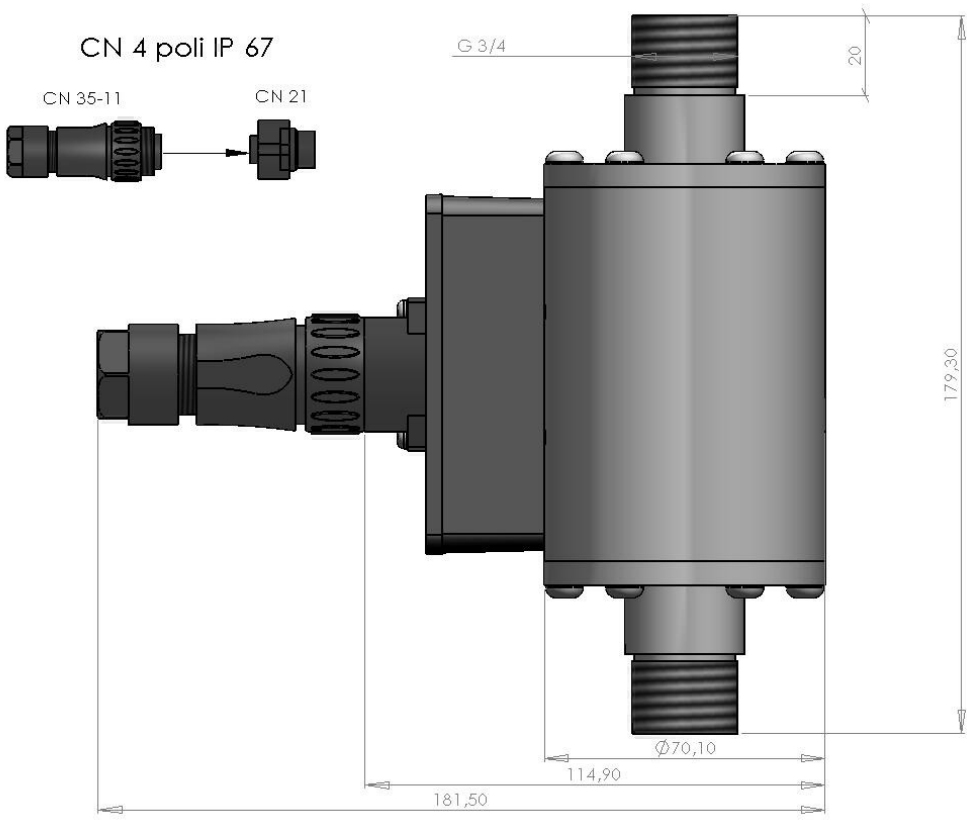
401A3x0D0Y0A

Hollow conductivity cell for industrial applications



Hollow conductivity cell, cylindric body, AISI 316 stainless steel, with graphite electrodes. Cell constant is K = 1 cm, and measuring range is 0÷100000 µS.
All 401A cells include integral temperature sensor Pt100, (other upon request), for measure thermo compensation.
Process connections are 3/4"GAS M (other upon request) suitable for direct installation in closed pipelines. These cells have a sealed cable connector; only upon request the cells may be supplied c/w a terminal board for cable connection, with cable outlet from SS cable gland. Typical applications for these cells are chemical processes, pharmaceutical industries, food and beverage industries, measures of concentration.

Advantages

- **Sturdy and compact execution, AISI 316 SS body**
- **3/4" GAS M threaded process connections (other upon request)**
- **Suitable for direct installation into closed pipelines**
- **Integral temperature sensor, Pt100, (other upon request)**
- **Operating temperature up to 250°C**
- **Operating pressure up to 200 bar**
- **Cell constant K = 1 cm**
- **Measuring range 0÷100000 µS**

Operating principle and realization

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Series 401A cells are hollow conductivity cells suitable for industrial applications. They include AISI 316 stainless steel body and annular graphite electrodes. Process connection is threaded, 3/4" GAS M, on request we can supply flanged connections of threaded unions connections. Cell constant is K= 1 cm and measuring range is 0-100000 µS. These cells include integral temperature sensor, Pt100 (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 250 °C and pressures up to 200 bar @ 20°C (atmospheric pressure at 250°C).
The cell in Mod.401A3x0D0Y0A includes a sealed connector for cable.
The cell in Mod.401A3x0D0G0A version (available only upon request) includes a junction box for cable connection, mounted on the probe body; cable outlet is from SS cable gland suitable for cables with maximum diameter 9 mm. In both cases the cable has to be separately ordered.

Correspondence between meas. ranges and cell constants for Series 401A cells

K = 1 cm.....0÷100˙000 µS

Installation, Maintenance and Calibration

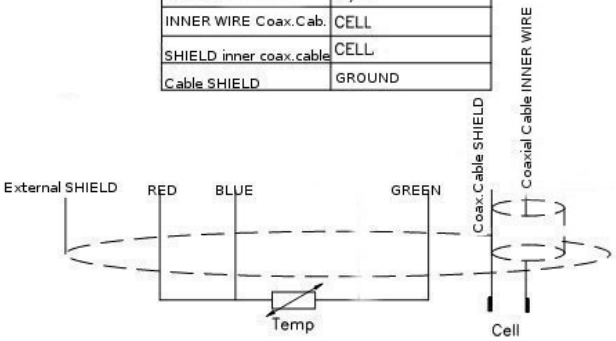
The cell must be installed in vertical position, with sample flowing upwards. Should the cell be installed in horizontal position the pipe (and the cell) must always be completely full of sample and w/o air bubbles.
FS values and cell constant of the instrument are factory calibrated. In any case all these values can be modified by the user, as stated in the user manual pertinent to conductivity transmitter. The cell constant "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 401A 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, AISI 316
Electrodes insulation material:.....PTFE
Electrodes:.....annular, graphite
Cell constant (cm):..... K = 1 cm
Measuring range:.....0÷100000 µS
Operating temperature limits:.....0÷250 °C
Operating pressure limits:.....200 bar @20°C, atmospheric @ 250°C
Process connections:.....3/4" GAS M
Installation: .....in vertical position, sample flowing upwards
Dimensions: .....see figure
Cable:.....
Mod.401A3x0D0Y0A:.....a sealed connector is installed on the cell body
Mod.401A3x0D0G0A (available only upon request):.....a junction box is installed on the cell body;
.....cable outlet is from SS cable gland suitable for cables with 9 mm maximum diameter

Wiring, Cell 401A3x0D0Y0A

COLOR	ELEMENT
RED + BLUE	°C/°F
GREEN + YELLOW	°C/°F
INNER WIRE Coax.Cab.	CELL
SHIELD inner coax.cable	CELL
Cable SHIELD	GROUND



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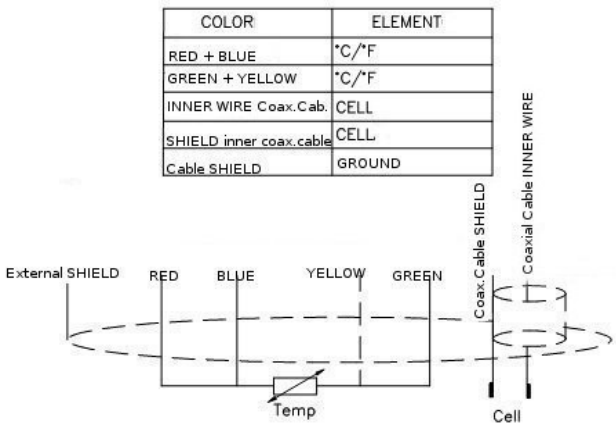

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Order Code Breakdown

Conductivity cells 401	x	x	x	x	x	x	x	x	x
Type of cell									
SS body, graphite electrodes, hollow cell for high pressure - high temperature **401HPTS**	A								
Cell constant									
k = 1 cm		3							
Special execution		9							
Temperature sensing element									
Not included			A						
Pt100 sensor			B						
Pt1000 sensor			C						
TC100 sensor			D						
Special execution			Z						
Cell construction material									
Standard (SS, AISI 316)				0					
Special execution				9					
Process connections									
Threaded, 3/4" GAS M					D				
Special execution					Z				
Fixed code						0			
Cable									
Sealed connector on the cell. Cable to be separately ordered CV1-xCN35-11							Y		
AVAILABLE ONLY UPON REQUEST: Junction box; cable outlet SS cable gland; (cable to be separately ordered CV1-x)							G		
Plug on instrument side									
None								0	
Electrodes insulation material									
Standard: PTFE									A
Special execution									Z

Accessories

Cable for Mod.401A3x0D0Y0A cell: multipolar cable c/w connector (CN35-11) on cell side
Mod.CV1-xCN35-11
where x = 3, 5, 10 (cable length in meters)

Cable for Mod. 401A3x0D0G0A cell (AVAILABLE ONLY UPON REQUEST):
multipolar cable, **Mod.CV1-x**
where x = 3, 5, 10 (cable length in meters)

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.