



# DET NORSKE VERITAS

## TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-11132  
This Certificate consists of 5 pages

*This is to certify that the*  
**Fire Detector**  
*with type designations*

**ORBIS Range of Conventional Heat,  
Optical Smoke and Multisensor Smoke Detector;  
ORBIS Range of Intrinsically Safe (IS) Heat,  
Optical Smoke and Multisensor Smoke Detector**

*Manufactured by*  
**Apollo Fire Detectors Limited**  
HAVANT, United Kingdom

*is found to comply with*  
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and  
Det Norske Veritas' Offshore Standards

*Application*  
Location classes:

Type	Temperature	Humidity	Vibration	FMC	Enclosure
ORBIS Range of Conventional Detector	C	B	B	B	B
ORBIS Range of Intrinsically Safe (IS) Detector	C	B	B	B	B

*Place and date*  
Høvik, 2009-04-17  
for DET NORSKE VERITAS AS

*[Signature]*  
Odd Magne Nesvåg

*Head of Section*



*Local Office*  
DNV London

*This Certificate is valid until*  
2012-12-31

*[Signature]*  
Kjell Myhrsveen  
*Surveyor*

*[Signature]*

Notice: 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.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million in this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



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 File No.: 473.12  
 Job Id. No.: 262.1-006901

### Product description

Type approval of ORBIS and ORBIS Intrinsically Safe Ranges of Fire Detectors covers the following Part Numbers:

Part Number	Description
<b>Orbis Bases</b>	
ORB-MB-00001-MAR ✓	TimeSaver Base
ORB-RB-40004-MAR ✓	TimeSaver Relay Base
<b>Orbis IS Bases</b>	
ORB-MB-50018-APO ✓	IS TimeSaver Base
ORB-BA-50008-APO ✓	IS Base Adaptor (in conjunction with 45681-207 base)
<b>Orbis Heat Detectors</b>	
ORB-HT-41001-MAR ✓	Class A1R Heat detector with SensAlert and FasTest
ORB-HT-41002-MAR ✓	Class A2S Heat detector with SensAlert and FasTest
ORB-HT-41003-MAR ✓	Class BR Heat detector with SensAlert and FasTest
ORB-HT-41004-MAR ✓	Class BS Heat detector with SensAlert and FasTest
ORB-HT-41005-MAR ✓	Class CR Heat detector with SensAlert and FasTest
ORB-HT-41006-MAR ✓	Class CS Heat detector with SensAlert and FasTest
ORB-HT-41013-MAR ✓	Class A1R Heat detector with SensAlert and FasTest and Flashing LED
ORB-HT-41014-MAR ✓	Class A2S Heat detector with SensAlert and FasTest and Flashing LED
ORB-HT-41015-MAR ✓	Class BR Heat detector with SensAlert and FasTest and Flashing LED
ORB-HT-41016-MAR ✓	Class BS Heat detector with SensAlert and FasTest and Flashing LED
ORB-HT-41017-MAR ✓	Class CR Heat detector with SensAlert and FasTest and Flashing LED
ORB-HT-41018-MAR ✓	Class CS Heat detector with SensAlert and FasTest and Flashing LED
<b>Orbis IS Heat Detectors</b>	
ORB-HT-51145-APO ✓	Class A1R Heat detector with SensAlert & FasTest
ORB-HT-51146-APO ✓	Class A1R Heat detector with SensAlert, FasTest & Flashing LED
ORB-HT-51157-APO ✓	Class A1S Heat detector with SensAlert & FasTest
ORB-HT-51158-APO ✓	Class A1S Heat detector with SensAlert, FasTest & Flashing LED
ORB-HT-51147-APO ✓	Class A2S Heat detector with SensAlert & FasTest
ORB-HT-51148-APO ✓	Class A2S Heat detector with SensAlert, FasTest & Flashing LED
ORB-HT-51149-APO ✓	Class BR Heat detector with SensAlert & FasTest
ORB-HT-51150-APO ✓	Class BR Heat detector with SensAlert, FasTest & Flashing LED
ORB-HT-51151-APO ✓	Class BS Heat detector with SensAlert & FasTest
ORB-HT-51152-APO ✓	Class BS Heat detector with SensAlert, FasTest & Flashing LED
ORB-HT-51153-APO ✓	Class CR Heat detector with SensAlert & FasTest
ORB-HT-51154-APO ✓	Class CR Heat detector with SensAlert, FasTest & Flashing LED
ORB-HT-51155-APO ✓	Class CS Heat detector with SensAlert & FasTest
ORB-HT-51156-APO ✓	Class CS Heat detector with SensAlert, FasTest & Flashing LED



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Part Number	Description
<b>Orbis Optical Detectors</b>	
ORB-OP-42001-MAR ✓	Optical smoke detector with SensAlert, FasTest and DirtAlert
ORB-OP-42003-MAR ✓	Optical smoke detector with SensAlert, FasTest and DirtAlert and Flashing LED
<b>Orbis IS Optical Detectors</b>	
ORB-OP-52027-APO ✓	Optical smoke detector with SensAlert, FasTest and DirtAlert
ORB-OP-52028-APO ✓	Optical smoke detector with Flashing LED, SensAlert, FasTest and DirtAlert
<b>Multisensor Smoke Detectors</b>	
ORB-OH-43001-MAR ✓	Multisensor smoke detector with SensAlert, FasTest and DirtAlert
ORB-OH-43003-MAR ✓	Multisensor smoke detector with SensAlert, FasTest and DirtAlert and Flashing LED
<b>Multisensor Smoke Detectors</b>	
ORB-OH-53027-APO ✓	Multisensor smoke detector with SensAlert, FasTest and DirtAlert
ORB-OH-53028-APO ✓	Multisensor smoke detector with Flashing LED, SensAlert, FasTest and DirtAlert

#### Application/Limitation

System application and location of detectors are to be in accordance with relevant parts of the Rules.

Ex installations to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Ex-certification is not covered by this certificate and the following paragraph, which is for information only, is based on information received from the manufacturer, but not verified by DNV.

Information on Ex-Certification received from manufacturer – Not verified by DNV		
Equipment	Certified	Certificate No.
ORBIS IS Series Fire Detectors	Ⓢ II 1 G Ex ia IIC T4 (-40°C ≤ t <sub>a</sub> ≤ 60 °C)/ T5 (-40°C ≤ t <sub>a</sub> ≤ 40 °C)	Baseefa 06ATEX0007X



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### 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 Ships Pt.4 Ch.9 Control and Monitoring Systems.

### Type approval documentation

<i>Documentation</i>	<i>Documentation Reference Number</i>
Product Guide	PP2147/2007/issue 3
Specification Data sheet	48000-15-issue 8, 48000-001-issue 9, 48000-013-issue 8
Circuit diagr.	100-OH-00003-issue 2A, 100-OH-00004-issue 2A
	100-HT-00001-issue 1, 100-HT-00002-issue 2
PCB Assy. drwg./Parts List	200-EA-00003-issue 2A, 200-EA-00004, issue 2B
	200-HT-00001-issue 1C, 200-HT-00002-issue 2A
Assy. drwg./Parts List	400-OH-00003-issue 2A, 400-OH-00004-issue 1A
	400-HT-00001-issue 1A, 400-HT-00002-issue 1
	400-OP-00005-issue 2A, 400-OP-00006-issue 1A
	300-MA-00003, issue 6
	38531-903-issue 2, 38531-909-issue 1, 38531-911-issue 1A

<i>Detector type</i>	<i>Test Reports</i>	
	<i>BRE Nos.</i>	<i>Apollo Nos.</i>
Heat Detectors	21036, TE210363SW, 211499, 211499SW/A, 21499SW/B	1884.0
Optical Smoke Detectors	210362, 210362-SW, TE210362BSW	1840.0
Multisensor Smoke Detectors	210364, TE210364SW, 211500, E211500SW	1841.0

<i>Detector type</i>	<i>EC – Type Examination Certificate</i>
	<i>Certification Number</i>
ORBIS IS Series Fire Detectors	Baseefa06ATEX0007X

Retention Survey Report, 2009-02-12 surveyor QUIS

### Tests carried out

Relevant tests of EN54-5 & 7 and "Standard for Certification No. 2.4 – April 2001"

### Certificate retention survey

The scope of the retention/renewal survey 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.



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The main elements of the survey 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

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE