



401Dxx0F0Y0A

Conductivity cell, PSU/SS, Stainless Steel electrodes, for industrial applications

Conductivity cells for industrial applications, suitable for direct installation in pressurized pipelines and tanks. These cells can withstand temperatures up to 120°C with pressures up to 6 bar (up to 12 bar at ambient temperature). Mod.401D sensors are made of AISI 316 SS and PSU, with AISI316 stainless steel electrodes, and are available with 2 different cell constants to cover a wide range of measurement applications. All the cells include an integral temperature sensor for measurement thermocompensation and temperature indication.

Typical applications of these cells are in ultrapure water for semiconductors, water softening plants, osmosis plants, electric power plants, pharmaceutical industry, food and beverage industry, drinking water plants.

Advantages

- Sturdy and compact execution, AISI316 stainless steel and PSU
- AISI 316 stainless steel electrodes
- Suitable for direct insertion into closed pipelines and tanks
- Threaded process connections, 1/2" NPT
- c/w integral temperature sensor, Pt100 or other upon request
- Operating temperature up to 120°C
- Operating pressure up to 12 bar
- Constant cells 10 and 100 cm
- Measuring ranges from 0,04 µS to 1000 µS

Operating principle and realization

Mod.401D cells have AISI316/PSU body (dimensions Ø 40 x l.179,5 mm) and AISI 316 stainless steel electrodes. Available cell constants are K = 10 cm and K = 100 cm, and measuring ranges are 0÷1000 µS and 0,04÷20 µS. These cells include temperature sensor, Pt100 (other upon request) for automatic thermocompensation of measure. Process connection is threaded, 1/2" NPT, and other connections are available upon request. The cells are designed to be directly inserted into pressurized pipelines or tanks and can withstand temperatures up to 120 °C and pressures up to 12 bar @ 20°C and 6 bar @ 120°C. The cable is supplied c/w integral water tight connector.

Series 401D cells are available with the options listed in the Order Code Breakdown.

Correspondence between measuring ranges and cell constants for Series 401Dxx0F0Y0A cells

K = 10 cm.....	0÷1000 µS
K = 100 cm.....	0,04÷20 µS

Technical Specifications

Materials:cell body: AISI 316/PSU; measuring electrodes:2, AISI 316 stainless steel

Cell constants and measuring ranges:.....(K = 100 cm) 0,04÷20 µS; (K = 10 cm) 0÷1000 µS

Operating temperature limits:.....-20÷120 °C

Pressure limits:.....max 6 bar @ 120 °C, 12 bar @ 20 °C

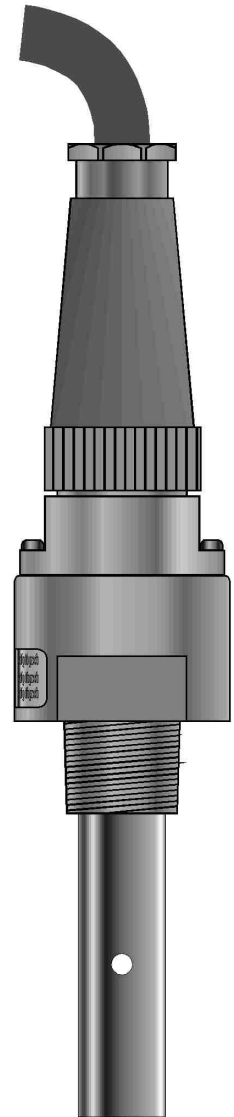
Process connections:.....threaded, 1/2" NPT other upon request)

Dimensions :Ø 40 mm, length. 179,5 mm

Insertion depth:.....56 mm

Cable:.....these cells are supplied c/w cable connector for cable;

.....the cable, that must be separately ordered, includes water tight connector on cell side

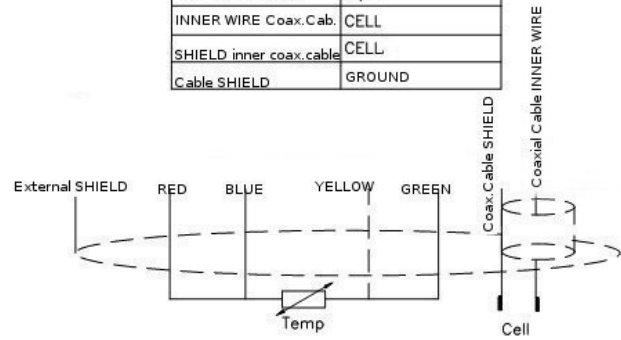
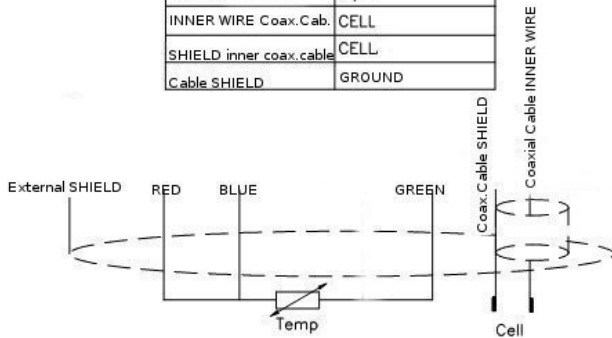


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Wiring

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

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

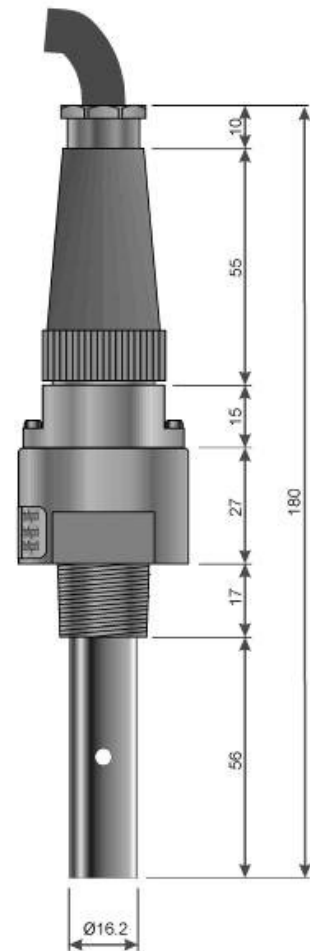
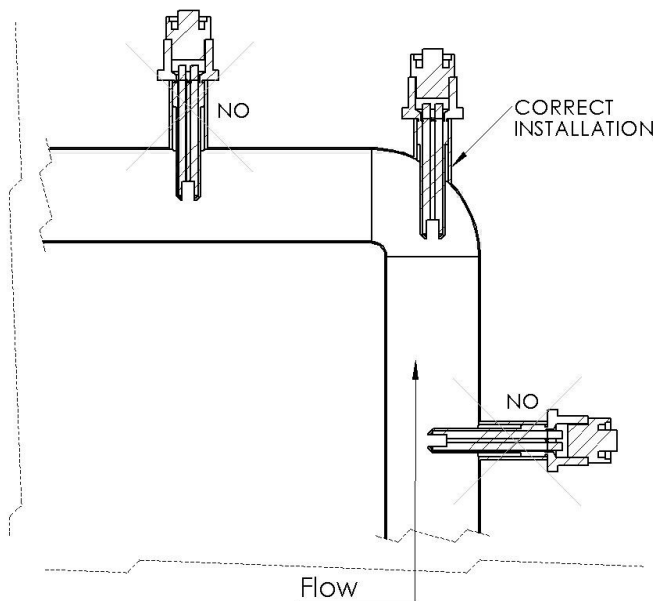


Installation, Maintenance and Calibration

The cells Series 401D cells should be installed so that the sample flow is directed against the cell bottom: in this way the liquid entering the cell can flow upwards and exit from the upper hole (this prevents air bubbles to get trapped into the cell). These cells should not be installed in locations with high turbulence. Refer to following drawing.

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). Conductivity cells Series 401D can be easily cleaned with a smooth brush, but also with water or with diluted acid or detergent.



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Order code breakdown

Conductivity cells	401	x	x	x	x	x	x	x	x	x
Type of cell For installation in pipeline, PSU conn. 401/PIPE		D								
Cell constant k = 10 cm k = 100 cm Special execution			5 6 9							
Temperature sensing element Not included Pt100 sensor Pt1000 sensor TC100 sensor Special execution				A B C D Z						
Cell material of construction PSU body, Stainless steel AISI316 electrodes Special execution					0 9					
Process connections Threaded 1/2" NPT M Special execution						F Z				
Fixed code							0			
Cable and connector Cable c/w multipolar sealed connector to be separately ordered (CV1-x-CN35-11)								Y		
Fixed Code									0	
Fixed code										A

Accessories

Cable for the connection to the electronic unit, c/w connector on cell side.

Mod.CV1-xCN35-11 where x = 3, 5, 10 (cable length in meters)

Optional accessories

Additional cable length for the connection to the electronic unit, to be used in conjunction with a junction box.

Mod.CV1-x where x = cable length in meters.

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.