



NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA13149M

**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>
Manufacturer:	<b>Danfoss Sp. z o.o.</b>
Place of Manufacturing:	<b>Ul. Chrzanowska 5, 05-825 Grodzisk Mazowiecki, Poland</b>
Product description:	<b>Differential Pressure Control</b>
Model:	<b>MBC 5180</b>
Approval No.:	<b>06A023</b>
Valid until:	<b>9 July 2017</b>

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

Issued at Tokyo on 18 April 2013.

  
Y. Shibata  
General Manager  
Machinery Department



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

**Specification & documents:**

1. Particulars:      Power supply: AC 250V 0.5A, DC 125V 12W  
                            Max. Operating Pressure: 45 bar (4.5 MPa)  
                            Operating Temperature: -10 ~ 85°C

2. Documentation and Test Reports:

061R9001

SKIBSGOD.DOC 9/25/96

Test Report No 196/NZL/NBW/2010/O

**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 85°C × 2 hours)		X
Damp heat test		X
Vibration test		X
Inclination test		X
Cold test (Temperature -10°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		X

## 2. Approval condition:

Nil