



UK TYPE-EXAMINATION (MODULE B) CERTIFICATE

This is to certify that:

Lloyd's Register Marine Limited (LRM Ltd) 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 the Merchant Shipping (Marine Equipment) Regulations 2016, as amended, subject to any conditions in the schedule attached hereto.

Manufacturer	Crowcon Detection Instruments Ltd
Address	172 Brook Drive, Milton Park, Abingdon, OX14 4SD, United Kingdom
Reference	MSN1874 Amendment 9
Regulation Item (No. & Item Designation)	UK/3.30b Portable oxygen analysis 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
Trade Name	T4
Specified Standard	EN 60945:2002 Including IEC 60945 Corrigendum 1: 2008 Cat 2: (Explosive Gas Atmospheres) EN 50104: 2019, EN 60079-0: 2018 incl.AC 2020 EN60079-1:2014, incl.AC:2018-09 EN60079-11: 2012 EN 60079-29-1: 2016 incl. A1:2022 and A11:2022

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 This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.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 is issued under the authority of the MCA. 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 approved body named on this certificate.

During the period of validity of this certificate the applicable regulations (international conventions and the relevant resolutions and circulars of the IMO) and testing standards may change, therefore the product conformity may need to be re-assessed by the Approved Body.

The "UK 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 Schedule 2 of the Merchant Shipping (Marine Equipment) Regulations 2016, as amended is fully complied with and controlled by a written inspection agreement with an Approved Body.

Lloyd's Register Marine Limited (Reg. no. 13281335) is a limited company registered in England and Wales. Registered office: 71 Fenchurch Street, London, EC3M 4BS, UK.
A member of Lloyd's Register group.

Matt Higgins

Electrical & Control - Senior Specialist
For and on behalf of Lloyd's Register Marine Ltd. (8512)

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ATTACHMENT TO UK TYPE EXAMINATION (MODULE B) CERTIFICATE No. LR22486678UKMB-02

The undernoted documents have been appraised for compliance with the relevant requirements of International Conventions and the Merchant Shipping (Marine Equipment) Regulations 2016, as amended for the UK Type Examination of marine equipment for use on UK ships

This Design Appraisal Document forms part of the Certificate.

This Certificate is an Amendment of Certificate Number LR22486678UKMB-01

APPROVAL/EXAMINED DOCUMENTATION

MED Risk Assessment Declaration	02 Jul 2020
ISO Certificate identity number No 10309206	28 Nov 2020
Schedule of Accreditation MS Testing Iss 26	30 Jun 2022
Q10107 T4 MED Assessment of Risk	19 Jan 2019
CDoC-21 EU Declaration of Conformity Ver 20	14 Jun 2020
ENG-000754: Firmware MED Compliance	14 Sep 2015
ENG-000600: T4 Sensors- Certification Control Document ver 6	17 Mar 2022
ENG-000656: Minimum Manual Content T4, Issue 7	11 May 2022

DRAWINGS

T4 Electronic Certified Drawings

ECAD-000143-CD-CERT: T4 Main PCB, issue 12 (4 pages)	25 Mar 2015
ECAD-000143-PL-CERT: T4 Main PCB Parts List, issue 14	15 Sep 2021
ECAD-000143-PCB-CERT: T4 Main PCB issue 11 (8 pages)	27 Sep 2021
ECAD-000144-CD-CERT: T4 Sensor PCB issue 9 (1 page)	26 Feb 2015
ECAD-000144-PL-CERT-T4 Sensor PCB issue 10 (1 page)	25 Mar 2015
ECAD-000144-PCB-CERT: T4 Sensor PCB issue 8 (10 pages)	26 Jan 2015
ECAD-000227-CD-CERT, T4 Sensor PCB Circuit Diagram, Issue 1	21 Jan 2022
ECAD-000227-PL-CERT, T4 Sensor PCB Parts List, Issue 1	21 Jan 2022
ECAD-000227-PCB-CERT, T4 Sensor PCB (10 pages), Issue 1	20 Jan 2022

T4 Mechanical Certified Drawings

MCAD-002035-T4, Rev. 01 T4 Battery Assembly	10 Oct 2014
MCAD-002498, Rev. 01 T4 Front Case	26 Sep 2014
MCAD-002499, Rev. 01 T4 Rear Case	30 Jan 2015
MCAD-002499, Rev. 02 T4 Rear Case	30 Sep 2015
MCAD-002500, Rev. 03 T4 Certification GA	16 Mar 2022
MCAD-002511, Rev. 01 T4 Clip on sensor filter plate	30 Jan 2015
MCAD-002512, Rev. 01 T4 Sensor Filter plate assembly	05 Aug 2014
MCAD-002521, Rev. 02 T4 Instrument serial number label	30 Sep 2015
MCAD-002548, Rev. 01 T4 Sensor insulator	05 Aug 2014
MCAD-004057, Rev. 01 T4 Sensor insulator	14 Sep 2021
MCAD-002553, Rev. 03 T4 Vibrator	31 Jan 2018
MCAD-002554, Rev. 01 T4 Main PCB potting details	13 Mar 2015
MCAD-002563, Rev. 01 T4 Potting Box	02 Sep 2014

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MCAD-002879, Rev. 02 T4 LCD Module	07 Dec 2021
MCAD-003072, Rev. 10 T4 Grip Clip	21 Feb 2011
MCAD-003072, Rev. 11 T4 Grip Clip	21 Feb 2011
MCAD-003207, Rev. 01 T4 Clip on aspirator plate	23 Sep 2015
MCAD-003214, Rev. 01 T4 Clip on aspirator plate	23 Sep 2015
MCAD-003217, Rev. 04 INMETRO MED Certification Type 2	07 Jul 2020
MCAD-003218, Rev. 06 T4 Atex/IECEx MED Certification label type 1	Not dated
MCAD-003219, Rev. 04 T4 INMETRO MED Certification Label Type 1	07 Jul 2020
MCAD-003220, Rev. 06 T4 Atex/IECEx MED Certification label type 2	Not dated
MCAD-02522, Rev 3 T4 Certification Label Type 1	28 Oct 2019
MCAD-003837, Rev 2 T4 China Certification Label Type 1	06 May 2020
MCAD-002734, Rev 3 T4 Certification Label Type 2	28 Oct 2019
MCAD-003832, Rev 3 T4 China Certification Label Type 2	11 May 2020
MCAD-004057, Rev 1 T4 Sensor PCB v2 Insulator	14 Sep 2021
MCAD-004059 Rev 1, RFI Rear Case Shielding	16 Nov 2021
MCAD-004041, Rev 2, T4 UK MCA Type 1 Label	14 Feb 2022
MCAD-004044, Rev 1, T4 UK MCA Type 2 Label	26 Aug 2021

TEST REPORTS

ExTR Report Package DK ULD ExTR15.0003 09	16 May 2022
IECEx ULD 15.0002 Issue 9 : IECEx Certificate of Conformity	16 May 2022
TL15070-ENV Test Report Environmental Compatibility	08 Sept 2015
TL21174A Test Report Marine Type Approval Testing Including EN50270:2015	04 Mar 2022
TL21174B Test Report Marine Type Approval Testing Including EN50270:2015	04 Mar 2022
TL21174C Test Report Marine Type Approval Testing Including EN50270:2015	07 Mar 2022
TL19061B-ENV Including TL15070-ENV Test Report BS EN50104 Compatibility	15 Jul 2019
TL19061B-ENV Including TL15070-ENV Test Report BS 60079-29-1 Compatibility	15 Jul 2019
TL19061B-EMC Including TL15070-EMC Test Report EMC	04 Jul 2019

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), as applicable. The UK Conformity Mark cannot be affixed to the product until a conformity assessment module is in place
2. Each item, batch or lot of the subject equipment is to be issued with a “UK Declaration of Conformity” and have the “UK Conformity Mark” affixed after a conformity assessment module is in place
3. The certificate holder is solely responsible for the products supplied under this Certificate and to ensure that their products are fully compliant with the relevant statutory regulations as applicable and are designed, manufactured and installed to the same quality and specifications as the prototype tested, including components that are designed and manufactured by third parties

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4. Should a change of Place of Production from that stated below be required i.e., where the stages of manufacture/assembly/testing of this product take place, the new Place of Production is to be advised to us prior to the change taking place. This Certificate will require to be updated for Approval to be maintained
5. The manufacturer must keep a copy of the UK type-examination certificate, its annexes, and additions together with the technical documentation at the disposal of the national authorities for a period of at least 10 years after the UK Conformity 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
6. 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

PLACE OF PRODUCTION

Crowcon Detection Instruments Ltd.
172 Brook Drive
Milton Park
Abingdon
OX14 4SD
United Kingdom



Matt Higgins
Electrical Specialist
Engineering Systems
UK&I Technical Support Office, Marine & Offshore
For and on behalf of Lloyd's Register Marine Ltd.
(LRM Ltd) - UK Approved Body 8512

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