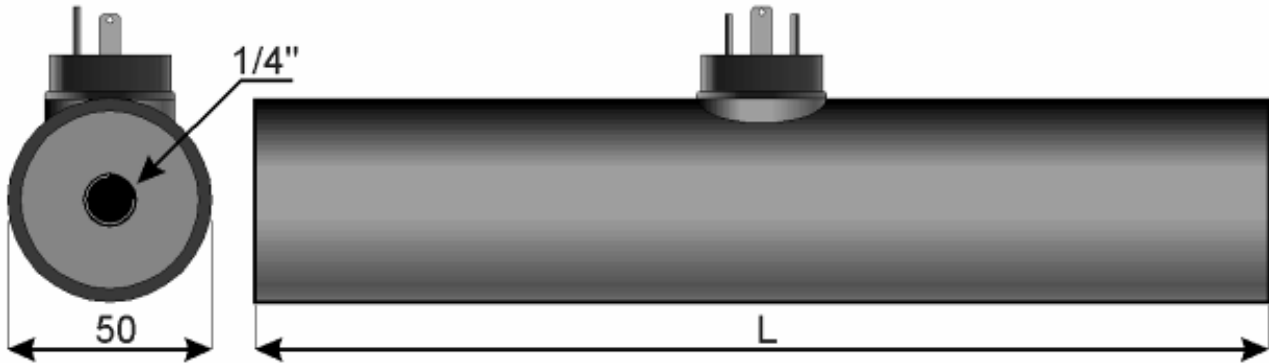




401Cxx0I0Y0x

Hollow conductivity cell for industrial applications



Conductivity cell with hollow cylindrical PVDF body, graphite electrodes. Cell constants are $K = 0.1$ cm and $K = 0.01$ cm, and measuring ranges are $0 \div 200$ mS and $0 \div 2000$ mS. All 401C cells include integral temperature sensor Pt100, Pt1000, TC100 or other upon request, for measure thermo compensation. Process connections are $\frac{1}{4}$ " F suitable for direct installation in closed pipelines. Typical applications for these cells are chemical processes, pharmaceutical industries, food and beverage industries, measures of concentration.

Advantages

- **Sturdy and compact execution, PVDF body**
- **$\frac{1}{4}$ " F threaded process connections, suitable for direct installation into closed pipelines**
- **Integral temperature sensor, Pt100, Pt1000, TC100 or other upon request**
- **Operating temperature up to 110°C**
- **Operating pressure up to 6 bar**
- **Cell constant $K = 0.1$ cm and $K = 0.01$ cm, measuring range $0 \div 200$ mS and $0 \div 2000$ mS**

Operating principle and realization

Series 401C cells are hollow conductivity cells suitable for industrial applications. They include PVDF body and annular graphite electrodes. Dimensions are 50 mm external diameter, 8 mm internal diameter, with variable length depending upon cell constant ($K 0.1$ L = 250 mm; $K 0.01$ L=350 mm). Process connection is threaded, $\frac{1}{4}$ " F. Available cell constants are $K = 0.1$ cm and $K = 0.01$ cm, and corresponding measuring ranges are $0 - 200$ mS and $0 - 2000$ mS.

The PVDF body is not in contact with the liquid to be measured. The parts at contact are the graphite electrodes and the electrodes insulator, that may be chosen in different materials on the basis of the sample to be measured.

These cells include integral temperature sensor, Pt100, Pt1000, TC100 or other upon request for automatic thermo compensation of measure. These cells are designed to be directly inserted into pressurized pipelines and can withstand temperatures up to 110°C and pressures up to 6 bar @ 20°C (atmospheric pressure at 110°C). The connector for the cable is integral to the cell.

The cable (maximum length 5 m) is supplied c/w integral water tight connector.

Correspondence between measuring ranges and cell constants for Series 401Cxx0I0Y0x cells

$K = 0.1$ cm.....	$0 \div 200 \cdot 000 \mu\text{S}$
$K = 0.01$ cm.....	$0 \div 2 \cdot 000 \cdot 000 \mu\text{S}$

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Installation, Maintenance and Calibration

The cell must be installed in vertical position, with sample flowing upwards. Should the cell be installed in horizontal position the pipe (and the cell) must be completely full of sample and w/o bubbles.

FS values, cell constant and set-point (min and max) of the instrument are factory calibrated. In any case all these values can be modified by the user, as stated in the user manual pertinent to conductivity transmitter.

The cell K correction is the only calibration to be performed at start up. Insert the cell in a solution with known conductivity and calibrate the slope to obtain the correct reading (the instrument should read the calibration solution conductivity value) or, in the instruments provided with this option, insert the known value of the cell constant (it is indicated on the cell data tag).

The conductivity cells Series 401C can be mechanically cleaned, e.g. with a proper brush, but can also be cleaned with water or with diluted acid or detergent.

Technical Specifications

Cell body:.....hollow, cylindrical, PVDF
Electrodes insulating material (material at contact):.....Mod.401Cxx0I0Y0A : PVDF
Electrodes insulating material (material at contact):.....Mod.401Cxx0I0Y0B : PVC
Electrodes insulating material (material at contact):.....Mod.401Cxx0I0Y0C : PP
Electrodes insulating material (material at contact):.....Mod.401Cxx0I0Y0E : PTFE
Electrodes insulating material (material at contact):.....Mod.401Cxx0I0Y0F : PSU
Electrodes:.....annular, graphite
Cell constant (cm):..... K = 0.1 cm, K = 0.01cm
Measuring range:.....(K = 0.1 cm) 0÷200 mS; (K = 0.01 cm) 0÷2000 mS
Operating temperature limits:.....electrodes insulator PVDF: -20÷110 °C
Operating temperature limits:.....electrodes insulator in PVC: 0÷50 °C
Operating temperature limits:.....electrodes insulator in PP: 0÷70 °C
Operating temperature limits:.....electrodes insulator in PTFE: -20÷120 °C
Operating temperature limits:.....electrodes insulator in PSU: -20÷120 °C
Limiti pressione di esercizio:.....6 bar @20°C, atmosferica a 110°C.
Operating pressure limits:.....6 bar @20°C, atmospheric @110°C
Installation:in vertical position, sample flowing upwards
Dimensions:ext.Ø 50 mm, int.Ø 8 mm, length.250 mm (K = 0.1), length.350 mm (K = 0.01)
Cable :.....the connector is integral to the cell, cable c/w connector to be separately required

Accessories

Cable for 401C cell

Cable with connector, length 1 m; length 3 m; length 5 m;

Optional accessories

Known conductivity standard solution, 250 ml bottle..... T/401-A

Specify desired conductivity value at order; typical values are: 1,278 mS, 11,67 mS e 102,09 mS, however solution with other conductivity values are available upon request.

401Cxx0I0Y0x

Order code breakdown

Conductivity cells	401	x	x	x	x	x	x	x	x	x
Type of cell Hollow cells, 401/PA		C								
Cell constant k = 0.01 cm k = 0.1 cm Special execution			1 2 9							
Temperature compensation Not included Pt100 sensor Pt1000 sensor TC100 sensor Special execution				A B C D Z						
Cell construction material Standard (PVDF) Special execution					0 9					
Process connections Threaded , 1/4" Gas F						I				
Fixed code								0		
Cable and connector Cable not included, to be separately ordered									Y	
Fixed code										0
Electrodes insulator material Standard: PVDF PVC PP PTFE PSU Special execution										A B C E F Z