



Marine & Offshore

Certificate number: 31392/B0 BV

File number: AP4438

Product code: 3841H

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

Barksdale GmbH
Reichelsheim - GERMANY

for the type of product

FLOW SWITCH

BFS-10-N, BFS-30-L/N/NE and BFS-40-N 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 is a renewal of certificate N° 31392/A1 BV expiring on 06/08/2018

This certificate will expire on: 06 Aug 2023

For Bureau Veritas Marine & Offshore,

At BV HAMBURG, on 23 May 2018,

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. 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.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

The **BFS-10-N**, **BFS-30-L/N/NE** and **BFS-40-N** series are adjustable flow switches for liquids.

1.1 - Main characteristics:

Output: 1 x NO or 1 x CO
Housing Material: Brass or Stainless Steel
Nominal pressure (bar): up to 100 (Brass version)
up to 350 (Stainless Steel version)
Degree of Protection: IP65

1.2 - Variants:

	BFS-10-N	BFS-30-L/N/NE	BFS40-N
Flow Range:	0.005 to 150 l/min	0.5 to 110 l/min	0.2 to 250 l/min
Order code:	Type: BFS-10-N - aaa - bb - cc - ST (acc. to document 923-1837 Rev. C) aaa = Process connection: G1/4, G1/2, G1 bb = Material: MS, SS cc = Micro switch: NO, WE	Type: BFS-30- aa - bbb - cc - dd - ST (acc. to document 923-1855 Rev. C) aa = Type: L, N, NE bbb = Process connection: G1/2, G1 cc = Material: MS, SS dd = Micro switch: NO, WE	Type: BFS-40-N - aaa - bb - cc - ST (acc. to document 923-1857 Rev. C) aaa = Process connection: G1/4, G1/2, G3/4, G1, G1 1/4, G1 1/2 bb = Material: MS, SS cc = Micro switch: NO, WE

2. DOCUMENTS AND DRAWINGS:

Data sheets: - 923-1837 Rev. C; 923-1855 Rev. C; 923-1857 Rev. C

Documents: - 911-0126 Rev. A dated 12.09.03; 911-0128 Rev. B dated 09.03.04; 911-0176 Rev. B dated 20.04.2011;
- 911-0182 Rev. C dated 20.04.2011; 911-0302; 922-1228 Rev. A dated 18.11.10; 922-1230 Rev. A dated 18.11.10;
- 922-1284 dated 22.09.11; 923-0267 Rev. J dated 17.04.2013; 923-0269 Rev. G dated 17.04.2013;
- 923-0752 Rev. G dated 17.04.2013

3. TEST REPORTS:

Institut für BFSV:

- UB 8155/12 dated 6 December 2012

Barksdale GmbH:

- Pressure test certificate dated 14.05.2013

4. APPLICATION / LIMITATION:

4.1 - Bureau Veritas Rules 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: 31.**

5. PRODUCTION SURVEY REQUIREMENTS:

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

Barksdale GmbH
Dorn-Assenheimer Strasse 27
61203 Reichelsheim
GERMANY

5.4 - Equipment is to be supplied with manual(s) for installation, use and maintenance.

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 **Barksdale GmbH** 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° 31392/A1 BV issued on 15 Aug 2013 by the Society.

*** END OF CERTIFICATE ***