

EC-TYPE EXAMINATION CERTIFICATE (MODULE B)

Application of: Directive 2014/90/EU of 23 July 2014 on marine equipment (MED), issued as "Forskrift om Skipsutstyr" by the Norwegian Maritime Authority. This Certificate is issued by DNV GL AS under the authority of the Government of Norway.

This is to certify:

That the Fixed fire detection and fire alarm systems components for control stations, service spaces, accommodation spaces, cabin balconies, machinery spaces and unattended machinery spaces: Flame detectors – Point detectors

with type designation(s)

X3301/X33AF - Multispectrum IR Flame Detector with Mounting Arm Q9033B/Q9033A with optional Q9033 Collar Attachment

Issued to

**Detector Electronics Corporation (Det-Tronics)
 Minneapolis, MN, USA**

is found to comply with the requirements in the following Regulations/Standards:

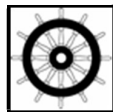
Regulation **(EU) 2019/1397**,
item No. MED/3.51e. SOLAS 74 as amended, Regulation II-2/7 & X/3, 1994 HSC Code 7, 2000 HSC Code 7, FSS Code 9, IGF Code 11 and IMO MSC.1/Circ.1242

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

This Certificate is valid until **2025-03-03**.

Issued at **Høvik** on **2020-03-04**

DNV GL local station:
**Certification & Inspection
 Services**



for **DNV GL AS**

Approval Engineer:
Nils Jarem

Notified Body
 No.: **0575**

**Roald Vårheim
 Head of Notified Body**



The mark of conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production-surveillance module (D, E or F) of Annex B of the MED is fully complied with and controlled by a written inspection agreement with a Notified Body. The product liability rests with the manufacturer or his representative in accordance with Directive 2014/90/EU.

This certificate is valid for equipment, which is conform to the approved type. The manufacturer shall inform DNV GL AS of any changes to the approved equipment. This certificate remains valid unless suspended, withdrawn, recalled or cancelled.

Should the specified regulations or standards be amended during the validity of this certificate, the product is to be re-approved before being placed on board a vessel to which the amended regulations or standards apply.



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
	23	Relay/0-20 mA & HART
d=	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 60092-504:2016 table 1 item 6-7)

Vibration: VIB-B For eq. on reciprocating machines etc. (ref. IEC 60092-504:2016 table 1 item 10)

EMC: EMC-B Bridge and open deck zone (ref. IEC 60092-504:2016 table 1 item 13-20)

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

Job Id: **344.1-001921-6**
 Certificate No: **MEDB00005C4**

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 Element EMC test report DETE0073 rev. 00
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 60092-504:2016
- IEC 60533:2015
- EN 54-10:2002 including A1:2005

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 (wheel mark), followed by
 - identification number of the NoBo involved in production control (MED D)
 - the year the mark is affixed.
 - Example: 0575/2020