

# TYPE APPROVAL CERTIFICATE

**This is to certify:**

**That the Fire Technical Ancillary Equipment**

with type designation(s)  
**BBL-100, BBL-100/IP**

Issued to  
**Autronica Fire and Security AS**  
**Trondheim, Norway**

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

**Application :**

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

**Location classes:**

Type	Temperature	Humidity	Vibration	EMC	Enclosure
<b>BBL-100</b>	<b>B *</b>	<b>B</b>	<b>A</b>	<b>B</b>	<b>A</b>
<b>BBL-100/IP</b>	<b>B *</b>	<b>B</b>	<b>A</b>	<b>B</b>	<b>According to IP grade of the cable glands used</b>

\* Cold test to -15°C carried out

Issued at **Høvik** on **2019-11-05**

This Certificate is valid until **2024-06-30**.

DNV GL local station: **Trondheim**

Approval Engineer: **Ståle Sneen**

for **DNV GL**

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**Trond Sjøvåg**  
**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.



Job Id: **262.1-011178-3**  
Certificate No: **TAA000002A**  
Revision No: **1**

### **Product description**

BBL-100: Compact beacon for use in protected areas (e.g. accommodation), simple mounting in all relevant directions.  
BBL-100/IP: Compact beacon for use in semi-protected areas (e.g. engine room), simple mounting in all relevant directions.

### **Place of manufacture**

Eaton Electrical Products Limited  
Cwmbran, South Wales, UK

### **Application/Limitation**

Approved for use with Autronica addressable fire alarm system.  
The maximum number of beacons on a detection loop must be calculated according to the limitations of the system in question.

### **Approval conditions**

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 classification of ships Pt.4 Ch.9 Control and monitoring systems.

### **Type Approval documentation**

#### **Tests carried out**

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.  
Applicable tests according to IACS Unified Requirements E10 Rev.7.  
Applicable tests according to EN 54-17:2005 incl. AC:2007 (Short-circuit isolators).

#### **Marking of product**

The products to be marked with:  
- manufacturer name  
- model name  
- serial number  
- power supply ratings

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

END OF CERTIFICATE