DNV·GL

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Certificate No:
MEDB00003RX
Revision No:
1

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the Fixed oxygen analysis and gas detection equipment

with type designation(s)
ULTIMA X5000 Gas Monitor

Issued to
MSA - The Safety Company
Cranberry Twp, PA, USA

is found to comply with the requirements in the following Regulations/Standards:
Regulation **(EU) 2019/1397,**
item No. MED/3.54. SOLAS 74 as amended, Regulation II-2/4 & VI/3 and FSS Code 15

Manufacturers authorised representative
MSA Europe GmbH
Rapperswil-Jona, Switzerland

Further details of the equipment and conditions for certification are given overleaf.

This Certificate is valid until **2024-11-26**.
Issued at **Høvik** on **2019-11-27**

DNV GL local station:
Certification & Inspection Services

Approval Engineer:
Nils Jarem

Notified Body
No.: **0575**

for **DNV GL AS**
Digitally Signed By: Trond Sjåvåg
Location: DNV GL Høvik, Norway
on behalf of

Roald Vårheim
Head of Notified Body

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-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.
This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.
Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.

Job Id: **344.1-007825-2**
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Product description

ULTIMA® X5000 Gas Monitor for detection of combustible gases.

ULTIMA® X5000 Gas Monitor consisting of ULTIMA® X5000 transmitter, X5000 Junction Box, ULTIMA® XIR Plus point IR sensor or catalytic Point Digital Sensor for combustible gases.

The ULTIMA® X5000 Gas Monitor supports two Digital Sensors installed either integral to the ULTIMA® X5000 transmitter or remotely using the X5000 Junction Box, one ULTIMA® XIR Plus point IR detector and one Digital Sensor installed either integral to the ULTIMA® X5000 transmitter or remotely using the X5000 Junction Box, or two ULTIMA® XIR Plus point IR detector installed remotely using the X5000 Junction Box.

The ULTIMA® X5000 Gas Monitor generates two independent discrete analog outputs; one for each sensor connected to the transmitter. The analog output associated with Sensor 1 also has the digital HART (Highway Addressable Remote Transducer) communication superimposed on the analog signal. If two sensors are connected, the digital HART communication carries information for both sensors. The ULTIMA® X5000 also has a Bluetooth communication option. Bluetooth is used for status inquiry and setup.

Place of manufacture

Digital Sensor:
General Monitors, CA, USA

XIR Plus:
MSA - The Safety Company
Cranberry Twp, PA. USA

X5000 Transmitter and Junction Box:
MSA - The Safety Company
Cranberry Twp, PA. USA

General Monitors Ireland LTD.
Galway, Ireland

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to Ex-Certification**/** Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

The equipment are found to comply with the following location/application dependent requirements (for definition of each of the location classes, see below the table):

ULTIMA X5000 Gas Monitor	Temperature D	Vibration A	EMC B	Enclosures: IP 66 and Salt mist test.

Definition of the location classes with reference to relevant standards:
Temperature D:
Tested at -40°C, -25°C, +55°C and +70°C *(ref. IEC 60092-504 :2016) table 1 item 6-7)*
Vibration A:
General applications: (*ref. IEC 60092-504:2016 table 1 item 10)*
EMC B:
Bridge and open deck zone: *(ref. IEC 60092-504:2016 table 1 item 19-20)*

Type Examination documentation

No.	Scope	Doc. No.	Description
3	IEC 60079-29-1	R70116274A rev. 2017-09	Assessment report
22		R70199267A rev. 2019-08	Assessment report EN60079-29-1:2016
23	EN 50271	R70220416 rev.1.0/2019-08-16	Assessment Report, X5000 EN 50271:2010.
9		1604-077E rev. D	EMI TEST REPORT X5000 GAS DETECTION SYSTEM
10	IEC 60092-504	1806-107E rev. B	EMI TEST REPORT X5000 GAS DETECTOR
11		1806-108N rev. A	ENVIRONMENTAL TEST REPORT X5000
12	IEC 60533	1807-166N rev. B	ENVIRONMENTAL TEST REPORT X5000
13		1807-077N rev. A	Salt mist TEST TRANSMITTERS WITH SENSORS
14		1807-078N rev. A	ENV. TEST REPORT TRANSMITTERS WITH SENSORS
5	Manual	10177361 rev. 05	Operating Manual ULTIMA® X5000 Gas Monitor
6	Manual	10182779 rev. 05	Addendum to Operating Manual 10177361
20	Product data	ID 0720-185-MC rev. 2018-02	Ultima X5000 gas monitor data sheet-EN
7	Drawing	SK3015-1051 rev 4	INSTALLATION OUTLINE ULTIMA X5000

Tests carried out

The relevant tests have been carried out according to the following standards:

- IEC 60092-504: 2016
- IEC 60533: 2015
- EN 60079-0: 2012 incl A11:2013
- EN 60079-29-1: 2016

Marking of product

For identification to this type examination certificate the products shall be marked with:

- Manufacturer's name or trade mark
- Type designation
- Mark of Conformity (wheel mark), followed by
    - identification number of the NoBo involved in production control (MED D)
    - the year the mark is affixed.
    - Example: 0575/2019