

Safety Instructions

Memosens disinfection sensors

NI Class I Div 2 Groups A, B, C, D T6

Ex ic IIC T6 Gc

Class I Zone 2 AEx ic IIC T6 Gc

Safety instructions for electrical apparatus in explosion-hazardous areas




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Associated documentation	<p>This document is an integral part of the Memosens CCS50E Operating Instructions BA02313C.</p> <p>This document is an integral part of the Memosens CCS51E Operating Instructions BA02314C.</p> <p>This document is an integral part of the Memosens CCS53E Operating Instructions BA02351C.</p> <p>This document is an integral part of the Memosens CCS55E Operating Instructions BA02315C.</p> <p>This document is an integral part of the Memosens CCS58E Operating Instructions BA02316C.</p>
Supplementary documentation	 Competence Brochure CP00021Z <ul style="list-style-type: none"> ■ Explosion Protection: Guidelines and General Principles <ul style="list-style-type: none"> ■ www.endress.com
Certificates	<p>The certificates and declarations of conformity are available in the Downloads area of the Endress+Hauser website:</p> <p>www.endress.com/download</p> <p>CSA C/US certificate, certificate number: CSA20CA80021490X</p>
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>
Ex-approval	<p>CSA Ex</p> <p>NI Class I Div 2 Groups A, B, C, D T6</p> <p>Ex ic IIC T6 Gc</p> <p>Class I Zone 2 AEx ic IIC T6 Gc</p> <p>Details of the fulfilled standards are provided on the certificate.</p>
Safety instructions	<p>The amperometric sensors Memosens types CCS50E, CCS51E, CCS53E, CCS55E and CCS58E are suitable for use in hazardous areas</p> <ul style="list-style-type: none"> ■ A maximum ambient temperature of 90 °C (194 °F) must not be exceeded at the sensor head. ■ The plastic housing may only be cleaned with a damp cloth. ■ The sensor may not be operated in electrostatically critical processing conditions, in which an electrostatic loading of the sensor and the connecting system is to be counted. Significant steam and dust clouds acting directly on the Memosens sensor head must be strictly avoided. ■ The maximum permitted cable length between the sensor and transmitter is 100 m (330 ft). ■ When using devices and sensors, observe the regulations for electrical systems in hazardous areas (EN/IEC 60079-14). ■ The procedures for electrical connection described in the Operating Instructions must be followed. Use only as specified in the related manual. Improper use may impair protection ■ Install the device according to the National Electrical Code (NFPA70) or the Canadian Electrical Code, Part 1 (C22.1), where applicable. ■ It is the responsibility of the system assembler to ensure the safety of any system that incorporates this equipment

Type code

Memosens	CCS50E-aabbccdd+g CCS51E-aabbccdd+g CCS53E-aabbccdd+g CCS55E-aabbccdd+g CCS58E-aabbccdd+g	
	aa	Approval CD CSA C/ US NI Cl. 1, Div. 2 GP A-D T6
	bb	Application all options are certified
	cc	Measuring range all options are certified
	dd	Adapter mounted all options are certified
	g	Optional = one or more characters determining optional features (no ex-relevance), e.g. test or other certificates/declarations

Temperature table

Sensor	Process temperature T_p	Ambient temperature T_a
CCS50E	$0\text{ }^\circ\text{C (32 }^\circ\text{F)} \leq T_p \leq 55\text{ }^\circ\text{C (131 }^\circ\text{F)}(T6)$	$-20\text{ }^\circ\text{C (-4 }^\circ\text{F)} \leq T_a \leq 60\text{ }^\circ\text{C (140 }^\circ\text{F)}(T6)$
CCS51E	$0\text{ }^\circ\text{C (32 }^\circ\text{F)} \leq T_p \leq 55\text{ }^\circ\text{C (131 }^\circ\text{F)}(T6)$	$-20\text{ }^\circ\text{C (-4 }^\circ\text{F)} \leq T_a \leq 60\text{ }^\circ\text{C (140 }^\circ\text{F)}(T6)$
CCS53E	$0\text{ }^\circ\text{C (32 }^\circ\text{F)} \leq T_p \leq 55\text{ }^\circ\text{C (131 }^\circ\text{F)}(T6)$	$-20\text{ }^\circ\text{C (-4 }^\circ\text{F)} \leq T_a \leq 60\text{ }^\circ\text{C (140 }^\circ\text{F)}(T6)$
CCS55E	$0\text{ }^\circ\text{C (32 }^\circ\text{F)} \leq T_p \leq 55\text{ }^\circ\text{C (131 }^\circ\text{F)}(T6)$	$-20\text{ }^\circ\text{C (-4 }^\circ\text{F)} \leq T_a \leq 60\text{ }^\circ\text{C (140 }^\circ\text{F)}(T6)$
CCS58E	$0\text{ }^\circ\text{C (32 }^\circ\text{F)} \leq T_p \leq 45\text{ }^\circ\text{C (113 }^\circ\text{F)}(T6)$	$-20\text{ }^\circ\text{C (-4 }^\circ\text{F)} \leq T_a \leq 55\text{ }^\circ\text{C (131 }^\circ\text{F)}(T6)$

The above temperature table applies only under the following installation conditions, which are described in the following graphic . If the installation conditions cannot be met, the maximum process temperature T_p must not exceed the maximum ambient temperature T_a .

Connection

Ex specification

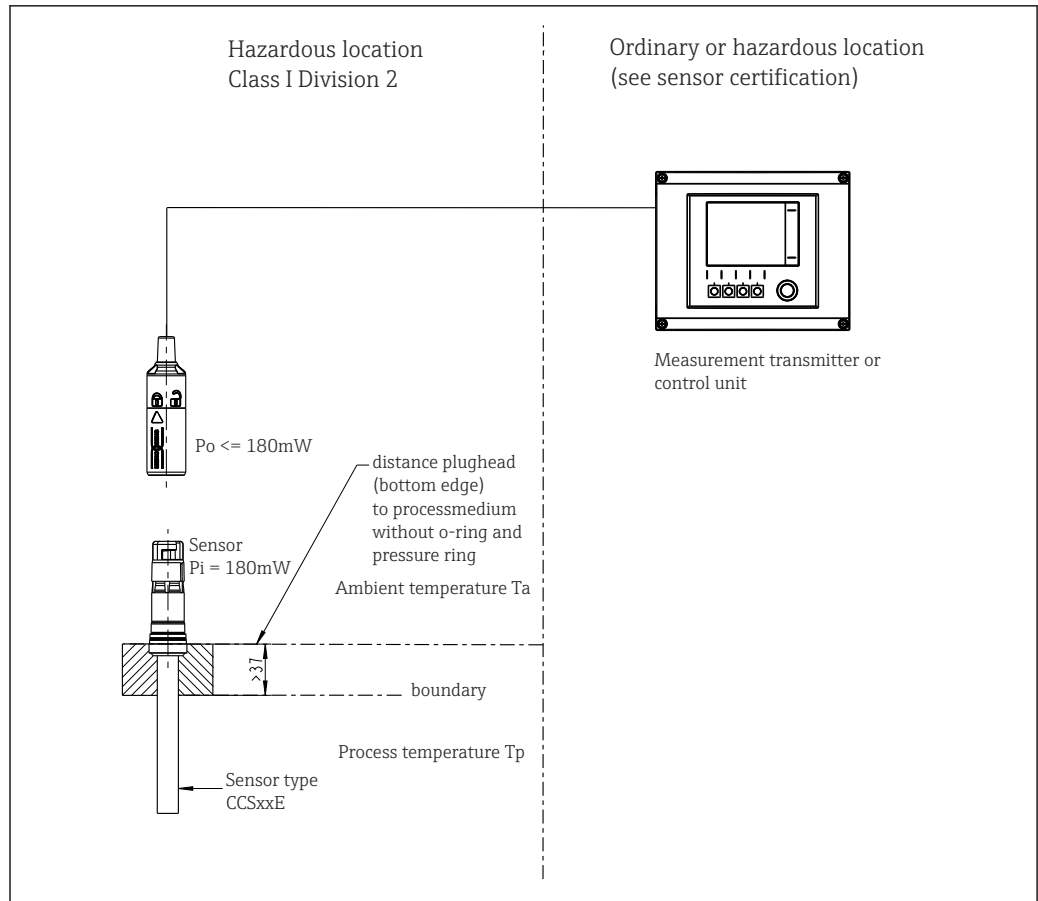
The amperometric sensors Memosens types CCS50E, CCS51E, CCS53E, CCS55E and CCS58E have an intrinsically safe input with the following parameter set:

Parameter	Value
P_i	180 mW

The amperometric sensors Memosens types CCS50E, CCS51E, CCS53E, CCS55E and CCS58E must be connected to a Memosens cable or cable transmitter with intrinsically safe output with the following parameter:

Parameter	Value
P_o	max. 180 mW

Installation conditions



A0056176

1 Installation in hazardous location



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