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

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Certificate No: LR22308791MB-04

Issue Date: 03/10/2022

Expiry Date: 09/06/2025

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	Crowcon Detection Instruments Ltd.,
Address	172 Brook Drive, Milton Park, Abingdon, Oxfordshire, OX14 4SD, United Kingdom (UK)
Reference	Marine Equipment Directive (MED) 2014/90/EU, Regulation (EU) 2022/1157
Regulation Item (No. & Item Designation)	MED/3.30b Portable Oxygen Analysis and/or Gas Detection Equipment: - category 2: (explosive gas atmospheres)
Product Type	PORTABLE OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT
Product Description	PORTABLE OXYGEN ANALYSIS AND GAS DETECTION EQUIPMENT
Specified Standard	EN 60945:2002 Including IEC 60945 Corrigendum 1: 2008, Cat 2: (Explosive Gas Atmospheres) EN 50104: 2010, EN 60079-0: 2018 EN 60079-1:2014, EN 60079-11: 2012 EN 60079-29-1: 2016
Trade Name	GAS-PRO/GAS-PRO TK

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

Matt Higgins

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

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EC Type Examination (Module B) Certificate

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 This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.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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Reference: UITSO/ETS/TA/MH/WP44229016/PRJ11100325548

ATTACHMENT TO EC TYPE EXAMINATION (MODULE B) CERTIFICATE No. LR22308791MB-04

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 Supersedes and is an Amendment of Certificate Number LR22308791MB

Approval Documentation

CDoC-9 Ver 9 EU Declaration of Conformity	26 Apr 2022
ISO Certificate identity number No 10309206	28 Nov 2020
ENG-000130 Issue 5 Minimum Manual Content Gas-Pro INMETRO - MED Risk Assessment Declaration	5 Mar 2022
Q10105 Gas-Pro/Gas-Pro TK MED Assessment of Risk	25/04/2022
ENG-000028 Issue 11 Minimum Manual Content Gas-Pro-Certification Control Document	19 Jan 2019
ENG-000024 Issue 5 Gas-Pro Sensors-Certification Control Document	25 Feb 2021
Schedule of Accreditation MS Testing	22 Jul 2022
	22 Jun 2022

DRAWINGS

GAS-PRO, GAS-PRO TK Electronic Certified Drawings

1004-1027-CD-CERT: Gas-Pro Display ver 8	16 Mar 2011
1004-1027-PCB-CERT: Gas-Pro Display ver 8	16 Mar 2011
1004-1027-PL-CERT: Gas-Pro Display Certified Parts List ver 8	31 May 2011
1004-1042-01-CD-CERT: Gas-Pro B3 Main PCB ver 1	18 Apr 2011
1004-1042-01-PL-CERT: Gas-Pro B3 Main PCB ver 2	15 Apr 2015
1004-1042-01-PL-CERT: Gas-Pro B3 Main PCB ver 5	26 Feb 2021
1004-1042-CD-CERT: Gas-Pro B3 Main PCB ver 6	18 Apr 2011
1004-1042-CD-CERT: Gas-Pro B3 Main PCB ver 9	30 Nov 2021
1004-1042-PCB-CERT: Gas-Pro B3 Main PCB ver 6	01 Mar 2011
1004-1042-PL-CERT: Gas-Pro B3 Main PCB Parts List ver 8	13 Apr 2015
1004-1042-PL-CERT: Gas-Pro B3 Main PCB Parts List ver 11	25 Feb 2021
1004-1047-01-CD-CERT: Gas-Pro B2 Main PCB ver1	31 Mar 2011
1004-1047-01-CD-CERT: Gas-Pro B2 Main PCB ver4	30 Nov 2211
1004-1047-01-PL-CERT: Gas-Pro B2 Main PCB Parts List ver 2	17 Apr 2011
1004-1047-01-PL-CERT: Gas-Pro B2 Main PCB Parts List ver 5	25 Feb 2021
1004-1047-CD-CERT: Gas-Pro B2 Main PCB ver1	10 Mar 2011
1004-1047-CD-CERT: Gas-Pro B2 Main PCB ver 4	30 Nov 2021
1004-1047-PCB-CERT: Gas-Pro B2 Main PCB ver 1	10 Mar 2011
1047-1047-PL-CERT: Gas-Pro B2 Main PCB Parts List ver 2	15 Apr 2015
1047-1047-PL-CERT: Gas-Pro B2 Main PCB Parts List ver 5	24 Feb 2021
1004-1080- CD-CERT: Gas Pro B1 Main PCB ver 1	10 Mar 2011
1004-1080- PCB-CERT: Gas Pro B1 PCB ver 1	10 Mar 2011

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1004-1080-CD-CERT Issue 2: Gas Pro B1 Main PCB (Circuit Diagram)	16 Dec 2015
1004-1080-CD-CERT: Gas Pro B1 Main PCB (Circuit Diagram) ver 5	29 Nov 2021
1004-1080-PCB-CERT Issue 2: Gas Pro B1 Main PCB (PCB Layout)	17 Dec 2015
1004-1080-PL-CERT: Gas-Pro B1 Main PCB Parts List ver 2	17 Apr 2015
1004-1080-PL-CERT: Gas-Pro B1 Main PCB Parts List ver 5	22 Feb 2021
ECAD-000106-01-CD-CERT: Gas-Pro B4 Main PCB Version 4b rev 1	26 Sept 2013
ECAD-000106-01-CD-CERT: Gas-Pro B4 Main PCB Version 4b rev 4	01 Dec 2021
ECAD-000106-01-PL-CERT: Gas-Pro Main PCB Version 4b Parts List rev 2	30 Apr 2015
ECAD-000106-01-PL-CERT: Gas-Pro Main PCB Version 4b Parts List rev 5	26 Feb 2021
ECAD-000106-CD-CERT: Gas-Pro B4 Main PCB ver1	26 Sept 2013
ECAD-000106-CD-CERT: Gas-Pro B4 Main PCB ver3	01 Dec 2021
ECAD-000106-PCB-CERT: Gas-Pro B4 Main PCB ver 2	18 Nov 2013
ECAD-000106-PL-CERT: Gas-Pro B4 Main PCB ver 2	30 Apr 2015
ECAD-000106-PL-CERT: Gas-Pro B4 Main PCB ver 4	26 Feb 2021

GAS-PRO, GAS-PRO TK Mechanical Certified Drawings

1004-1005: Front Case Moulding rev 2	12 Nov 2013
1004-1006: Rear Case Moulding Rev 4	23 Nov 2017
1004-1008: Pumped Flow Plate Assembly rev 1	08 Apr 2010
1004-1009: Pumped Flow Plate rev 1	08 Apr 2010
1004-1014: Battery Tray rev 1	15 Jun 2010
1004-1016: B2 Potting Box rev 1	22 Oct 2010
1004-1022: Non Pumped Flow Plate Assembly rev 1	08 Apr 2010
1004-1023: Non Pumped Flow Plate rev 1	15 Jun 2010
1004-1049: Gas-Pro-Certification GA MCAD Issue 4	12 Nov 2013
1004-1049: Gas-Pro-Certification GA MCAD Issue 5	25 Apr 2016
1004-1075: Gas Pro Battery Assembly Issue 4	26 Aug 2010
1004-1076 Gas Pro ATEX Certification Label Issue 6	07 Jul 2010
1004-1077: B3 Potting Box rev 1	15 Jun 2010
1004-1086: Display Board PCB Assembly rev 1	04 Aug 2010
1004-1090: Display to Main Board Connection rev 1	10 Nov 2010
1004-1091: B3 and B4 Main Board Potting Detail rev 2	18 Sept 2010
1004-1093: B1 Potting Box rev 1	09 Feb 2011
1004-1094: B2 Main Board Potting Detail rev 1	21 Feb 2011
1004-1095: B1 Main Board Potting Detail rev 1	21 Feb 2011
1004-1099: B3 Sensor Insulator rev 1	20 Jan 2011
1004-1101: B2 Sensor Insulator rev 1	23 Feb 2011
1004-1266: B1 Sensor Insulator rev 1	23 Feb 2011
1004-6000: Battery Connection rev 1	22 Feb 2011
1004-6003: Pump Cable Restraint rev 1	22 Feb 2011
1004-6005: KNF Pump-PJ25004-NMS020 rev 1	23 Feb 2011
1004-6010: Flow Plate Assembly Two rev 1	08 Apr 2010
1004-6011: Flow Plate Two rev 1	08 Apr 2010
1004-7001: Vibrator rev 1	22 Feb 2011
1004-7002: Connecting Cable- Main Board to Display Board rev 1	22 Feb 2011
1004-7003: Piezo Transducer	23 Feb 2011
3072: Grip Clip rev 10	21 Feb 2011

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3072: Grip Clip rev 11	21 Feb 2011
MCAD-003241 Issue : IR Sensor Shield rev 1	13 Jan 2016
MCAD-003242 Issue 1: Front Case RFI Shielding rev 1	13 Jan 2016
MCAD-003243 Issue 1: Rear Case RFI Shielding rev 1	13 Jan 2016
MCAD-000743: Dust Filter Flow Plate Assy rev 1	05 Sept 2013
MCAD-002434: B4 Sensor Insulator rev 1	19 Sept 2013
MCAD-003205: MED ATEX/IECEX Certification Label Rev 5	07 July 2010
MCAD-003224: MED Inmetro Certification Label Rev 4	14 July 2020
MCAD-003840 GasPro ATEX Certification Label (China) rev 1	18 Mar 2020
MCAD-003844 GasPro ATEX Certification Label (China) rev 3	24 Mar 2020
MCAD-003849 GasPro MED ATEX/IECEX Certification Label rev 4	24 Mar 2020
MCAD-003850 GasPro ATEX Certification Label rev 3	24 Mar 2020

TEST REPORTS & CERTIFICATION

ExTR Report Package DK ULD ExTR11.0005 10	2021/12/10
IECEX ULD 11.0004X Issue 11: IECEX Certificate of Conformity	2021/12/10
TL19061C EMC Including TL16038	15 Jul 2019
TL19061 including TL14065A-EMC	03 July 2019
TL19061A-ENV including TL14065C-ENV	15 July 2019
TL19061A-ENV including TL14065B-ENV	15 July 2019
TL19061C-ENV	15 July 2019
TL19061C-ENV	15 July 2019
TL16038 Crowcon Gas Pro EMC Report Issue 2	04 Apr 2016

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 following Standards are not applicable for this certificate:
EN 60079-15: 2010
EN 60079-26: 2015
EN60079-10-1:2015
IEC60092-504:2016
IEC60533-2015

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Place of Production

Crowcon Detection Instruments Ltd.,
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Oxfordshire
OX14 4SD
United Kingdom (UK)



Matt Higgins
Electrical Specialist
Engineering Systems
UK&I Technical Support Office, Marine & Offshore
For and on behalf of Lloyd's Register Marine Deutschland
LRMD EC Distinguishing No. 2923

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