

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Common Battery Telephone

with type designation(s)
HCT-12S, HCT-20S, HCT-5D

Issued to

HANSHIN ELECTRONICS CO.,LTD.
Busan, Republic of Korea

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

Application :

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

This Certificate is valid until **2021-12-30**.

Issued at **Busan** on **2016-12-31**

DNV GL local station: **Busan**

for **DNV GL**

Approval Engineer: **Geun Young Park**

Baeg Soon Choi
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:
Certificate No: **TAA00000XD**

Product description

HCT-12S, HCT-20S and HCT-5D, common battery telephone system, consists of the following components;

HCT-12S Type

Part Name	Description	Location	Remark
HCD-601-A3	Desk type telephone	Protected	Maximum number of extension is 12
HCW-701-A3/B3/C3/D3/A3N	Wall type telephone	Protected	
HCF-801-A3/D3	Flush type telephone	Protected	

HCT-20S Type

Part Name	Description	Location	Remark
HCD-603-A3	Desk type telephone	Protected	Maximum number of extension is 20
HCW-703-A3/B3/C3/D3/A3N	Wall type telephone	Protected	
HCF-803-A3/D3	Flush type telephone	Protected	

HCT-5D Type (Option)

Part Name	Description	Location	Remark
HCD-601-A1	Desk type telephone	Protected	Maximum number of extension is 5
HCW-701-A1/B1/C1/D1	Wall type telephone	Protected	
HCF-801-A1/D1	Flush type telephone	Protected	

Common Accessory

Part Name	Description	Location
HRL-220A	Rotating Lamp	Protected
HBE-024B	Bell	Protected
HAH-050B	Headset	Protected
HSR-032	Signal Relay Box	Protected
HJB-511C, HJB-512CW, HJB-520CF, HJB-520CW, HWC-034S, HFC-046S, HPC-050C	Connection Box	Protected

Application/Limitation

- HCT-12S, HCT-20S and HCT-5D shall be installed on board in accordance with operation & installation manual.
- HCT-5D does not comply with the requirement of back-up telephone in DNVGL Rules for classification ships (2016 July) Pt.6 Ch.3 Sec.3.
- The external power supply (DC 24V) shall be supplied from an appropriate source of power. At least 30 minutes of capacity by a transitional source may be required to comply with DNVGL Rules for classification ships (2016 July) Pt.6 Ch.3 Sec.3.

Type Approval documentation

DNVGL No.	Drawing No.	Revision No.	Title
8	R100R-004	-	Environment test report
9	E048R-032	-	Emission Test Report
10	E048R-033	-	Immunity Test Report
14	HS-TTL220-120124	1.0b	Performance test report
16	HS-TTL220-111201	1.0b	Circuit Drawing
17	HS-TTL220-120121	1.0d	Operation & Installation Manual
19	HS-TTL220-1701091	1.0a	Operation and Installation manual (HCT-20S)

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20	-	-	Circuit Drawings (HCT-20S)
24	HS-TTL330-161214	1.0a	Performance test report for HCT-20S

Tests carried out

- Performance Test : DNV Type approval Program No.A-848.90
- Environmental Test : IEC 60945 (2002)

Marking of product

The manufacturer and Type Designation to be applied to the equipment in a clear 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

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 system, software versions, components and/or materials used comply with type approved documents and/or referenced system, 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 shall be performed at least every second year and at renewal of this certificate.