



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA19109M

This is to certify that the undernoted product(s) has/have been approved in accordance with the requirements specified in Chapter 1, Part 7 of "Guidance for the Approval and Type Approval of Materials and Equipment for Marine Use" and the relevant Society's Rules.

This certificate is issued to

| | |
|-------------------------|---|
| Applicant: | Danfoss A/S |
| Place of Applicant: | DK-6430, Nordborg, Denmark |
| Manufacturer: | Danfoss Sp. z o.o |
| Place of Manufacturing: | U1. Chrzanowska 5 05-825 Grodzisk, Poland |
| Product description: | Pressure Controls |
| Model: | KPS31, KPS33, KPS35, KPS37, KPS39, KPS43, KPS45, KPS47 |
| Approval No.: | 84A107 |
| Valid until: | 15 February 2024 |

This certificate is subject to the conditions specified in the attached sheet(s).

Issued at Tokyo on 16 February 2019.



T. Shimada
General Manager
Machinery Department

Note: The manufacturer, if desired, is requested to apply to the Society for renewal prior to the expiration date.

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Attached sheet -2/2 to the Certificate No. TA19109M

Test items & approval conditions:

1. Test items:

(Applied testing items are marked with X.)

| ENVIRONMENTAL TESTS | | Mark |
|---|-------------------------|------|
| External examination | | X |
| Operation test and performance test | | X |
| Electric power supply failure test | | -- |
| Power supply fluctuation test | Electric | -- |
| | Pneumatic and Hydraulic | X |
| Insulation resistance test | | -- |
| High voltage test | | -- |
| Pressure test (Pneumatic and Hydraulic) | | X |
| Dry heat test (Temperature 70°C × 50 hours) | | X |
| Damp heat test | | X |
| Vibration test (Acceleration ±0.7g × 2 hours) | | X |
| Inclination test | | X |
| Cold test (Temperature -30°C × 16 hours) | | X |
| Salt mist test | | -- |
| Electrostatic discharge immunity test | | -- |
| Radiated radio frequency immunity test | | -- |
| Conducted low frequency immunity test | | -- |
| Conducted high frequency immunity test | | -- |
| Burst / Fast transient immunity test | | -- |
| Surge immunity test | | -- |
| Radiated emission test | | -- |
| Conducted emission test | | -- |
| Flame retardant test | | X |

2. Approval condition:

The product is not allowed to be installed on open decks.

- The End -

