DNV·GL

Certificate No:
TAA000006U

TYPE EXAMINATION CERTIFICATE

This is to certify:

That the Miscellaneous

with type designation(s)
Alphaline Repeater Display MFS-H, Alphaline Repeater Display MFS-V, Alphaline Repeater Display MFS-VJ, Alphaline Repeater Display MFS-VR, Alphaline Repeater Display MFL, Alphaline Repeater Display MFM

Manufactured by
Alphatron Marine B.V.
Rotterdam, Netherlands

is found to comply with
Det Norske Veritas' Rules for Classification of Ships

Application :

See page 2. *For panel mount installation in IP56 enclosure.

Type	Temperature	Humidity	Vibration	EMC	Enclosure
Alphaline Repeater Display MFS-H	**D**	**B**	**A**	**B**	**C***
Alphaline Repeater Display MFS-V	**D**	**B**	**A**	**B**	**C***
Alphaline Repeater Display MFS-VJ	**D**	**B**	**A**	**B**	**C***
Alphaline Repeater Display MFS-VR	**D**	**B**	**A**	**B**	**C***
Alphaline Repeater Display MFL	**D**	**B**	**A**	**B**	**C***
Alphaline Repeater Display MFM	**D**	**B**	**A**	**B**	**C***

This Certificate is valid until **2021-04-26**.

Issued at **Høvik** on **2016-04-27**

DNV GL local station: **Rotterdam, Product Certification /Verification**

for **DNV GL**

Approval Engineer: **Frederik Tore Elter**

Jan Tore Grimsrud
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Examination Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-019834-1**
Certificate No: **TAA000006U**

Product description

Alphatron Marine, Alphaline MF Systems repeater displays, consisting of types:

Type Designation	Description	Item No.	IEC60945 Location
Alphaline Repeater Display MFS-H	5.0 inch display horizontal LCD orientation	3803.0226 (grey), 3803.0228 (black)	Exposed
Alphaline Repeater Display MFS-V	5.0 inch display vertical LCD orientation	3803.0230 (grey), 3803.0232 (black)	Exposed
Alphaline Repeater Display MFS-VJ	5.0 inch display vertical LCD orientation with joystick, rotary encoder and push button.	3803.0234 (grey), 3803.0236 (black)	Exposed
Alphaline Repeater Display MFS-VR	5.0 inch display vertical LCD orientation with rotary encoder and push button.	3803.0238 (grey), 3803.0240 (black)	Exposed
Alphaline Repeater Display MFM	6.5 inch display vertical LCD orientation	3803.0242 (grey), 3803.0244 (black)	Exposed
Alphaline Repeater Display MFL	8.5 inch display horizontal LCD orientation	3803.0246 (grey), 3803.0248 (black)	Exposed

Application/Limitation

- This certificate covers hardware environmental and EMC approval of listed components. When applicable see to separate certification for specific display applications, functions and interfaces.
- Alphaline Repeater Displays are to be installed in accordance with Installation and Operation Manual.
- For exposed installation the Alphatron Repeater Displays are to be mounted in an watertight casing in accordance with manufacturers specifications.

Type Approval documentation

DNV GL No	Title	Drawing No	Rev.
32	Report: Alphaline Repeater Display MFL - DNV 2.4	9505 333 653XX 001	2.001
31	Report: Alphaline Repeater Display MFM - DNV 2.4	9505 333 651XX 001	2.001
30	Report: Alphaline Repeater Display MFS-VR - DNV 2.4	9505 333 649XX 001	2.001
29	Report: Alphaline Repeater Display MFS-VJ - DNV 2.4	9505 333 647XX 001	2.001
28	Report: Alphaline Repeater Display MFS-V - DNV 2.4	9505 333 645XX 001	2.001
27	ARD Product stickers		
23	Manual: Alphaline MF Systems - Installation and Operation Manual		
16	Report: Alphaline Repeater Display MFL IEC60945	9505333652_eqr_001	
14	Report: Alphaline Repeater Display MFM IEC60945	9505333650_eqr_001	
12	Report: Alphaline Repeater Display MFS-VR IEC60945	9505333648_eqr_001	
10	Report: Alphaline Repeater Display MFS-VJ IEC60945	9505333646_eqr_001	
8	Report: Alphaline Repeater Display MFS-V IEC60945	9505333644_eqr_001	
7	Report: Alphaline Repeater Display MFS-H DNV 2.4	9505333643_eqr_001	
6	Report: Alphaline Repeater Display MFS-H IEC60945	9505333642_eqr_001	v001

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Tests carried out

- Environmental testing: IEC60945(2002)
- Environmental testing: DNV 2.4 - Environmental test specification for instrumentation and automation equipment

Marking of product

The Manufacturer and Type Designation to be applied to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, safe distance to magnetic compass, power consumption and/or supply voltage.

Periodical assessment

A retention survey is to be performed at least once every second year, and again upon renewal of this certificate.
The scope of the retention/renewal survey is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society.