



DET NORSKE VERITAS

EC TYPE-EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2010/68/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by Det Norske Veritas under the authority of the Government of the Kingdom of Norway.

CERTIFICATE NO. MED-B-7755

This is to certify that the
Fixed fire detection and fire alarm systems

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

Manufacturer
Spectrex Inc.
Cedar Grove NJ, United States

is found to comply with the requirements in the following Regulations/Standards:
Annex A.1, item No. A.1/3.51 and Annex B, Module B in the Directive. SOLAS 74 as amended, Regulation II-2/7 & X/3, 2000
HSC Code 7, FSS Code 9 and IMO MSC.1/Circ.1242


Further details of the equipment and conditions for certification are given overleaf.

Hovik, 2012-05-25
for Det Norske Veritas AS

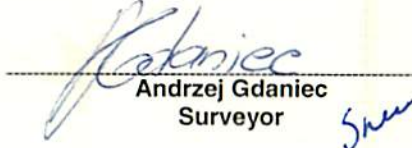


This Certificate is valid until
2017-05-25

Notified Body No.: 0575


Marianne Valderhaug
Head of Department

DNV local office:
New York


Andrzej Gdaniec
Surveyor



The Certificate is subject to terms and conditions overleaf. Any significant changes in design or construction of the product, or amendments to the Directive or Standards referenced above may render this Certificate invalid. The product liability rests with the manufacturer or his representative in accordance with Council Directive 96/98/EC, as amended. The Mark of Conformity may only be affixed to the product and a Declaration of Conformity may only be issued when the production/product assessment module referred to in the council directive, is fully complied with.



Certificate No.: MED-B-7755
Item No.: A.1/3.51
Job Id.: 344.1-003439-1

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.

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.

The equipment are found to comply with following location/application dependent requirements (for definition of each of the location classes, see below the table):

MODEL	TEMPERATURE	VIBRATION	EMC	ENCLOSURE
Flamme Detector 40/40L, 40/40LB, 40/40L4, 40/40L4B	TEM-D	VIB-A	EMC-B	Tested for IP66 and IP67

Definition of the location classes with reference to relevant standards:

Temperature

TEM-D Location (-25°C to +70°C) (ref. IEC 60092-504 (2001) table 1 item 6-7)

Vibration

VIB-A (ref. IEC 60092-504 (2001) table 1 item 10)

EMC

EMC-B Bridge and open deck zone (ref. IEC 60092-504 (2001) table 1 item 19-20)

Type Examination 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

The relevant tests have been carried out according to the following standards:

- IEC 60092-504 (2001)
- IEC 60533 (1999)
- IEC 60945 (2002)
- EN54-10: (2002) / A1(2005)





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Marking of product

For identification to this type examination certificate the products shall be marked with:

- Manufacturer's name or trade mark
- Type designation
- Mark of Conformity (see below)

Mark of Conformity

The manufacturer is allowed to affix the Mark of Conformity according to Article 11 in the Council Directive 96/98/EC on Marine Equipment and shall issue a Declaration of Conformity, only when the module D or E or F of Annex B in the same directive is fully complied with.

- Module D: The quality system for production and testing shall be approved by the Notified Body.
- Module E: The quality system for inspection and testing shall be approved by the Notified Body.
- Module F: Compliance of the products to type as described in this EC Type-Examination Certificate must be verified by the Notified Body who also shall issue a Certificate of Conformity.

