



CERTIFICATE NUMBER	20-LD1960114-PDA
EFFECTIVE DATE	18-Mar-2020
EXPIRY DATE	17-Mar-2025
ABS TECHNICAL OFFICE	London Engineering Department

CERTIFICATE OF Product Design Assessment

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

DANFOSS A/S

located at

**NORDBORGVEJ 81 - BUILDING E14 S4A, APPROVALS DEPT.,
NORDBORG, Denmark, DK-6430**

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 Pressure Switch

Model KPS (Pressure)

KPS (Temperature)

This Product Design Assessment (PDA) Certificate remains valid until 17/Mar/2025 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

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)

DANFOSS A/S

NORDBORGVEJ 81 - BUILDING E14 S4A

APPROVALS DEPT.

NORDBORG

Denmark DK-6430

Telephone: 45-7488-2222

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Web: www.danfoss.com

Tier: 3 - Type Approved, unit certification not required

Product: Pressure Switch

Model: KPS (Pressure)

KPS (Temperature)

Intended Service:

ABS Classed Vessels and Offshore Facilities in accordance with the listed ABS Rules

Description:

Pressure and temperature switches intended for use in monitoring, alarm and regulation systems in the following mediums: Water, Fuel Oil, Lube Oil, Gas, Refrigerants, Hydraulic Fluids

Rating:

Pressure Switches

Type: KPS 31; Operation Pressure (BAR): 0 to 2.5; Type: KPS 33; Operation Pressure (BAR): 0 to 3.5; Type: KPS 35; Operation Pressure (BAR): 0 to 8; Type: KPS 37; Operation Pressure (BAR): 6 to 18; Type: KPS 39; Operation Pressure (Bar): 10-35; Type: KPS 43; Operation Pressure (BAR): 1 to 10; Type: KPS 45; Operation Pressure (BAR): 4 to 40; Type: KPS 47; Operation Pressure (BAR): 6 to 60; Temperature of medium for KPS 31-39: -40 degrees C to 100 degrees C; Temperature of medium for KPS 43-47: -25 degrees C to 100 degrees C; For Water - Maximum 80 degrees C; Maximum Contact Load: 440V, 10 A AC, 220V 12 W DC,

Temperature Switches

Type: KPS 76; Temperature Range -10 to 30 degrees C; Type: KPS 77; Temperature Range 20 to 60 degrees C; Type: KPS 79; Temperature Range 50 to 100 degrees C; Type: KPS 80; Temperature Range 70 to 120 degrees C; Type: KPS 81; Temperature Range 60 to 150 degrees C; Type: KPS 83; Temperature Range 100 to 200 degrees C; Maximum Contact Load: 220V, 12 W DC, 400V, 10A AC

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:

The Manufacturer has provided a declaration about the control of, or the lack of Asbestos in this product.

Notes/Drawing/Documentation:

Drawing No. IC.PD.P10.I6.02_520B7855, Pressure switch and Thermostat KPS, Revision: n/a, Pages: 1

Drawing No. email 12 feb 20 - revalidation of PDA certificate 15-LD1292204-PDA, email 12 feb 20 - revalidation of PDA certificate 15-LD1292204-PDA, Revision: -, Pages: 1

Drawing No. email 12 feb 20 revalidation of PDA certificate 15-LD1320228-PDA, email 12 feb 20 revalidation of PDA certificate 15-LD1320228-PDA, Revision: -, Pages: 1

Terms of Validity:

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Tier: 3 - Type Approved, unit certification not required

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STANDARDS

ABS Rules:

- Marine Vessel Rules (2020): 1-1-4/7.7, 1-1-A3&A4, 4-8-3/1.7, 4-9-9/7, 4-9-9/13, 4-9-9/Table1;
- Facilities on Offshore Installations (2020): 1-1-4/9.7, 1-1-A2&A3;
- Mobile Offshore Units (2020): 1-1-4/9.7, 1-1-A2&A3, 4-1-1/7.9, 4-3-1/11, 6-1-1/9, 6-1-1/13;
- Steel Vessels for Service on Rivers and Intracoastal Waterways (2020): 1-1-4/7.7, 1-1-A3&A4;
- High Speed Crafts (2020): 1-1-4/11.9, 1-1-A2&A3, 4-6-1/11, 4-7-9/7, 4-7-9/15, 4-7-9/Table 9;
- Steel Barge Rules (2020): 1-1-4/7.9, 1-1-A3&A4;

National:

NA

International:

NA

Government:

NA

EUMED:

NA

OTHERS:

NA