



Product catalog

Conductivity
valid from 01. January 2023

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1. Instruments

1.1 Neon® EC / Neon® EC IL

1.1.1 Description



Neon® Touch wall mounted housing

Single channel water monitoring instrument

The Neon® is a leading edge measurement and control instrument and its range of functions can be tailored according to your application. The entry level version contains input / outputs for measurement and temperature, key operation, a digital input and an alarm relay. The Neon® is expandable through software upgrades and add on modules. It is possible to add up to two additional analogue outputs, control functions either concentration-based or volume-based, Modbus interface, and data logger. The information displayed on the screen can be selected by the user. With multiple installations the same settings within the software can be duplicated in additional instruments using industry standard SD cards. The Neon® is simplicity in a small package, it has an up to date touch screen to navigate through the Neon® menus easily and intuitively. The Neon® EC can be used for the measurement of conductivity.

Neon's® water measurement process can be controlled at any time, from any place, on any device via Kuntze's Cloud Connect® service. All Kuntze products are Made in Germany.

1.1.2 Applications



Disinfection



Industrial Water



Pool & Spa



Drinking Water



Process Water

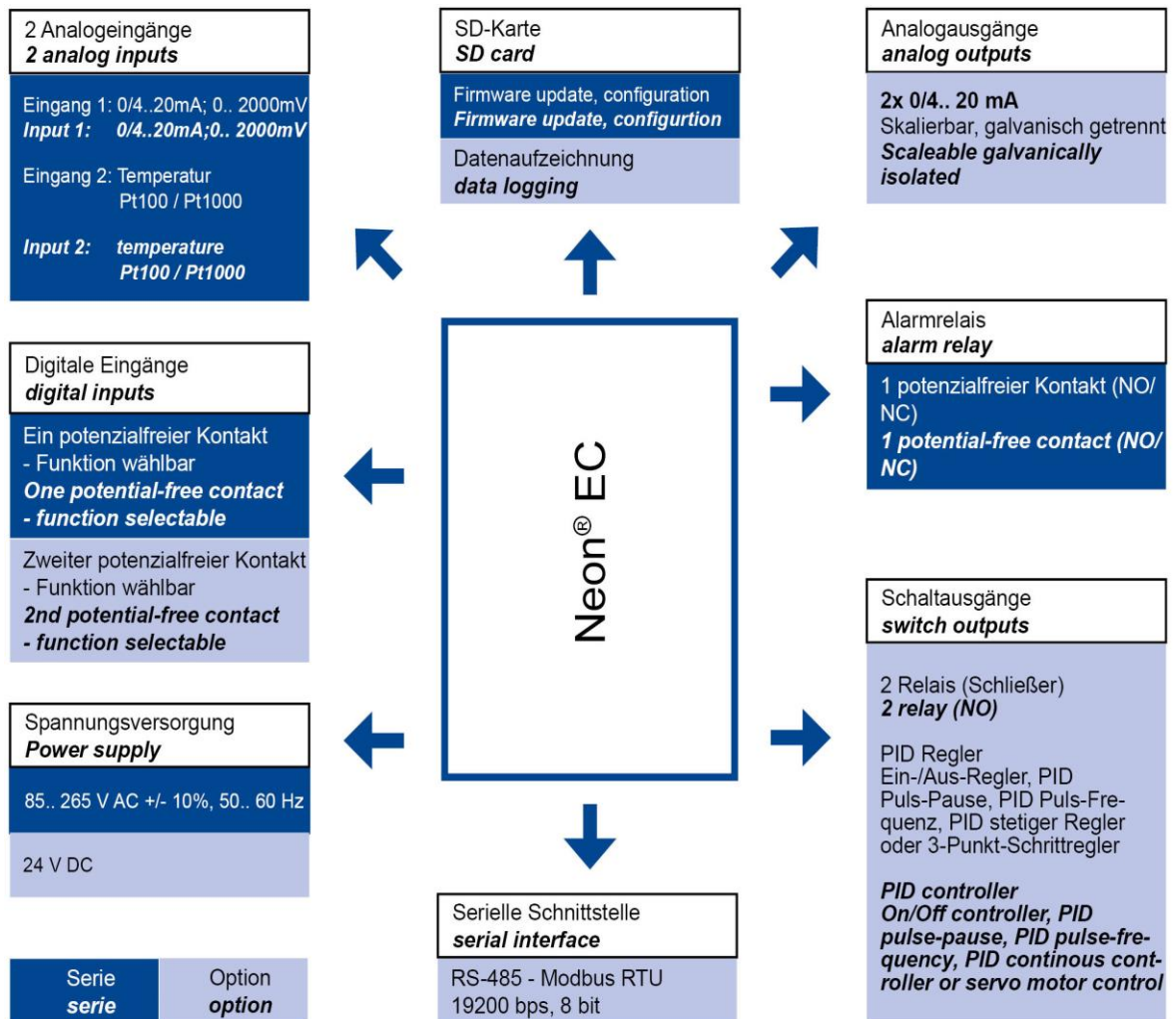


Food &
Beverage



Waste Water
Treatment

1.1.3 Interface diagram



1.1.4 Technical data**Measuring range**

| | |
|---------------------------|---|
| Conductivity (inductive) | Up to 2.000 mS/cm, 20.00 mS/cm, 200.0 mS/cm to 2000 mS/cm |
| Conductivity (conductive) | Up to 2.000 µS/cm, c= 0.05/cm (TDS 1.000 ppt) |
| | Up to 20.00 µS/cm, c= 0.05/cm (TDS 10.00 ppt) |
| | Up to 200.0 µS/cm, c= 0.05/cm (TDS 100.0 ppt) |
| | Up to 2.000 mS/cm, c= 0.20/cm |
| | Up to 20.00 mS/cm, c= 0.20/cm |

Input characteristic

| | |
|-----------------------------|--|
| Temperature measuring range | -30.. +140 °C / -22.0 ° .. 284 °F |
| Temperature compensation | 0.0 .. 8.0 % / K adjustable or ultrapure water compensated (EC) |
| Digital input | 1 as controller stop by external contact, option: 2 nd as controller stop |

Output characteristics

| | |
|------------------|---|
| Alarm relay | 1 potential-free NO contact, max. 250 V, 6 A, 550 VA (invertable) |
| Output signal | Option: 2 x 0/4 .. 20 mA (scaleable, galvanically isolated) |
| | Load: 500 Ohm |
| | Registration range: Scaleable within the measuring range |
| Storage media | SD card up to 1 GB - Industry standard |
| Serial interface | Option: RS 485 Modbus RTU |
| | Baud rate: 19200 bps |
| | Data format: 8 bit |

Power supply

| | |
|-------------------|--|
| Line voltage | 85.. 265 V AC, +6/-10 %, 50.. 60 Hz; option: 24 V DC |
| Power consumption | 10 V |

Ambient conditions

| | |
|------------------|---|
| Temperature | Storage: -20.. +65 °C / -4.. +149 °F |
| | Operation: 0.. +50 °C / 32.. 122 °F |
| Humidity | Max. 90 % rH bei 40 °C / 104 °F, non-condensing |
| Protection class | Wall mounted: IP 65 |
| | Panel mounted: IP 54 (front), IP 30 (housing) |

Controller

| | |
|------------------|---|
| Control response | Option: on/off controller (adjustable hysteresis) P / PI / PID controller (pulse-frequency or continuous output) servo motor control |
| Relay | 2 relays, each with a potential-free N/O contact, max. 250 V, 6 A, 550 VA |
| Start delay | 0.. 200 seconds until controller active |
| Controller stop | Digital input |

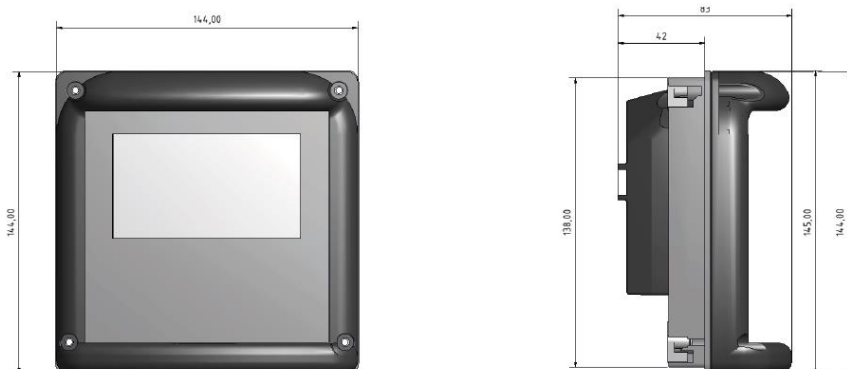
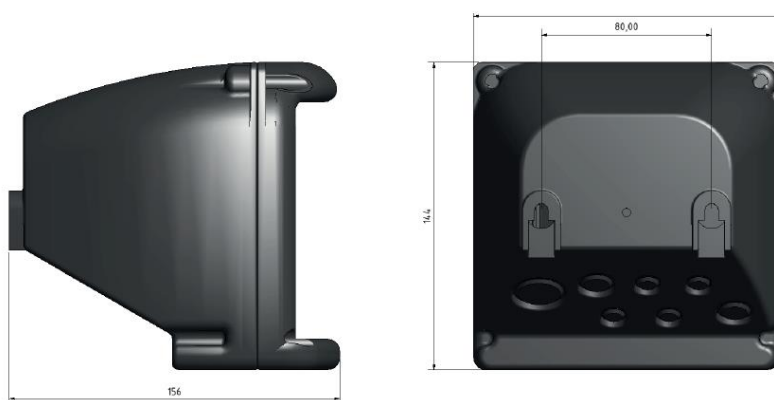
Certificates and approval

| | |
|-----------|---|
| CE-Symbol | The product meets the requirements of the harmonized European standards and complies with the legal requirements of the EC directives |
| EMV/EMC | EN 61000 6-1 (3) EN 61000 6-2 (4) EN 61326-1 |

Design configuration

| | |
|--------------------|---|
| Material | ABS |
| Dimensions | Panel mounted housing: 138 x 138 x 83 mm (Max. Wall thickness: 5 mm) |
| Mounting dimension | Wall mounted housing: 144 x 144 x 156 mm |
| | Panel mounted housing: 138 x 138 x 42 mm |
| Weight | 0.6 kg (wall mounted housing: 1 kg) |
| Connection | Cable inlet: 2 x M16, 2 x M12 + optional: 2 x M12 and 1 x M25 |
| | Plug-in terminal: Rigid / flexible 0.2 - 2.5 / 0.2 - 2.5 mm ² |
| | Measurement: Rigid / flexible 0.2 - 1 / 0.2 - 1.5 mm ² |

1.1.5 Mechanical drawing

*Neon® panel mounted**Neon® wall mounted*

1.1.6 Order information Neon® EC

| | Artikel Nr. / Article No. | Beschreibung / Description |
|--------------------------|--------------------------------------|---|
| Type | 142100K | Neon® EC (konduktive Leitfähigkeit) (1 digital input and alarm relay 85.. 265 V AC |
| | 19514101K | 24 V DC module |
| Interfaces | 19514300K | RS 485 Modbus RTU |
| Controller | 19514200 | PID with 2 control relays |
| | 19514201K | Volume based dosing with 2 relays* *only in combination with 2nd digital input (Art. 19514202K) |
| Inputs | 19514202K | Second digital input |
| Outputs | 19514203K | First mA output |
| | 19514204K | Second mA output |
| Special functions | 19514205K | Datalogging |
| Housing | 19514000K | Panel mounted (Front IP 54) |
| | 19514001K | Wall mounted (IP 65) |

**Note!**

Choose the components you need and that's how your „assembly version“ is designed. We will have to technically inspect and approve a free combination of individual key features.

1.1.7 Order information Neon® EC IL

| | Artikel Nr. / Article No. | Beschreibung / Description |
|--------------------------|--------------------------------------|---|
| Type | 142190K | Neon® EC IL (inductive conductivity) (1 digital input and alarm relay), 85.. 265 V AC |
| | 19514101K | 24 V DC module |
| Interfaces | 19514300K | RS 485 Modbus RTU |
| Controller | 19514200 | Second digital input |
| | 19514201K | Volume based dosing with 2 relays * * only in combination with 2nd digital input (Art. 19514202K) |
| Inputs | 19514202K | Second digital input |
| Outputs | 19514203K | First mA output |
| | 19514204K | Second mA output |
| Special functions | 19514205K | Datalogging |
| Housing | 19514000K | Panel mounted (Front IP 54) |
| | 19514001K | Wall mounted (IP 65) |

**Note!**

Choose the components you need and that's how your „assembly version“ is designed. We will have to technically inspect and approve a free combination of individual key features.

2. Sensors

2.1 Zirkon® Conductivity LE44 Pt

2.1.1 Description



LE44 PT



LE44 PT 4SCR

2-electrode conductivity sensor for electrical conductivity with integrated temperature sensor Pt100. The sensor is available as flow version with male thread 3/4" and 4-pole angular plug connector (Hirschmann) for electrical connection or as immersion version with 10 m fixed cable and 1/2" male thread. For both cases the electrodes are made of stainless steel (concentric electrodes, material number 1.4571). In case of the flow version the head is PVDF and for the immersion version it is PP.

2.1.2 Applications



Industrial Water



Drinking Water



Process Water

2.1.3 Technical data

Messparameter / Measuring range

| | |
|-----------------------------|---|
| Leitfähigkeit (konduktiv) / | 0,000.. 2,000 $\mu\text{S} / \text{cm}$ ($c= 0,05 / \text{cm}$) |
| Conductivity (conductive) | 0,00.. 20,00 $\mu\text{S} / \text{cm}$ ($c= 0,05 / \text{cm}$) |
| | 0,0.. 200,0 $\mu\text{S} / \text{cm}$ ($c= 0,05 / \text{cm}$) |
| | 0,000.. 2,000 mS / cm ($c= 0,20 / \text{cm}$) |
| | 0,00.. 20,00 mS / cm ($c= 1,00 / \text{cm}$) |

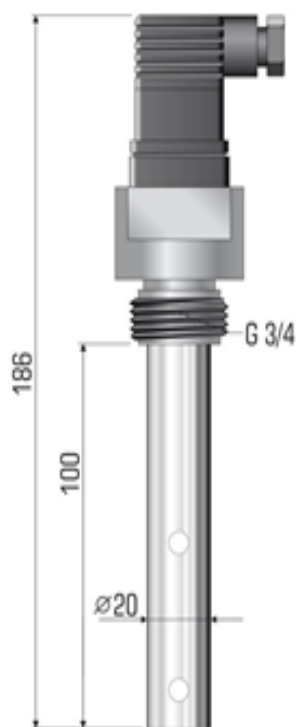
Prozessbedingungen / Process conditions

| | |
|--------------|---|
| Druck / | 16 bar bei 25 °C / |
| Pressure | 16 bar at 25 °C / 232 psi at 77 °F |
| Temperatur / | Steckeranschluss 0.. +135 °C / |
| Temperature | Kabelanschluss 0.. +90 °C / |
| | Plug connection: 0.. +135 °C / 32.. 275 °F, |
| | Cable Connection: 0.. +90 °C / 32.. 194 °F |

Konstruktiver Aufbau / Mechanical construction

| | |
|--------------------------|---|
| Schaftmaterial / | PVDF - Steckervariante, PP – Kabelvariante / |
| Shaft material | Plug version: PVDF, cable version: PP |
| Elektrodenmaterial / | Edelstahl 1.4571 / |
| Electrode material | Stainless steel 1.4571 |
| Mechanischer Anschluss / | $\frac{3}{4}$ " Außengewinde, Steckerversion, |
| Process connection | $\frac{1}{2}$ " Außengewinde, Kabelversion / |
| | Plug version: $\frac{3}{4}$ " male thread, |
| | Cable version: $\frac{1}{2}$ " male thread |
| Elektrischer Anschluss / | 4 poliger Winkelstecker (Hirschmann), |
| Electrical connection | 10 m fest angeschlossenes Kabel / |
| | 4-poles angular plug (Hirschmann), |
| | 10 m connected cable |
| Temperatursensor / | Pt 100 |
| Temperature sensor | |

2.1.4 Mechanical drawing



LE44 PT



LE44 PT 4SCR

2.1.5 Order information

| Artikel Nr. / Article No. | Typ / Type | Beschreibung / Description |
|--------------------------------------|--|--|
| 26125252K | Zirkon® Conductivity LE44 Pt, c= 0.05 | Conductivity sensor (0.. 2, 0.. 20; 0.. 200 µS/cm) |
| 26125253K | Zirkon® Conductivity LE44 Pt, c= 0.20 | Conductivity sensor (0.. 2 mS/cm) |
| 26125254K | Zirkon® Conductivity LE44 Pt, c= 1.00 | Conductivity sensor (0.. 20 mS/cm) |
| 26125255K | Zirkon® Conductivity LE44 Pt, 4SCR, c= 0.20 | Conductivity sensor (0.. 2 mS/cm) with 10 m fixed cable |
| 26125256K | Zirkon® Conductivity LE44 Pt, 4SCR, c= 1.00 | Conductivity sensor (0.. 20 mS/cm) with 10 m fixed cable |
| 26125257K | Zirkon® Conductivity LE44 Pt, 4SCR, c= 0.05 | Conductivity sensor (0.. 2; 0.. 20; 0.. 200 µS/cm) with 10 m fixed cable |

2.2 Zirkon® Conductivity IL 15

2.2.1 Description



IL 15

Zirkon® Conductivity IL 15 is a sensor for the inductive conductivity measurement in Polypropylene (PP) with two internal, circular measuring coils. The sensor is delivered with 6 m cable and internal temperature sensor.

Benefits

- Corrosion resistant
- Dirt resistant
- Small and robust construction

2.2.2 Applications



Industrial Water Drinking Water Process Water Cooling Water

2.2.3 Technical data**Messparameter / Measuring range**

| | |
|----------------------------|---------------------|
| Leitfähigkeit (induktiv) / | 0.000.. 2.000 mS/cm |
| Conductivity (inductive) | 0.00.. 20.00 mS/cm |
| | 0.0.. 200.0 mS/cm |
| | 0.. 2000 mS/cm |

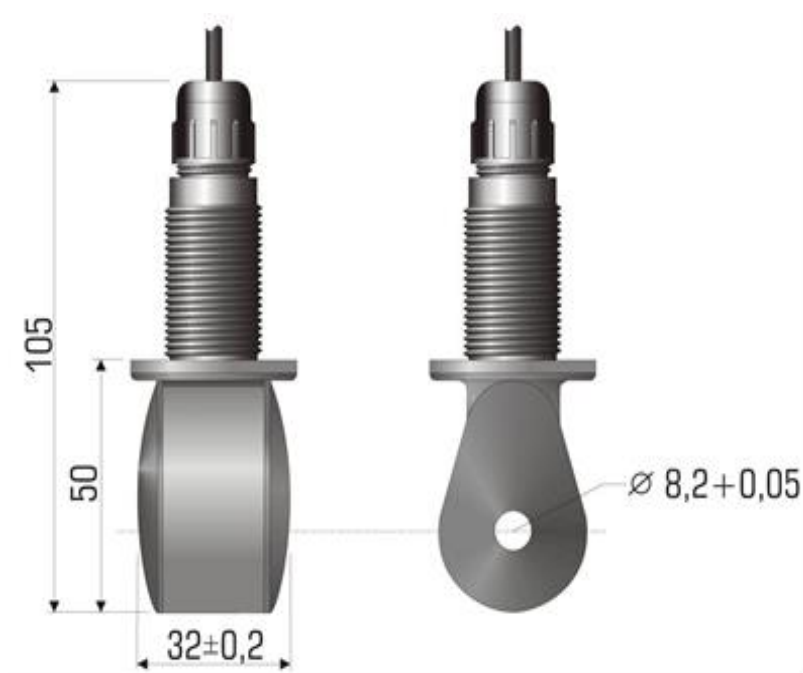
Umgebungsbedingungen / Process conditions

| | |
|--------------|-------------------------|
| Druck / | 10 bar bei 20 °C / |
| Pressure | 10 bar at 20 °C / 68 °F |
| Temperatur / | < 90 °C / < 194 °F |
| Temperature | |

Konstruktiver Aufbau / Mechanical construction

| | |
|--------------------------|---------------------|
| Schaftmaterial / | PP |
| Shaft material | |
| Mechanischer Anschluss / | G1/2 Außengewinde / |
| Process connection | G1/2 male thread |
| Temperatursensor / | NTC |
| Temperature sensor | |

2.2.4 Mechanical drawing



IL 15

2.2.5 Order information

| Artikel Nr. / Article No. | Typ / Type | Beschreibung / Description |
|--------------------------------------|----------------------------|--|
| 26164025K | Zirkon® Conductivity IL 15 | Inductive conductivity sensor, 6 m fixed cable |

3. Accessories

3.1 Assembly GD 25 V (G) (PP) (G) (PP)

3.1.1 Description



GD 25 V(G) (PP)

Flow assembly for installation of one conductive sensor LE 44 Pt in pipes with adhesive coupling or pipe coupling DN 25 with 1" female thread. Available in PVC and PP.

3.1.2 Technical data

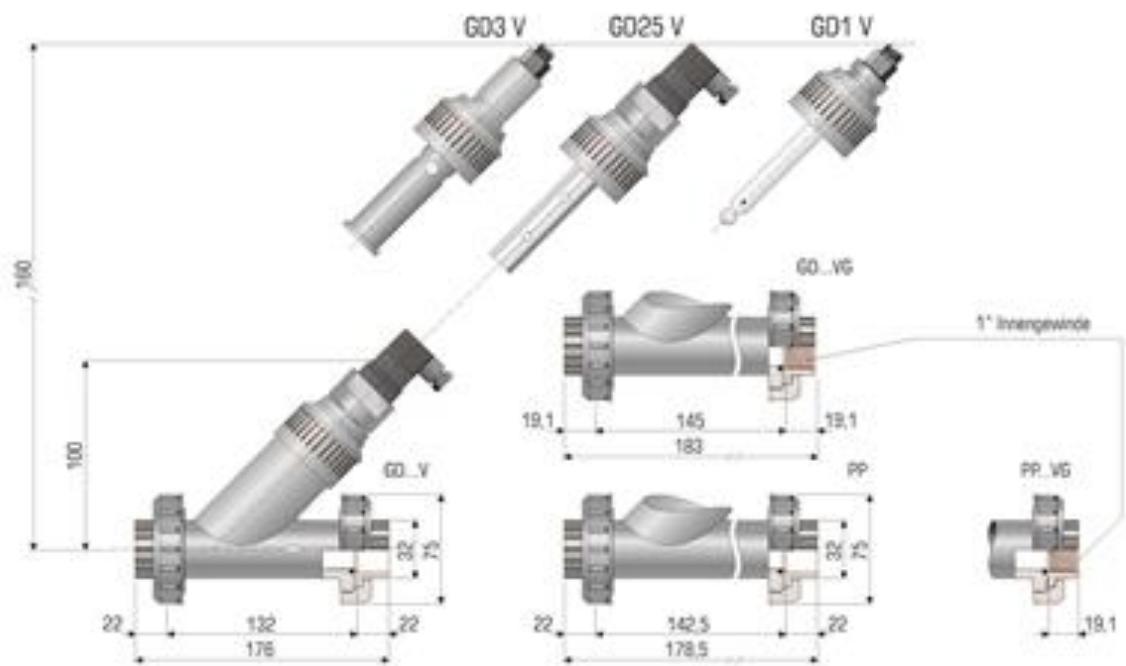
Umgebungsbedingungen / *Ambient conditions*

| | |
|------------------------------------|---|
| Druck / <i>Pressure</i> | PVC: 16 bar (bei 20 °C) PP: 10 bar (bei 20 °C) / PVC: 16 bar (at 20 °C) / 232 psi (at 68 °F) PP: 10 bar (at 20 °C / 68 °F) |
| Temperatur / <i>Temperature</i> | PVC: Max. 40 °C / 104 °F PP: Max. 90 °C / 194 °F |

Konstruktiver Aufbau / *Mechanical construction*

| | |
|---------------------------------|---|
| Wertstoff / <i>Material</i> | PVC, PP |
| Maße / <i>Dimensions</i> | Siehe Maßzeichnung / <i>See dimensional drawing</i> |
| Einbau / <i>Installation</i> | GD 25 V: Klebekupplung GD 25 VG (PP): Rohrkupplung DN 25 mit 1" Innengewinde / <i>GD 25 V: Adhesive coupling GD 25 VG (PP): Pipe coupling DN 25 with 1" female threat</i> |

3.1.3 Mechanical drawing



GD 25 V(G) (PP)

3.1.4 Order information

| Artikel Nr. / Article No. | Typ / Type | Beschreibung / Description |
|--------------------------------------|-----------------------|--|
| 36604230K | GD 25 V | Adhesive coupling (DN 25), PVC |
| 36604231K | GD 25 VG | Pipe coupling (DN 25) with 1" internal thread, PVC |
| 36604235K | GD 25 VG PP | Pipe coupling (DN 25) with 1" internal thread, PP |

3.2 Assembly GD 40 IL

3.2.1 Description



GD 40 IL PVC



GD 40 IL PP

PP or PVC Flow assembly for installation of one conductivity sensor Zirkon® Conductivity IL 15. Available in PVC and PP.

3.2.2 Technical data

Prozessbedingungen / *Ambient conditions*

Druck / *Pressure* PVC: 16 bar (at 20 °C) / 232 psi at 68 °F
PP: 10 bar (at 20 °C) / 145 psi at 68 °F

Temperatur / *Temperature* PVC: Max. 40°C / 104 °F
PP: Max. 90 °C / 194 °F

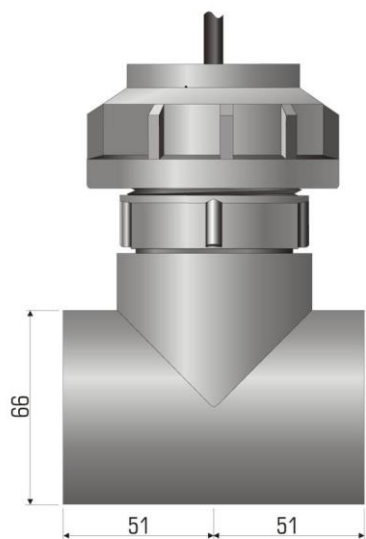
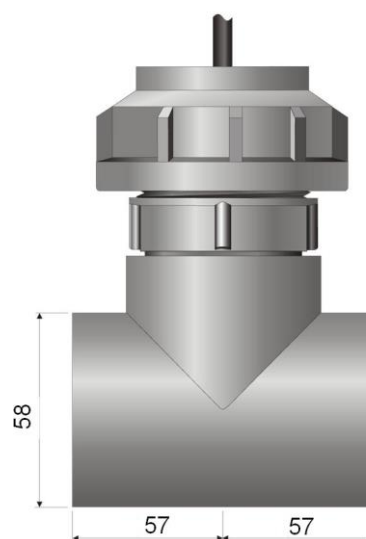
Konstruktiver Aufbau / *Mechanical construction*

Werkstoff / *Material* PVC, PP

Maße / *Dimensions* Siehe Maßzeichnung /
See dimension drawing

Einbau / *Installation* PVC: Muffen (d= 50 mm)
PP: Geschweißter Muffen d= 50 mm /

PVC: Adhesive coupling (d= 50 mm),
PP: Welded sleeve d= 50 mm

3.2.3 Mechanical drawing*GC 40 IL PP**GD 40 IL PVC*

3.2.4 Order information

| Artikel Nr. / Article No. | Typ / Type | Beschreibung / Description |
|--------------------------------------|-----------------------|---------------------------------------|
| 36604025K | GD 40 IL PP | Adhesive coupling d= 50 mm, PP |
| 36604026K | GD 40 IL PVC | Welded sleeve d= 50 mm, PVC |

3.3 Hand-held unit LF 6

3.3.1 Description



Hand-held unit LF 6

All-purpose portable instrument for measurement of conductivity and temperature. Sensor with integrated temperature sensor is attached. Sensor, instrument and portable case are included in delivery.

Benefits

- Automatic measuring-value-stability recognition
- Automatic power shut-off
- Double display for conductivity value and temperature
- Power supply by battery or mains operation
- Easy and safe handling by soft keys
- Low battery indication
- Fold away support

3.3.2 Technical data

Messparameter / Measuring parameter

| | |
|---|--|
| Leitfähigkeit (konduktiv) / <i>Conductivity (conductive)</i> | 0,0.. 200.0 µS/cm 0.. 2000 µS/cm 0,00.. 20.00 mS/cm 0,0.. 200.0 mS/cm |
| Spez. Widerstand / <i>Resistance</i> | 0,005.. 100.00 kOhm |
| TDS | 0,0.. 1999 mg/l |
| Salinität / <i>Salinity</i> | 0,0.. 70.0 g/lg (PSU) |
| Temperatur / <i>Temperature</i> | -5.. +100 °C / 23.. 212 °F |

Genauigkeit / Accuracy

| | |
|--|--------------------------------------|
| Leitfähigkeit / <i>Conductivity</i> | ±0,5 % v. MW ±0,3 % FS bzw. ±2 µS/cm |
| Temperatur / <i>Temperature</i> | ±0,2 K |

Ausgangskenngrößen / Output parameters

| | |
|---|---|
| Serielle Schnittstelle / <i>Serial interface</i> | Seriell, (3,5 mm Klinkenbuchse) über galv. getrennten Schnittstellenwandler direkt an die RS232 bzw. USB-Schnittstelle eines PC's anschließbar / <i>Serial, (3.5 mm jack socket) can be connected directly to the RS232 or USB interface of a PC via electrically isolated interface converter</i> |
|---|---|

Hilfsenergie / Power Supply

| | |
|--|--|
| Netzanschluss / <i>Network connection</i> | 10,5 - 12 V (Netzteil nicht im Lieferumfang enthalten / 1,9 mm Innenstiftdurchmesser) / <i>Line voltage via 10-12 V (power unit not included in delivery)</i> |
| Stromversorgung / <i>Power Supply</i> | 9 V-Batterie Typ IEC 6F22 / ' <i>9 V battery Type IEC 6F22</i> |
| Stromverbrauch / <i>Power consumption</i> | Ca. 3 mA |

Prozessbedingungen / Ambient conditions

| | |
|---|---|
| Umgebungstemperatur / <i>Ambient temperature</i> | Betrieb 0.. 50 °C, Lagerung -25.. 70 °C / <i>Operation 0.. 50 °C / 32..122 °F, storage -25.. 70 °C / -13..158 °F</i> |
| Luftfeuchte / <i>Relative humidity</i> | Max. 95 % r.F. bei 40 °C (nicht kondensiert) / <i>Max. 90 % rH at 40 °C / 104 °F (non-condensing)</i> |
| Schutzart / <i>Protection class</i> | IP 65 |
| Lieferumfang / <i>Delivery scope</i> | Leitfähigkeits-Handmessgerät, Kunststoffkoffer, 9V-Batterie, Betriebsanleitung / <i>Delivery scope / Conductivity meter, plastic case, 9V battery, operating manual</i> |

Zertifikate und Zulassungen / *Certificates and approvals*

| | |
|---------------------------|---|
| CE-Zeichen / CE-Symbol | Konformitätserklärung: Es entspricht allen geltenden europäischen Vorschriften und erfüllt damit die gesetzlichen Vorgaben der EG-Richtlinien. Der Hersteller bestätigt die erfolgreiche Prüfung des Produkts durch die Anbringung des CE-Zeichens. / <i>Declaration of conformity: The product meets the requirements of the harmonized European standards. It thus complies with the legal requirements of the EC directives. The manufacturer confirms successful testing of the product by affixing the CE symbol.</i> |
|---------------------------|---|

Konstruktiver Aufbau / Constructive structure

Maße / *Dimensions* 142 x 71 x 25 mm

3.3.3 Order information

| Artikel Nr. / Article No. | Typ / Type | Beschreibung / Description |
|--------------------------------------|-----------------------|--|
| 65522410K | Hand-held unit LF 6 | Complete set measuring instrument with sensor including portable case |

3.4 Cable 4SCR-EC

3.4.1 Description



Cable 4SCR-EC

Connecting cable for conductive conductivity sensor Zirkon®
Conductivity LE 44 Pt.

Sold by meter.

3.4.2 Technical data**Prozessbedingungen / *Process conditions***

Temperatur / -20..+70 °C / -4..158 °F
Temperature

Konstruktiver Aufbau / *Mechanical construction*

Werkstoff / PVC
Material

3.4.3 Order information

| Artikel Nr. / Article No. | Typ / Type | Beschreibung / Description |
|--------------------------------------|-----------------------|--|
| 44136352K | Cable 4SCR-EC | Connection cable for conductivity sensors, 4 cores, screened, sold by meter |

3.5 Cable 4-2SCR-IL-10

3.5.1 Description



Cable 4-2SCR-II 10

Extension cable - 10 m - for the inductive conductivity sensor
Zirkon® Conductivity IL 15.

3.5.2 Technical data**Prozessbedingungen / *Process conditions***

Temperatur / -20.. +70 °C / -4..158 °F
Temperature

Konstruktiver Aufbau / *Mechanical construction*

Werkstoff / PVC
Material

3.5.3 Order information

| Artikel Nr. / Article No. | Typ / Type | Beschreibung / Description |
|--------------------------------------|-----------------------|---|
| 44136353K | Cable 4-2SCR-IL-10 | Extension cable for sensor Zirkon® Conductivity IL 15, length 10 m |

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Cable 34, 37

G

GD 25 V 22

GD 40 IL 26

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L

LF 6 30

N

Neon® EC / Neon® EC IL 5

Z

Zirkon® Conductivity IL 15 18

Zirkon® Conductivity LE44 P 13



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