



CERTIFICATE NUMBER 19-HG1889296-PDA  
EFFECTIVE DATE 18-Sep-2019  
EXPIRATION DATE 17-Sep-2024  
ABS TECHNICAL OFFICE  
Hamburg Engineering Department

## CERTIFICATE OF Product Design Assessment

This is to certify that a representative of this Bureau did, at the request of

**BARKSDALE GMBH**

located at

**DORN-ASSENHEIMER-STR. 27, D-61203 REICHELSEHEIM,  
GERMANY**

assess design plans and data for the below listed product. This assessment is a representation by the Bureau as to the degree of compliance the design exhibits with applicable sections of the Rules. This assessment does not waive unit certification or classification procedures required by ABS Rules for products to be installed in ABS classed vessels or facilities. This certificate, by itself, does not reflect that the product is Type Approved. The scope and limitations of this assessment are detailed on the pages attached to this certificate.

**Product** Flow Switch

**Model** BFS-10/30/40-N/NE/L

This Product Design Assessment (PDA) Certificate remains valid until 17-Sep-2024 or until the Rules and/or Standards used in the assessment are revised or until there is a design modification warranting design reassessment (whichever occurs first).

Acceptance of product is limited to the "Intended Service" details prescribed in the certificate and as per applicable Rules and Standards.

This Certificate is valid for installation of the listed product on ABS units which exist or are under contract for construction on or previous to the effective date of the ABS Rules and standards applied at the time of PDA issuance. Use of the Product for non-ABS units is subject to agreement between the manufacturer and intended client.

American Bureau of Shipping

  
Efstratios Maliatsos  
Engineer / Consultant

NOTE: This certificate evidences compliance with one or more of the Rules, Guides, standards or other criteria of ABS or a statutory, industrial or manufacturer's standards. It is issued solely for the use of ABS, its committees, its clients or other authorized entities. Any significant changes to the aforementioned product without approval from ABS will result in this certificate becoming null and void. This certificate is governed by ABS Rules 1-1-A3/5.9 Terms and Conditions of the Request for Product Type Approval and Agreement (2010)

## **BARKSDALE GMBH**

DORN-ASSENHEIMER-STR.27

D-61203 REICHELHEIM

Germany

Telephone: +49 6035 949-222

Fax: +49 6035 949-111

Email: info@barksdale.de

Web: www.barksdale.de

### **Tier: 2 - PDA Issued**

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**Product:** Flow Switch

**Model:** BFS-10/30/40-N/NE/L

**Intended Service:**

Flow Switch for monitoring liquids on Marine and Offshore applications.

#### **Description:**

Operation of the BFS flow switch is based on the movement of a spring-loaded piston within a cylindrical tube. A permanent magnet within the piston activates an adjustable reed switch. Since these flow switches are spring-loaded they can be mounted in virtually any position without affecting the setpoint.

#### **Rating:**

Measuring Ranges:

0.005 ... 0.06 l/min to 60 ... 150 l/min (BFS-10...)

0.5 ... 1.5 l/min to 35 ... 110 l/min for liquids of 30 up to 60 cSt (BFS-30...)

0.2 ... 4 l/min to 35 ... 250 l/min (BFS-40...)

Operating temperature: up to 160 deg C

Contact rating: 200 V/ 1 A to 250 V/ 3 A

Protection Class: IP65/ IP67

Housing material: brass or stainless steel (1.4571)

#### **Service Restriction:**

Unit Certification is not required for this product. If the manufacturer or purchaser request an ABS Certificate for compliance with a specification or standard, the specification or standard, including inspection standards and tolerances, must be clearly defined.

#### **Comments:**

- Flow switches are fitted in piping systems, therefore valves are to be provided so that the devices can be easily isolated and replaced.
- The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

#### **Notes/Drawing/Documentation:**

Drawing No. UB 8155/12, , Test Report, 6 December 2012, BFSV Institute, Revision: -, Pages: 28

Drawing No. 922-1228, Title: Zbz. BFS-10-N-G1/2-SS, Revision: A, Pages: 01

Drawing No. 922-1230, Title: Zbz. BFS-10-N-G1/2-SS, Revision: A, Pages: 01

Drawing No. 922-1284, Title: Zbz. BFS-10-N-G1/4-SS, Revision: A, Pages: 01

Document No. Nomenclature BFS, Revision: -, Pages: 01

Drawing No. BV-Zert., BV-31392-B0-BFS10-30-40, Revision: 1, Pages: 3

Drawing No. DNV-GL Zert., TAA0000204, Revision: 1, Pages: 3

#### **Terms of Validity:**

This Product Design Assessment (PDA) Certificate 19-HG1889296-PDA, dated 18/Sep/2019 remains valid until 17/Sep/2024 or until the Rules or specifications used in the assessment are revised (whichever occurs first).

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This PDA is intended for a product to be installed on an ABS classed vessel, MODU or facility which is in existence or under contract for construction on the date of the ABS Rules or specifications used to evaluate the Product.

Use of the Product on an ABS classed vessel, MODU or facility which is contracted after the validity date of the ABS Rules and specifications used to evaluate the Product, will require re-evaluation of the PDA.

Use of the Product for non ABS classed vessels, MODUs or facilities is to be to an agreement between the

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manufacturer and intended client.

**STANDARDS**

**ABS Rules:**

Rules for Conditions of Classification (2019), 1-1-4/7.7, 1-1-A3, 1-1-A4, which covers the following:  
2019 Rules for Building and Classing Marine Vessels: 4-9-9/13.1  
2019 Rules for Building and Classing Steel Vessels: 4-9-8/13.1  
2019 Rules for Building and Classing Offshore Support Vessels: 4-9-8/13.1

**National:**

NA

**International:**

NA

**Government:**

NA

**EUMED:**

NA

**OTHERS:**

NA