



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA13111M

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 (Tianjin) Ltd.
Place of Manufacturing:	No.5 Fuyuan Road Wuqing Development Area 301700 Tianjin China
Product description:	Pressure Transmitter
Model:	MBS 33M
Approval No.:	93A107
Valid until:	27 May 2016

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

Issued at Tokyo on 22 March 2013.


T. Narisawa
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: DC10-30V

2. Documentation and Test Reports:

060R3009

060C0340

060R3008

Technical brochure (IC.PD.P21.M1.02)

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		X
Power supply fluctuation test	Electric	X
	Pneumatic and Hydraulic	--
Insulation resistance test		X
High voltage test		X
Pressure test (Pneumatic and Hydraulic)		X
Dry heat test (Temperature 70°C × 2 hours)		X
Damp heat test (Static: IEC 68-2-3 for 6days, Cyclic: IEC 68-2-30 for 6days)		X
Vibration test (Acceleration ±4.0g × 2 hours)		X
Shock test (IEC 68-2-27, Test Ea)		X
Inclination test		X
Cold test (Temperature -30°C × 16 hours, -50°C × 2 hours)		X
Salt mist test		X
Electrostatic discharge immunity test		X
Radiated radio frequency immunity test		X
Conducted low frequency immunity test		X
Conducted high frequency immunity test		X
Burst / Fast transient immunity test		X
Surge immunity test		X
Radiated emission test		X
Conducted emission test		X
Flame retardant test		--

2. Approval condition:

Nil