

Sensors for Conductivity Measurement

Chem



SE 656 Toroidal Conductivity Sensor

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

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

Facts

- Robust design
- Extremely large measuring range due to inductive measuring principle
- Insensitive to contamination
- No process-wetted electrodes
- Extremely high chemical resistance (PFA)
- Measurement in hazardous locations

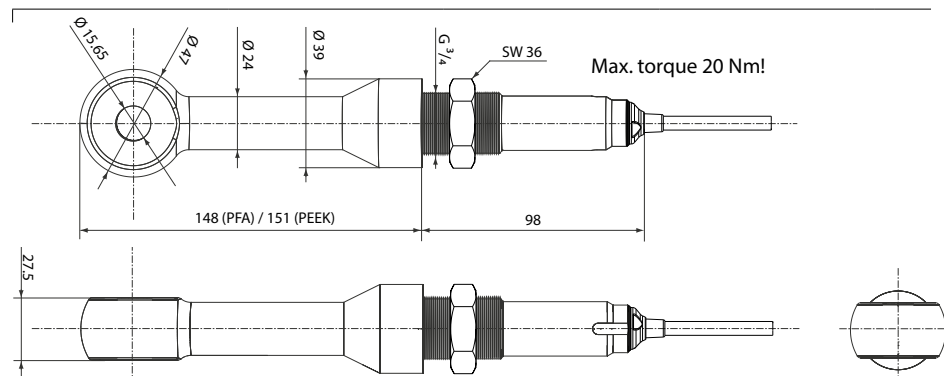
Applications

Conductivity measurement of highly concentrated acid and alkaline solutions, hydrofluoric acid, nitric acid, concentrated sulfuric acid, oleum, concentrated alkaline solutions, strongly oxidizing media

Specifications

Cell factor:	Approx. 2/cm (≥ 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 $-20 \text{ }^\circ\text{C} \dots +100 \text{ }^\circ\text{C}$ $\pm (10 \mu\text{S/cm} + 0.5 \% \text{ measured value})$ at $>100 \text{ }^\circ\text{C}$
Material:	Cell: PFA ; Gasket: FFKM (Chemraz)
Temperature detector:	Pt 100 (Class A)
Temp. response time t_{90} :	Approx. 11 min
Temperature:	$-20 \dots +125 \text{ }^\circ\text{C}$
Pressure:	0 ... 16 bar
Cable:	Fixed cable, 5 m
Protection:	IP 68 (when mounted)
Assembly:	G 3/4" (36-mm nut and FFKM (Chemraz) gasket included in shipment)
ATEX Certificate (SE 656 X):	II 1 G Ex ia IIC T4/T6 Ga

Dimension Drawing



All dimensions in mm



Product Range

SE 656 conductivity sensor	G 3/4"
SE 656X conductivity sensor	G 3/4"

Order No.

SE 656
SE 656X

Accessories

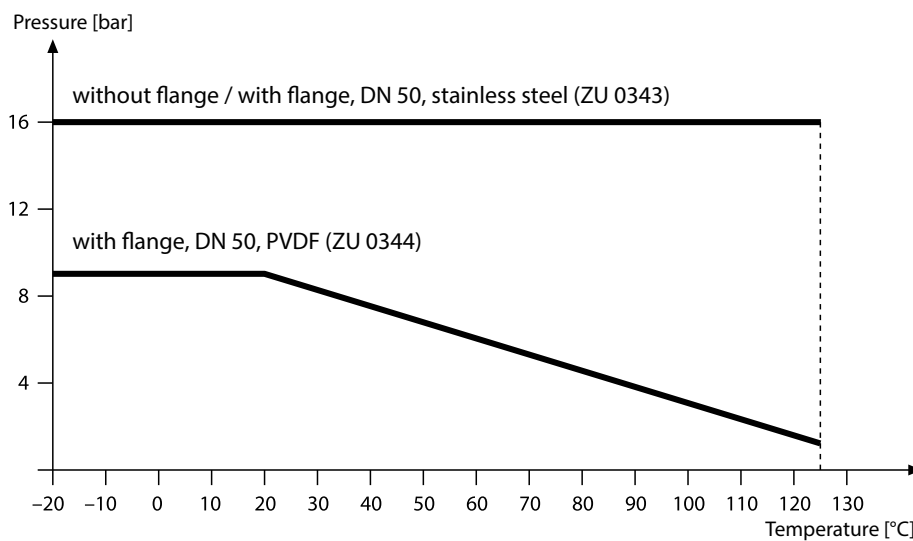
Flange DN 50 PN 16	Material: 316 L
Flange DN 50 PN 10	Material: PVDF
Sealing set A (spare parts)	Nut + FKM (Viton) O-ring (3 x)
Sealing set C	PTFE washer, DN 50 (protects ZU 0343 flange against aggressive media)
Conductivity standard*)	KCl 0.1 mol/l 12.88 mS/cm ± 1.5 % 250 ml

Order No.

ZU 0343
ZU 0344
ZU 0340N
ZU 0342N
ZU 0348

*) Observe instructions for use (field conditions)

Pressure/Temperature Diagram



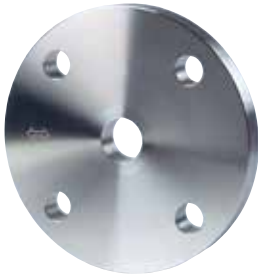
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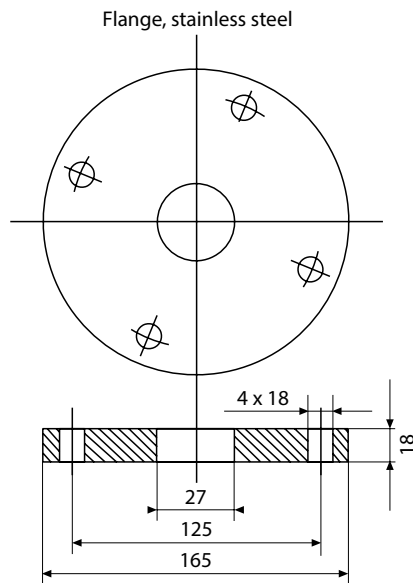
Accessories / Specifications

316 L flange
ZU 0343



DN 50 PN 16

Dimension drawing:

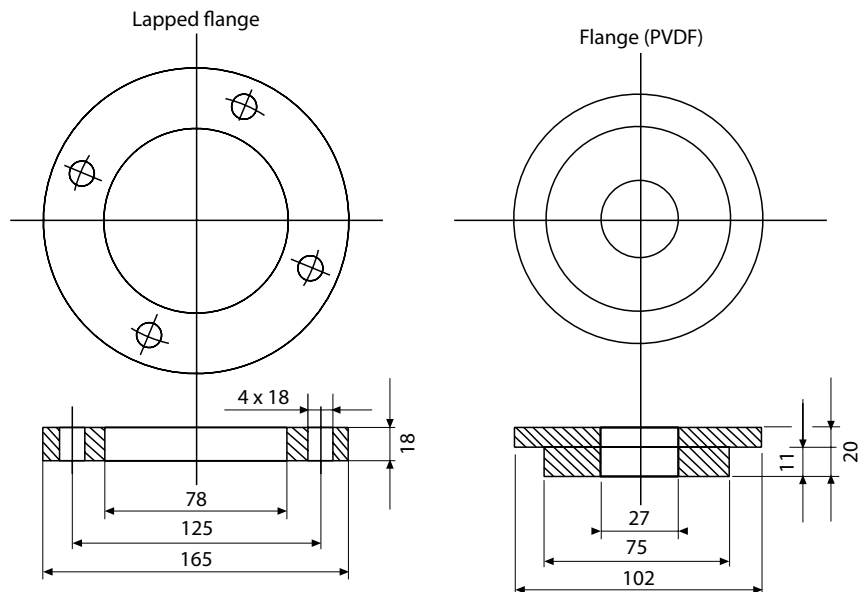


PVDF flange
ZU 0344



DN 50 PN 10

Dimension drawings:



Overview of Accessories and Assembly

Example:

