

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Gas Detector

with type designation(s)
PIRECL/AutroPoint HC200
PIRTB, HC300 PL - Termination Box

Issued to

Detector Electronics Corporation (Det-Tronics)
MINNEAPOLIS MN, United States

is found to comply with
DNV GL rules for classification – Ships
DNV GL offshore standards

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Temperature	D
Humidity	B
Vibration	B
EMC	B
Enclosure	C

This Certificate is valid until **2021-07-26**.

Issued at **Hamburg** on **2016-07-27**

DNV GL local station: **New York**

Approval Engineer: **Andrea Grün**

for **DNV GL**

Duy Nam Le
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.

Product description

The type approval covers the following variants: Detector PIRECL/AutroPoint a b c d e and Termination Box PIRTB a b c d e

Detector (Key to type number designations)

PIRECL: Detector Electronics Corp.
AutroPoint: Autronica Fire and Security AS

a	A	3/4 NPT
	B	M25
	C	1/2 – 14 NPT
	D	M20
b	1	4-20mA w/Hart Protocol & RS-485: 0-100% LFL Full Scale Range
	4	Eagle Quantum Premier (EQP) Compatible, 0-100% LFL Full Scale Range
c	A	without Relay Board
	B	with Relay Board
	1	Weather shield with hydrophobic filter
	2	Weather shield without hydrophobic filter
d	3	1/16" NPT Thread with hydrophobic filter
	4	1/16" NPT Thread without hydrophobic filter
	5	No weather protection installed
e	E	ATEX/CE
	N	AUTRONICA Private Labeled ATEX Version
	T	SIL/FM/CSA/ATEX/CE
	W	FM/CSA/ATEX/CE

Termination Box (Key to type number designations)

a	A	Aluminium
	S	Stainless Steel
b	2M	2 Port, Metric M20/25
	2N	2 Port, 3/4" NPT
	3M	3 Port, Metric M20/25
	3N	3 Port, 3/4" NPT
	5L	5 Port, Metric M25
	5N	5 Port, 3/4" NPT
c	W	FM/CSA/ATEX/CE
d	1	Short without window
	2	Tall with window
e	L, I, T,V	Cable entries orientation

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.

Location of detectors to be in accordance with relevant parts of the Rules.

Type Approval documentation

Detector

Design Reference Drwgs ECLIPSE (PIRECL) "DEMKO" 007263-001, Rev. T, dated 2015-03-17
007263-002, Rev. K, dated 2015-09-22

Schematic, Interface board Data sheet

007117-002, Rev. R, dated 2015-07-13
PIRECL 90-1138-8.1

Termination Box

Design Reference Drwgs. 007007-1, Rev. J, dtd. 2012-03-23, 2 sheets
(DEMKO)

Instruction Manual Infrared Hydrocarbon Gas Detector, PointWatch Eclipse Model PIRECL
No. 95-8526-12.1, issue 9/11

Infrared Carbon Dioxide Gas Detector, PointWatch Eclipse Model PIRECL
No. 95-8676-1.1, issue 2/12

Duct Mount Kit for Marine Applications Q900C1001
No. 95-8640-3.1, issue 3/11

AutroPoint: 116-P-HC200/AE (95-8593-12.1) dated 2012-07-12

AutroPoint: 116-P-HC300 PL/DE (95-8587-1.1) dated 2010-08-03

Test reports

ITS No. J20040518.011 dated April 26, 2001
ITS No. 3029121.011 dated Sept. 4, 2002
ITS No. 3040086.011 dated May 9, 2003
FM Id. 3009050 dated May 15, 2001
FM Id. 3011384 dated October 18, 2001
FM Id. 3014962 dated August 20, 2002
FM Id. 3017714 dated June 27, 2003
FM Id. 3018012 dated November 6, 2003
FM Id. 3032248 dated December 4, 2008
Environ Lab. vibration test No41225-1 Rev.1 dated October 21, 2009
Det-Tronics Internal Test Report, vibration test dated October 15, 2009
UL International Demko A/S No. 129485-13 dated 2005-06-08
DNV No. 2004-3221 dated 2004-03-11
DNV No. 2003-3221 dated 2004-03-11
DEMKO report 129485-20/9CA39156 dated 2009-11-26
DEMKO 01 ATEX 129485-24 (Methane) dated April 12, 2011
DEMKO 01 ATEX 129485-24 (Propane) dated May 3, 2011
DEMKO 01 ATEX 129485-24 (Ethylene) dated May 4, 2011
DEMKO 01 ATEX 129485-27 dated August 25, 2011

Tests carried out

Applicable tests according to Class Guidance DNVGL-CG-0339, November 2015.

Relevant tests according to EN 61779-1 (2000), EN 61779-4 (2000), EN 60079-29-1 (2007) PIRECL and HC200.

Periodical assessment

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 at least every second year and at renewal of this certificate.

END OF CERTIFICATE