

DET NORSKE VERITAS

TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **A-11799**

This is to certify that the
Level Switches

with type designation(s)
Bilge Level Switch BLS9200

Manufactured by
PSM Instrumentation Ltd
HAYWARDS HEATH WEST SUSSEX, United Kingdom

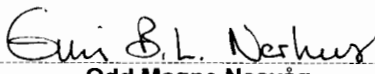
is found to comply with
Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det Norske Veritas' Offshore Standards

Application
Location classes:

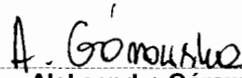
Temperature	D
Humidity	B
Vibration	A
EMC	N/A
Enclosure	D

Høvik, 2010-05-25
for **Det Norske Veritas AS**

This Certificate is valid until
2014-06-30


Odd Magne Nesvåg
Head of Section


DNV local office:
London


Aleksandra Górowska
Surveyor

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 proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.



Certificate No.: A-11799
File No.: 895.30
Job Id.: 262.1-009301-1

Product description

The Bilge Level Switch Type BLS9200 is designed to be installed in ships bilges and tanks.

Technical data:

Max. rating:	100 Watt AC/DC resistive load
Max. voltage:	500 Vdc / 250 Vac
Max. current:	3 A
Material:	Stainless Steel
Float s.g:	0.62

Application/Limitation

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.

Type Approval documentation

User Manual: Doc Ref Man 45 Issue D
Specification: DAT40A dated 2008-06-30
Drawings: S-001311-9200-GO issue C dated 2009-09-09
Reports: Mariner Systems Ltd. Climatic and Mechanical Test Report No. TL1209A dated 2008-12-03,
TL1209M dated 2008-08-14

Certificate No. SOU 0800311/1 dated 2008-08-22 (IP test according to BS EN 60529:1992 ingress protection category IP68.

Tests carried out

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

Dry Heat Test carried out for 16h at +70°C.

Cold Test carried out for 16h at -25°C.

Certificate Retention Survey

The scope of the retention/renewal survey 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 survey 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

Retention survey is to be performed at least every second year and at renewal of this certificate.

END OF CERTIFICATE