



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No.TA19067M

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:

Themostats

Model:

KPS76, KPS77, KPS79, KPS80, KPS81, KPS83

Approval No.:

84A106

Valid until:

15 February 2024

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

Issued at Tokyo on 31 January 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.

NIPPON KAIJI KYOKAI

Attached sheet -1/2 to the Certificate No.TA19067M

Specification & documents:

1. Particulars:

Temperature Range: $-10 \sim 200$ °C

Contact Load

: AC 440V 10A (Ohmic), 6A (Inductive)

DC 220V 12W

2. Components and reference drawings:

Components	Drawings
KPS76,	
KPS77,	060R0031,
KPS79,	060R0034,
KPS80,	060R0061
KPS81,	
KPS83	

3. Test Reports:

Danfoss Test Report dated 26/10/2011

Polish test laboratory Test Report No. 250/NZL/NBW/2011/O dated 12/1/2012

- To be continued -

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Attached sheet -2/2 to the Certificate No. TA19067M

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	
Insulation resistance test		X
High voltage test		X
Pressure test (Pneumatic and Hydraulic)		
Dry heat test (Temperature 70°C × 22 hours)		X
Damp heat test		X
Vibration test (Acceleration $\pm 4.0 \text{g} \times 2 \text{ hours}$)		X
Inclination test		X
Cold test (Temperature $-30^{\circ}\text{C} \times 18 \text{ hours}, -50^{\circ}\text{C} \times 2 \text{ hours}$)		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		

2. Approval condition:

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

