DNV·GL

Certificate No:
TAA000006Y

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Fire Detector

with type designation(s)
ORBIS Range of Conventional Heat, Optical Smoke and Multisensor Smoke Detector
ORBIS Range of Intrinsically Safe (IS) Heat, Optical Smoke and Multisensor Smoke Detector

Issued to
Apollo Fire Detectors Limited
HAVANT, HAMPSHIRE, United Kingdom

is found to comply with
DNV GL rules for classification – Ships and offshore units

Application :

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

Location classes:

Type	Temp.	Humidity	Vibr.	EMC	Enclosure
ORBIS Range of Conventional Heat, Optical Smoke and Multisensor Smoke Detector;	**C**	**B**	**B**	**B**	**B / IP44**
ORBIS Range of Intrinsically Safe (IS) Heat, Optical Smoke and Multisensor Smoke Detector	**C**	**B**	**B**	**B**	**B / IP44**

This Certificate is valid until **2016-12-31**.

Issued at **Høvik** on **2015-11-17**

for **DNV GL**

DNV GL local station: **London**

Approval Engineer: **Andrzej Gdaniec**

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.

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Product description

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

Part Number	Description
Orbis Bases	
ORB-MB-00001-MAR	TimeSaver Base
ORB-RB-40004-MAR	TimeSaver Relay Base
Orbis IS Bases	
ORB-MB-50018-APO	IS TimeSaver Base
ORB-BA-50008-APO	IS Base Adaptor (in conjuction with 45681-207 base)
Orbis Heat Detectors	
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
Orbis IS Heat Detectors	
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
Orbis Optical Detectors	
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
Orbis IS Optical Detectors	
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
Multsensor Smoke Detectors	
ORB-OH-43001-MAR	Multisensor smoke detector with SensAlert, FasTtest and DirtAlert
ORB-OH-43003-MAR	Multisensor smoke detector with SensAlert, FasTest and DirtAlert and Flashing LED

Part Number	Description
Multsensor Smoke Detectors	
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

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.

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 GL.

Information on Ex-Certification received from manufacturer – Not verified by DNV GL		
Equipment	Certified	Certificate No.
ORBIS IS Series Fire Detectors	Ⓔx II 1 G Ex ia IIC T4 (-40ºC ≤ Ta ≤ +60ºC)/ T5 (-40ºC ≤ Ta ≤ +40ºC)	Baseefa 06ATEX0007X

Type Approval documentation

Tests carried out

Applicable tests according to DNV Standard for Certification No. 2.4, April 2001.
Tested according to EN54-5, EN54-7

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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE