

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Batteryless Telephone System**

with type designation(s)

ODS4181, ODS4381, ODS4781, ODS4981, ODS5181, ODS5381, ODS5781, ODS5981

Issued to

**NIPPON HAKUYO electronics, ltd.
Yokohama, Kanagawa, Japan**

is found to comply with

DNV GL rules for classification – Ships**Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.**

Type	Temperature	Humidity	Vibration	EMC	Enclosure
ODS4181	D	B	A	B	A
ODS4381	D	B	A	B	B
ODS4781	D	B	A	B	A
ODS4981	D	B	A	B	B
ODS5181	D	B	A	B	A
ODS5381	D	B	A	B	B
ODS5781	D	B	A	B	A
ODS5981	D	B	A	B	B

Issued at **Høvik** on **2017-05-18**This Certificate is valid until **2022-05-17**.DNV GL local station: **Yokohama**for **DNV GL**Approval Engineer: **Rolf Heger**

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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 Batteryless Telephone System, consisting of the following models:

Model	Description
ODS4181-1	Desk type Telephone 1=direct or 12 station, 2=24 station, C= with Capacitor Unit
ODS4181-1C	
ODS5181-1	
ODS5181-1C	
ODS5181-2	
ODS5181-2C	
ODS4381-1	Wall type Telephone 1=direct or 12 station, 2=24 station, H= with Headset
ODS4381-1H	
ODS5381-1	
ODS5381-1H	
ODS5381-2	
ODS5381-2H	
ODS4781-1	Flush type Telephone 1=direct or 12 station, 2=24 station, C= with Capacitor Unit D=Dial illumination
ODS4781-1C	
ODS5781-1	
ODS5781-1C	
ODS5781-1D	
ODS5781-1DC	
ODS5781-2	
ODS5781-2C	
ODS5781-2D	
ODS5781-2DC	
ODS4981-1	Portable type Telephone 1=direct or 12 station, 2=24 station
ODS5981-1	
ODS5981-2	
ODZ9210-1	Head Set

Application/Limitation

- The Batteryless Telephone System as listed in product description may comply with DNVGL-RU-SHIP-Pt6 Ch3. Back-up telephone system depending on the installation onboard.
- Where available the equipment may provide a relay call signal output interface for auxiliary equipment.
- This system is to be installed in accordance to installation documentation.

Job Id: **262.1-024015-1**
Certificate No: **TAA000013H**

Type Approval documentation

DNV GL No	Doc. Ref.	Rev.	Description
17	17-075(E)	2017/05/15	Report. RIME, Test Report on Compass Safe Distance ODS581-2D
16	RA1164-9538-1	2	Report: DNV GL, Performance Test Report Batteryless Telephone System
14	ENV17001	-	Report: IPS, IEC60945 Environmental Test report Batteryless telephone
9	151000	2015/7/3	Report: OEG, IEC60945 EMC Test report
8	RA1114-9031	2.1	Technical-Specifications
5	RA1113-604x, RA1114-604x	-	Drawing: Outline drawings Batteryless Telephone
4	RA1114-9502	2.1	Manual: Batteryless Telephone System Instruction Manual
3	RA1164-9539	1.0	Manual: Batteryless Telephone Installation & Maintenance Manual
1	RB8301-8413-1	-	Drawing: Connection Diagram Example for Batteryless Telephone

Tests carried out

- Environmental Tests, DNVGL-CG-0339
- Performance tests according to: Functional tests according to DNV Type Approval program 848.60 for Sound Powered/ Batteryless Telephone Systems, DNV GL Rules for Ships.

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, safe distance to magnetic compass, power consumption and/or supply voltage.

Periodical assessment

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.

The scope of the periodical/renewal assessment 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.

END OF CERTIFICATE