



401Hxx0F0Y0A

Conductivity cell, AISI 316 SS body, AISI 316 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 130°C with pressures up to 16 bar. Mod.401H sensors are made of AISI 316 SS, with AISI 316 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 thermo compensation and temperature indication.

Typical applications of these cells are in ultra pure 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, AISI 316 stainless steel
- AISI 316 stainless steel electrodes
- Suitable for direct insertion into closed pipelines and tanks
- Threaded process connections, ½" NPT
- c/w integral temperature sensor, Pt100 or other upon request
- Operating temperature up to 130°C
- Operating pressure up to 16 bar
- Constant cells 10 and 100 cm
- Measuring ranges from 0,04 µS to 1000 µS

Operating principle and realization

Mod.401H cells have SS AISI 316 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 thermo compensation of measure. Process connection is threaded, ½" NPT, (other connections are available: sanitary type DN50; Clamp 1"; threaded for immersion probes 42 mm diameter). The cells are designed to be directly inserted into pressurized pipelines or tanks and can withstand temperatures up to 130 °C and pressures up to 16 bar @ 130°C. The cable is supplied c/w integral water tight connector.

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



Correspondence between measuring ranges and cell constants for Series 401Hxx0F0Y0A cells

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

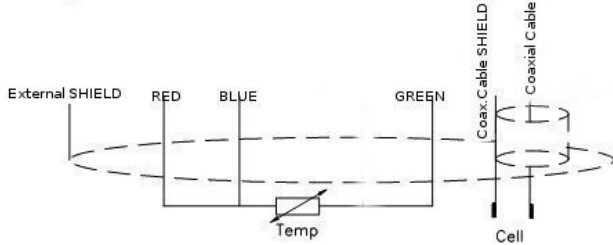
Technical Specifications

Materials:.....cell body:AISI 316 stainless steel; 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÷130 °C
 Pressure limits:.....max 16 bar @ 130 °C
 Process connections:.....threaded, ½" NPT; threaded for immersion probes 42 mm diameter; sanitary type DN50; Clamp 1"
 Dimensions :Ø 40 mm, length. 179,5 mm
 Insertion depth:.....56 mm
 Cable:.....cell supplied c/w cable connector and separate cable;
the cable, that must be separately ordered, includes water tight connector on cell side

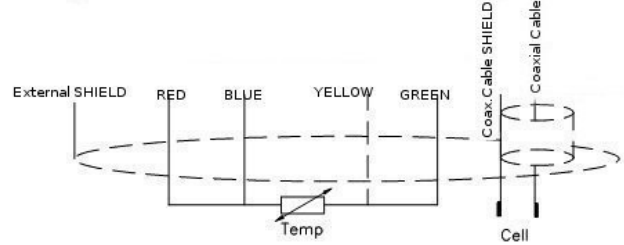
401Hxx0F0Y0A

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

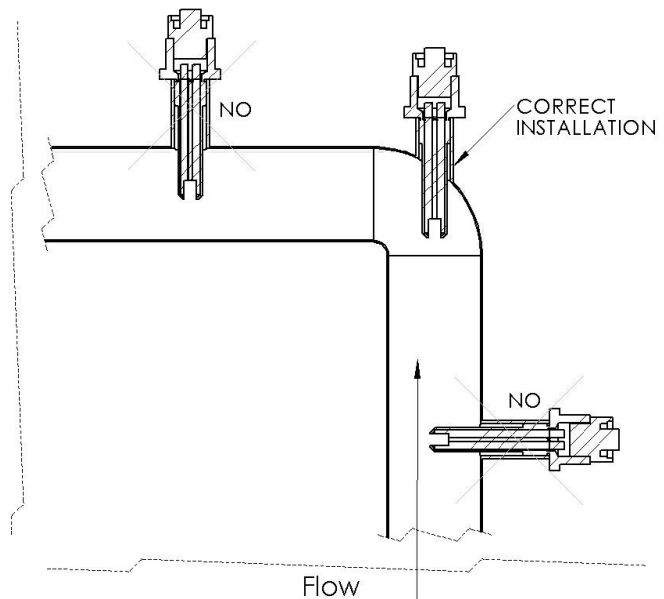
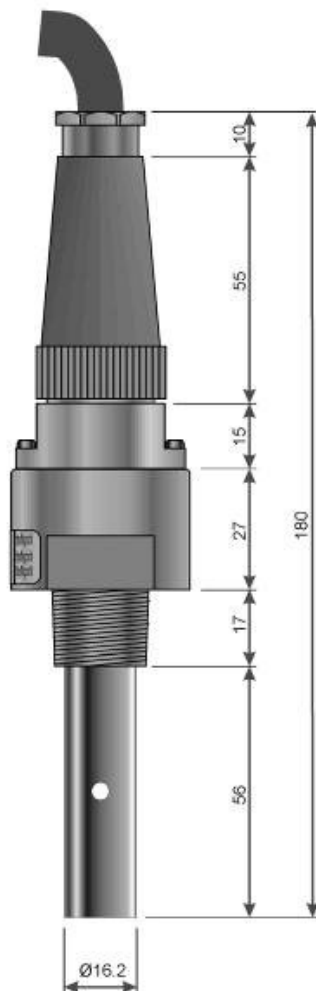


Installation, Maintenance and Calibration

The cells Series 401H 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 401H 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 direct install. into pipeline, 401/PIPE-inox		H								
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 construction material AISI 316 stainless settl body, AISI 316 SS electrodes					0					
Process connections Threaded 1/2" NPT M Sanitary type DN50 Clamp 1" Threaded for immersion probes 42 mm diameter Special execution						F L M O Z				
Fixed code								0		
Cable and connector Cable c/w multipolar sealed connector to be separately ordered (CV1-xCN35-11)									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 length cable 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.