



# NIPPON KAIJI KYOKAI

## TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No.TA19541M

**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>MTS Sensor Technologie GmbH &amp; Co. KG</b>
Manufacturer 1:	<b>MTS Sensor Technologie GmbH &amp; Co. KG</b>
Place of Manufacturing 1:	<b>Auf dem Schueffel 9, 58513 Luedenscheid Germany</b>
Manufacturer 2:	<b>MTS System Corp. Sensors Division</b>
Place of Manufacturing 2:	<b>3001 Sheldon Drive, Cary, NC 27513, USA</b>
Product description:	<b>Magnetostrictive Linear Position Sensors Temposonics®</b>
Model:	<b>T-Series TH-Sensor</b>
Approval No.:	<b>19A037</b>
Valid until:	<b>25 September 2024</b>

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

Issued at Tokyo on 26 September 2019.



T. Shimada  
General Manager  
Machinery Department

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

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Attached sheet -1/2 to the Certificate No.TA19541M

**Specification & documents:**

1. Particulars: Power supply: DC 24V

2. Components and reference drawings:

Type	Drawing
T-Series TH-Sensor	280700, 280702, 280715, 252921, 253132, 235177, 253188

3. Documentation and Test Reports:

Data Sheet TH Analog: 551385

Operation Manual TH Analog: 551513

Test report on Electromagnetic Compatibility: 9/341

Test report on Electromagnetic Compatibility: 9/468

Environmental Tests on TH-Sensors: P19-PRCS005063

Test report of the witness tests of the T-Series according to ClassNK Part 7:605458

**- To be continued -**

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Attached sheet -2/2 to the Certificate No.TA19541M

**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)		--
Dry heat test (Temperature 70°C × 16 hours)		X
Damp heat test		X
Vibration test (Acceleration ±4.0 g × 1.5 hours)		X
Inclination test		--
Cold test (Temperature -25°C × 22 hours)		X
Salt mist test		--
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. Approved condition:

The product is not allowed to be installed on the bridge or on open deck.

- The End -