



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA18236M

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
Manufacturer:	Danfoss Sp. z o.o.
Place of Manufacturing:	Ul. Chrzanowska 5, 05-825 Grodzisk Mazowiecki, Poland
Product description:	Pressure switch and differential pressure switch
Model:	MBC 5100 & MBC 5180
Approval No.:	06A023
Valid until:	9 July 2022

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

Issued at Tokyo on 10 July 2017.


F. Taguchi
General Manager
Machinery Department



Note: The manufacturer, 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

MBC 5100:

Low pressure bellows	Over load:	15 bar (1.5 MPa)
	Min. burst pressure:	30 bar (3.0 MPa)
High pressure bellows	Over load:	45 bar (4.5 MPa)
	Min. burst pressure:	90 bar (9.0 MPa)
Diaphragm	Over load:	150 bar (15.0 MPa)
	Min. burst pressure:	300 bar (30.0 MPa)
Piston	Over load:	600 bar (60.0 MPa)
	Min. burst pressure:	1200 bar (120.0 MPa)

MBC 5180:

Permissible operating pressure	45 bar (4.5 MPa)
Min. burst pressure	90 bar (9.0 MPa)

2. Documentation and Test Reports:

IC. PD. P10. 2A. 02

IC. PD. P10. K4. 02

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

SGS Test Report No.274438-1c (10.10.2014)

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 × 96 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

- The End -

