



NIPPON KAIJI KYOKAI

TYPE APPROVAL CERTIFICATE FOR AUTOMATIC DEVICES AND EQUIPMENT

Certificate No. TA18505M

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: | Danfoss A/S |
| Place of Manufacturing: | Nordborgvej 81, DK-6430 Nordborg, Denmark |
| Product description: | Temperature Sensor |
| Model: | MBT 5250, 5252, 5253, 5260 |

| | |
|---------------|-----------------------|
| Approval No.: | 96A130 |
| Valid until: | 22 August 2023 |

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

Issued at Tokyo on 29 October 2018.



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. TA18505M

Specification & documents:

1. Particulars:

Temperature Range of MBT 5250/5253/5260 -50 ~ 200°C

Temperature Range of MBT 5252 -50 ~ 400°C

2. Components and reference drawings:

| Type | Data sheet (Standard Type) | Engineering Sheets (Customized Type) | Remarks |
|-----------------|--|---|---|
| MBT 5250 Series | IC.PD.P30.13.02 | 130813-6, 110825-7, 090428-5, 101116-5 | Interchangeable Measuring insert |
| MBT 5252 | IC.PD.P30.13.02 | - | Interchangeable Measuring insert With Connection Head |
| MBT 5260 Series | IC.PD.P30.13.02 Specification key: 084R2034 ver.05 | 100128-5 | Fixed Measuring insert DIN 43650 Plug |
| MBT 5253 | - | 110119-5, 110119-6, 110119-7 Specification key: 084R2016 ver.05 | Interchangeable Measuring insert |

- To be continued -

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) | | -- |
| Dry heat test (Temperature 70°C × 22 hours) | | X |
| Damp heat test | | X |
| Vibration test (Acceleration $\pm 4.0g \times 1.5$ hours) | | X |
| Inclination test | | -- |
| Cold test (Temperature -50°C × 2 hours) | | X |
| Salt mist test | | -- |
| 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 | | -- |

2. Approval condition:

The product is not allowed to be installed on open decks.

- The End -

