

**TYPE APPROVAL CERTIFICATE****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 GL 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 GL.****Location classes:**

<b>Temperature</b>	<b>A</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>B</b>

This Certificate is valid until **2021-06-30**.Issued at **Høvik** on **2017-06-19**DNV GL local station: **London**Approval Engineer: **Nils Jarem**for **DNV GL**

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**Odd Magne Nesvåg**  
**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 Approval Certificate and not to the approval of equipment/systems installed.

Job Id: **262.1-003081-4**  
Certificate No: **TAA00000GD**  
Revision No: **1**

## 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

## Application/Limitation

Not for application in hazardous areas.

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, 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 GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems.

## Type Approval documentation

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

Gen. Assembly Drawing: 58000-400, issue 3  
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

### Ionisation smoke detector, 58000-500MAR (Software version 34000-007 I88.5)

Gen. Assembly Drawing: 58000-500, 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

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

Gen. Assembly Drawing: 58000-600, issue 2  
Schematic Diagram: 58000-600CD, issue 12  
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

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

Gen. Assembly Drawing: 58000-700, issue 2  
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

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

Type approval periodical assessment report for A-12766, DNV GL Southampton 2016-05-25.

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### **Tests carried out**

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

### **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