TYPE APPROVAL CERTIFICATE

Certificate No.   : LDN23417-FD002   **Initial Approval :**   18th November, 2008

Product   : Fire Detectors

Manufacturer   : Apollo Fire Detectors Ltd.

   36 Brookside Road, Havant, Hampshire, P09 1JR. U.K

Product Description : Conventional Orbis Fire Detector ;
   - Type : ORB-HT-41XXX-MAR, ORB-OP-42XXX-MAR, ORB-OH-43XXX-MAR

   Intrinsically Safe Orbis Fire Detector ;
   - Type : ORB-HT-51XXX-APO, ORB-OP-52XXX-APO, ORB-OH-53XXX-APO

   " See Appendix 1 "

Approval Condition : " See Appendix 2 "

   THIS IS TO CERTIFY   that the above-mentioned product has been approved in accordance with the relevant requirement of this Society's Rules and / or of the recognized standards as follows and entered in the "List of Approved Manufacturers and Type Approved Equipment".

Pt. 6, Ch. 2, Art. 301 of the Rules for Classification, Steel Ships and EN54-5, EN54-7

This Certificate is valid until 17th November, 2023
Issued at Busan, Korea on 2nd July, 2018

KOREAN REGISTER OF SHIPPING

General Manager of
Marine & Ocean Equipment Team

Appendix 1

Product Description and/or Approval Condition

Certificate No :   LDN23417-FD002   **Date of Issue :**2nd July, 2018

A. Product Description ;

  1. Conventional Orbis Fire Detector ;
     1) Heat Detector (ORB-HT-41XXX-MAR)
          - ORB-HT-41001-MAR : Class A1R with SensAlert/FasTest
          - ORB-HT-41002-MAR : Class A2S with SensAlert/FasTest
          - ORB-HT-41003-MAR : Class BR with SensAlert/FasTest
          - ORB-HT-41004-MAR : Class BS with SensAlert/FasTest
          - ORB-HT-41005-MAR : Class CR with SensAlert/FasTest
          - ORB-HT-41006-MAR : Class CS with SensAlert/FasTest
          - ORB-HT-41013-MAR : Class A1R with SensAlert/FasTest/FI LED
          - ORB-HT-41014-MAR : Class A2S with SensAlert/FasTest/FI LED
          - ORB-HT-41015-MAR : Class BR with SensAlert/FasTest/FI LED
          - ORB-HT-41016-MAR : Class BS with SensAlert/FasTest/FI LED
          - ORB-HT-41017-MAR : Class CR with SensAlert/FasTest/FI LED
          - ORB-HT-41018-MAR : Class CS with SensAlert/FasTest/FI LED

     2) Optical Smoke Detector (ORB-OP-42XXX-MAR)
          - ORB-OP-42001-MAR : with SensAlert/FasTest/DirtAlert
          - ORB-OP-42003-MAR : with SensAlert/FasTest/DirtAlert/FI LED

     3) Multisensor Smoke Detector (ORB-OH-43XXX-MAR)
          - ORB-OH-43001-MAR : with SensAlert/FasTest/DirtAlert
          - ORB-OH-43003-MAR : with SensAlert/FasTest/DirtAlert/FI LED

  2. Intrinsically Safe Orbis Fire Detector ;
     1) Heat Detector (ORB-HT-51XXX-APO)
          - ORB-HT-51145-APO : Class A1R with SensAlert/FasTest
          - ORB-HT-51147-APO : Class A2S with SensAlert/FasTest
          - ORB-HT-51149-APO : Class BR with SensAlert/FasTest
          - ORB-HT-51151-APO : Class BS with SensAlert/FasTest
          - ORB-HT-51153-APO : Class CR with SensAlert/FasTest
          - ORB-HT-51155-APO : Class CS with SensAlert/FasTest
          - ORB-HT-51157-APO : Class A1S with SensAlert/FasTest
          - ORB-HT-51146-APO : Class A1R with SensAlert/FasTest/FI LED
          - ORB-HT-51148-APO : Class A2S with SensAlert/FasTest/FI LED
          - ORB-HT-51150-APO : Class BR with SensAlert/FasTest/FI LED
          - ORB-HT-51152-APO : Class BS with SensAlert/FasTest/FI LED
          - ORB-HT-51154-APO : Class CR with SensAlert/FasTest/FI LED
          - ORB-HT-51156-APO : Class CS with SensAlert/FasTest/FI LED
          - ORB-HT-51158-APO : Class A1S with SensAlert/FasTest/FI LED

     2) Optical Smoke Detector (ORB-OP-52XXX-APO)
          - ORB-OP-52027-APO : with SensAlert/FasTest/DirtAlert
          - ORB-OP-52028-APO : with SensAlert/FasTest/DirtAlert/FI LED

     3) Multisensor Smoke Detector (ORB-OH-53XXX-APO)
          - ORB-OH-53027-APO : with SensAlert/FasTest/DirtAlert
          - ORB-OH-53028-APO : with SensAlert/FasTest/DirtAlert/FI LED

  3. Bases ;
       - ORB-MB-00001-MAR Orbis TimeSaver Base
       - ORB-RB-40004-MAR Orbis Base Relay
       - ORB-BA-50008-APO Orbis IS Base Adaptor
       - ORB-MB-50018-APO Orbis IS TimeSaver Base

< To be continued >

Appendix 2

Product Description and/or Approval Condition

Certificate No :   LDN23417-FD002   **Date of Issue :** 2nd July, 2018

B. Approval Condition ;

1. This approval is granted on the basis of test reports & documents
   - Product guide & General assembly drawings
   - 210362, 210363, 201364, 211499, 211500
   - 1840, 1841, 1884
   - TE210364SW, TE211500SW, TE210362BSW, TE210362-SW, TE210363SW, P101167-1001
   - Baseefa06ATEX0007X (Orbis IS)

2. The product or packing is to be marked with manufacturer name and type designation
   on a suitable position.

3. Explosion-proof certification by a notified/recognized certification body is not covered by
   this certificate. Rating and special for safe use in hazardous area are to be obtained from
   the relevant valid Ex-Certificate.

4. Unless specially directed by the Administration, this approval is not to be construed
   as a substitute for a flag Administration's approval. In order to be installed on board
   the Korean flag vessels in Korea, this product is to be type approved by the Korean
   Government.

5. Individual Product Certification is not required.

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