DNV·GL

Certificate No:
TAA000017F

TYPE EXAMINATION CERTIFICATE

This is to certify:

That the Gas Detector

with type designation(s)
FlexSonic™ Acoustic Detector consisting of: AC100 (sensor), ATX10 (transmitter), STB (termination box)

Issued to
Detector Electronics Corporation (Det-Tronics)
Minneapolis MN, United States

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Location classes:

Temperature	**D**
Humidity	**B**
Vibration	**B**
EMC	**B**
Enclosure	**C / IP66**

Issued at **Hamburg** on **2017-05-24**
This Certificate is valid until **2022-05-23**.
DNV GL local station: **New York**

for **DNV GL**

Approval Engineer: **Andrea Grün**

Joannis Papanuskas
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 Examination Certificate and not to the approval of equipment/systems installed.

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Product description

FlexSonic™ Acoustic Detector:

- designed to recognize the unique ultrasonic frequency content of events such as gas leaks
- two main components:
  - AC100 Acoustic Sensor
  - ATX10 Acoustic Transmitter

- AC100 Acoustic Sensor can be connected directly to the ATX10Transmitter
- or mounted remotely using an optional Sensor Termination Box (STB)

Enclosure material: 316 stainless steel.
Operating voltage: 24 Vdc nominal, operating range from 9 to 30 Vdc

Application/Limitation

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to DNV GL Rules and Ex-Certification**/** Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Examination documentation

Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

Marking of product

Type designation	AC100, ATX10
Manufacturer	DET-TRONICS
Unique serial no.	xxx-xxxx
Power supply rating	24 Vdc, range: 9 to 30 Vdc

Certificate Retention Survey

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 after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE