

Certificate No:
MED-B-9427
Item No:
A.1/3.51
Job Id:
344.1-001921-4

EC TYPE EXAMINATION CERTIFICATE

Application of: Council Directive 96/98/EC of 20 December 1996 on Marine Equipment as amended by directive 2012/32/EU, issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Directorate. This Certificate is issued by DNV GL under the authority of the Government of the Kingdom of Norway.

This is to certify:

That the Fixed fire detection and fire alarm systems

with type designation(s)
**X3301/X33AF - Multispectrum IR Flame Detector with Mounting Arm Q9033B/Q9033A
with optional Q9033 Collar Attachment**

Issued to

**Detector Electronics Corp.
Minneapolis MN, 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.

**Høvik, 2014-11-11
for DNV GL**



This Certificate is valid until
2019-11-10

**Marianne Strand Valderhaug
Head of Department**

Notified Body No.: **0575**

DNV GL 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.

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Product description

The type approval covers the following variants: X3301/X33AF a b c d e

Key to type number designation		
X3301/X33AF abcde, where		
X3301=		Multispectrum IR Flame Detector (Det-Tronics)
X33AF=		Multispectrum IR Flame Detector (Autronica)
a=	A	Aluminum
	S	Stainless Steel
b=	2E	2 PORT 1/2" NPT
	2F	2 PORT, METRIC M20
	2N	2 PORT 3/4" NPT
	2M	2 PORT, METRIC M25
	4E	4 PORT 1/2" NPT
	4F	4 PORT, METRIC M20
	4M	4 PORT, METRIC M25
	4N	4 PORT 3/4" NPT
c=	11	Relay
	13	Relay & 0-20 mA
	14	LON - Eagle Quantum Premier (EQP)
	15	Relay & Pulse
	16	Third party addressable module
	21	Relay-Automotive
	22	LON EQP-Automotive
d=	23	Relay/0-20 mA & HART
	A	FM/CSA
	B	INMETRO (BRAZIL)
	E	ATEX/IECEX
	S	SIL
	T	SIL/FM/CSA/ATEX/IECEX
	W	FM/CSA/ATEX/IECEX
e=	1	Division/Zone Ex de
	2	Division/Zone Ex d

Note : Multiple letters may be used for 'd' to designate the approvals on the product

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	TEMP.	VIBRATION	EMC	ENCLOSURE
X3301, X33AF	TEM-D	VIB-B	EMC-B	ENC-C

Definition of the location classes with reference to relevant standards:

Temperature

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

Vibration

VIB-B For eq. on reciprocating machines etc. (ref. IEC 60092-504 (2001) table 1 item 10)



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EMC

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

Enclosure

ENC-C Open deck (IP56) (ref. IEC 60092-201 table 5)

Type Examination documentation

Documentation	Documentation Reference Number
Design Reference Drwg X3301 "DEMKO"; X3301 Flame Detector; Final Assy, X3301, Multi Det. Q9033 Collar Attachment, SS Q9033B/Q9033A Mounting Arm, SS and AL Drwg X3301	007288-001 Rev. Y 0081XX-000 Rev. D 017265-000 Rev. AF 011385-001 Rev. D 007290-000 Rev. M 007264-001 Rev. AK
Instruction Manual for X3301 X33AF	95-8527, dtd 12/13 or 95-8704, dtd 7/14 95-8627, dtd 11/07
Test reports	VdS No. 02073, BMA, dtd. 2002-12-12 VdS no. SW-2002202, dtd. 2002-08-29 ITS No. J20048651.012, dtd. 2001-07-11 ITS No. 3030895.011 dtd. 2002-09-04 FM Id. 3011126, dtd. 2001-11-21 with supplementary report FM Id. 3012419, dtd. 2002-02-07 FM Id. 3014814, dtd. 2002-09-12 FM Id. 3016955, dtd. 2003-05-29 FM Id. 3017881, dtd. 2003-06-25 FM Id. 3021592, dtd. 2005-02-25 FM Id. 3032248, dtd. 2008-12-04 Intertec ETL SEMKO No. 3076372.001, dtd. April 28, 2005 DNV No. 2003-3177, dtd. 2003-06-04 DNV No. 2005-3452- Rev 01, dtd. 2005-10-10 DNV No. 2004-3530- Rev 01, dtd. 2004-12-15 DNV No. 2005-3565- Rev 01, dtd. 2005-12-17 Sinusoidal vibration test report 31167-1 dated 5/5/2004 Approval report from FM Approvals, project id 3020383 IECEX 11CA57798-ULD06.0017X, dtd 2012-07-10 Detector Electronics Internal Test Report, X3301-DNV-PE, 2008-06-08 Detector Electronics Internal Test Report DEC 1207-13, X3301/X33AF with Q9033 Collar Attachment, DNV No. 2.4 CI 3.6 Vibration Testing, 2012-05-23
Model#Matrix, X-series dwg	007306-001, AB
Official Project Record for X3301, X33AF (Test Report)	CDOC 3607, Rev.A, 2014-08-19

Tests carried out

- IEC 60092-504 (2001)
- IEC 60533 (1999)
- EN 54-10 (2002) including A1(2005)



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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 of Certificate Conformity.