



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA14480M

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, Mazowiecki, Poland
Product description:	Thermostats
Model:	CAS178, CAS1078, CAS179, CAS1079, CAS180, CAS1080 CAS181, CAS1081
Approval No.:	84A158
Valid until:	8 July 2019

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

Issued at Tokyo on 9 July 2014.


Y. Shibata
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. TA14480M

Specification & documents:

1. Particulars:

Temperature Range: 20 - 150 °C
Contact Load: AC 250V 0.1A
DC 125V 12W

2. Components and reference drawings:

Components	Model	Drawings
Thermostat	CAS178, CAS1078, CAS179, CAS1079, CAS180, CAS1080, CAS181, CAS1081	060R0251, 060R0253, 060R0034, 060R0035, 060R0037, 060R0254, 027M0024-1/2, 2/2

3. Test Reports:

Type approval tests report (1) (Danfoss, TR 60-763, 1984-3-23)

Type approval tests report (2) (Danfoss, CG-LF/OJN/hh, 1994-4-19)

- To be continued -

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)		X
Dry heat test (Temperature 70°C × 48 hours)		X
Damp heat test (Temperature 55°C, Humidity 90% × 16 hours × 4 cycles)		X
Vibration test (Acceleration ±4.0g × 2 hours)		X
Inclination test		X
Cold test (Temperature -25°C × 19 hours, -50°C × 2 hours)		X
Salt mist test		X
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		--



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA14480M

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, Mazowiecki, Poland
Product description:	Thermostats
Model:	CAS178, CAS1078, CAS179, CAS1079, CAS180, CAS1080 CAS181, CAS1081
Approval No.:	84A158
Valid until:	8 July 2019

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

Issued at Tokyo on 9 July 2014.


Y. Shibata
General Manager
Machinery Department



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