

TYPE APPROVAL CERTIFICATE

This is to certify:**That the Pressure Switch**with type designation(s)
S8000 and S9000 series

Issued to

Barksdale GmbH
REICHELHEIM WETTERAU, Germanyis found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards**Application :****Location classes:**

| | |
|--------------------|------------|
| Temperature | D |
| Humidity | B |
| Vibration | B |
| EMC | N/A |
| Enclosure | B |

This Certificate is valid until **2018-12-31**.Issued at **Høvik** on **2014-11-06**DNV GL local station: **Augsburg**Approval Engineer: **Nils Jarem**for **DNV GL**

Odd Magne Nesvåg
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. If any person suffers loss or damage which is proven to have been caused by any negligent act or omission of the Society, then the Society shall pay compensation to such person for his proven direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question. The maximum compensation shall never exceed USD 2 million. In this provision the "Society" shall mean DNV GL AS as well as all its direct and indirect owners, affiliates, subsidiaries, directors, officers, employees, agents and any other person or entity acting on behalf of DNV GL AS.

Certificate No: **A-13790**
File No: **895.10**
Job Id: **262.1-015076-1**

Product description

Pressure Switches Series S8000 and S9000 series:

| | |
|-----------------------|----------------|
| S8000: 0.6...600 bar; | 250 V AC, 5 A |
| | 125 V AC, 5 A |
| | 30 V DC, 5 A |
| | 250 V DC 0,2 A |
| S9000: 0.2...400 bar; | 250 V AC, 10A |
| | 24 V DC 6.0 A |

Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV Rules for Ships Pt.4 Ch.9 Control and Monitoring Systems.

Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

Type Approval documentation

Data sheets : Series 8000 Compact Pressure Switches; 923-1295 Rev J
Series 9000 Compact Pressure Switches; 923-1647 Rev E
Manuals : Operating Instructions Compact Piston and Diaphragm Pressure Switches Series 8000
Test reports : Test report (vibr), 6761/09, dated 2009-07-02
Prüfbericht (IP), 5641a/05, dated 2005-06-22
Prüfbericht, 5527/05, dated 2005-02-08
BFSV-Test-Report, 0973/14, dated 2014-10-17
Drawings: 923-1961, Rev A, Datenblatt S9000 Membrane
923-1571, Rev C, Serie 8000 Sales-Drawing

Tests carried out

Applicable tests according to Standard for Certification No. 2.4, April 2006.

Marking of product

The products to be marked with model name, manufacturer name and serial number.

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 systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, 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 is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE