



DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-12704

Holder of Certificate
Spectrex Inc.
Cedar Grove NJ, United States

This is to certify that the
Flame Detector

with type designation(s)
40/40L, 40/40LB, 40/40L4, 40/40L4B

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

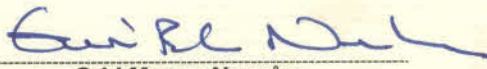
Application
Lacation classes:

Temperature	D
Humidity	B
Vibration	A
EMC	B
Enclosure	C

Høvik, 2012-04-24
for Det Norske Veritas AS



This Certificate is valid until
2016-06-30


Odd Magne Nesvåg
Head of Section

DNV local office:
New York


Andrzej Gdaniec
Surveyor



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.



Certificate No.: A-12704
File No.: 891.40
Job Id.: 262.1-011483-2

Product description

Model 40/40L and 40/40LB provides a combination of UV and IR sensors, where the IR sensor operates at a wavelength of 2.5-3.0 μm and can detect hydrocarbon-based fuel and gas fires, hydroxyl and hydrogen fires, as well as metal and inorganic fires.

Model 40/40L4 and 40/40L4B is identical to the 40/40L except that the IR sensor works at a wavelength of 4.5 μm and is only suitable for hydrocarbon-based fires.

The UV/IR flame detector senses radiant energy in the short wave section of both the ultraviolet and infrared portions of the electromagnetic spectrum. The signals from both sensors are analyzed for frequency, intensity and duration. Simultaneous detection of radiant energy in both the UV and IR sensors triggers an alarm signal.

Responsibility

The Holder of Certificate takes the responsibility that both design and production are in compliance with the Rules and standards listed on page 1,2 of this Type Approval Certificate.

Application/Limitation

The Type Approval covers hardware and software listed under Product description.

As long as the units are covered by the Type Approval, a product certificate according to Pt.4 Ch.9 Sec.1 A 202 will not be required. Correct configuration and set up for each delivery to be tested during commissioning after installation.

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.

When the type approved software is revised (affecting all future deliveries) DNV is to be informed by forwarding updated software version documentation. If the changes are judged to affect functionality for which rule requirements apply a new functional type test may be required and the certificate may have to be renewed to identify the new software version.

Manufactured by

Spectronix Ltd.
Industrial Zone Sderot
Khilat Milano Street
Sderot 80150, Israel

Type Approval documentation

Document name	Document no.	Doc. version
SharpEye 40/40 UV/IR Flame Detector series data sheet	DS-F-40/40 UV/IR	March 2012
SharpEye 40/40 Series UV/IR Flame Detector Models 40/40L, LB, L4, L4B User Guide	TM 40/40L	Rev.(5) June 2011
BRE Global Ltd test Report for models 40/40L, 40/40LB, 40/40L4, 40/40L4B, 40/40UB, 40/40U acc. to EN 54-10:2002	TE 243256b Issue 2	07/12/2009
FM Approvals Approval Report for 40/40 Series Flame Detectors	Project Id: 3029553	07/11/2008
QualiTech, Environmental&Mechanical Laboratory Test Report 40/40LB, 40/40R, 40/40I	20080528-0944 Edition 01	28/05/2008
QualiTech, Environmental&Mechanical Laboratory Test Report 40/40LB	20111206-1700 Edition 01	06/12/2011
QualiTech EMCTest Report for models: 40/40 L, LB, L4, L4B, U, UB	SPC 180310	2010 March 18
QualiTech EMCTest Report for model 40/40 LB	SPC 241008	2008 October 24

Tests carried out

Applicable tests according to DNV Standard for Certification No. 2.4, April 2006.
Relevant tests of application functions in accordance with EN54-10: 2002.

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.

The main elements of the survey are:

- Ensure that type approved documentation is available



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- 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

