



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

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 -

NIPPON KAIJI KYOKAI

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 -