN++ Ver. FW3.0.4

Place of Production

SENSITRON Srl,

Viale della Repubblica 48,

Cornaredo 20007 (MI), Italy

Andrei Petrov

Specialist

For and on behalf of Lloyd's Register Marine Deutschland

LRMD EC Distinguishing No. 2923

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TA144-145 1.0.0 DAD-DAD MRA Rev01