401Exx0F0Y0A

Conductivity cell, PSU/glass, platinized platinum electrodes, for industial applications

Conductivity cells for industrial applications, suitable for direct installation in pressurized pipelines and tanks. These cells can withstand temperatures up to 80°C and pressures up to 5 bar at room temperature. Mod.401E sensors are made of PSU and glass, with platinized platinum electrodes, and are available with 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 water softening plants, osmosis plants, electric power plants, drinking water plants.

Advantages

- **Compact execution, PSU and glass**
- **Platinized platinum 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 80°C**
- **Operating pressure up to 5 bar**
- **Constant cells 10 cm, 1 cm and 0.1 cm**
- **Measuring ranges 0 to 100000 µS**

Operating principle and realization

Mod.401E cells have PSU/glass body (dimensions ∅ 40 x l.180,5 mm) and platinized platinum electrodes. Available cell constants are K = 10 cm, K = 1 cm, K = 0.1 cm and measuring ranges are 0÷1000 µS 0÷20000 µS and 2000÷100000 µS. These cells include temperature sensor, Pt100, Pt1000 or TC100 (other upon request) for automatic thermo compensation of measure. Process connection is threaded, ½" 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 80 °C and pressures up to 5 bar at room temperature.
The cable is supplied c/w integral water tight connector.
Series 401E cells are available with the options listed in the Order Code Breakdown.

Correspondence between measuring ranges and cell constants for Series 401Exx0F0Y0A cells

K = 10 cm.....0÷1000 µS
K = 1 cm.....0÷20000 µS
K = 0.1 cm.....2000÷100000 µS

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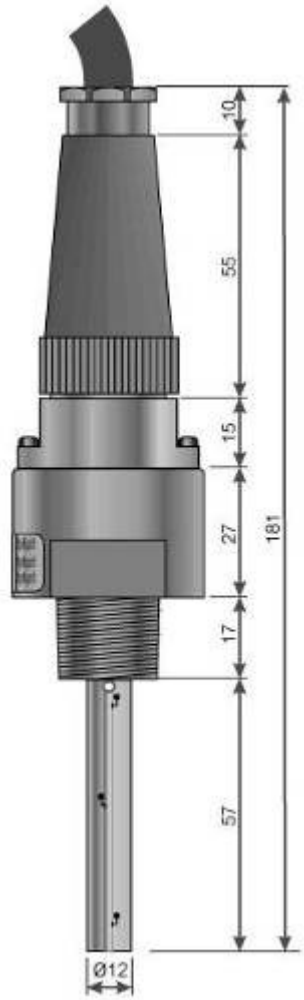
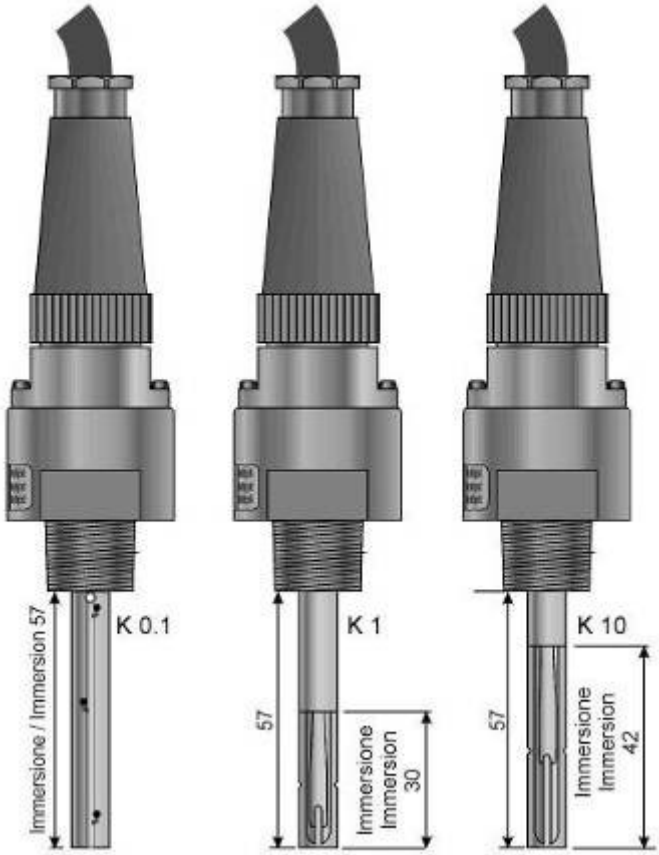
Technical Specifications

Cell body:.....PSU/glass
Measuring electrodes:.....platinized platinum
Cell constants (cm):..... K = 10 , K = 1, K = 0.1
Measuring ranges:.....(K = 10 cm) 0÷1000 µS; (K = 1 cm) 0÷20000 µS;
.....(K = 0.1 cm) 2000÷100000 µS
Operating temperature limits:.....5÷80 °C
Pressure limits:.....5 bar @ 20 °C
Process connections:.....threaded, ½" NPT other upon request)
Dimensions : .....∅ 40 mm, length. 180,5 mm
Minimum immersion depth:.....see drawing
Cable:.....these cells are supplied c/w cable connector and separate cable;
.....the cable is 7 cores, c/w water tight connector on cell side
.....the cable must be ordered separately





Installation, Maintenance and Calibration

The cells Mod.401E should be installed so that the sample flow is directed against the cell bottom: the liquid will enter the cell, 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 401E with platinum electrodes should be cleaned with water or with diluted acid or detergent, but never with mechanical cleaning, that could damage platinum electrodes.

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Order code breakdown

Conductivity cells	401	x	x	x	x	x	x	x	x	x

Type of cell

For pipeline, glass body **401/PIPE-L-K...**	E

Cell constant

k = 0.1 cm	2
k = 1 cm	3
k = 10 cm	5

Temperature sensing element

Not included	A
Pt100 sensor	B
Pt1000 sensor	C
TC100 sensor	D
Special execution	Z

Cell construction material

PSU/glass body, platinized platinum electrodes	0
Special execution	9

Process connections

Threaded ½" NPT M	F
Special execution	Z

Fixed code	0

Cable and connector

Cable c/w multipolar sealed connector to be separately ordered (CV/7025...-CN35-11)	Y

Fixed code	0

Fixed code	A

Accessories

Cable for the connection to the electronic unit, 7 wires, c/w connector on cell side.
Mod.CV/7025-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; 7 wires shielded cable.
Mod.CV/7025-SCH-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.

Wiring