



CERTIFICATE NUMBER

DATE

11-LD766034C-PDA

07 July 2011

ABS TECHNICAL OFFICE

London Engineering Department

CERTIFICATE OF DESIGN ASSESSMENT

This is to Certify that a representative of this Bureau did, at the request of
APOLLO FIRE DETECTORS LIMITED - HAMPSHIRE

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

PRODUCT: **Fire Detector**

MODEL: **Apollo Orbis Conventional Range of Intrinsically Safe Smoke/Heat Detectors and Accessories**

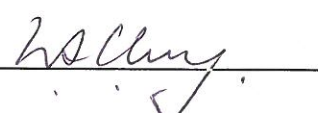
This Product Design Assessment (PDA) Certificate 11-LD766034C-PDA, dated 07/Jul/2011 remains valid until 06/Jul/2016 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the manufacturer and intended client.

AMERICAN BUREAU OF SHIPPING


Wing F. Cheung
Engineer

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by the terms and conditions as contained in ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010).

APOLLO FIRE DETECTORS LIMITED

36 BROOKSIDE ROAD
HAVANT
HAMPSHIRE
ENGLAND PO9 1JR
United Kingdom
Telephone: 44-2392-492-412
Fax: 44-2392-492-754
Web: www.apollo-fire.co.uk

MA Certificate No. 09-SO1732027-X

Product: Fire Detector
Model: Apollo Orbis Conventional Range of Intrinsically Safe Smoke/Heat Detectors and Accessories

Intended Service:
Conventional fire detection systems for marine and offshore applications in machinery and accommodation spaces

Description:
The Orbis IS range detectors are microprocessor based conventional fire detection units with standard IS (time-saving) electronic-free bases comprising optical smoke detectors, multisensor smoke detectors and heat detectors. The following part numbers and classifications are included in the range:

- ORB-BA-50008-APO Adaptor Base
- ORB-HT-51145-APO Class A1R Heat Detector with SensAlert/FasTest
- ORB-HT-51146-APO Class A1R Heat Detector with Flashing LED/SensAlert/FasTest
- ORB-HT-51147-APO Class A2S Heat Detector with SensAlert/FasTest
- ORB-HT-51148-APO Class A2S Heat Detector with Flashing LED/SensAlert/FasTest
- ORB-HT-51149-APO Class BR Heat Detector with SensAlert/FasTest
- ORB-HT-51150-APO Class BR Heat Detector with Flashing LED/SensAlert/FasTest
- ORB-HT-51151-APO Class BS Heat Detector with SensAlert/FasTest
- ORB-HT-51152-APO Class BS Heat Detector with Flashing LED/SensAlert/FasTest
- ORB-HT-51153-APO Class CR Heat Detector with SensAlert/FasTest
- ORB-HT-51154-APO Class CR Heat Detector with Flashing LED/SensAlert/FasTest
- ORB-HT-51155-APO Class CS Heat Detector with SensAlert/FasTest
- ORB-HT-51156-APO Class CS Heat Detector with Flashing LED/SensAlert/FasTest
- ORB-HT-51157-APO Class A1S Heat Detector with SensAlert/FasTest
- ORB-HT-51158-APO Class A1S Heat Detector with Flashing LED/SensAlert/FasTest
- ORB-MB-50018-APO Timesaver Base
- ORB-OH-53027-APO Multisensor Smoke Detector with SensAlert/FasTest/DirtAlert
- ORB-OP-52027-APO Optical Smoke Detector with SensAlert/FasTest/DirtAlert
- ORB-OP-52028-APO Optical Smoke Detector with Flashing LED/SensAlert/FasTest/DirtAlert
- ORB-OP-53028-APO Multisensor Smoke Detector with Flashing LED/SensAlert/FasTest/DirtAlert

Ratings:
Nominal voltage: 14 to 24V DC (non-polarised);
Ingress protection: IP44;
IS Certification: 06ATEX0007X;
Operating temperature: - 40°C to 70°C;
Classification: II 1G Ex ia IIC T5 or T4;
Certification: BASEEFA 06 ATEX 0007X and IECEx BAS 06.0002X



Service Restrictions:
Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined. Use in conjunction with certified safe barriers.

Comments:
Tests and approval are for hardware only. Each configuration and external connection is to be specifically approved.

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Notes / Drawings / Documentation:

This Product Design Assessment (PDA) is valid only for products intended for use on ABS classed vessels, MODUs or facilities which are in existence or under contract for construction on the date of the ABS Rules used to evaluate the Product.

Term of Validity:

This Product Design Assessment (PDA) Certificate 11-LD766034C-PDA, dated 07/Jul/2011 remains valid until 06/Jul/2016 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

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STANDARDS

ABS Rules:

2011 Steel Vessel Rules 1-1-4/7.7, 4-7-3/11.5, 4-8-3/13.3.1, 4-9-7/13

National:

BS EN 54 Parts 5:2001, 7:2001, as applicable

International:

IMO FSS Code Chapter 9

Government Authority:

NA

EUMED:

European Union Marine Equipment Directive 96/98/EC as Amended by 2008/67/EC. Item A.1/3.51 Fixed fire detection and fire alarm systems components for control stations, service spaces, accommodation spaces, machinery spaces and unattended machinery spaces.

Others:

NA



WFL