



Marine & Offshore

Certificate number: 09820/E0 BV

File number: AP 3287

Product code: 3741H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

KUKDONG LEVEL CO.
BUSAN - KOREA (REPUBLIC OF)

for the type of product

LEVEL TRANSMITTERS
KD-12 series, KD-30 series, KD-90 series.

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

EC Code: 31

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 20 May 2026

For Bureau Veritas Marine & Offshore,

At BV PUSAN, on 20 May 2021,

Chang-Uk HONG



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with Bureau Veritas Marine & Offshore. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of Bureau Veritas Marine & Offshore available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against Bureau Veritas Marine & Offshore for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

1.1 - Models:

KD-12 series (Float Level Switch): water, oil tank and piston cooling oil tank.

KD-30 series (Float Type Level Switch): water & oil tank.

KD-90 series (Displacement Type Level Switch): water & oil tank.

1.2 - Technical datas:

KD-12 SERIES:

Application model	Switch capacity	Max. Working Press. (Kg/cm ²)	Max. Working Temp. (°C)	IP rating	Switch contact
KD-12	AC 125V/5A, 250V/3A DC 30V/5A	7	120	56	SPDT
KD-12P	AC 125V/5A, 250V/3A DC 30V/5A	10	120	56	SPDT, DPDT
KD-121H	AC 250V/1A	7	120	56	SPST

KD-30 SERIES:

Application model	Electrical characteristics	Max. Working Press. (Kg/cm ²)	Max. Working Temp. (°C)	IP rating
KD-30-1A to 3A W	Switch: 150V/0.25A Control Unit: 250V/1A	10	120	56
KD-30-1A-W-T	Max voltage: 250V Amp: 0.3A	10	120	56
KD-30-11A	Contact Rating: SPDT 250V/0.3A	10	120	56
KD-30-12A	Contact Form & Fattig: SPST, 110VAC/1A	10	80	56
KD-30-13A	Switch: SPDT (for high alarm) 250V/3A	10	120	56

KD-90 SERIES:

Application model	Switch capacity	Max. Working Press. (Kg/cm ²)	Max. Working Temp. (°C)	IP rating	Switch contact
KD-90 series	250 VAC/15A	10	120	56	MICRO
KD-90CSS	125/250 VAC/15A	20	250	56	SPDT

2. DOCUMENTS AND DRAWINGS:

2.1 - According to KUKDONG Catalogue ref. 051.208.1929.

2.2 - According to drawings:

- for KD-12: KD-LS-001/ 002/ 003/ 004/ 005/ 005-1/ 006.

KD-PC-007/ 007-1.

KAD-LS1-A017.

- for KD-30: KD-LS-008/ 009/ 010/ 011/ 012.

KAD-LS1-A023/ 028.

- for KD-90: KD-LS-013/ 015/ 016/ 018/ 019/ 021/ 022/ 023/ 024/ 025/ 026/ 027.

3. TEST REPORTS:

3.1 - According to Test report N° IM3400250, issued by KIMM (Korea Institute of Machinery & Materials) on 14-12-98.

3.2 - According to Test report KOMERI N°11T491 "KD-90C-SSF2-WF6", dated 02-06-2011.

3.3 - According to Test report KOMERI N°12T1632 "Temperature test KD-90C-SSF2-WF6", dated 27-11-2012.

3.4 - Test Report KOMERI N° KOMERI-0602-17T0758, dated 19-06-2017.

3.5 - Test Report KOMERI N° KOMERI-0602-17T0766, dated 19-06-2017.

3.6 - Test Report KOMERI N° KOMERI-0602-17T0762, dated 19-06-2017.

4. APPLICATION / LIMITATION:

- 4.1 - BV Rules for the Classification of Steel Ships.
- 4.2 - Approval also valid for ships to be granted with the notations: **AUT-UMS, AUT-CCS, AUT-PORT** and **AUT-IMS**.
- 4.3 - May not be used for oil and liquid fuel tanks on board passenger ships where penetration below tank top would be necessary.
- 4.4 - This model is not to be installed in Hazardous Area.
- 4.5 - BUREAU VERITAS Environmental Category, **EC Code: 31**.
- 4.6 - Equipment covered by this Type Approval certificate has been tested according to requirements of IACS UR E10 rev 7.

5. PRODUCTION SURVEY REQUIREMENTS:

- 5.1 - The above products are to be supplied by **KUKDONG LEVEL CO.**, in compliance with the type described in this certificate.
- 5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
- 5.3 - **KUKDONG LEVEL CO.**, has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
- 5.4 - For information, **KUKDONG LEVEL CO.**, has declared to Bureau Veritas the following production site(s):

**KUKDONG LEVEL CO.
18, 354BEONAN-GIL
DADAE-RO
Saha-gu
604-040 BUSAN
KOREA (REPUBLIC OF)**

6. MARKING OF PRODUCT:

- 6.1 - Trade name.
- 6.2 - Date of manufacture and serial number.
- 6.3 - Equipment type or model identification under which it was type-tested

7. OTHERS:

- 7.1 - It is **KUKDONG LEVEL CO.**'s responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.
- 7.2 - This certificate supersedes the Type Approval Certificate N° 09820/D0 BV issued on 27-11-2020 by the Society.

***** END OF CERTIFICATE *****