



TYPE APPROVAL CERTIFICATE

Certificate No:
TAA00001HU
Revision No:
1

This is to certify:

That the Flame Detector

with type designation(s)

**Salwico AC-IR-3Fq, Salwico AC-IR-3Fq Base, Salwico AC-IR-3Fq Addr Base,
Salwico AC-IR-3Fq Rugged Addr Base**

Issued to

Consilium Marine & Safety AB
Hisings Backa, Västra Götalands Län, Sweden

is found to comply with

DNV 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.

Location classes:

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	C (IP66 with locking screws deactivated and in addition IP67 with locking screws activated)

Issued at **Høvik** on **2023-06-30**

for **DNV**

This Certificate is valid until **2028-06-29**.

DNV local unit: **Sweden CMC**

Approval Engineer: **Frode Nygård**

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Frederik Tore Elter
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.

LEGAL DISCLAIMER: Unless otherwise stated in the applicable contract with the holder of this document, or following from mandatory law, the liability of DNV AS, its parent companies and their subsidiaries as well as their officers, directors and employees ("DNV") arising from or in connection with the services rendered for the purpose of the issuance of this document or reliance thereon, whether in contract or in tort (including negligence), shall be limited to direct losses and under any circumstance be limited to 300,000 USD.



Product description

The AC-IR-3Fq is a triple frequency conventional infrared flame detector using infrared elements suitable for the detection of smokeless combustible liquid and gas fires, as well as smoke-forming open fire involving carbonaceous materials as contained in wood, plastics, gases, oil products etc. The Fire evaluation process is done by triple infrared sensor, protected by a sapphire glass filtering >6.0 µm wavelength radiation.

This certificate covers the following equipment:

Equipment name	Part No.
Salwico AC-IR-3Fq	5200236-xxA
Salwico AC-IR-3Fq Base	5200235-xxA
Salwico AC-IR-3Fq Addr Base	5200237-xxA
Salwico AC-IR-3Fq Rugged Addr Base	5100874-xxA

Place of manufacture

Microdata Due S.r.l.
 Via Greti del Vara, 9
 Follo (SP)
 Italy

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 classification of ships Pt.4 Ch.9 Control and monitoring systems.

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area 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.

Type Approval documentation

Data sheet no. 5200236-00A_Salwico AC-IR-3Fq_M_EN_2015_H
 Data sheet no. 5200235-00A_Salwico AC-IR-3Fq Base_M_EN_2014_C
 Data sheet no. 5200237-00A_Salwico AC-IR-3Fq Addr Base_M_EN_2017_E
 Data sheet no. 5100874-00A_AC-IR-3Fq Rugged Addr Base_M_EN_2017_A

Document name	Document No.	Date
Enclosure Test Report with base MD9900/BS	213254	2006-06-30
Enclosure Test Report with base MD9900/BS	225438	2007-05-10
EMC and Environm. Test report for Salwico AC-IR-3Fq Base	119206F	2011-11-07
BRE Test Report acc. to EN54-10:2002 Clause 4.9 of Microdata MD9902 IR Flame Detector	TE227965-SW	2007-01-10
BRE Test Report for Microdata MD9902 Flame Det. acc. to EN54-10:2002 and LRS Rules: 2002	TE227965	2006-11-07
TesLab Test Report for AC-IR-3Fq Addr Base	172048F-a	2017-08-22
TesLab Test Report for AC-IR-3Fq Rugged Addr Base	172048F-c	2017-08-22
TesLab Test Report for MD9902	167169A	2016-08-01
TesLab Test Report Supplementary EMC	17B295E	2017-11-22

Type approval renewal assessment report for TAA00001hu, DNV Gothenburg on 2023-03-01.

Initial Type approval assessment report place of production, DNV Italy on 2023-03-08.

Tests carried out

Applicable tests according to class guideline DNV-CG-0339, August 2021.
 Performance tests according to EN 54-10:2002 incl. A1:2005 and EN 54-17:2005 incl. AC:2007

Marking of product

The products to be marked with:

- manufacturer name
- model name
- serial number
- power supply ratings

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