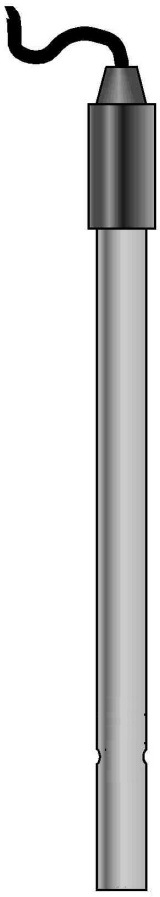
401AC5x8x0xxA

Conductivity cell, AISI 316 SS body ∅12 mm, AISI 316 SS electrodes



Conductivity cells with stainless steel body, AISI 316, and stainless steel electrodes, AISI 316, platinized internal electrode. These cells are available with K = 10 cm cell constant, corresponding to a 0÷2000 uS measuring range.
These cells can be supplied c/w integral temperature sensor Pt100, Pt1000, TC100 or other upon request, for measure thermo compensation.
Series 401AC cells are designed for all typical laboratory applications; they can also be installed into immersion probes, through flow cells and into probes for direct installation in closed pipelines or vessels, can therefore be used also in many process applications.
Typical use of these cells are drinking water plants, industrial processes, laboratories.

Advantages

- **Standard dimensions, ∅ 12 mm, L.120 mm**
- **Suitable for the insertion into immersion probes, through flow cells and probes for direct installation in closed pipelines or tanks**
- **Available c/w integral temp. sensor, Pt100, Pt1000, TC100 other on request**
- **stainless steel electrodes, AISI 316, platinized internal electrode**
- **Cell constant K=10 cm**
- **Measuring range 0 to 2000 uS**
- **Operating temperature -5 ÷ 90 °C**

Operating principle and realization

These cells have glass body, ∅ 12mm L.120mm. These dimensions allow, besides typical laboratory use, to install these cells into immersion fittings Mod.SI0A, SI0B, SI0G and SI0H and into through flow cell Mod.D0G and D0H, into retractable probe SIEST and into SI16 fitting for direct installation into closed pipes.
Measuring electrodes are made of AISI 316 stainless steel, and the inner electrode is platinized, therefore unaffected by the polarization phenomenon, so assuring good linearity of the measure within the measuring range limits.
Measuring electrodes are two, K = 10 cm cell constant.
Series 401AC cells are available with the options listed in the Order Code Breakdown.

Correspondence between measuring ranges and cell constants for Series 401AC5x8x0xxA cells

K = 10 cm.....0÷2000 µS

Installation, Maintenance and Calibration

Series 401AC cells should be installed at a minimum immersion depth of 20 mm, and the immersion depth should be kept reasonably constant. In process applications the sample flow should be directed against the cell bottom so that the liquid entering the cell can flow upwards and exit from the upper hole (in this way no air bubble will get trapped into the cell). These cells should not be installed in locations with high turbulence.
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 401AC have platinized inner electrode therefore they should be cleaned with water or with diluted acid or detergent, but ***never*** with mechanical cleaning, that could damage platinized electrodes. Never act mechanically on the inner electrode, otherwise the cell would be damaged.

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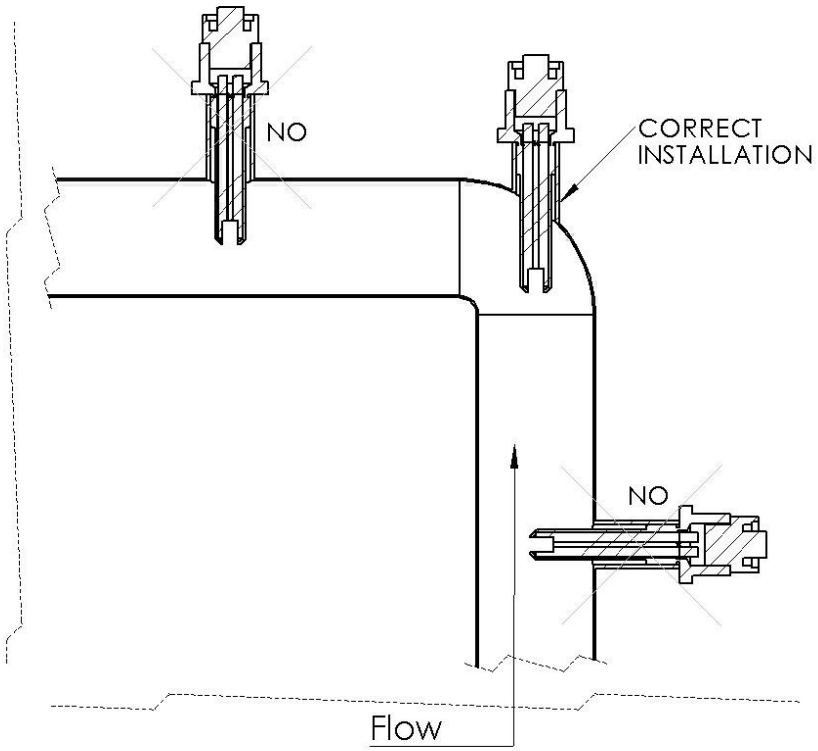
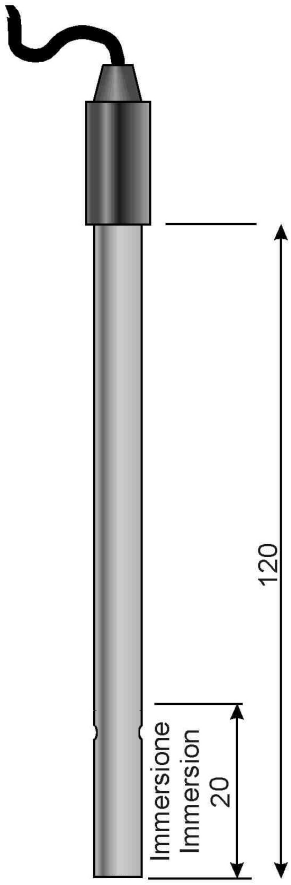


Technical Specifications

Cell body:.....Stainless steel, AISI 416
Measuring electrodes:. 2, stainless steel, AISI 316, platinized internal electrode
Cell constant (cm):.....K = 10 cm
Measuring range: .....0÷2000 µS
Operating temperature limits:.....-5÷90 °C
Dimensions : .....∅ 12mm, length. 120 mm
Minimum immersion depth:.....20 mm
Cable:.....according to order code

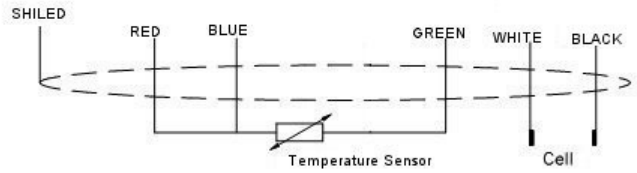
Outline Dimensions



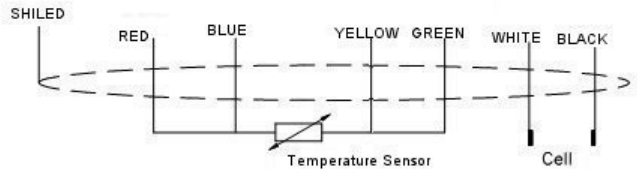
401AC5x8x0xxA

Wiring, cell with temperature sensor

COLOR	ELEMENT
RED + BLUE	Pt 100
GREEN	Pt 100
WHITE	CELL
BLACK	CELL
SHIELD	GROUND



COLOR	ELEMENT
RED + BLUE	Pt 100
YELLOW + GREEN	Pt 100
WHITE	CELL
BLACK	CELL
SHIELD	GROUND



Accessories

401AC... cells can be supplied c/w many type of cables and connectors on instrument side. Specify at order (or when asking for a quotation) the desired cable and connector.
Allowed choices are listed below; for different options pls contact Your supplier.

Cables for 401AC5A8x0xxA cells WITHOUT integral temperature sensor
Integral cable, 1 m, 5 m, 10 m, 15 m length.
Stainless steel head c/w flange and integral cable, 3m, 5m, 10m, 15 m length.

Cell with S7 screwed connector, or with S7 screwed connector and PG13,5 threaded process connection: for both the cables to be used are:
Mod.CV/S7-1 Shielded cable, ∅ 5mm, length 1 m, c/w S7 connector (CN/10)
Mod.CV/S7-3 Shielded cable, ∅ 5mm, length 3 m, c/w S7 connector (CN/10)
Mod.CV/S7-5 Shielded cable, ∅ 5mm, length 5 m, c/w S7 connector (CN/10)
Mod.CV/S7-10 Shielded cable, ∅ 5mm, length 10 m, c/w S7 connector (CN/10)
Mod.CV/S7-15 Shielded cable, ∅ 5mm, length 15 m, c/w S7 connector (CN/10)

Cables for 401AC5(B,C,D or Z)8x0xxA cells, C/W integral temperature sensor
Integral cable, 7 wires, shielded, length 3m, 5m, 10m, 15 m.
Stainless steel head c/w flange and integral cable, 7 wires, shielded, length 3m, 5m, 10m, 15m.
Quadripolar sealed connector for temperature compensated cells CN/95

Cable connectors, instrument side, ONLY for 401AC5xA8x0xxA cells, W/O integral temp. sensor:
Mod.CN/1 coaxial, BNC
Mod.CN/7 Banana ∅ 4 mm
Mod.CN/8 Banana ∅ 2 mm

Cable connectors, instrument side, for 401AC5(B,C,D or Z)8x0xxA cells, C/W integral temperature sensor:
Mod.CN/12 8 poles connector - cell 401AC5(B,C,D or Z)8x0x5A
Mod.CN/40 Connector for HD2306 c/w linearizing circuit - cell 401AC5(B,C,D or Z)8x0x4A

Optional accessories
All the 401AC cells can be supplied c/w threaded process connection, ½", upon request.
This process connection is fixed on the cell body in the position required by the customer.
If required, specify at order (or when asking for a quotation) the ½" threaded process connection and its position on the cell body.

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.

401AC5x8x0xxA

Order code breakdown

Conductivity cells 401	x	x	x	x	x	x	x	x	x
Type of cell									
AISI 316 SS body, ∅ 12 mm, AISI 316 SS electrodes	AC								
Cell constant									
Reserved		0							
k = 10 cm		5							
Special execution		9							
Temperature sensing element									
Not included			A						
Pt100 sensor			B						
Pt1000 sensor			C						
TC100 sensor			D						
Special execution			Z						
Cell construction material									
AISI 316 SS body, AISI 316 SS electrodes				6					
Special execution				9					
Process connections									
Standard (no connection)					A				
Threaded connection, PG 13,5					P				
Threaded ½" Gas M, plastic					Q				
Special execution					Z				
Fixed code						0			
Cable and connector									
Integral cable, 1 m							A		
Integral cable, 5 m							B		
Integral cable, 10 m							C		
Integral cable, 15 m							D		
S7 Screw connector (Note 1)							E		
S7 screw connector c/e PG 13,5 process connection (Note 1)							F		
Quadripolar sealed connecto for temperature compensated cells, CN/95							G		
SS head c/w flange, integral cable, 3 m							I		
SS head c/w flange, integral cable, 5 m							L		
SS head c/w flange, integral cable, 10 m							M		
SS head c/w flange, integral cable, 15 m							N		
SS sheath, threaded conn. ½", integral cable, 3 m							O		
SS sheath, threaded conn. ½", integral cable, 5 m							P		
SS sheath, threaded conn. ½", integral cable, 10 m							Q		
SS sheath, threaded conn. ½", integral cable, 15 m							R		
SS sheath, threaded conn. ½", S7 connector for cable (Note 1)							S		
SS sheath, threaded conn.½" NPT integral cable 3 m							T		
SS sheath, threaded conn.½" NPT integral cable 5 m							U		
SS sheath, threaded conn.½" NPT integral cable 10 m							V		
SS sheath, threaded conn.½" NPT integral cable 15 m							W		
SS sheath, threaded conn.½" NPT S7 connector for cable (Note 1)							X		
Special execution							Z		
Connector on instrument side									
None								0	
BNC coaxial (Note 1)								1	
Banana 2 mm (Note 1)								2	
Banana 4 mm (Note 1)								3	
Conn.CN/40 for HD2306								4	
8 poles connector (CN/12)								5	
Special execution								9	
Fixed code									A

Note 1: not available for cells c/w integral temperature sensor