

# Analog conductivity sensor

## Indumax CLS54

### Toroidal conductivity sensor for hygienic and sterile applications



More information and current pricing:

[www.es.endress.com/CLS54](http://www.es.endress.com/CLS54)

#### Benefits:

- Unique hygienic design avoids contamination
- With all hygienic certificates required in hygienic applications
- Food grade virgin PEEK body without joints nor crevices
- Certified biocompatibility according to USP class VI
- Suitable for cleaning-in-place (CIP) and sterilization-in-place (SIP)
- Compliant with EG 2023/2006 and 1935/2004

#### Specs at a glance

- **Measurement range** 100  $\mu\text{S}/\text{cm}$  - 2000  $\text{mS}/\text{cm}$  Cell constant k: 6,3 1/cm
- **Process temperature** Process temperature:  $-10^{\circ}\text{C}$  -  $+125^{\circ}\text{C}$  ( $14^{\circ}\text{F}$  -  $257^{\circ}\text{F}$ ) Sterilisation:  $150^{\circ}\text{C}/5$  bar (max. 60 min.) ( $302^{\circ}\text{F}$  / 72.5 psi)
- **Process pressure** 12 bar(174 psi)/ $20^{\circ}\text{C}$ ( $68^{\circ}\text{F}$ ) 8 bar(116 psi)/ $125^{\circ}\text{C}$ ( $257^{\circ}\text{F}$ )

**Field of application:** The Indumax CLS54 inductive conductivity sensor protects all of your products and processes that must meet the strictest hygienic and sterile demands. Its outstanding performance combined with a unique hygienic design ensures highest safety and quality of your products.

#### Features and specifications

Conductivity

Measuring principle

Inductive

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## Conductivity

### Application

Food, beverage and pharmaceutical industries and in biotechnology.

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### Characteristic

Specifically intended for use in hygienic applications and especially suitable for following applications:

Phase separation, control of CIP, concentration control, product monitoring, leakage monitoring.

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### Measurement range

100  $\mu$ S/cm - 2000 mS/cm Cell constant k: 6,3 1/cm

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### Measuring principle

Inductive conductivity measurement

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### Design

Hygienic design with food-grade virgin PEEK body in jointless and creviceless design including all hygienic certifications.

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### Material

In contact with medium: Virgin PEEK

Surface roughness: Ra<0.9 $\mu$ m

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### Process temperature

Process temperature: -10°C - +125°C  
(14°F - 257°F)

Sterilisation: 150°C/5 bar (max. 60 min.)  
(302°F / 72.5 psi)

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### Process pressure

12 bar(174 psi)/20°C(68°F)

8 bar(116 psi)/125°C(257°F)

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### Temperature sensor

Pt1000 (class A)with a temperature response time T90 < 27s.

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## Conductivity

**Ex certification**

ATEX II G EEx ia IIc T3/T4/T6  
FM/CSA IS NI CL.I,II,III,Div.1&2 group A-G in connection with the transmitter CM42.

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**Connection**

Dairy pipe, Aseptic-fitting, Clamp ISO 2852, SMS-2", Varivent N DN 40-125, Neumo Biocontrol D50.

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**Ingres protection**

IP68/NEMA6P

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**Additional certifications**

FDA, EHEDG, 3-A, Biological reactivity (USP class VI part 87 and 88)

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