

# Sensors for Conductivity Measurement

Chem

Energy

Pharm

Food

Water



## AK1655 Toroidal Conductivity Sensor

Universal and precise sensor with high chemical resistance over a very large measuring range, for heavily polluted media

Corrosion-resistant toroidal sensor for measuring pure water up to maximum conductivities. Smooth, easy-to-clean design. High accuracy due to electrodeless measurement. Low risk of contamination because of large sensor opening. Also for hazardous locations.

### Applications

Concentration measurement of acid and alkaline solutions, heavily polluted media, coating-forming and oil-containing media, salt spring, heavily polluted wastewaters, cooling water blowdown, concentrate monitoring, regeneration of ion exchangers

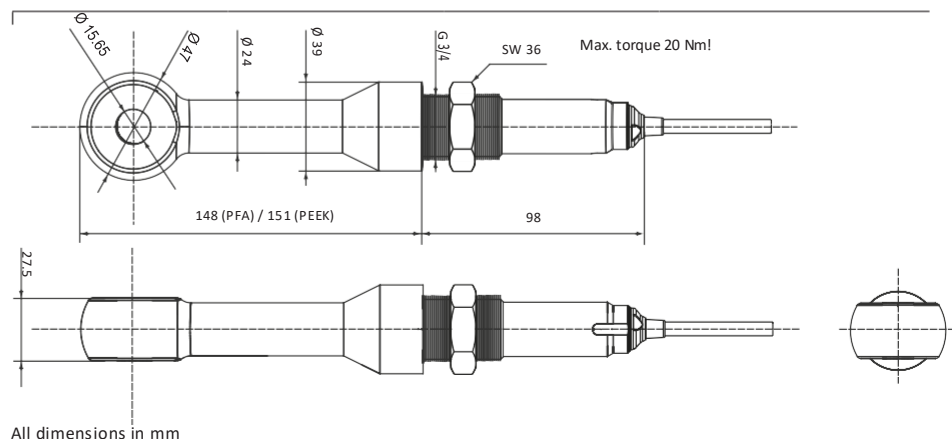
### Facts

- Robust design
- Extremely large measuring range due to inductive measuring principle
- Insensitive to contamination
- No process-wetted electrodes
- High chemical resistance (PEEK)
- Measurement in hazardous locations
- Steam-sterilizable
- CIP-capable

### Specifications

Cell factor:	Approx. 2/cm ( $\geq 30$ mm distance to wall)
Measuring range:	0.002 to 2000 mS/cm
Accuracy:	$\pm (5 \mu\text{S/cm} + 0.5 \% \text{ measured value})$ at $-20^\circ\text{C} \dots +100^\circ\text{C}$ $\pm (10 \mu\text{S/cm} + 0.5 \% \text{ measured value})$ at $>100^\circ\text{C}$
Material:	Cell: PEEK; gasket: FKM (Viton)
Temperature detector:	Pt 100 (Class A)
Temperature:	$-20 \dots +125^\circ\text{C}$
Temp. response time $t_{90}$ :	Approx. 7 min
Pressure:	0 ... 20 bar
Cable:	Fixed cable, 5 m
Protection:	IP 68 (when mounted)
Assembly:	G 3/4" (36-mm nut and FKM (Viton) gasket included in shipment)
ATEX Certificate (SE 655 X):	II 1 G Ex ia IIC T4/T6 Ga

### Dimension Drawing



For up-to-date information, please visit [www.knick.de](http://www.knick.de)

Isolation Amplifiers  
Transmitters

Indicators

Process Analytics

Portable Meters

Laboratory Meters

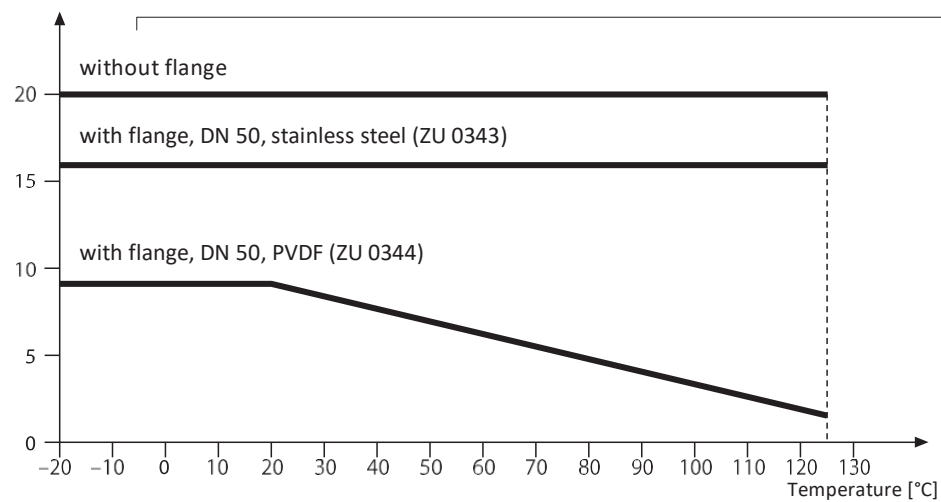
Sensors

Fittings

**Knick** 

### Pressure/Temperature Diagram

Pressure [bar]



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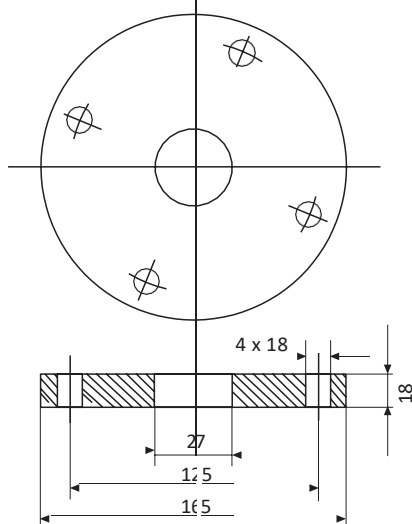
### Accessories / Specifications

316 L flange  
AKZ0343

DN 50 PN 16

Dimension drawing:

Flange, stainless steel

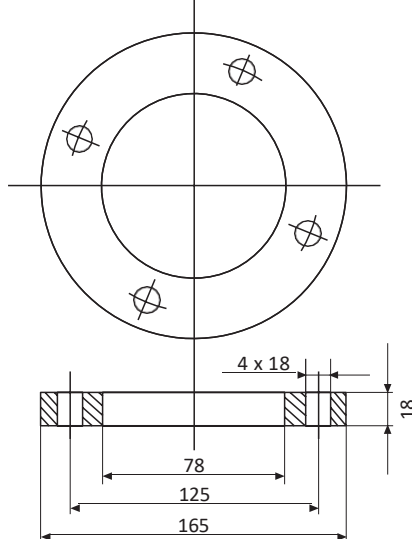


PVDF flange  
AKZ0344

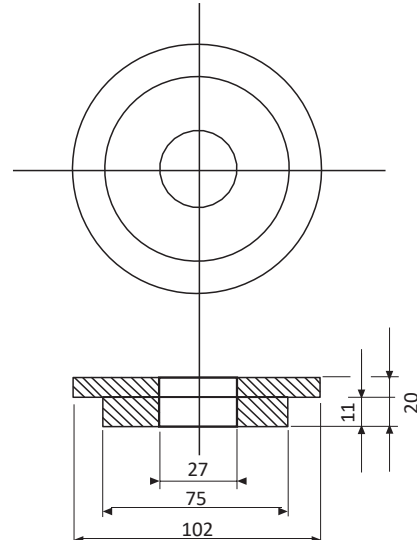
DN 50 PN 10

Dimension drawings:

Lapped flange



Flange (PVDF)



## Overview of Accessories and Assembly

Example:

