

Safety Instructions

Temperature sensor CTS1

Supplement to BA02056C

Safety instructions for electrical apparatus in explosion-hazardous areas



EU-Konformitätserklärung
EU-Declaration of Conformity
Déclaration UE de Conformité

Endress+Hauser 
 People for Process Automation

Company Endress+Hauser Conducta GmbH+Co. KG
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 erklärt als Hersteller in alleiniger Verantwortung, dass das Produkt
 declares as manufacturer under sole responsibility, that the product
 déclare sous sa seule responsabilité en qualité de fabricant que le produit

Product pH-ORP sensors
 CPS11-****ESA, CPS12-****ESA, CPS13-****ESA, CPS41-****ESS, CPS42-****ESS,
 CPS64-****ESA, CPS71-****ESA, CPS72-****ESA, CPS91-****ESA
 Temperature sensor
 CTS1-**ESA



Regulations den folgenden Europäischen Richtlinien entspricht:
 conforms to following European Directives:
 est conforme aux prescription des Directives Européennes suivantes :

ATEX 2014/34/EU (L96/309)
 RoHS 2011/65/EU (L174/88)

Standards angewandte harmonisierte Normen oder normative Dokumente:
 applied harmonized standards or normative documents:
 normes harmonisées ou documents normatifs appliqués :

EN 60079-0 (2012) + A11 (2013)
 EN 60079-11 (2012)
 EN 50581 (2012)

Wir erklären hiermit, daß die Produkte nur von kleineren oder formalen Änderungen in Bezug auf neue Normenstände betroffen sind. Die Produkte erfüllen nach wie vor die ATEX-Richtlinie. Diese Erklärung gilt auch, wenn die Kennzeichnung und die Zertifikate der aufgeführten Geräte vorangegangenen Normenständen entsprechen.


We declare that the products are only affected by minor or formal changes with respect to the new edition of the standards. The products still comply with the ATEX directive and this declaration is also valid if the marking and certificates of the listed devices refer to previous editions of standards.

Nous déclarons par la présente que les produits ne sont concernés que par des modifications mineures ou formelles par rapport aux nouvelles éditions des normes. Les produits sont toujours conformes à la directive ATEX et cette déclaration s'applique également si le marquage et les certificats des appareils répertoriés font référence aux éditions précédentes des normes.

Certification EG-Baumusterprüfbescheinigung Nr. EX5 01 08 30266 002
 EC-Type Examination Certificate No.
 Numéro de l'attestation d'examen CE de type

Ausgestellt von/issued by/dé livré par TÜV Product Service GmbH (0123)
 Qualitätssicherung/Quality assurance/Système d'assurance qualité DEKRA Exam GmbH (0158)

Gerlingen, 26.04.2018
 Endress+Hauser Conducta GmbH+Co. KG


 i.V. Jörg-Martin Müller
 Technology



 i.V. Robert Binder
 Technology Certifications and Approvals

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Associated documentation	This document is an integral part of Operating Instructions BA02056C.
Supplementary documentation	 Competence Brochure CP00021Z <ul style="list-style-type: none"> ▪ Explosion Protection: Guidelines and General Principles ▪ www.endress.com
Manufacturer's certificate	EU Declaration of Conformity
Identification	<p>The nameplate provides you with the following information on your device:</p> <ul style="list-style-type: none"> ▪ Manufacturer identification ▪ Order code ▪ Extended order code ▪ Serial number ▪ Safety information and warnings ▪ Ex marking on hazardous area versions <p>► Compare the information on the nameplate with the order.</p> <p>Type code</p> <p>Certificates and approvals</p> <p><i>Declaration of Conformity</i></p> <p>With this Declaration of Conformity, the manufacturer guarantees that the product complies with the provisions of ATEX Directive 2014/34/EU. Compliance is verified by adherence to the standards listed in the Declaration of Conformity.</p> <p><i>Ex approvals</i></p> <p>ATEX:</p> <p> II 1G Ex ia IIC T3/T4/T6 Ga</p> <p><i>Notified Body</i></p> <p>TÜV Produkt Service GmbH</p>
Safety Instructions	<ul style="list-style-type: none"> ▪ Sensor CTS1 has been developed and manufactured in accordance with the applicable European standards and guidelines and is suitable for use in hazardous areas for the specified equipment group. ▪ The EC type examination certificate confirms compliance with the harmonized European standards for using the sensors in hazardous areas. The corresponding EU Declaration of Conformity is part of this document. ▪ The electrical connection of sensor CTS1 must be carried out according to the wiring diagram →  6. ▪ Compliance with the specified ambient temperature range and with the permitted electrical connection values of the relevant transmitter is a prerequisite for safe use. ▪ Sensor CTS1 may only be used in suitable, intrinsically safe circuits. ▪ Make sure that the maximum permitted inductance and capacitance values are not exceeded in these circuits. ▪ Full compliance with regulations for electrical apparatus in explosive atmospheres (EN 60079-14) is mandatory when using the devices and sensors. ▪ Ensure that the device is installed correctly to maintain IP 68 protection. Verify that the O-ring seals are undamaged. Only use a genuine seal when replacing seals.

Temperature tables

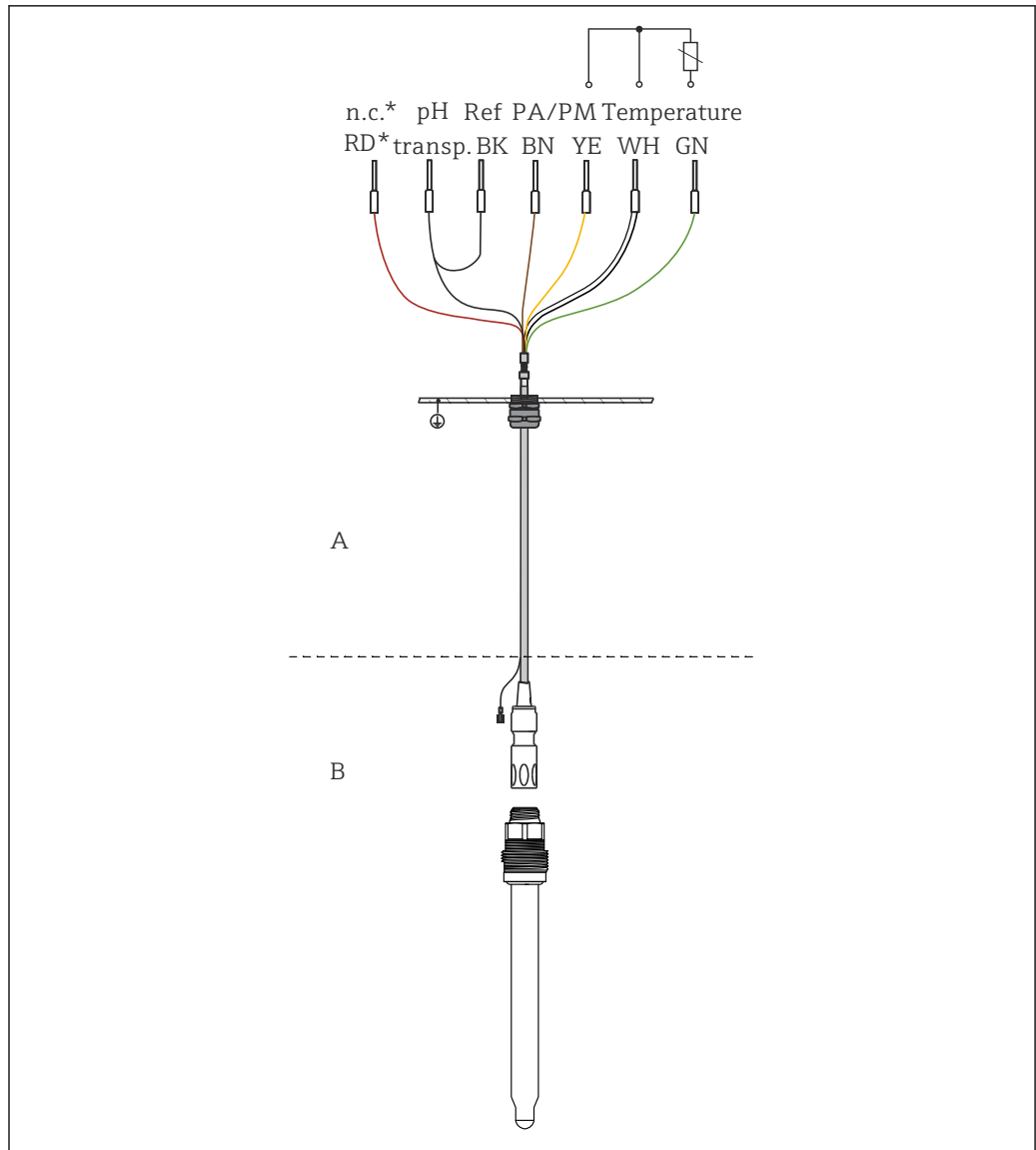
Sensor	Temperature class	Process temperature
CTS1	T3	$\leq 135\text{ }^{\circ}\text{C}$
	T4	$\leq 130\text{ }^{\circ}\text{C}$
	T6	$\leq 75\text{ }^{\circ}\text{C}$

If the specified medium temperatures are observed, temperatures that are not permitted for the respective temperature class will not occur on the equipment.

Connection**Ex specification**

The following connection data refer to safety-related limit values which must not be exceeded.

Characteristic	Connection data	Circuit
Power supply circuit		ia
Maximum input voltage U_i	17 V	
Maximum input current I_i	130 mA	
Maximum input power P_i	200 mW	
Maximum internal capacitance C_i	1 nF/m (CPK9, CPK12)	
Maximum internal inductance L_i	6 μH (CPK9, CPK12)	



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1 Electrical connection CTS1

* Does not apply to CPK9

A Hazardous area Zone 1

B Hazardous area Zone 0



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