

# FLS C100-301

Stainless steel conductivity sensor



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Conductivity FLS sensors with stainless steel electrodes (C100 series) are designed for agriculture and light industrial applications, where the conditions of the samples allow the use of steel (water treatment, food industry and other sectors). This type of sensor is characterised by a particularly convenient cost/performance ratio. The combination of the temperature sensor with the ATC (Automatic Temperature Compensation) function of the monitor/transmitter allows an accurate measurement to be obtained. The wide choice of cell constants also guarantees the availability of the most suitable product for countless specific applications. The C301 series is designed for ultrapure water monitoring (certified cell constant 0.01) and for wastewater (cell constant 10). The C301 sensors are made entirely of stainless steel, so they are suitable for a wide range of applications.

## STAINLESS STEEL CONDUCTIVITY SENSOR

### APPLICATIONS

- Agriculture and fertilizers
- Water treatment
- Food industry
- Aquaculture
- Production and use of ultrapure water

### MAIN CHARACTERISTICS

- Stainless steel measuring surfaces
- Particularly convenient cost/performance ratio
- Temperature sensor included
- Wide choice of cell constants
- Extremely durable PP sensor body (C100)
- Sensor made entirely of stainless steel (C301)
- C301.001TCCK with certified cell constant

### TECHNICAL DATA

#### General information

#### Operating range

- C301.001 TC: from 0,055 to 200  $\mu\text{S}/\text{cm}$  (from 18,2  $\text{M}\Omega\cdot\text{cm}$  to 5  $\text{k}\Omega\cdot\text{cm}$ )
- C100.01 TC: from 0,1 to 2000  $\mu\text{S}/\text{cm}$  (from 10  $\text{M}\Omega\cdot\text{cm}$  to 500  $\Omega\cdot\text{cm}$ )
- C100.02 TC: from 0,2 to 4000  $\mu\text{S}/\text{cm}$
- C100.1 TC: from 1 to 20000  $\mu\text{S}/\text{cm}$
- C301.10 TC: from 10 to 200000  $\mu\text{S}/\text{cm}$

**Temperature compensation device (for TC models):** Pt100 (C100TC), Pt1000 (C301 TC)

#### Cable length:

- C100.01 TC, C100.02 TC, C100.1 TC: no cable available
- C301 TC: 3m

#### Connection to the process:

- C100.01 TC, C100.02 TC, C100.1 TC:  $\frac{3}{4}$ " male BSP fitting
- C301 TC:  $\frac{1}{2}$ " male BSP fitting

#### Max operating temperature:

- C100.01 TC, C100.02 TC, C100.1 TC: 80 °C (176 °F)
- C301 TC: 80 °C (PP adapter), 120 °C (stainless steel adapter)

#### Max operating pressure:

- C100.01 TC, C100.02 TC, C100.1 TC: 6 bar (85 psi)
- C301 TC: 7 bar (PP adapter), 13 bar (stainless steel adapter)

#### Materials in contact with liquids:

- Body: C100.01 TC, C100.02 TC, C100.1 TC: PP;
- C301 TC: SS 316
- Measuring surface: AISI 316 stainless steel

#### Standards & Approvals

Manufactured under ISO 9001  
 Manufactured under ISO 14001  
 CE  
 EAC

## OPTIMAL OPERATING RANGES

Cell constant	0.01	0.1	0.2	1.0	10.0
conductivity range	0.055÷20 $\mu\text{S}/\text{cm}$	0.5÷200 $\mu\text{S}/\text{cm}$	1÷400 $\mu\text{S}/\text{cm}$	0,005÷10 $\text{mS}/\text{cm}$	0,5÷200 $\text{mS}/\text{cm}$
resistivity range	18.18÷0.05 $\text{M}\Omega\cdot\text{cm}$	2000÷5 $\text{k}\Omega\cdot\text{cm}$	1÷0.0025 $\text{M}\Omega\cdot\text{cm}$	200÷0,1 $\text{k}\Omega\cdot\text{cm}$	2÷0,005 $\text{k}\Omega\cdot\text{cm}$

# PRODUCT CODES



## C100.XX

PP Body Conductivity Sensor with SS Electrodes with Temperature Sensor (Pt100) included

Code	Description	Application/Flow Rate Range	Cell Constant	Connection	Installation	Weight (gr.)
C100.01TC	Pt100 included	0.1 $\mu\text{S}/\text{cm}$ to 2000 $\mu\text{S}/\text{cm}$ (10M $\Omega$ to 500M $\Omega$ *cm)	0,1	4 poles connector	$\frac{3}{4}$ " male BSP (parallel threaded)	350
C100.02TC	Pt100 included	0.2 $\mu\text{S}/\text{cm}$ to 4000 $\mu\text{S}/\text{cm}$	0,2	4 poles connector	$\frac{3}{4}$ " male BSP (parallel threaded)	350
C100.1TC	Pt100 included	1 $\mu\text{S}/\text{cm}$ to 20000 $\mu\text{S}/\text{cm}$	1	4 poles connector	$\frac{3}{4}$ " male BSP (parallel threaded)	350

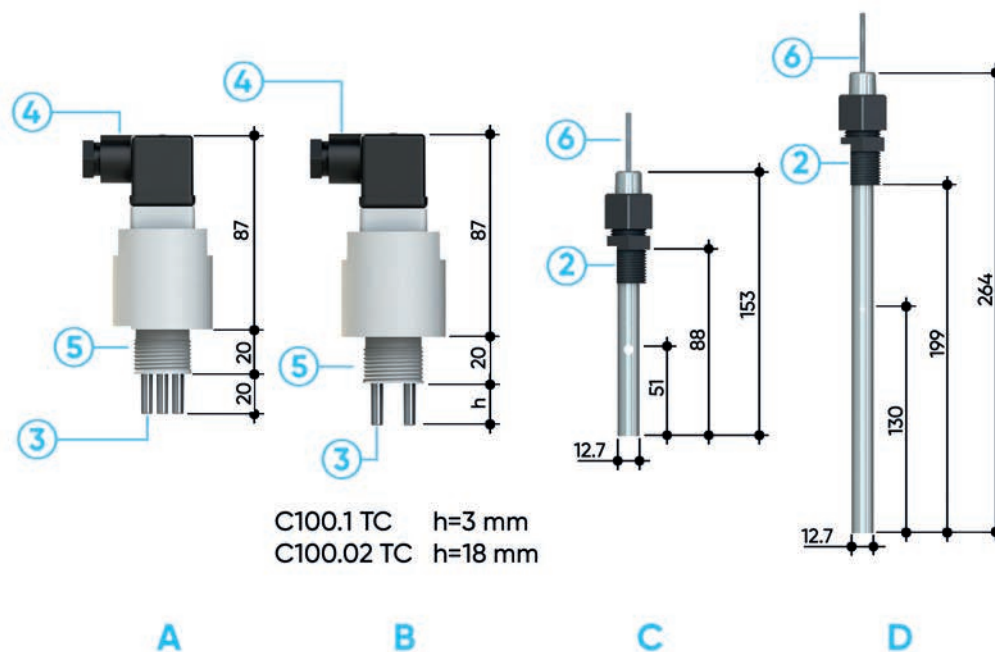


## C301

SS Body and Electrodes Conductivity Sensors with Temperature Sensor (Pt1000) included

Code	Description	Application/Flow Rate Range	Cell Constant	Connection	Installation	Weight (gr.)
C301.001TC	-	0.055 $\mu\text{S}/\text{cm}$ to 200 $\mu\text{S}/\text{cm}$ (18,2M $\Omega$ to 5K $\Omega$ *cm)	0,01	3 m	1/2" male threaded	150
C301.001.TCCK	Certified Cell constant	0.055 $\mu\text{S}/\text{cm}$ to 200 $\mu\text{S}/\text{cm}$ (18,2M $\Omega$ to 5K $\Omega$ *cm)	0,01	3 m	1/2" male threaded	150
C301.10TC	-	10 $\mu\text{S}/\text{cm}$ to 200000 $\mu\text{S}/\text{cm}$	10	3 m	1/2" male threaded	150

# TECHNICAL DRAWINGS



- A** C100.01 TC
- B** C100.1 TC, C100.02 TC
- C** C301.001 TC

- D** C301.10 TC
- 2** PP body 1/2" male threaded BSP
- 3** Stainless Steel electrodes

- 4** 4-Poles connector
- 5** PP body 3/4" male threaded BSP
- 6** Cable: 3m (10 ft.)