



Marine &amp; Offshore

Certificate number: 22461/C0 BV

File number: AP4068

Product code: 3840H

*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*

**BEDIA Motorentchnik GmbH & Co. KG**

Altdorf bei Nürnberg - GERMANY

*for the type of product*

**LEVEL SWITCH**

Type: CLS50/55

Capacitive Level Switches

**Requirements:**

Bureau Veritas Rules for the Classification of Steel Ships

EC Code: 33/43

*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: 22 Sep 2025****For Bureau Veritas Marine & Offshore,**

At BV HAMBURG, on 22 Sep 2020,

Dirk Hoepfner



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](http://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:**

The **CLS50/55** series are capacitive level switches intended to monitor level of water, oil and Fuel Oil in tanks or on diesel engines.

#### **1.1 - Identification of Sensors:**

Rated Voltage:	HV: 9 to 36V DC LV: 4.5 to 18V DC
Media:	0: Oil 1: Water 2: Oil Special with Oil Shield 2
Process Connection:	xx - Depending on type
Housing:	2: Stainless Steel
Electrical Connection:	xxxx - Depending on type
Cable / Cable Gland:	xxxx - Depending on type
Type of Cable:	xx - Depending on type
Length of cable:	00000 - Without cable XXXXXX - Length in mm
Sensor Output:	1: HSS: High Side Switch - 1A (HV type only) 2: LSS: Low Side Switch - 1A (HV type only) 3: LSS: Low Side Switch - 0.5A (LV type only) 4: AOU - Analogue Output Voltage 5: AOP - Analogue Output Proportional
Operation Mode:	1: Minimum OC (Operation Current) 2: Minimum QC (Rest Current) 3: Maximum OC (Operation Current) 4: Maximum QC (Rest Current)
Switch Point:	1XXX - mm From Seal Edge (long feeler) 2XXX - mm From Seal Edge (short feeler) 1028 - Default value
Response Delay:	XXXX in Seconds
Self Test Function:	XXXX in Seconds
Analogue Values	XXX/XXX

#### **1.2 - Main characteristics:**

Operating Temperature:	- 40°C to 125°C
Ingress Protection Index:	up to IP69K (DIN 40050) depending on connector / cable
Software / Firmware:	CLS40V0_0_19.HEX.

### **2. DOCUMENTS AND DRAWINGS:**

- Description of CLS50/55, Document dated 17.08.2009;
- Variants CLS50/55, Ver. 1.4 dated 05.05.09
- CLS\_006\_001V2, CLS\_007\_001V2, BES\_CLS50\_001V1, 500131/158/159/162/163/164, CLS-H\_V1\_5,
- IF002\_V4\_6 and CLS-A\_V2\_0; Part Lists CLS H, CLS IF and CLS A

### **3. TEST REPORTS:**

- LGA QualiTest GmbH: E4.964-I dated August 25, 2009
  - ECL - European Compliance Laboratory: 08-192 dated 22.10.08
- For C0 version:
- ECL - European Compliance Laboratory: 20-081 dated 15.07.20

### **4. APPLICATION/LIMITATION:**

- 4.1 - Bureau Veritas Rules and Regulations for the Classification of Steel Ships
- 4.2 - Approval valid for ships intended to be granted with the following additional class notations: **AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.**
- 4.3 - Bureau Veritas Environmental Category, **EC Code: 33/43**
- 4.4 - The equipment fulfils the EMC requirements for installation on Deck and in General Power Distribution Zone.
- 4.5 - The above products have been tested according to IACS UR E10 Rev7.

**5. PRODUCTION SURVEY REQUIREMENTS:**

5.1 - The above mentioned products are to be supplied by **BEDIA Motorentechnik GmbH & Co. KG** 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 - **BEDIA Motorentechnik GmbH & Co. KG** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

**BEDIA Motorentechnik GmbH & Co. KG**

**Im Erlet 1**

**90518 Altdorf**

**GERMANY**

**6. MARKING OF PRODUCT:**

- Maker's name or trademark
- Equipment type or model identification
- Date of manufacture and/or serial number

**7. OTHERS:**

7.1 - It is the responsibility of **BEDIA Motorentechnik GmbH & Co. KG** 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° 22461/B0 BV issued on 05 Feb 2015 by the Society.

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