TYPE APPROVAL CERTIFICATE

Certificate no.:
TAA00000GD
Revision No:
5

This is to certify:

that the Fire Detector

with type designation(s)
Discovery 58000-400MAR/500MAR/600MAR/700MAR

issued to
Apollo Fire Detectors Limited
Havant, Hampshire, United Kingdom

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft

Application:

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.

Location classes:

Temperature	**A**
Humidity	**B**
Vibration	**A**
EMC	**B**
Enclosure	**B**

Issued at **Høvik** on **2024-02-21**

This Certificate is valid until **2026-06-30**.
DNV local unit: **UK & Ireland CMC & VMC**

Approval Engineer: **Frode Nygård**

for **DNV**
Digitally Signed By: Sneen, Ståle
Location: DNV Høvik, Norway

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 Approval Certificate and not to the approval of equipment/systems installed.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.

Product description

The following Discovery fire detectors installed with mounting base 45681-210 are included in this type approval:

- Heat detector, 58000-400MAR
- Ionisation smoke detector, 58000-500MAR
- Optical smoke detector, 58000-600MAR
- Optical smoke/heat multisensor detector, 58000-700MAR

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

Not for application in hazardous areas.

Type Approval documentation

Heat detector 58000-400MAR (Software version 34000-046SW)

Gen. Assembly Drawing:	58000-400, issue 4
Schematic Diagram:	58000-400CD, issue 7
Engineering Product Guide:	PP2052/2015/issue 7a
Test Reports:	LPC TE 90372, dated 1999-04-16
	Apollo No. 1657.0, dated 2003-03-14
	Apollo No. 1086 v1, dated 2000-08-09
	BRE-TE-P111208 Issue 1, dated 2018-06-22
	BRE-TE-P105642-1001 Issue 1, dated 2019-03-21

Ionisation smoke detector, 58000-500MAR (Software version 34000-065SW)

Gen. Assembly Drawing:	58000-500, issue 3
Discovery ionisation support:	38532-138, issue 1
Schematic Diagram:	58000-500CD, issue 6
Engineering Product Guide:	PP2052/2015/issue 7a
Test Reports:	LPC TE 90373, dated 1998-12-29
	Apollo No. 1659.0, dated 2003-03-26
	Apollo No. 1080 v1, dated 2000-07-14
	BRE TE P111208 Issue 1, dated 2018-06-22
	BRE-TE-P105641-1001 Issue 1, dated 2018-10-31

Optical smoke detector, 58000-600MAR (Software version 34000-045SW)

Gen. Assembly Drawing:	58000-600, issue 2
Schematic Diagram:	58000-600CD, issue 14
Engineering Product Guide:	PP2052/2015/issue 7a
Test Reports:	LPC TE 90371, dated 1999-04-16
	Apollo No. 1658.0, dated 2003-03-24
	Apollo No. 971.1 v1, dated 1998-09-23
	BRE-TE-P105641-1001 Issue 1, dated 2018-10-31

Multisensor detector, 58000-700MAR (Software version 34000-044SW)

Gen. Assembly Drawing:	58000-700, issue 3
Schematic Diagram:	58000-700CD, issue 8
Engineering Product Guide:	PP2052/2015/issue 7a
Test Reports:	LPC TE 90373, dated 1998-12-29
	Apollo No. 1659.0, dated 2003-03-26
	Apollo No. 1091 v1, dated 2000-10-31
	BRE-TE-P105641-1001 Issue 1, dated 2018-10-31

Certificate for IP44:	TUV SX615834-001 Issue 1
Test report, Limited EMC testing:	TUV OO615834/01 Issue 1
Test report, EMC testing:	TUV job 75902489-41000
	1041 IR, Issue 1, 2019-04-12
	1278 CR, Issue 1, 2019-05-30
	18R110 ER, Issue 1, 2018-03-26

Test Certificate Ingress Protection: 9089-17 (58000-400MAR), Issue 1, 2018-06-13
9089-18 (58000-500MAR), Issue 1, 2018-06-14
9089-19 (58000-600MAR), Issue 1, 2018-06-14
9089-20 (58000-700MAR), Issue 1, 2018-06-14

Type approval periodical assessment report for TAA00000GD, DNV 2021-08-02.

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.
Performance tests according to:
- EN 54-5:2017,
- EN 54-7:2018.

Marking of product

The products to be marked with:
- manufacturer name
- model name
- serial number

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE