



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA14479M

**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:	<b>Danfoss A/S</b>
Place of Applicant:	<b>DK-6430, Nordborg, Denmark</b>
Manufacturer:	<b>Danfoss Sp. z o.o</b>
Place of Manufacturing:	<b>U1. Chrzanowska 5 05-825 Grodzisk, Mazowiecki, Poland</b>
Product description:	<b>Pressure Controls</b>
Model:	<b>CAS133, CAS1033, CAS136, CAS1036, CAS137, CAS1037, CAS139, CAS1039, CAS143, CAS1043, CAS145, CAS1045, CAS147, CAS1047</b>
Approval No.:	<b>84A156</b>
Valid until:	<b>8 July 2019</b>

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. TA14479M

**Specification & documents:**

1. Particulars:

Pressure Range: 0 - 6 MPa  
Contact Load: AC 250V 0.1A  
DC 125V 12W

2. Components and reference drawings:

Components	Model	Drawings
Pressure Controls	CAS133, CAS1033, CAS136, CAS1036, CAS137, CAS1037, CAS139, CAS1039, CAS143, CAS1043, CAS145, CAS1045, CAS147, CAS1047	060R0251, 060R0253, 060R0033, 060R0036, 060R0044, 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)

**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		--