Type Examination Certificate

This is to certify that:

Kentec Electronics Limited
Unit 25-26
Fawkes Avenue
Questor
Dartford
DA1 1JQ
United Kingdom

Holds Certificate Number: BSI/MED/3.51/755656

In respect of:

MED/3.51
Fixed fire detection and fire alarm systems components for control stations, service spaces, accommodation spaces, cabin balconies, machinery spaces and unattended machinery spaces
(a) Control and Indication equipment
(b) Power Supply Equipment

Product - Analogue Addressable Fire Alarm Control Panel with General Emergency Alarm. Syncro ASM M8000 Series, Models MA80161M2, MA80162M2, MH80161M2, MH80162M2.

Specified standard - EN 54-2:1997 including AC:1999 + A1:2006, EN 54-4:1997 including AC:1999 + A1:2002 + A2:2006, IEC 60092-504:2016, IEC 60533:2015

On the basis that BSI carried out the relevant EU type examination procedures for the equipment identified above which was found to be in compliance with the Marine Equipment Directive (MED) 2014/90/EU as amended, subject to any conditions in the schedule attached hereto. The attached schedule of approval forms part of this certificate.

For and on behalf of BSI, a Notified Body for the above Directive (Notified Body Number 2797):

Denelise L'Ecluse, Managing Director Assurance - Continental Europe

First Issued: 2021-11-29 Latest Issue: 2023-01-05 Expiry Date: 2027-07-03

PRODUCTS RvA C 646

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To check its validity telephone +31 20 3460780. An electronic certificate can be authenticated online.

BSI Group The Netherlands B.V., registered in the Netherlands under number 33264284, at John M. Keynesplein 9, 1066 EP Amsterdam, The Netherlands
A member of BSI Group of Companies.

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No. BSI/MED/3.51/755656

SCHEDULE OF APPROVAL

Approval Documentation that forms part of this certification:

Drawing No.	Rev./ Issue No.	Date	Title
S785AH	18/11/2020	18/11/2020	idented Level BOM
S785AH PAF	09	09/01/2020	S785AH Layout
B1624 CMFTB Datasheet	3	-	Fuse Block data sheet
VTX-146-100-830C	1	24/06/19	Toroidal Transformer 100VA
Man-1100M	3	June/2013	User Manual
MPL-1142	-	-	Model label
MP214LGUK	-	-	Screen print
SD785AH-7	2v3	10/09/14	Syncro AS A/H Schematic
K7670	15	24/05/21	Syncro AS Construction - Mega Assembly SI
M2	10	24/10/19	385 x 310 x 90 Surface Box
ML2	04	14/08/20	2005 Style 385 x 310 Lid with Aperture
S586 PAF	11	01/09/15	S586 Layout
S586	18/11/2020	18/11/2020	Bill of material
B2652 Mains Filter	May 2014	May 2014	EMC filters
DS51 Syncro ASM	DS51/17/17	DS51/17/17	Syncro ASM data sheet
MP214	07	14/01/2021	Syncro AS - Analogue Addressable Control Pane- Hole & Fasteners
SD586-2	04	30/07/2009	Syncro AS Loop 2- board schematics
K10137	06	05/07/22	Syncro AS IC Programming details

Supporting Documentation

Technical File	Syncro AS 8000 Series including Syncro AS Marine Firmware Version V6.60 and Technical file version 1.3D. BSI Ref 7374007, 7559852, 7803272, 8631841, 3267543, 3702418	
Test Report		
228/7161856	14/03/08	BSI – EMC Issue 2 Test Report
228/4944547-1	06/11/07	BSI – EMC Test Report
228/4944547-2	06/11/07	BSI – EMC Test Report
222/7000365	08/11/07	BSI – Safety Test Report
703002	20/03/07	FDA Technology –Software Test Report
244/7000367-1	07/11/07	BSI – Environmental test Report
244/7000367-2	22/10/07	BSI – Issue 2 Marine Environment Test Report

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SCHEDULE OF APPROVAL - CONTINUED

244/7138115	01/05/07	BSI – Performance Test Report
244/7376099	16/10/09	BSI – Test Report to updated standards
2411/7374007	09/12/09	MED Module B Technical File Review Report
104444067LHD ☐001	05/01/21	Intertek Test Report covering 6GHZ test IEC 61000-4-3
3413501	07/09/21	BSI – Limited Testing, Includes Software Ver V6.553T3
3702418	22/11/22	BSI – Technical file assessment of version 1.3D including software update to Ver 6.60

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SCHEDULE OF APPROVAL - CONTINUED

Certificate Amendment Record and BSI internal Review relating to this Certificate

Issue date	Comments	BSI Review No.
November 2021	First Issued	2797:21:3503511
January 2023	Document update to reflect software version 6.60	2797:23:3702419

Conditions of Certification

i) This certificate remains valid unless cancelled or revoked, provided the conditions listed below are complied with and the equipment remains satisfactory in service.

ii) The equipment detailed on page 1 on this certificate is to be manufactured in accordance with Conformity to Type Based on Quality Assurance of the Production Process (Module D) of the Marine Equipment Directive

iii) SOLAS 74 Reg. II-2/7, SOLAS 74 Reg. X/3, IMO Res. MSC.36(63)-(1994 HSC Code) 7, IMO Res. MSC.97(73)-(2000 HSC Code) 7, IMO Res. MSC.98(73)-(FSS Code) 9, IMO Res. MSC.391(95)-(IGF Code) 11, IMO MSC.1/Circ.1242, IMO MSC.1/Circ.1487, IMO MSC.1/Circ.1528 & IMO MSC.1/Circ.1554 requirements, as applicable.

iv) If the specified standards are amended during the validity of this certificate, this product type is to be re-approved prior to it being supplied to vessels to which the amended standards apply.

v) Production tests are to be conducted in accordance with the applicable requirements of the IMO Resolutions and applicable standards and be recorded by the manufacturer in accordance with the approved Conformity to Type Based on Quality Assurance of the Production Process (Module D) of the Marine Equipment Directive

vi) Each item, batch or lot of the equipment is to have the "Mark of Conformity" affixed and be issued with a "Declaration of Conformity".

vii) Detailed User instructions are to be provided with each product.

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