



# DET NORSKE VERITAS

## TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. **A-13659**

This is to certify that the  
**Peripheral Equipment**

with type designation(s)  
**ProfiHub B5+**

Issued to  
**Procentec**  
**Wateringen, Netherlands**

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:**

<b>Temperature</b>	<b>D</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>IP20</b> <b>Required protection according to the Rules to be provided upon installation on board</b>

This Certificate is valid until **2018-06-30**.

Issued at **Høvik** on **2014-02-11**

for **Det Norske Veritas AS**

DNV local station: **Rotterdam, Product Certification /Verification**

Approval Engineer: **Andrzej Gdaniec**

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**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 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.

## Product description

The ProfiHub B5+ is a network component for PROFIBUS DP installations, to implement long multi-device spur lines and backbone structures with star/tree segments.

The ProfiHub B5+ refreshes a received message on one channel and transfers it to all the other channels.

More details can be found in Procentec User Manual ProfiHub B5+ Ver.1.3.

## 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.

### Product certificate

If specified in the Rules, ref. Pt.4 Ch.9 Sec.1, the control and monitoring system in which the above listed hardware is used shall be delivered with a product certificate. For each such delivery the certification test is to be performed at the manufacturer of the application system before the system is shipped to the yard. The test shall be done according to an approved test program. After the certification the clause for application software control will be put into force.

### Clause for application software control

All changes in software are to be recorded as long as the system is in use on board. The records of all changes are to be forwarded to DNV for evaluation and approval. Major changes in the software are to be approved before being installed in the computer.

## Type Approval documentation

### Manuals and drawings:

- ProfiHub B5+ User Manual, Ver.1.3, dated 2013-12

### Test reports:

- DEKRA Test report No. 2164967.0502-EMC, dated 2013-09-19
- DEKRA Certificate Electromagnetic Compatibility No. 2164967.0551-EMC, dated 2013-09-19
- DEKRA Test report No. 2164967.0501-EMC, dated 2013-09-19
- DEKRA Attestation No. 2164967.0552-EMC, dated 2013-09-19

## Tests carried out

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

The 'Compass safe distance' was not measured according to section 11.2 of IEC 60945 4<sup>th</sup> edition (2002).

## Marking of product

Brand name: Procentec

Model name and part number: ProfiHub B5+

Serial number: Unique for each delivered item

## 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