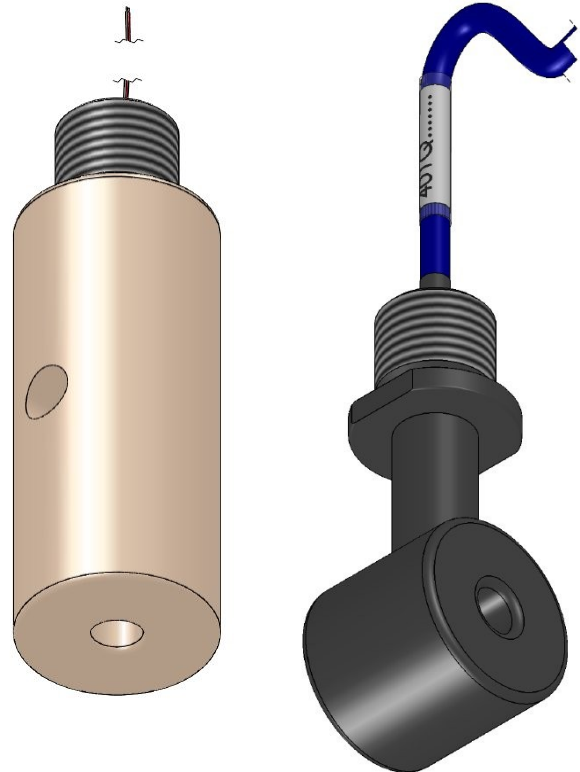


Conductivity cell, toroidal (inductive) type, for industrial applications

Conductivity cells for industrial applications. Toroidal (inductive) type, PVC or PEEK body (AISI 316 SS or other materials only upon request), suitable for immersion installation and installation in closed pipelines and tanks, according to supplied accessories. For small diameter pipelines a through flow cell is available so that the 401Q cell can be installed on a sampling line.

Designed for high range conductivity measurement. These cells can withstand temperatures up to 50°C (PVC) and 150°C (PEEK) and pressures up to 5 bar. They include an integral temperature sensor for measurement thermocompensation and temperature indication.

Typical applications of these cells are high concentration, high conductivity solution even in aggressive fluids.



Advantages

- Sturdy and compact execution, PVC or PEEK body & SS sheath for Pt100
- Suitable for direct insertion into closed pipelines and tanks; available in through-flow cell execution for small diameter pipelines
- c/w integral temperature sensor, Pt100 or Pt1000
- Operating temperature up to 50°C (PVC) and 150°C (PEEK)
- Operating pressure up to 5 bar
- Measuring ranges up to 2000 mS

Operating principle and realization

Mod.401Q cells have PVC or PEEK body; dimensions: toroid \varnothing 32 mm, depth 32 mm; sensor length 65 mm (length 85 mm for the PEEK cylindrical version). Toroidal cells wetted parts are PVC (PEEK) and stainless steel. Measuring range is 0÷2000 mS. These cells include temperature sensor, Pt100 or Pt1000 according to order code, for automatic thermocompensation of measure. The cells are designed to be directly inserted into pressurized pipelines or tanks and can withstand temperatures up to 50 °C (PVC) or 150°C (PEEK) and pressures up to 5 bar @ 20°C.

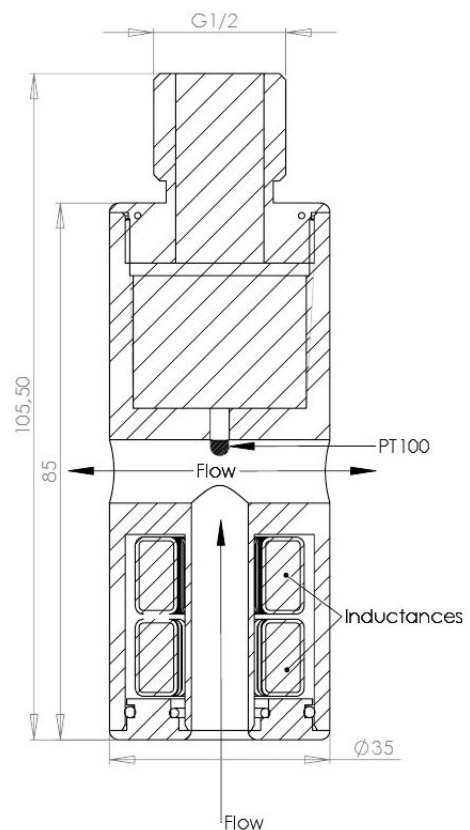
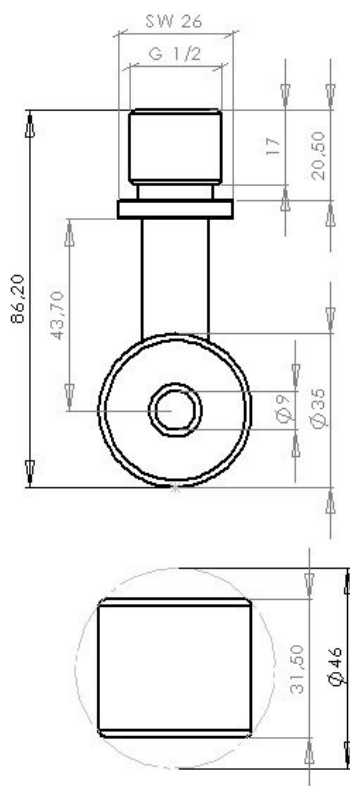
A through flow cell is available for the installation of the 401Q conductivity cell when the closed pipeline diameter is too small to house the 401Q cell.

The cable (5 or 10 m according to order code) is integral to the cell.

401Q

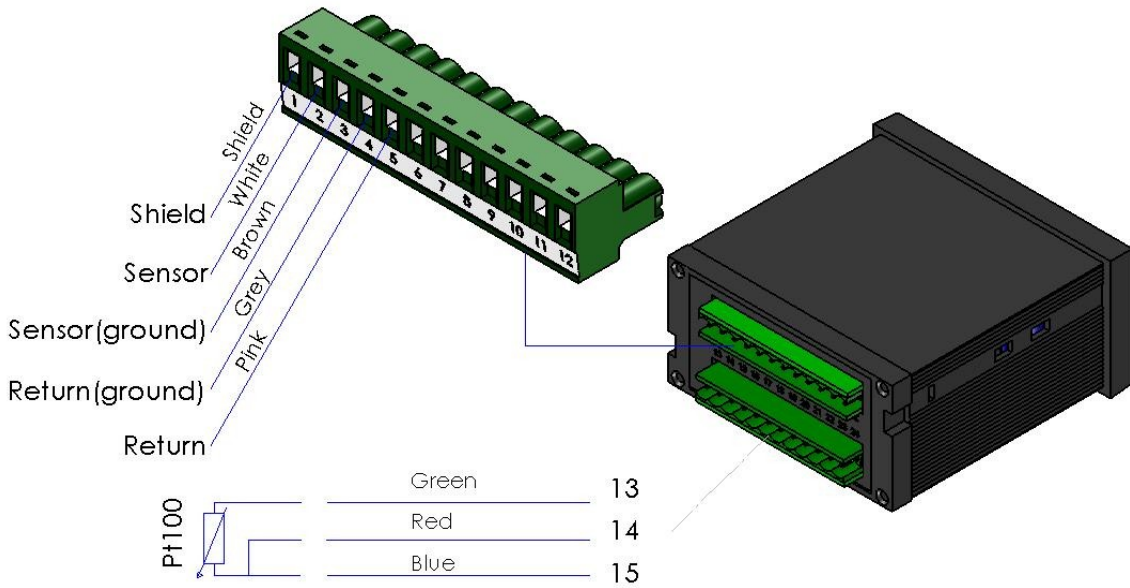
Technical Specifications

Materials:cell body: PVC; sheath for temperature sensor: AISI 316 stainless steel
Measuring ranges:.....0÷2000 mS
Operating temperature limits:.....-5÷50 °C
Storage temperature limits:.....-5÷50 °C
Temperature sensor response time:.....2 sec for 90% of the value
Pressure limits:.....max 5 bar @ 20°C
Insertion depth:.....the toroidal sensor must be fully immersed (see figure)
Minimum distance from the toroidal sensor to the velle/pipe walls:.....30 mm (see figure)
Maximum speed allowed for the fluid under measure:.....3 m/sec
Fixing thread:.....1/2" GAS M
Cable:.....cells supplied c/w integral cable 5 or 10 15 m
Dimensions :Ø 32 mm, toroid depth 32 mm, height 65 mm under the thread
Weight.....approx. 200 g w/o cable

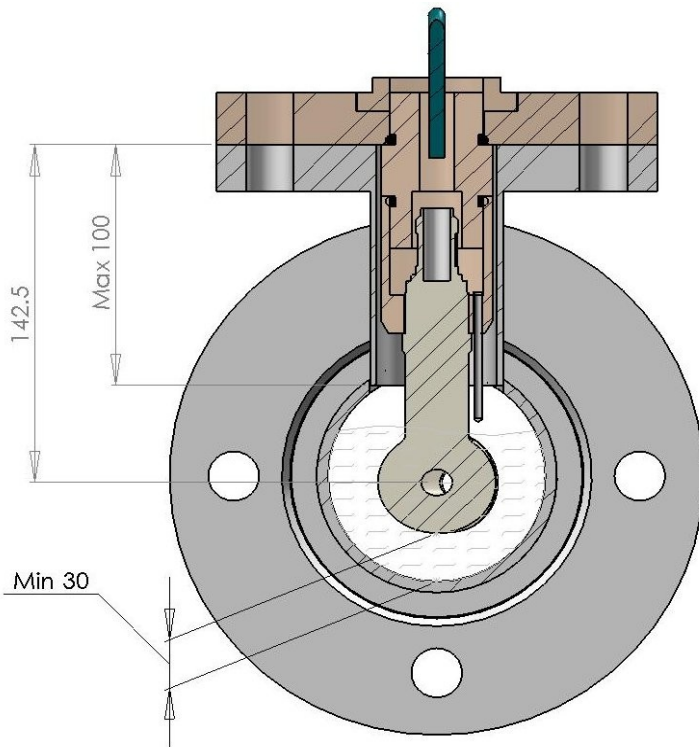


401Q

Wiring



Installation, Maintenance and Calibration



It is mandatory to install the 401Q cells so that the toroid sensor is fully immersed into the sample to be measured (see figure). It is also a must that the sensor is surrounded by at least 30 mm of fluid under measure (the toroid must be at least 30 mm away from pipe or tank walls). The same is during calibration.

The cells Series 401Q should not be installed in locations with high turbulence (max allowed sample flow rate is 3 m/sec) 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 401Q can be easily cleaned with a smooth brush, but also with water or with diluted acid or detergent. It is important for correct cell operation that the toroid sensor hole is not blocked with dirt.

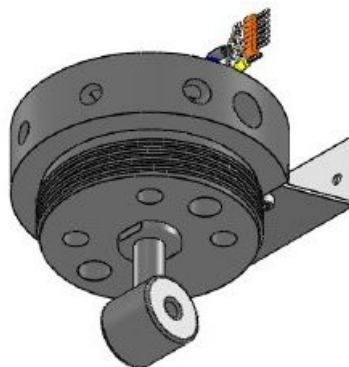
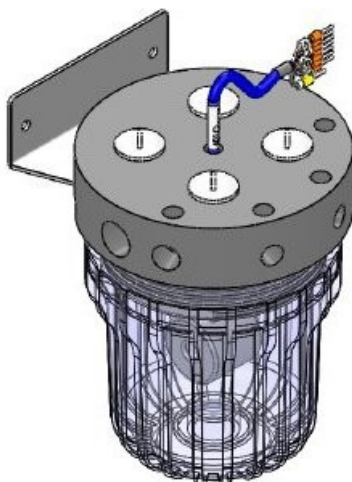
Optional accessories

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.

401Q

Order code breakdown

Conductivity cell	401	Q	x	x	x	x	x	x	x	x
Type of Cell Inductive (toroidal) cell		Q								
Cell constant Fixed code			0							
Compensazione di temperatura Not included Pt100 sensor Pt1000 sensor Special Execution				A B C Z						
Materiale cella PVC AISI 316 SS PEEK Special Execution					1 6 7 9					
Process connections Threaded, 1/2" GAS M Special Execution						C Z				
Fixed code								0		
Cable and connector Reserved Integral cable, 5 m Integral cable, 10 m Special execution									Y C D Z	
Plug on instrument side No plug Other										0 9
Fixed code										A



**Toroidal
conductivity sensor
401Q installed into
through flow cell**