DIGITAL

Memosens Protocol

SE656(N/X) Toroidal Conductivity Sensor

Universal and precise conductivity sensor with maximum chemical resistance to highly oxidizing media.
Digital with Memosens protocol.

The SE656(N/X) digital toroidal conductivity sensor is a sturdy and corrosion-resistant sensor that, thanks to its high chemical resistance and durability when exposed to aggressive media, 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, in particular of highly oxidizing 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 media.

Facts and Features

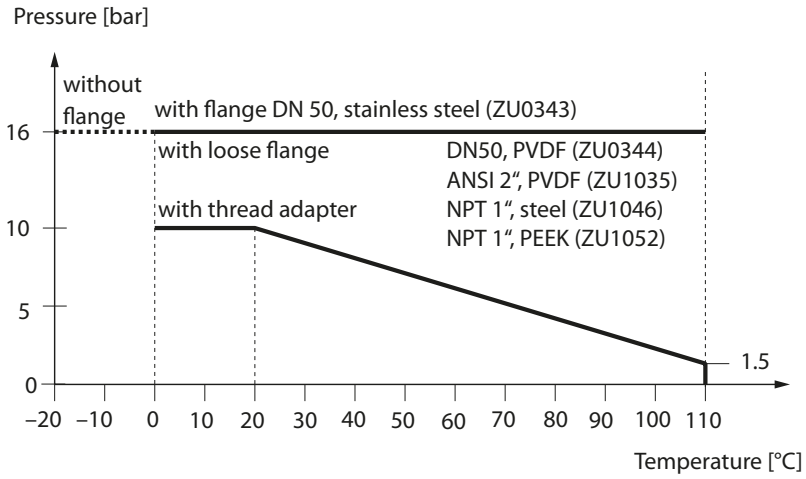
- Process-wetted material: PFA
- Sturdy design
- Resistant to contamination and fouling
- Range of six decades
- Inductive measuring principle, full galvanic isolation of sensor coils from process medium
- Digital with Memosens protocol

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 measured value
Measurement error (>100 °C):	± 0.010 mS/cm + 0.5 % of measured value
Material:	PFA
Temperature detector:	Pt1000 (Class A in acc. with IEC 60751)
Temperature response time t_{90} (DIN 746-1):	approx. 11 min
Process temperature:	–20 ... 110 °C
Ambient temperature:	–20 ... +60 °C
Storage temperature:	–20 ... +80 °C
Relative process pressure:	0 ... 16 bar (see pressure/temperature diagram)
Cable:	Fixed cable, 7 m with ferrules
Protection (EN 60529):	IP 68 (sensor mounted, with original gasket)
Mounting:	G ¾“ (nut A/F 36 and FFKM (Chemraz) gasket included in package contents)
Explosion protection:	see Ex certificates and EU declaration of conformity or www.knick.de

SE656(N/X) Digital Toroidal Conductivity Sensor

Pressure/Temperature Diagram



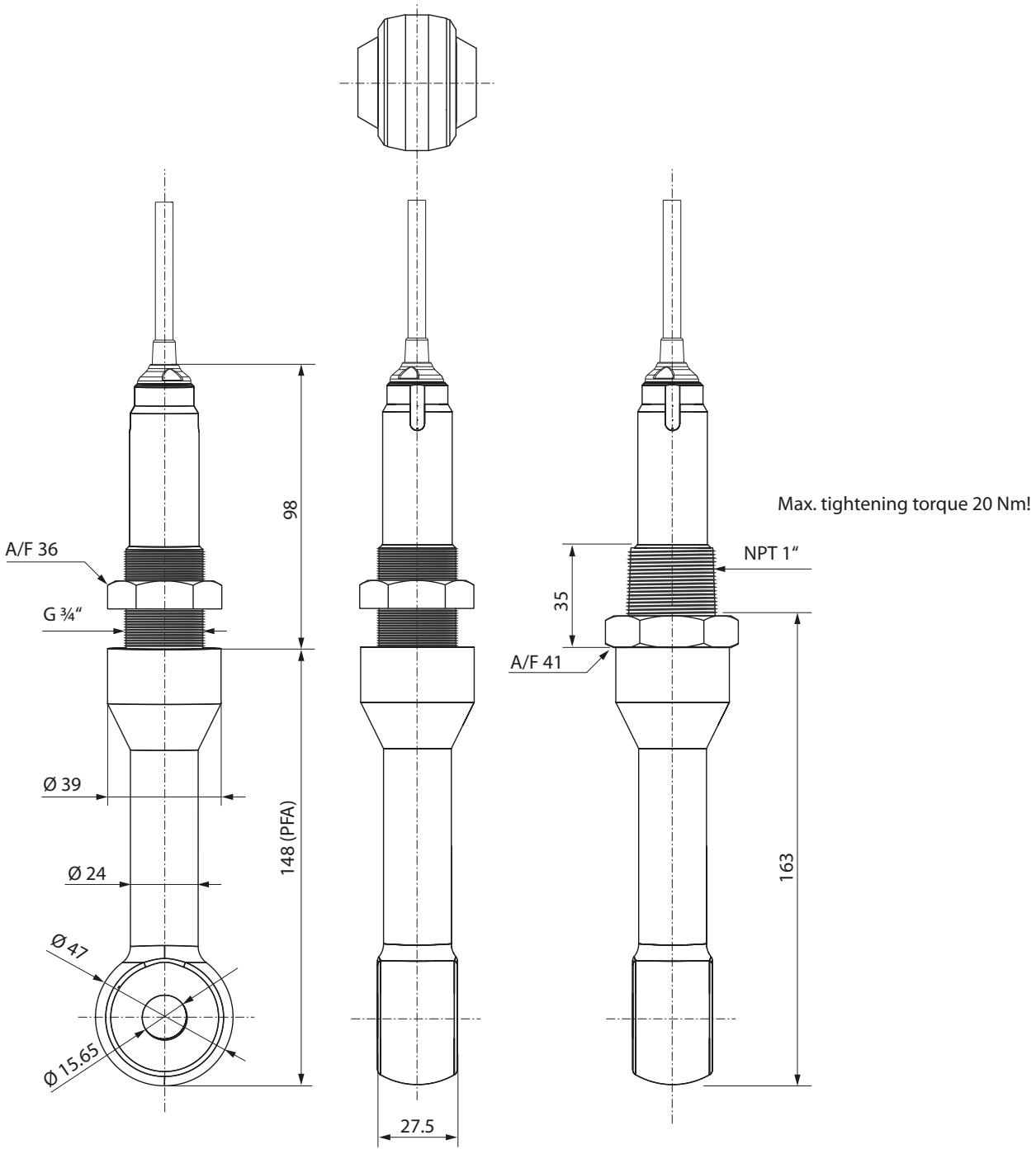
Product Line

Sensor			Order no.
SE656N conductivity sensor	Digital, with Memosens protocol	7 m cable	**SE656N -GEFTW0KM**
SE656N conductivity sensor	Digital, with Memosens protocol, for hazardous areas	7 m cable	**SE656X -GEFTW0KM**

Accessories			Order no.
NPT 1" adapter		Material: stainless steel	**ZU1046**
		Material: PEEK	**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 B	Nut + FFKM O-ring (1 pc) Replacement for SE 656(N/X)-GEFTW0KM		**ZU0341N**
Sealing kit C	PTFE washer DN 50 (protects ZU0343 flange against aggressive media)		**ZU0342N**
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)

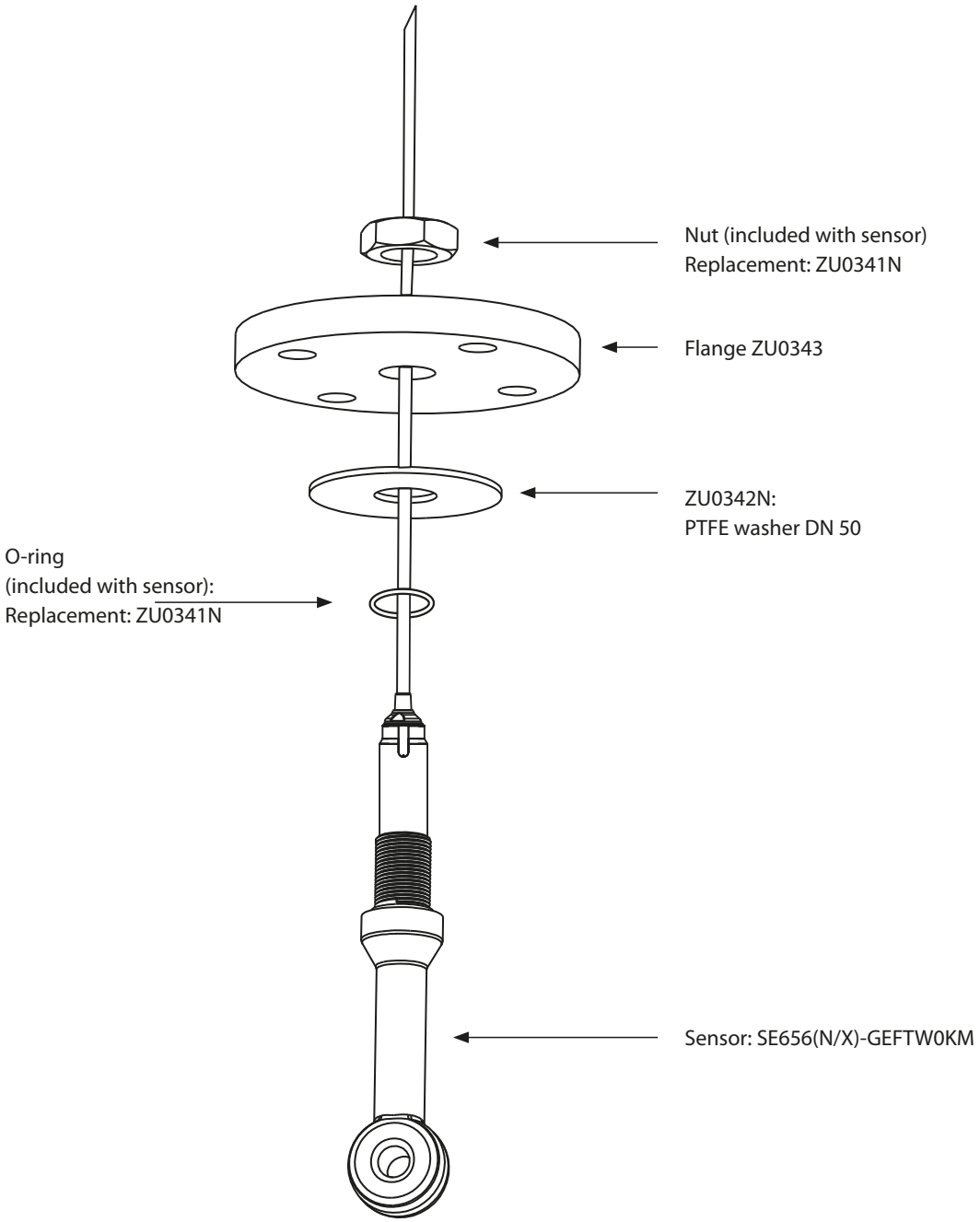
Dimension Drawing



SE656(N/X) Digital Toroidal Conductivity Sensor

Overview of Accessories and Installation

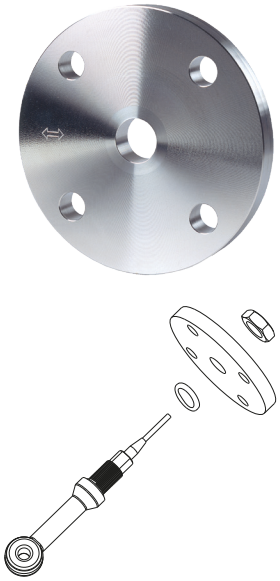
Example: Flange DN 50 stainless steel, with PTFE washer



Accessories/Specifications

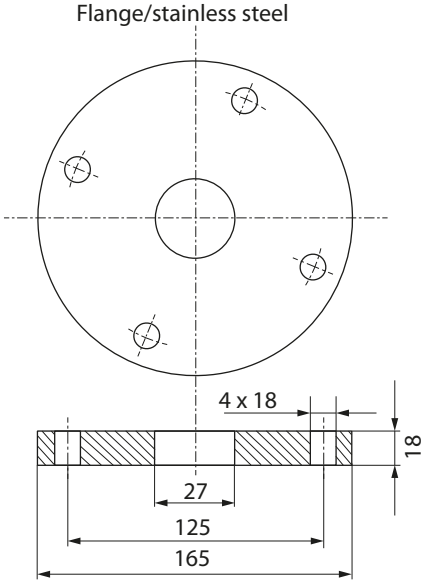
Flange 316 L
ZU0343

DN 50 PN 16



Dimension drawing:

Flange/stainless steel

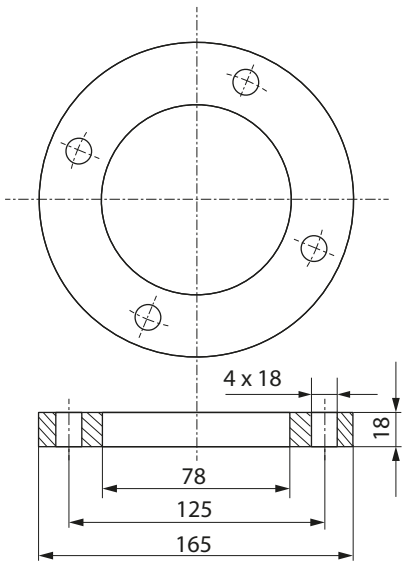


Flange PVDF
ZU0344

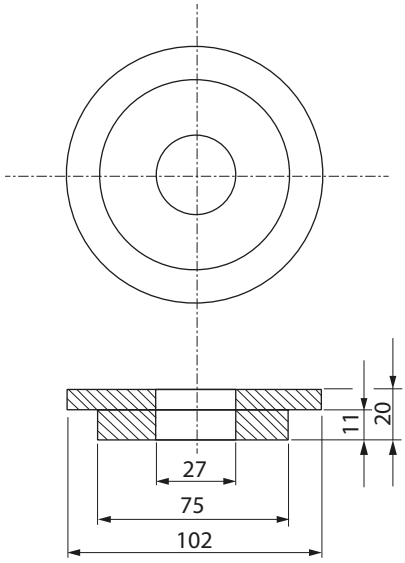
DN 50 PN 10

Dimension drawings:

Loose flange



Flange (PVDF)

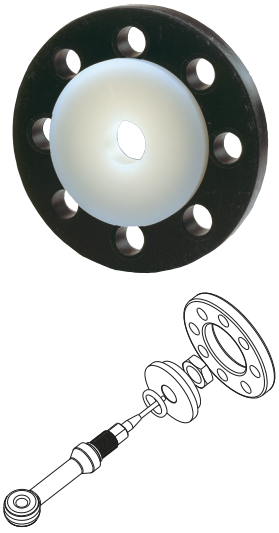


SE656(N/X) Digital Toroidal Conductivity Sensor

Accessories/Specifications

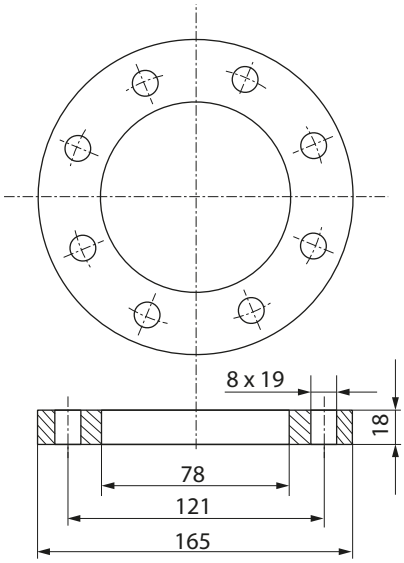
Flange ANSI 2“
ZU1035

150 lbs

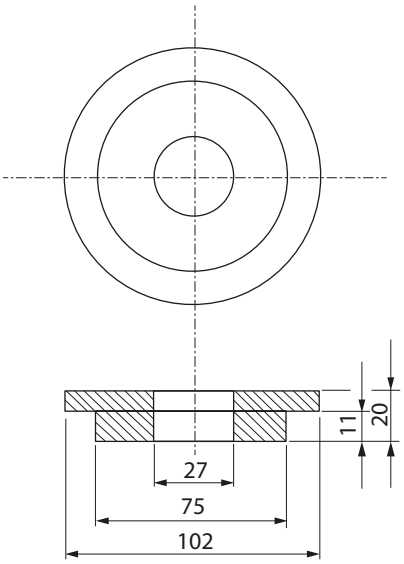


Dimension drawings:

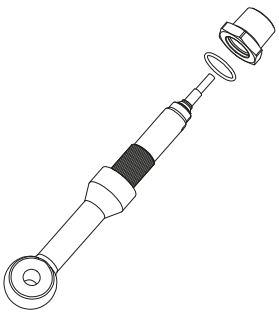
Loose flange



Flange (PVDF)

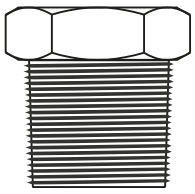


NPT 1“ adapter



Stainless steel ZU1046
PEEK ZU1052

Dimension drawing:



A/F 41 mm