

# Average temperature measurement Prothermo NMT539

## High precision average temperature measurement



More information and current pricing:

[www.endress.com/NMT539](http://www.endress.com/NMT539)

### Benefits:

- Intrinsically safe device allowing for the safest electrical configuration possible
- Available in four different versions based on customer requirements:
  - Converter only
  - Converter and temperature probe
  - Converter and water bottom probe
  - Converter, temperature and water bottom probe
- Converter is compatible with various element types in third party manufacturer temperature probes
- Compatible with Endress+Hauser's user friendly FieldCare
- Variety of process connections and cable entries available to meet worldwide classifications
- High reliability and easy installation
- Maintenance free

### Specs at a glance

- **Accuracy** +/- 0.1 °C
- **Max. process pressure (static)** 0 bar...0.5 bar (0 psi...7.25 psi)
- **Operating temperature range** Standard: -40 °C...100 °C Optional: -55 °C...235 °C Water Bottom spec.: -40 °C...100 °C Cryogenic: -170 °C...60 °C
- **Max. immersion length on request** 40 m (131.2 ft)

**Field of application:** Prothermo NMT539 is an intelligent HART signal converter, with a combined average temperature sensor and water bottom interface probe. For average temperature measurement consists of precision multispot Pt100 elements. The NMT539 is a highly capable solution for constant average temperature data and water interface data

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via HART communication. For custody transfer and accurate inventory measurement, it is best suited connected to Proservo NMS5 or Tank Side Monitor NRF590 with Micropilot.

## Features and specifications

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### Thermometer

**Measuring principle**

Resistance Temperature Detector

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**Characteristic / Application**

High precision average temperature measurement, with optional capacitance water bottom sensor

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**Max. immersion length on request**

40 m (131.2 ft)

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**Process connection**

JIS10K 50A RF

ASME 2" 150 lb RF

DN50 PN10 RF

JPI 2" 150 lb RF

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**Thermometer****Operating temperature range**

Standard:

-40 °C...100 °C

Optional:

-55 °C...235 °C

Water Bottom spec.:

-40 °C...100 °C

Cryogenic:

-170 °C...60 °C

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**Max. process pressure (static)**

0 bar...0.5 bar

(0 psi...7.25 psi)

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**Accuracy**

+/- 0.1 °C

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**Ex - approvals**

ATEX, FM, CSA, IEC Ex, TIIS, NEPSI

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**Continuous / Liquids****Measuring principle**

Servo / Float Tank Gauging

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**Characteristic / Application**

High precision average temperature measurement, with optional capacitance water bottom sensor

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**Continuous / Liquids****Supply / Communication**2-wire (HART)

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**Accuracy**+/- 0.1 °C

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**Ambient temperature**

-40 °C ... 85 °C

(-40 °F ... 185 °F)

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**Process temperature**

Standard:

-40 °C...100 °C

(-40 °F...212 °F)

Optional:

-55 °C...235 °C

(-67 °F...455 °F)

Water Bottom spec.:

-40 °C...100 °

(-40 °F...212 °F)

Cryogenic:

-170 °C...60 °C

(-274 °F...140 °F)

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**Process pressure absolute / max. overpressure limit**

0 bar ... 0.5 bar

(0 psi ... 7.25 psi)

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**Main wetted parts**316 SUS

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## Continuous / Liquids

### Process connection

JIS10K 50A RF  
ASME 2" 150 lb RF  
DN50 PN10 RF  
JPI 2" 150 lb RF

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### Max. measurement distance

40 m (131.2 ft)

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### Communication

digital HART

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### Certificates / Approvals

ATEX, FM, CSA, IEC Ex, TIIS, NEPSI

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### Application limits

Heating coil or other mechanical obstruction in tank: may affect total length

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