

# Technical Information

## CTS1

Temperature sensor e.g. for automatic temperature compensation during pH measurement



### Application

- Temperature measurement
- Can be combined with:
  - pH combined sensor without a temperature sensor
  - pH glass electrode and separate reference electrode
- Suitable for installation in immersion assemblies and flow assemblies

### Your benefits

- Pt100 measuring resistor
- Process connection Pg 13.5
- Measuring cable connection via:
  - Coaxial plug-in head
  - TOP68 plug-in head
  - Fixed cable
- Sensor shaft made of lead-free glass, suitable for process applications
- Double Pt100 version possible
- Version for use in Ex zone 0

## Input

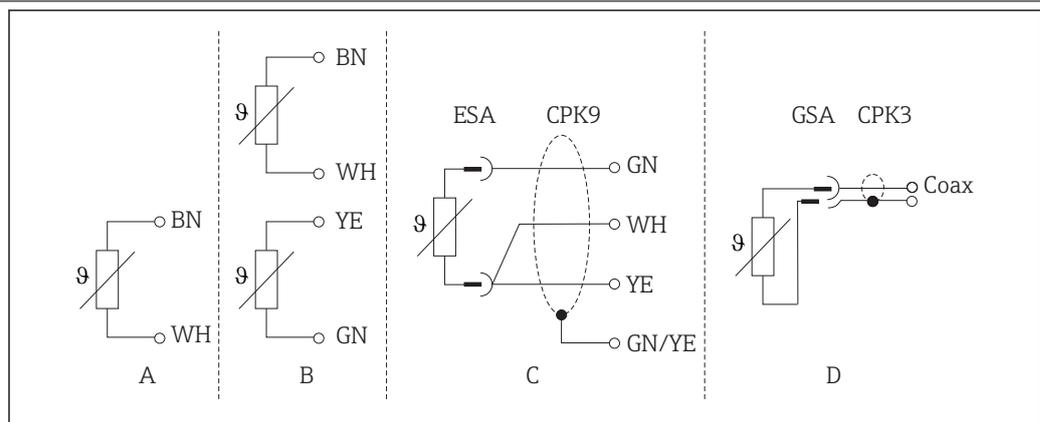
**Measured variable** Temperature via temperature-dependent resistor (TDR)

**Measuring range**

- In conjunction with Liquiline M CM42:  
-35 to 250 °C (-31 to 482 °F)
- In conjunction with Liquisys M CPM223/253:  
-50 to 150 °C (-58 to 302 °F)

## Power supply

**Electrical connection**



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1 Cable connection

- A Fixed cable (version with GFB terminal head) and type A (single Pt100)  
 B Fixed cable (version with GFB terminal head) and type B (double Pt100)  
 C Connection of version with ESA threaded plug-in head with CPK9 cable  
 D Connection of version with GSA threaded plug-in head with CPK3 cable

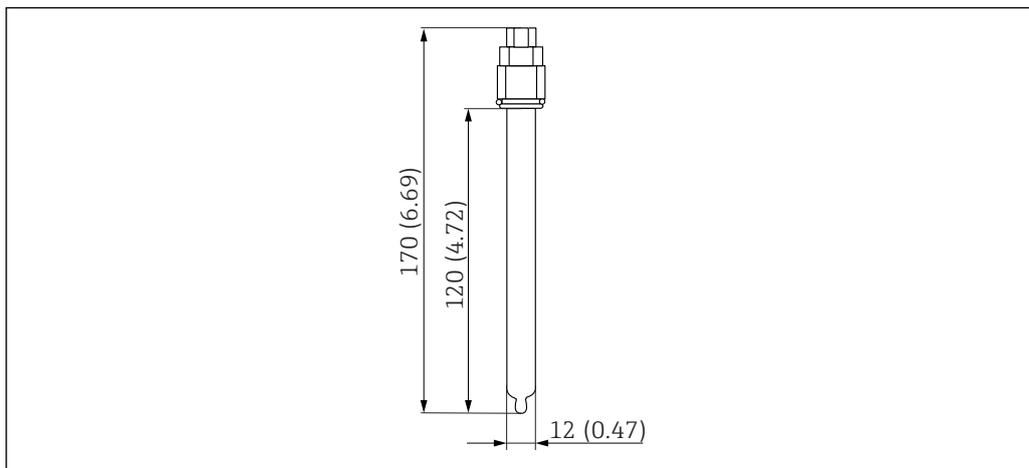
## Process

**Process temperature range** -15 to 135 °C (5 to 275 °F)

**Process pressure range** 0.8 to 14 bar (11.6 to 203 psi)

## Mechanical construction

### Design, dimensions



2 Dimensions. Engineering unit: mm (in)

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### Weight

185 g (6.5 oz)

### Materials

#### Wetted materials

Shaft	Glass to suit process
Sealing ring	Viton
Thrust collar	EPDM

#### Materials not in contact with the medium

#### Information according to REACH Regulation (EC) 1907/2006 Art. 33/1:

The potting compound in the sensor shaft contains the SVHC substance terphenyl, hydrogenated (CAS number <sup>1)</sup> 61788-32-7) with more than 0.1 % (w/w). The product does not present a hazard if it is used as designated.

### Process connections

Pg 13.5

## Certificates and approvals

### CE mark

The product meets the requirements of the harmonized European standards. As such, it complies with the legal specifications of the EU directives. The manufacturer confirms successful testing of the product by affixing to it the CE mark.

### Ex approval

- ATEX II 1G EEx ia IIC T3/T4/T6
- FM Class I Div. 2, in conjunction with the Mypro CPM431 and Liquiline M CM42 transmitter

### TÜV certificate for TOP68 plug-in head

Pressure resistance 16 bar rel. (232 psi), minimum three times the safety pressure

## Ordering information

### Product page

[www.endress.com/cts1](http://www.endress.com/cts1)

1) CAS = Chemical Abstracts Service, international identification standard for chemical substances

**Product Configurator**

On the product page there is a **Configure** button to the right of the product image.

1. Click this button.
  - ↳ The Configurator opens in a separate window.
2. Select all the options to configure the device in line with your requirements.
  - ↳ In this way, you receive a valid and complete order code for the device.
3. Export the order code as a PDF or Excel file. To do so, click the appropriate button on the right above the selection window.



For many products you also have the option of downloading CAD or 2D drawings of the selected product version. Click the **CAD** tab for this and select the desired file type using picklists.

**Scope of delivery**

The scope of delivery comprises:

- Sensor in the version ordered
- Operating Instructions

## Accessories

**Measuring cable CPK3**

- Preassembled measuring cable for connecting analog sensors with GSA plug-in head
- Selection in accordance with product structure
- Product Configurator on the product page: [www.endress.com/cpk3](http://www.endress.com/cpk3)



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**Measuring cable CPK9**

- Terminated measuring cable for connecting analog sensors with TOP68 plug-in head
- Selection in accordance with product structure
- Ordering information: Endress+Hauser sales office or [www.endress.com](http://www.endress.com).



Technical Information TI00118C

**CPS64**

- pH single electrode for all applications
- Product Configurator on the product page: [www.endress.com/cps64](http://www.endress.com/cps64)



Technical Information TI00032C

**OrbiSint CPS13**

- pH reference electrode for all applications
- With dirt-repellent PTFE diaphragm
- Product Configurator on the product page: [www.endress.com/cps13](http://www.endress.com/cps13)



Technical Information TI00367C

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

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