

Conductivity Sensors

MEMO SENS



SE 655N Toroidal Conductivity Sensor

Conductivity sensor with high chemical resistance.

The SE 655N toroidal conductivity sensor is a sturdy and corrosion-resistant sensor that, thanks to its high chemical resistance, is particularly suitable for applications in the chemical industry. A combination of a large sensor opening and dirt-repellent material prevents blockages and deposits in media with a high pollution degree.

The inductive measuring principle enables full galvanic isolation of the measurement from the medium.

The sensor is an all-rounder, suitable for a multitude of applications with a range covering six decades. Equipped with Memosens protocol as a digital version, it offers considerable process and data security, and ensures reliable data recording.

Applications

Concentration measurement of acids and bases, online quality monitoring of chemical

products in tanks and pipes, phase separation of product mixtures, paper manufacturing (high fiber concentration), heavily soiled media and wastewater, fouling and oil-contaminated media, brine, regeneration of ion exchangers.

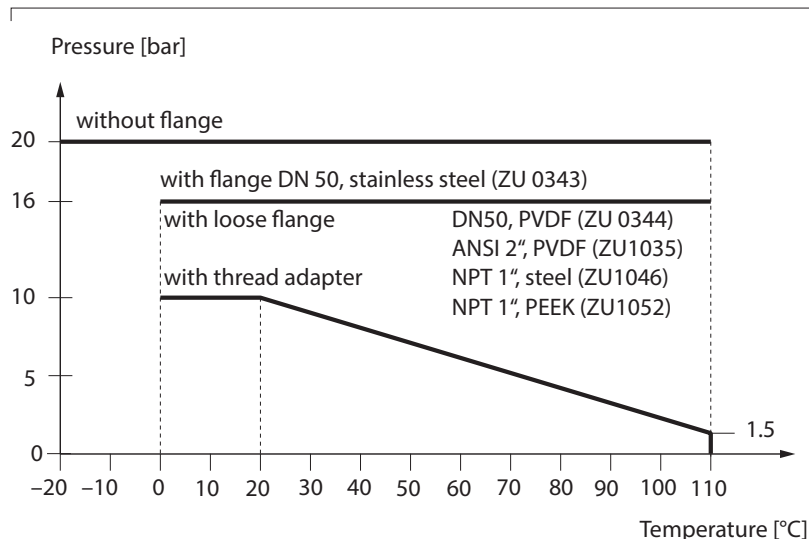
Facts and Features

- Process-wetted material: PEEK
- Sturdy design
- Resistant to contamination and fouling
- Range of six decades
- Steam sterilizable and CIP capable
- Inductive measuring principle, full galvanic isolation of sensor coils from process medium
- Digital with Memosens protocol

Specifications

Cell factor	approx. 2/cm (≥ 30 mm wall clearance)
Measuring range	0 ... 2,000 mS/cm
Resolution	0.002 mS/cm
Measurement error -4°F ... 212°F (-20 ... $+100^{\circ}\text{C}$):	± 0.005 mS/cm + 0.5 % of measured value
Measurement error $>212^{\circ}\text{F}$ ($>100^{\circ}\text{C}$):	± 0.010 mS/cm + 0.5 % of measured value
Material	PEEK
Temperature detector	Pt1000 (Class A in acc. with IEC 60751)
Temperature response time t_{90} (DIN 746-1):	approx. 7 min
Process temperature:	-4 ... 230°F (-20 ... 110°C)
Ambient temperature:	-4 ... 140°F (-20 ... 60°C)
Storage temperature	-4 ... 176°F (-20 ... 80°C)
Relative process pressure	0 ... 290 psi
Cables	Fixed cable, 3 m (SE 655N-GEFFT0AM) with ferrules Fixed cable, 7 m (SE 655N-GEFTT0AM) with ferrules
Protection (EN 60529)	IP 68 (sensor mounted, with original gasket)
Mounting	G $\frac{3}{4}$ " (nut A/F 36 and FKM gasket included in package contents)

Pressure/Temperature Diagram



Product Range

SE 655N conductivity sensor	Digital, with Memosens protocol	3 m cable	SE 655N-GEFFT0AM
		7 m cable	SE 655N-GEFTT0AM

Accessories

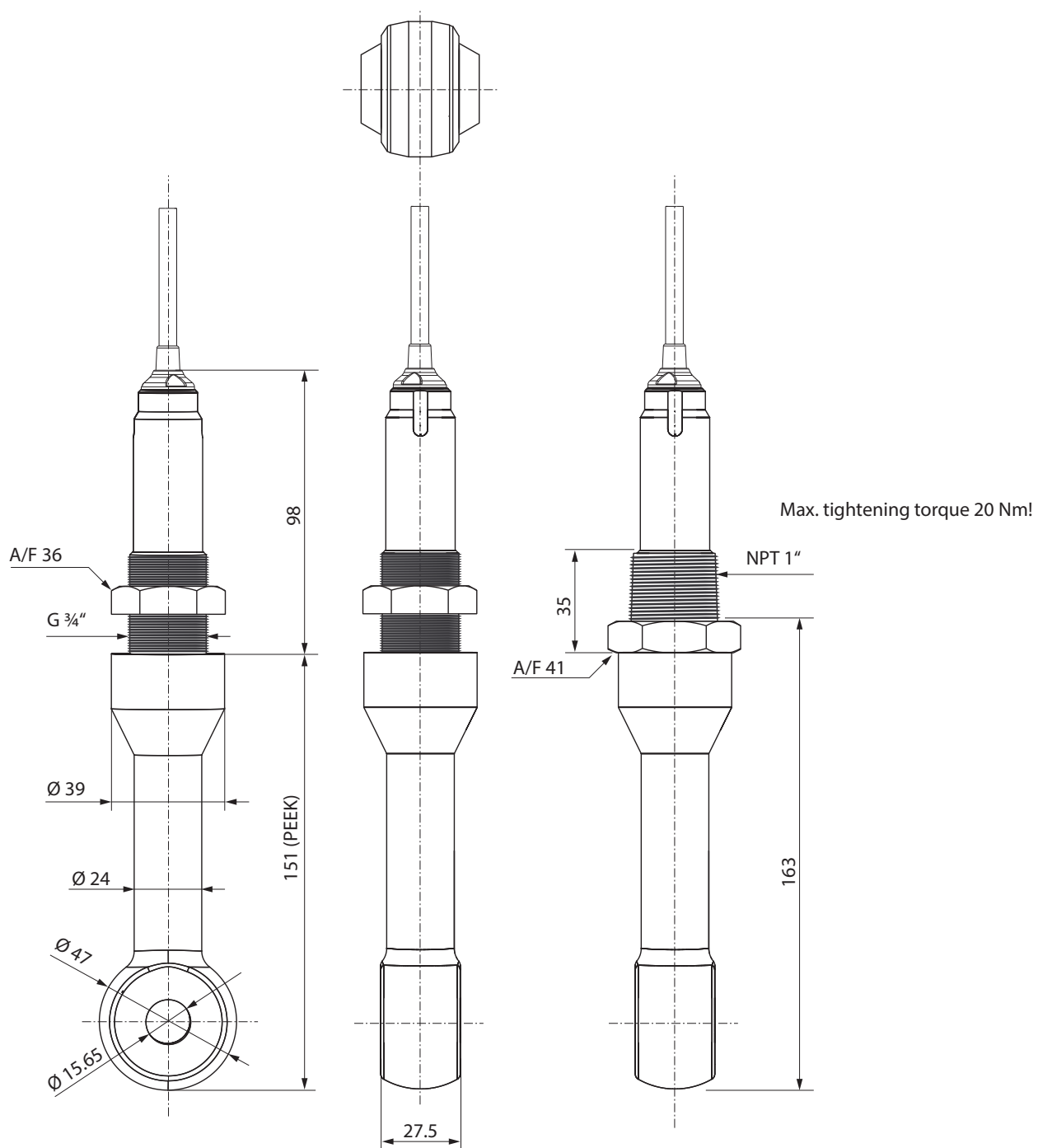
NPT 1" adapter		Material: stainless steel	ZU 1046
		Material: PEEK	ZU 1052
Flange, DN 50 PN 10		Material: PVDF	ZU 0344
Flange ANSI 2", 150 lbs		Material: PVDF	ZU 1035
Gasket set A	Nut + FKM O-ring (3 pcs) Replacement for SE655NGEFFT0AM/ GEFTT0AM		ZU 0340N
Sealing kit C	PTFE washer DN 50 (protects ZU 0343 flange against aggressive media)		ZU 0342N
O-rings		Material: FKM	O-ring 30x2.5 FKM
		Material: EPDM-FDA	O-ring 30x2.5 EPDM-FDA
		Material: FFKM	O-ring 30x2.5 FFKM
Conductivity standard ²⁾	KCl 0.1 mol/l 12.88 mS/cm ±1.5 %	500 ml	CS-C12880K/500

¹⁾ When measuring in aggressive media, sealing kit C is additionally required

²⁾ Check the user manual (field conditions)

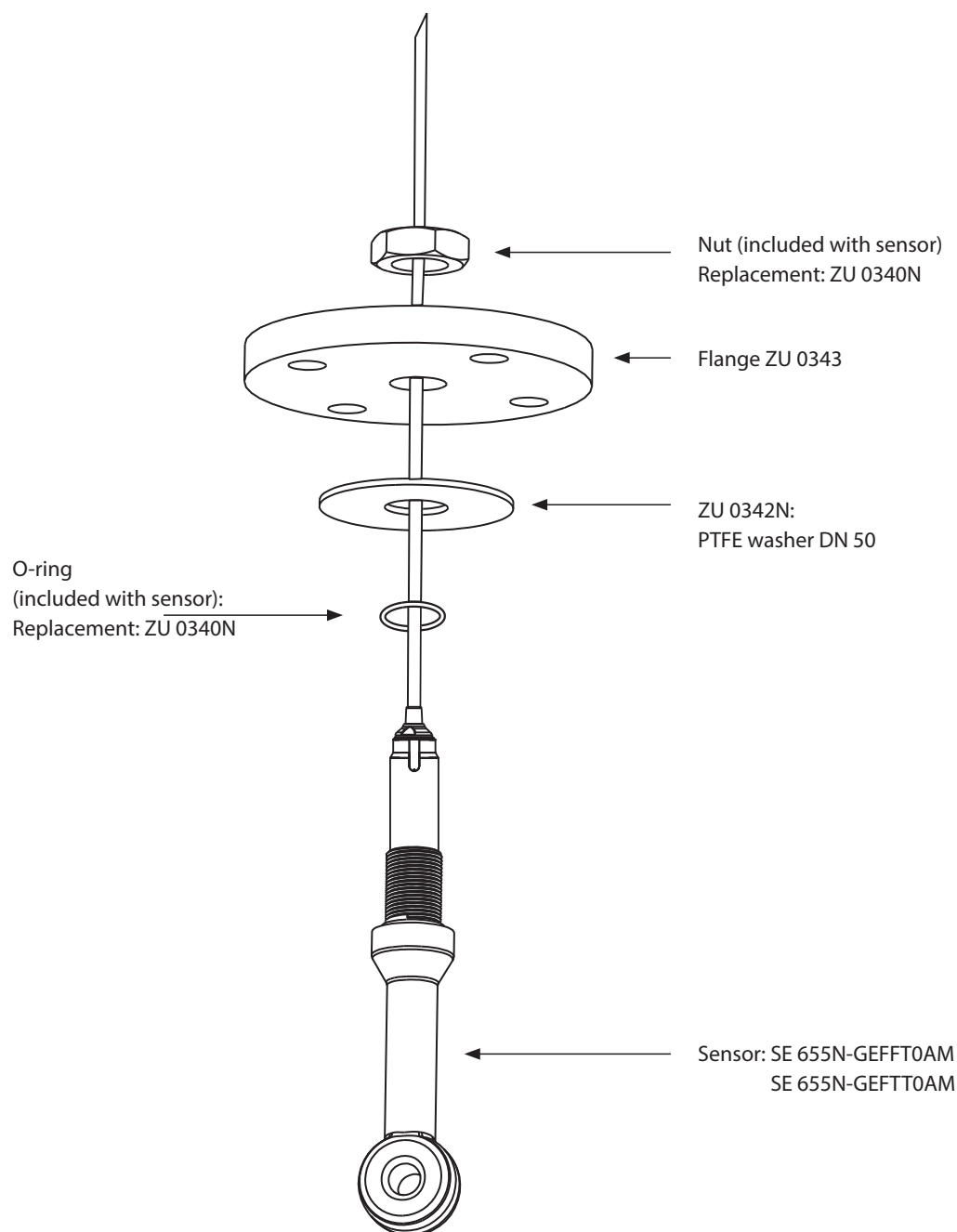
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Dimensional Drawing



Overview of Accessories and Installation

Example: Flange DN 50 stainless steel, with PTFE washer



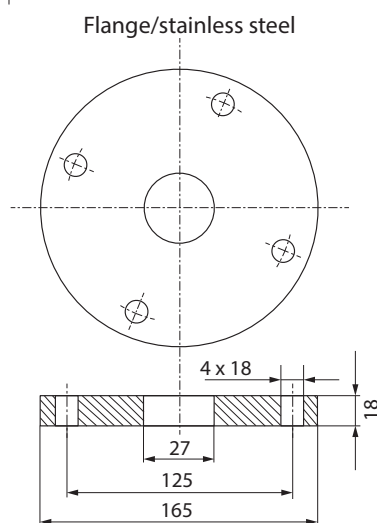
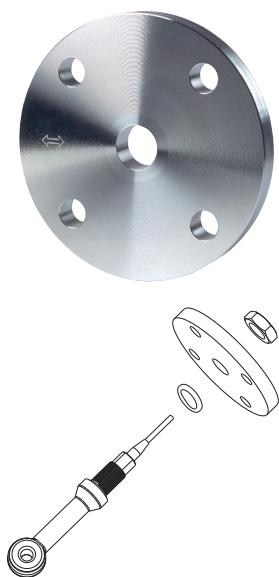
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Accessories/Specifications

Flange 316 L
ZU 0343

DN 50 PN 16

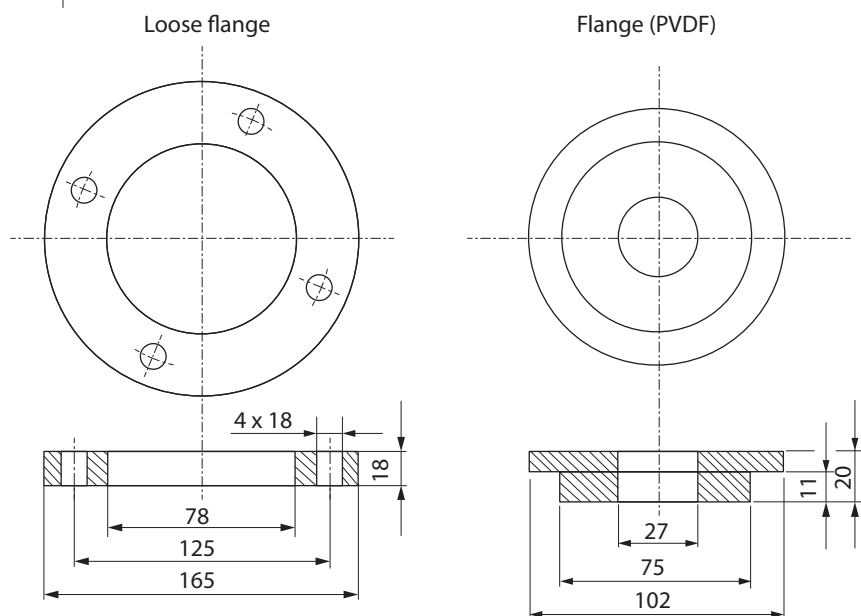
Dimension drawing:



Flange PVDF
ZU 0344

DN 50 PN 10

Dimension drawing:

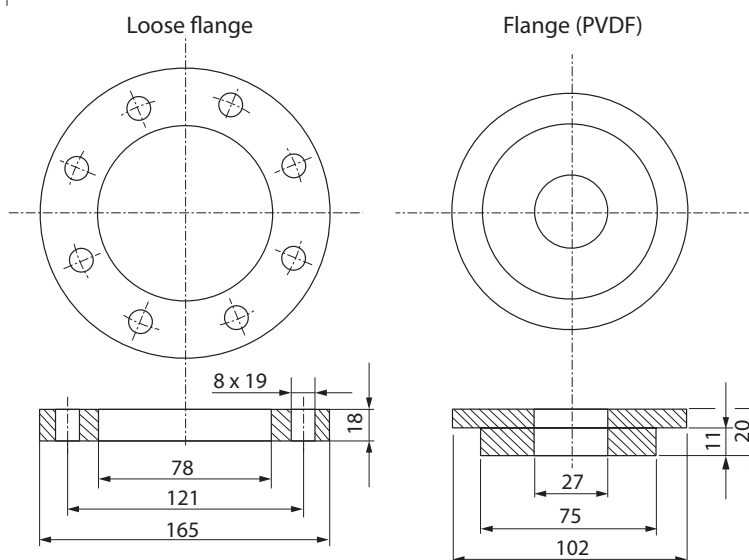


Accessories/Specifications

Flange ANSI 2"
ZU 1035

150 lbs

Dimension drawing:



NPT 1" adapter

Stainless steel ZU 1046
PEEK ZU 1052

Dimension drawing:



A/F 41 mm

