

EC TYPE-EXAMINATION (MODULE B) CERTIFICATE

Marine Equipment Directive (MED) 2014/90/EU

PHOENIX TESTLAB
Notified Body Number **0700**

Recognised by



0800S11/4822/007

BUNDESAMT FÜR
SEESCHIFFFAHRT
UND
HYDROGRAPHIE

This is to certify that:

PHOENIX TESTLAB 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, subject to any conditions in the schedule attached hereto.

| | |
|--|--|
| Certificate No. | PTL-MED-B-19-111454 |
| Manufacturer | Alltek Marine Electronics Corp. |
| Address | 14F-2, No. 237, Sec. 1, Datong Rd., Xizhi District New Taipei City 22161, Taiwan, R.O.C. |
| Authorised Representative | Orolia B.V. |
| Address | Blauw-roodlaan 100 2718 SJ Zoetermeer, The Netherlands |
| Directive Reference (No & Item designation) | Directive 2014/90/EU, Regulation (EU) 2019/1397 MED/4.32 Universal automatic identification system equipment (AIS) |
| Product Description | Automatic Identification System (AIS) |
| Product Name / Trade Name | Type: Z601 / McMurdo Smartfind M5 |
| Specified Standards | |
| IMO Resolution A.694(17) | IEC 61993-2 Ed. 2.0 (2012) |
| IMO Resolution MSC.74(69) | IEC 61993-2 Ed. 3.0 (2018) |
| IMO Resolution MSC.191(79) | IEC 61108-1 Ed. 2.0 (2003) |
| ITU-R M.1371-5 (Class A), 2014 | IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) |
| | IEC 61162-1 Ed. 5.0 (2016) |
| | IEC 61162-2 Ed. 1.0 (1998) |

| | | | |
|-------------------------|-------------------|--------------|-------------------|
| Date of issue: | 2019-12-13 | Expiry date: | 2021-08-29 |
| USCG Approval Category: | 165.155 | | |

This certificate remains valid unless suspended, expired or withdrawn, provided the conditions in the attached schedule are complied with.

The attached Schedule of Approval forms part of this certificate. This certificate consists of 4 pages.



Signed by Klaus Knörig
Notified Body

Schedule of Approval

System Components

| Component | Part No. | Remarks |
|------------------------------|----------|---------------------------|
| Class A AIS Transponder Unit | Z601 | Software Version 1.0.6.XX |
| Junction Box Unit | JB-712 | |
| Extension Cable | EC-713 | |
| GPS Antenna | ANT-21 | |
| VHF Antenna | ANT-11 | Or equivalent VHF antenna |

Optional Components

| Component | Part No. | Remarks |
|-----------------|----------|---------|
| Pilot Plug Unit | PP-714 | |

Approval documentation

| | |
|-----------------------------------|---|
| Block Diagram | Block Diagram of CAMINO-701 with Functional Description |
| Circuit Diagrams | Schematic DCB, Document No. M-PCB-AISADCBV3, Rev. V3 Schematic JB, Document No. M-PCB-AISAJBV1, Rev. V1 Schematic MB, Document No. M-PCB-AISAMBV4, Rev. V4 Schematic Power, Document No. M-PCB-AISAPOWRV4, Rev. V4 |
| PCB Layout and Parts Placement | PCB layout DCB, PCB layout JB, PCB layout MB, PCB layout Power |
| Parts List | Parts list DCB, Parts list JB, Parts list MB, Parts list Power |
| Label | Type: Z601, McMurdo Smartfind M5 label drawing |
| Declaration letters | EU representative letter Declaration of identity – GPS Antennas |
| Waiver letter IEC 60945 | Technical Construction File Waiver Document, TCF_CAMINO-701_WD_R3, 2017-03-28 |
| GPS Antenna Datasheets | GPS Antenna AGGRESSOR-111-C Datasheet GPS Antenna AGGRESSOR-21 Datasheet GPS Antenna AGGRESSOR-21 Specification |
| Installation and Operation Manual | McMurdo Smartfind M5 AIS Class A User Manual, Issue 13T |
| Risk Assessment | Risk Assessment of AIS Class A Transponder (Brand Name: McMurdo; Type: Z601; Model Name: Smartfind M5), 2018-08-23 |

Applied Standards and Test Reports

| Specification | Laboratory | Test Report Number / Version |
|---|--------------------|--|
| IEC 61993-2 Ed. 2.0 (2012-10), Sections 14, 16-20, Annex D IEC 61162-1 Ed. 4.0 (2010) IEC 61162-2 (1998) | BSH | BSH/46121/4322163/13-1, 2013-05-13 |
| IEC 61993-2 Ed. 2.0 (2012-10), Sections 15, D.2 | PHOENIX TESTLAB | F123924E1, 2012-10-22 |
| IEC 61993-2 Ed. 2 (2012-10) Section 15 | BSH | BSH/46121/4322163/13-4, 2013-04-12 |
| IEC 61993-2 Ed. 3.0 (2018-07) | BSH | BSH/454.AIS-A/AMEC CAMINO-701/1, 2019-10-22 |
| IEC 62288 Ed. 1.0 (2008-07), Sections 4, 7 | BSH | BSH/46121/4322163/13-3, 2013-05-13 |
| IEC 62288 Ed. 2.0 (2014-07), Sections 4, 7 IEC 61993-2 Ed. 2.0 (2012-10) ITU-R M.1371-5 | BSH | BSH/4543/001/4322868/14, 2014-12-15 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Sections 6, 11.1, 13-15 | BSH | BSH/46121/4322163/13-6, 2013-04-11 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Section 5.2.3 | CCS | T130218W04-OT, 2013-03-08 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Sections 8.2 Dry Heat, 8.3 Damp Heat, 8.4 Low Temperature | PHOENIX TESTLAB | U123924E1, 2012-11-07 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Sections 8.7 Vibration, 12.1 Access to dangerous voltages | SGS | HC60123B/2012, 2012-11-28 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Section 8.8 Rain and spray | SGS | HCD0137A/2009, 2010-04-13 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Sections 9, 10 EMC | CCS | T130218W04-E, 2013-04-30 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Section 8.12 Corrosion | IST | HS1204120137A Version C, 2012-11-21 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Section 11.2, Compass safe distance | BSH | Certificate No. 777, 2012-08-09 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Section 12.2 Electromagnetic radio frequency radiation | CCS | T130102W05-E, 2013-01-14 |

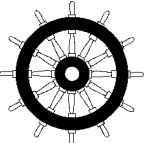
| Specification | Laboratory | Test Report Number / Version |
|--|--------------------|-----------------------------------|
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Sections 8.2 Dry Heat, 8.3 Damp Heat, 8.4 Low Temperature, 8.7 Vibration | PHOENIX TESTLAB | U092025E1, 2009-12-01 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Section 8.12 Corrosion | PHOENIX TESTLAB | U092663E1, 2009-12-01 |
| IEC 60945 Ed. 4.0 (2002) incl. Corr. 1 (2008) Section 10.9 ESD | PHOENIX TESTLAB | F100511E1, 2010-03-02 |
| IEC 61108-1 Ed. 2.0 (2003-07) | BSH | BSH/4612/4322163/12-2, 2013-05-13 |

Limitations / Restrictions

- None -

Notes

1. 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 PHOENIX TESTLAB.
2. Should the specified regulations or standards be amended during the period of validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on the market and on board vessels to which the amended regulations or standards apply.

3.  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.

U.S. Coast Guard Approval

This equipment is covered by the scope of the "Agreement between the European Community and the United States of America on Mutual Recognition of Certificates of Conformity for Marine Equipment" signed February 27th, 2004 and amended by Decision No.1/2008 dated February 18th, 2019 according to U.S. Coast Guard approval category 165.155.

A U.S. Coast Guard approval number will be assigned to the equipment when the production module has been completed and will appear on the production module certificate (module D, E or F) as allowed by the MRA.

The AIS radio transmitter is required to be authorized by the U.S. Federal Communications Commission (FCC).