



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA18355M

**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

Manufacturer:	<b>Danfoss A/S</b> <b>Nordborgvej 81, 6430 Nordborg, Denmark</b>
Place of Manufacturing:	<b>Danfoss (Tianjin) Ltd.,</b> <b>9 Quanhui Road, 301700 Tianjin, China</b>
Product description:	<b>Pressure Transmitter</b>
Model:	<b>MBS5100 / 5150 / 5103 / 5153</b>
Approval No.:	<b>95A109</b>
Valid until:	<b>9 February 2023</b>

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

Issued at Tokyo on 10 February 2018.

  
**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: Power Supply DC24V , Output 4-20 mA

2. Components and reference drawings:

Components		Drawing
Pressure Transmitter	MBS5100	060C0339, 060G2295, 060G2289, 060N0000, 060N9000, TR060N004, TR060N005, TR060N006 Technical report (2006-9017) Data sheet ( 520B7974 )
	MBS5150	
	MBS5103	
	MBS5153	

Proof for flammability (Technical Data sheet: laxness Durethan PA66)

**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 85°C × 22 hours)		X
Damp heat test		X
Vibration test		X
Inclination test		X
Cold test (Temperature -40°C × 16 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		--