

DIGITAL Memosens Protocol



SE655(N/X) Toroidal Conductivity Sensor

Universal and precise conductivity sensor with high chemical resistance. Digital with Memosens protocol.

The SE655N digital 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. Also for hazardous areas.

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

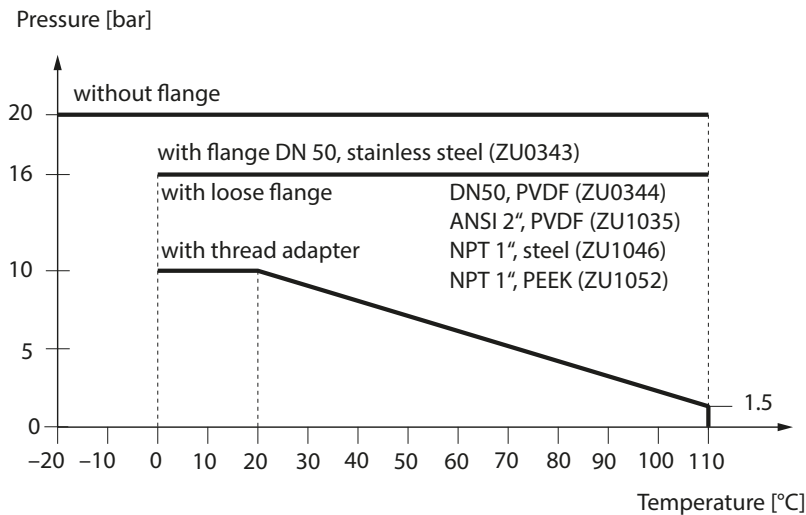
- Process-wetted material: PEEK
- Sturdy design
- Resistant to contamination and fouling
- Range of six decades
- Steam sterilizable and CIP capable
- Inductive measuring principle, full galvanic isolation of sensor coils from process medium
- Digital with Memosens protocol

Specifications

Cell factor:	1.98/cm (≥30 mm wall clearance)
Measuring range:	0 ... 2,000 mS/cm
Resolution:	0.002 mS/cm
Measurement error (–20 ... +100 °C):	± 0.005 mS/cm + 0.5 % of meas. value
Measurement error (>100 °C):	± 0.010 mS/cm + 0.5 % of meas. 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:	–20 ... 110 °C
Ambient temperature:	–20 ... +60 °C
Storage temperature:	–20 ... +80 °C
Relative process pressure:	0 ... 20 bar (see pressure/temperature diagram)
Fixed cables with ferrules:	3 m (SE655N-GEFFTOAM) 7 m (SE655(N/X)-GEFTTOAM)
Protection (EN 60529):	IP 68 (sensor mounted, with original gasket)
Mounting:	G ¾" (nut A/F 36 and FKM gasket included in package contents)
Explosion protection:	see Ex certificates and EU declaration of conformity or www.knick.de

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Pressure/Temperature Diagram



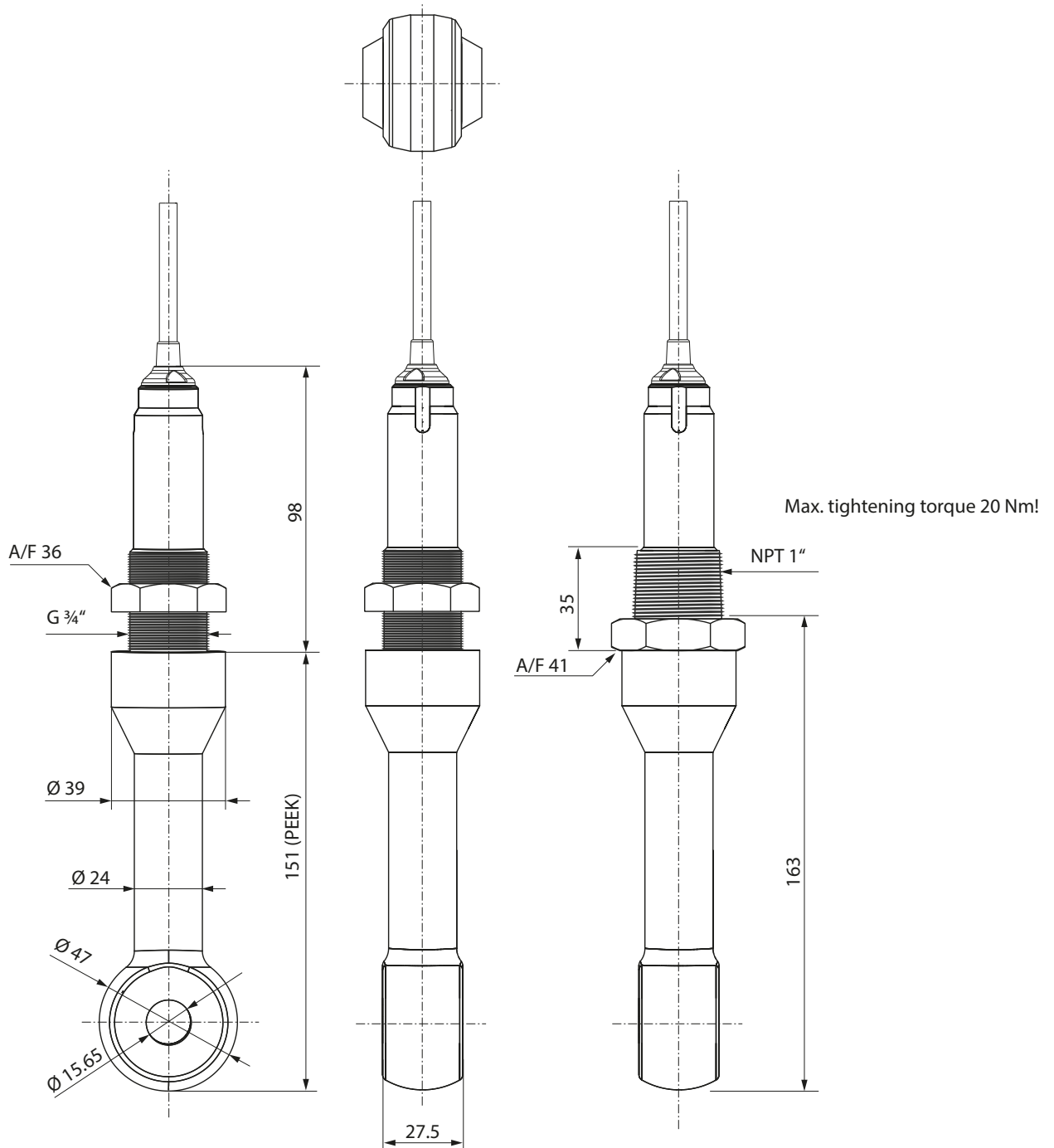
Product Line

Sensor		Order no.
SE655N conductivity sensor	Digital, with Memosens protocol 3 m cable 7 m cable	SE655N-GEFFT0AM SE655N-GEFTT0AM
SE655X conductivity sensor	Digital, with Memosens protocol, for hazardous areas. 7 m cable	SE655X-GEFTT0AM
Accessories		Order no.
NPT 1" adapter	Material: stainless steel Material: PEEK	ZU1046 ZU1052
Flange DN 50 PN 16 ¹⁾	Material: 316 L	ZU0343
Flange, DN 50 PN 10	Material: PVDF	ZU0344
Flange ANSI 2", 150 lbs	Material: PVDF	ZU1035
Gasket kit A	Nut + FKM O-ring (3 pcs) Replacement for SE655N-GEFFT0AM, SE655(N/X)-GEFTT0AM	ZU0340N
Sealing kit C	PTFE washer DN 50 (protects ZU0343 flange against aggressive media)	ZU0342N
O-rings	Material: FKM Material: EPDM-FDA Material: FFKM	O-ring 30x2.5 FKM O-ring 30x2.5 EPDM-FDA 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)

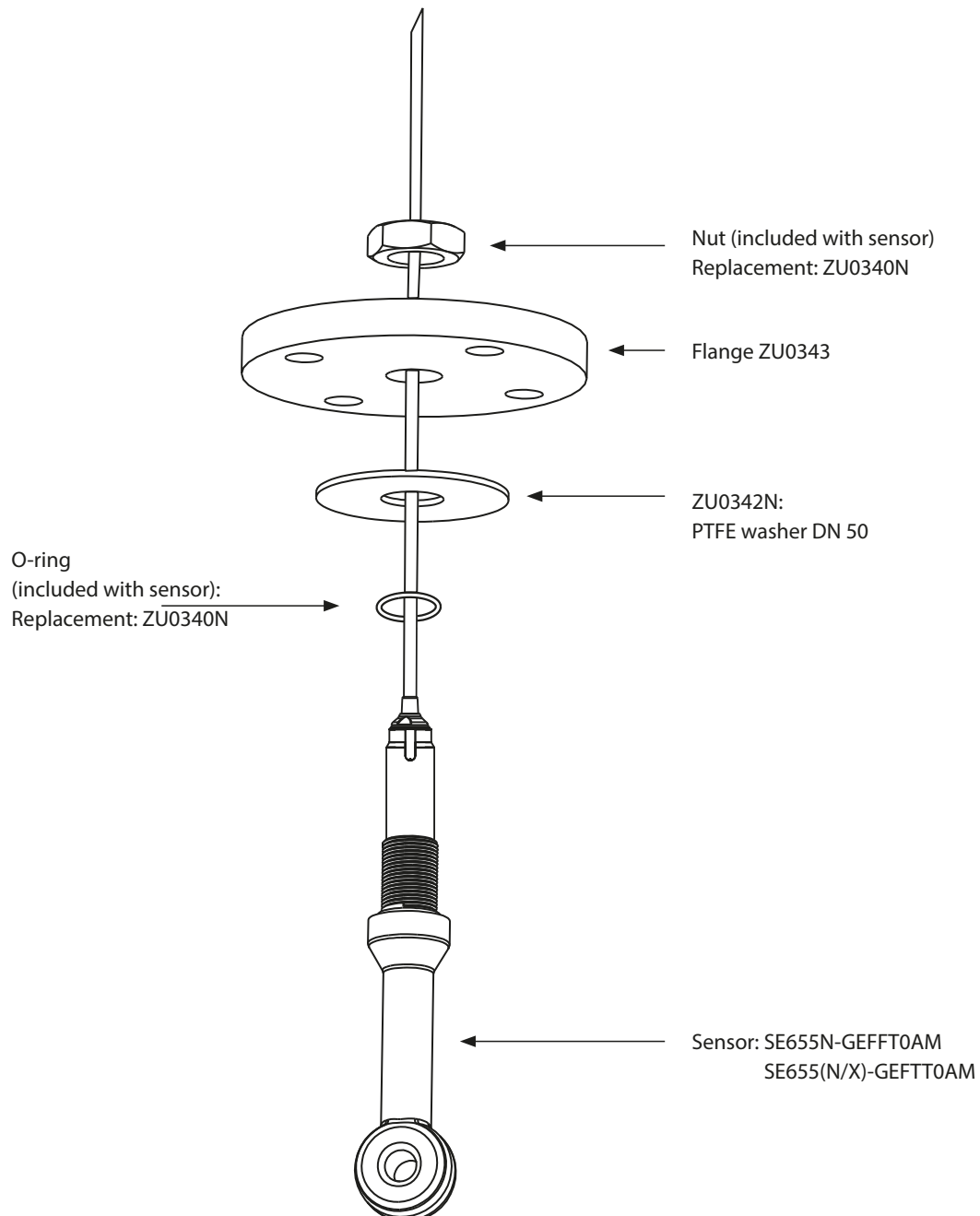
Dimension Drawing



SE655(N/X) Digital Toroidal Conductivity Sensor

Overview of Accessories and Installation

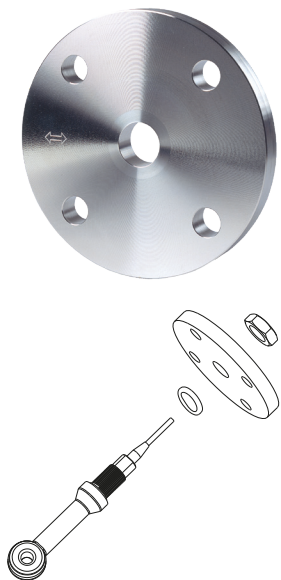
Example: Flange DN 50 stainless steel, with PTFE washer



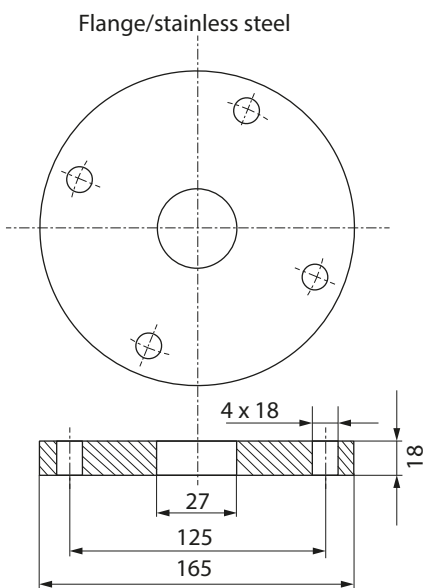
Accessories/Specifications

Flange 316 L
ZU0343

DN 50 PN 16



Dimension drawing:

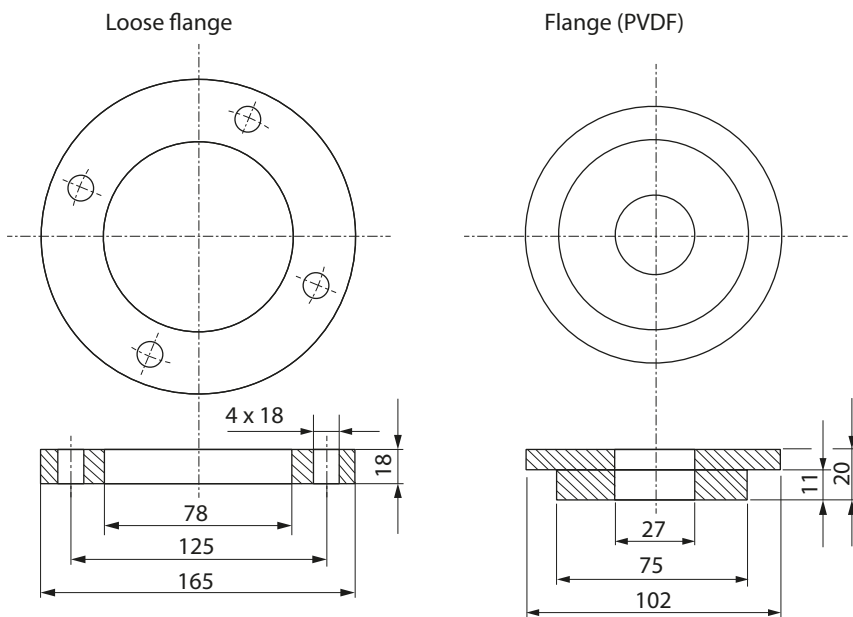


Flange PVDF
ZU0344

DN 50 PN 10



Dimension drawings:

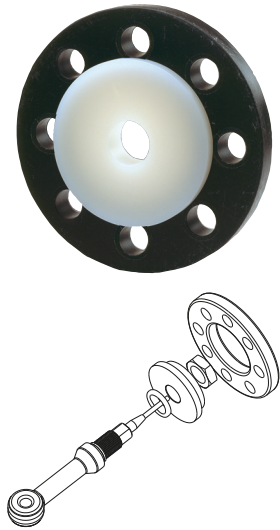


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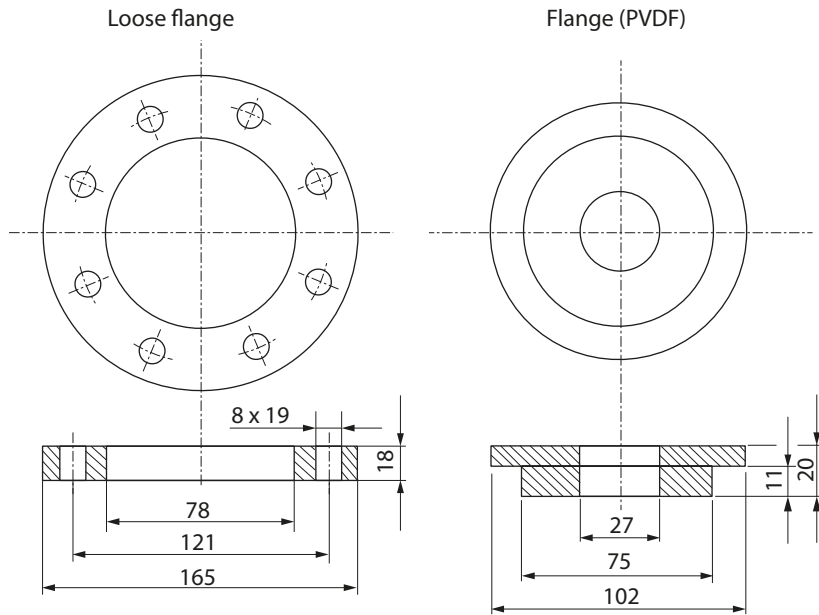
Accessories/Specifications

Flange ANSI 2"
ZU1035

150 lbs

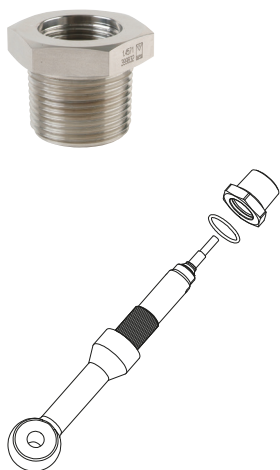


Dimension drawings:



NPT 1" adapter

Stainless steel ZU1046
PEEK ZU1052



Dimension drawing:

