

# TYPE APPROVAL CERTIFICATE

**This is to certify:****That the Public Address and General Alarm System**with type designation(s)  
**Praesideo**

Issued to

**Bosch Security Systems B.V.**  
**EINDHOVEN, Netherlands**

is found to comply with

**Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards****IMO A.1021(26) Code on alerts and indicators (2009)****LSA Code VII 7.2****IMO MSC Circ 808****Application :****See page 2.****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**This Certificate is valid until **2018-12-31**.Issued at **Høvik** on **2016-02-03**for **DNV GL**DNV GL local station: **Rotterdam, Product Certification /Verification**Approval Engineer: **Steinar Kristensen****Jan Tore Grimsrud**  
**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 Praesideo Public Address and General Alarm system can be provided as either:

- PA system only
- GA system only
- Integrated PA and GA system

When used for PA on passenger vessels or integrated PA and GA on any vessel, the system shall be duplicated (A+B system). When used for passenger vessels the A and B systems shall be installed in separate fire zones.

Praesideo Public Address and General Alarm System consists of the following equipment <sup>1)</sup>:

| Equipment type    | Description                                | Type no.                  |
|-------------------|--------------------------------------------|---------------------------|
| Central Equipment | Network Controller                         | PRS-NC03                  |
|                   | SPEC RCS, Special Network Splitter, Master | PSP-D00039                |
|                   | SPEC RCS, Special Network Splitter, Slave  | PSP-D00040                |
| Network Equipment | Audio Expander Analogue                    | LBB4402/00                |
|                   | Audio Expander Analogue                    | PRS-4AEX4 <sup>*)</sup>   |
|                   | Multi Channel Interface                    | PRS-16MCI                 |
|                   | Basic Amplifier 8x60W                      | PRS-8B060 or PRS-8B060-EU |
|                   | Basic Amplifier 2x250W                     | PRS-2B250 or PRS-2B250-EU |
|                   | Basic Amplifier 1x500W                     | PRS-1B500 or PRS-1B500-EU |
|                   | Basic Amplifier 4x125W                     | PRS-4B125 or PRS-4B125-EU |
|                   | Network Splitter                           | PRS-NSP                   |
|                   | Fiber Interface                            | PRS-FIN                   |
|                   | Fiber Interface Non-Addressable            | PRS-FINNA                 |
|                   | Fiber Interface Single-Mode                | PRS-FINS                  |
|                   | Call Stacker                               | PRS-CRF                   |
| Call Stations     | Call Station Interface                     | PRS-CSI                   |
|                   | Remote Call Station                        | PRS-CSR                   |
|                   | Call Station Keypad                        | LBB4432/00                |
|                   | Remote Call Station Module                 | PRS-CSRSM                 |
|                   | Call Station Keypad Module                 | PRS-CSKPM                 |
|                   | Call Station Module                        | PRS-CSM                   |
| Software          | Praesideo Software 4.3                     | PRS-SW                    |

System is to be mounted in a protected, i.e. indoor, and climate controlled environment.

<sup>\*)</sup> Audio output ports 3 and 4 of PRS-4AEX4 are not to be used.

<sup>1)</sup> Actual configuration may vary based on requirements for individual installations. Only modules listed in certificate are approved for installation.

### Application/Limitation

1. The Praesideo system may be used in cargo ships, passenger vessels, high speed-, light- & naval surface craft and mobile offshore units for compliance with the following codes/rules/regulations:
  - SOLAS
  - HSC Code
  - MODU Code
  - DNV GL Statutory Interpretations [July 2015]
2. Equipment is to be installed in an environment as specified in Appendix and according to instructions in Installation Manual, doc ID: IUI-PRAESIDEO\_4.3, and Application Note appendix for Maritime Installations, doc. ID: AN Praesideo DNV
3. Call Stations which are not used for emergency PA activation shall have a lower priority than GA.
4. Call Stations with functions for activation of Emergency PA and GA are to be installed in locations with access control.
5. Call Stations with functions for activation of Emergency PA and GA shall be provided with means to avoid unintended use, e.g. cover for protection of keys. Keys shall be clearly labelled.
6. When used as combined PA/GA system, a minimum two independent speaker loops are required.

### Type Approval documentation

| DNV No | Doc. ID             | Description                                                                                   | Rev.       |
|--------|---------------------|-----------------------------------------------------------------------------------------------|------------|
| 6      | RLS2014006-2        | Declaration: Bosch, Description of modifications relevant for radiated emission               | 2014-07-15 |
| 8      |                     | Drawing: Bosch, Test set-up for IEC 60945 testing                                             | 2014-05-07 |
| 11     | IUI-PRAESIDEO_4.3   | Manual: Bosch, Praesideo 4.3 Installation and User Instructions                               | 1.0        |
| 12     | AN Praesideo DNV GL | Manual: Bosch, Application Note appendix for Maritime Installations                           | 2016-01-25 |
| 13     | PY007515            | Report: Bosch, Performance test report for DNV Type Approval                                  | 1.0        |
| 7      | 20143788200         | Report: Telefication, EMC and environmental test report for Praesideo PA/GA system            | 1.0        |
| 5      | 20134648201         | Report: Telefication, EMC and environmental test report for PRS call station modules          | 3.0        |
| 2      | 20133256200         | Report: Telefication, Environmental tests for PRS-NCO3 Network Controller                     | 1.0        |
| 9      | 20104096800         | Report: Telefication, Selected EMC and environmental tests for Praesideo system               | 1.1        |
| 3      | 20124320800         | Report: Telefication, Selected EMC and environmental tests for PRS-NCO3 network controller    | 1.0        |
| 20     | 20144581201         | Report: Telefication, EMC and environmental test report for PRS-4AEX4 Audio Expander Analogue | 1.0        |

### Tests carried out

- Environmental testing: IEC 60945 (2002)
- Performance testing: Functional tests according to DNV Type Approval program 848.22



Job Id: **262.1-015606-2**  
Certificate No: **TAA000009K**

### **Marking of product**

The Manufacturer and Type Designation to be applied to the equipment in a clearly visible location. In addition the equipment shall be marked with serial number, power consumption and/or supply voltage. Safe distance to magnetic compass is to be stated in manuals.

### **Periodical assessment**

A retention survey is to be performed at least once every second year, and again upon renewal of this certificate.

The scope of the retention/renewal survey is to verify that the production quality conditions stipulated for the type approval are complied with and that no alterations are made to the product design or its components and/or materials without appraisal by the Society