

# A measured step forward

# Time for change





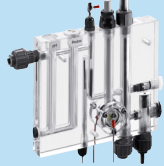


**Lutz-Jesco sensor technology**  
**Made in Germany**

Dosing | *Liquids*  
Conveying | *Gases*  
Control | *Systems*

# The subtle difference






Lutz-Jesco sensors are characterised by their high quality, a robust build and good price-performance ratio. Intensive research and many years of practical experience mean we have the skills to successfully deal with the measurement tasks you set us. We provide all measuring procedures for chlorine measurement, enabling you to select the procedure which matches your needs.

## Measuring cell for the measurement of disinfection in water

					
Sensor type	CS120 - Pt/Cu	CS120 - Pt/Ag	PM	DMZ-3	CI 4.1.A
Measuring unit	all oxidising ions	all oxidising ions	all oxidising ions	all oxidising ions	free chlorine
Part number	23722968	23732271	34186	44302002	23700614
Applications	Swimming pool water, Drinking water, Process water	Swimming pool water, Drinking water, Process water, Saline water	Swimming pool water, drinking water, Process water, Saline water	Swimming pool water, drinking water, Process water, Saline water	Swimming pool water, drinking water, Process water, Saline water
Measuring range	0 – 10.00 mg/l Cl <sub>2</sub>	0 – 10.00 mg/l Cl <sub>2</sub>	0 – 10.00 mg/l Cl <sub>2</sub>	0 – 10.00 mg/l Cl <sub>2</sub>	0 – 10.00 mg/l Cl <sub>2</sub>
Transfer/slope	20 – 30 µA / mg/l	20 – 30 µA / mg/l	20 – 30 µA / mg/l	20 – 30 µA / mg/l	4 – 20 mA
Electrolyte	Sample water	Sample water	Sample water	Sample water	Diaphragm cap with electrolyte
Connection	free wire end	free wire end	free wire end	free wire end	free wire end
Pressure range	max. 6 bar	max. 6 bar	max. 6 bar	max. 6 bar	max. 1 bar
Flow rate	40 – 50 l/h	40 – 50 l/h	40 – 50 l/h	30 l/h	30 l/h
Measuring principle	Amperometric open two-electrode measuring cell	Amperometric open two-electrode measuring cell	Amperometric open three-electrode measuring cell with potentiostatic control	Amperometric open three-electrode measuring cell with potentiostatic control	Amperometric membrane covered cell measuring cell
Can be used for:					
Water sampling station EASYPRO	-	-	-	•	•
EASYSALT	-	-	-	-	-
Water sampling station EASYPOOL SMART	•	•	-	-	-
Water sampling station EASYPOOL	•	•	-	-	-
Water sampling station DCM 01	-	-	•	-	-
Water sampling station PM 01	-	-	•	-	-
Water sampling station PM 03	-	-	•	-	-
Water sampling station PM 04	-	-	•	-	-





# Overview Sensors Disinfectants

## Measuring cell for the measurement of disinfection in water

					
Sensor type	CI 4.1.A 2	CD 4 MA	CD 4.1.A	GCM	GCM
Measuring unit	free chlorine	Chlorine dioxide	Chlorine dioxide	total chlorine	total chlorine
Part number	23700608	23700604	23700605	43700751	43700752
Applications	Swimming pool water, Drinking water, Process water	Drinking water, Process water	Drinking water, Rinsing water, Process water	Swimming pool water, Drinking water, Process water	Swimming pool water
Transfer/slope	4 – 20 mA	4 – 20 mA	4 – 20 mA	4 – 20 mA	4 – 20 mA
Electrolyte	Diaphragm cap with electrolyte	Diaphragm cap with electrolyte	Diaphragm cap with electrolyte	Diaphragm cap with electrolyte	Diaphragm cap with electrolyte
Connection	free wire end	free wire end	free wire end	free wire end	free wire end
Pressure range	max. 1 bar	max. 1 bar	max. 1 bar	max. 1 bar	max. 1 bar
Flow rate	30 l/h	30 l/h	30 l/h	30 l/h	30 l/h
Measuring principle	Amperometric membrane covered cell measuring cell	Amperometric membrane covered cell measuring cell	Amperometric membrane covered cell measuring cell	Amperometric membrane covered cell measuring cell	Amperometric membrane covered cell measuring cell
Can be used for:					
Water sampling station EASYPRO	•	•	•	•	•
EASYSALT	-	-	-	-	-
Water sampling station EASYPOOL SMART	-	-	-	-	-
Water sampling station EASYPOOL	-	-	-	-	-
Water sampling station DCM 01	-	-	-	•	•
Water sampling station PM 01	-	-	-	-	-
Water sampling station PM 03	-	-	-	-	-
Water sampling station PM 04	-	-	-	-	-





# Overview Sensors pH measurement

## Measuring cell for measuring pH value

				
Sensor type	PE110	PE110	PE110	PE110
Part number	44101001	44101002	44101003	44101004
Applications	Process water light soiling, Drinking water, warm water	Process water heavy soiling, Drinking water, warm water	Boiler water, Drinking water	Swimming pool water, Drinking water
Measuring range	0 – 14 pH	0 – 14 pH	0 – 14 pH	2 – 12 pH
Transfer/slope	52 – 59 mV / pH value	52 – 59 mV / pH value	52 – 59 mV / pH value	52 – 59 mV / pH value
Electrolyte	Potassium chloride (gel)	Potassium chloride (gel)	Potassium chloride (fluid)	Potassium chloride (gel)
Connection	N attachment head with Screw-in thread PG 13.5	N attachment head with Screw-in thread PG 13.5	N attachment head with Screw-in thread PG 13.5	N attachment head with Screw-in thread PG 13.5
Pressure range	max. 6 bar	max. 6 bar	max. 6 bar with pressure cap	max. 6 bar
Temperature range	0 – 80 °C	0 – 130 °C	0 – 60 °C	0 – 50 °C
Installation lengths	120 mm	120 mm	180 mm	120 mm
Shaft diameter	approx. 12 mm	approx. 12 mm	approx. 12 mm	approx. 12 mm
Measuring principle	pH single-rod measuring cell	pH single-rod measuring cell	pH single-rod measuring cell	pH single-rod measuring cell
Can be used for:				
Water sampling station EASYPRO	•	•	•	•
Water sampling station EASYPOOL SMART	-	-	-	•
Water sampling station EASYPOOL	•	•	•	•
Water sampling station DCM 01	•	•	•	•
Water sampling station PM 01	•	•	•	•
Water sampling station PM 03	•	•	•	-
Water sampling station PM 04	•	•	•	•







# Overview Sensors pH measurement

## Measuring cell for measuring pH value

				
Sensor type	PE110	Glass electrode	Reference electrode	Reference electrode
Part number	44101007	44101000	41100062	41100060
Applications	Swimming pool water, Drinking water, Process water	Industrial pH value measuring, Drinking water, Process water	Industrial pH value measuring, Drinking water, Process water	Industrial pH value measuring Reference electrode for Article no. 34180
Measuring range	2 – 12 pH	0 – 14 pH	0 – 14 pH	0 – 14 pH
Transfer/slope	52 – 59 mV / pH value	52 – 59 mV / pH value	52 – 59 mV / pH value	52 – 59 mV / pH value
Electrolyte	Potassium chloride (gel)	Potassium chloride (gel)	Potassium chloride (gel)	Potassium chloride (gel)
Connection	Fixed cable, 1.5 m long with BNC connector	N attachment head with Screw-in thread PG 13.5	N attachment head with Screw-in thread PG 13.5	Fixed cable, 1.5 m long with BNC connector
Pressure range	max. 0.6 bar	max. 6 bar	max. 6 bar	max. 6 bar
Temperature range	0 – 50 °C	0 – 60 °C	0 – 60 °C	0 – 60 °C
Installation lengths	120 mm	120 mm	120 mm	120 mm
Shaft diameter	approx. 12 mm	approx. 12 mm	approx. 12 mm	approx. 12 mm
Measuring principle	pH single-rod measuring cell	pH value electrode	pH value reference electrode (Ag/AgCl)	pH value reference electrode (Ag/AgCl)
Can be used for:				
Water sampling station EASYPRO	•	-	-	-
Water sampling station EASYPOOL SMART	•	-	-	-
Water sampling station EASYPOOL	•	-	-	-
Water sampling station DCM 01	•	-	-	•
Water sampling station PM 01	•	-	-	•
Water sampling station PM 03	•	-	-	•
Water sampling station PM 04	•	-	-	•








# Overview sensors REDOX measurement

## Measuring cells for measuring the REDOX value

						
Sensor type	ME110	ME110	ME110	ME110	ME110	ME110
Part number	44102011	44102013	44102014	44102015	44102018	44102019
Applications	Process water light soiling, Swimming pool water	Process water heavy soiling	Boiler water	Swimming pool water, Drinking water	Saline water	Saline water
Measuring range	1000 mV	1000 mV	1000 mV	1000 mV	1000 mV	1000 mV
Electrolyte	Potassium chloride (gel)	Potassium chloride (gel)	Potassium chloride (fluid)	Potassium chloride (gel)	Potassium chloride (gel)	Potassium chloride (gel)
Connection	N attachment head with Screw-in thread PG 13.5	N attachment head with Screw-in thread PG 13.5	N attachment head with Screw-in thread PG 13.5	Fixed cable, 1.5 m long with BNC connector	N attachment head with Screw-in thread PG 13.5	Fixed cable, 1.5 m long with BNC connector
Pressure range	max. 6 bar	max. 6 bar	max. 6 bar	max. 0.6 bar	max. 6 bar	max. 0.6 bar
Temperature range	0 – 80 °C	0 – 80 °C	0 – 50 °C	0 – 50 °C	0 – 50 °C	0 – 50 °C
Installation lengths	120 mm	120 mm	120 mm	120 mm	120 mm	120 mm
Shaft diameter	approx. 12 mm	approx. 12 mm	approx. 12 mm	approx. 12 mm	approx. 12 mm	approx. 12 mm
Measuring principle	REDOX single-rod measuring cell	REDOX single-rod measuring cell	REDOX single-rod measuring cell	REDOX single-rod measuring cell	REDOX single-rod measuring cell	REDOX single-rod measuring cell
Can be used for:						
Water sampling station EASYPRO	•	•	•	•	•	•
Water sampling station EASYPOOL SMART	-	-	-	-	-	-
Water sampling station EASYPOOL	•	•	•	•	•	•
Water sampling station DCM 01	•	-	-	•	-	-
Water sampling station PM 01	•	•	•	•	•	•
Water sampling station PM 03	•	•	•	-	-	-
Water sampling station PM 04	•	•	•	•	-	-

# Overview sensors conductivity sensor







## Measuring cell for measuring the conductivity

							
Sensor type	LE110	LE110	LE110	LE110	LE110	LE110	CTI500
Part number	44300098	44300099	44300097	45000001	45000002	45000003	45500200
Applications	Swimming pool water, Process water, Saline water	Swimming pool water, Process water, Saline water	Swimming pool water, Process water, Saline water	Industry, Process water	Industry, Process water	Industry, Process water	Industry, Process water
Measuring range	20 mS/cm (1% salt content) with Measurement amplifier	60 mS/cm (3% salt content) with measurement amplifier	160 mS/cm (8% salt content) with Measurement amplifier	0 – 200 µS/cm	0 – 2 mS/cm	0 – 20 mS/cm	0 – 2000 mS/cm
Transfer/slope	Measurement amplifier output 0/4 – 20 mA	Measurement amplifier output 0/4 – 20 mA	Measurement amplifier output 0/4 – 20 mA	Cell constant 0.05/cm	Cell constant 0.2/cm	Cell constant 1.0/cm	Measurement amplifier output 4 – 20 mA
Connection	Measurement amplifier complete with measuring cell	Measurement amplifier complete with measuring cell	Measurement amplifier complete with measuring cell	4-pole angled connector with integrated temperature sensor Pt100	4-pole angled connector with integrated temperature sensor Pt100	4-pole angled connector with integrated temperature sensor Pt100	Measurement amplifier complete with measuring cell
Pressure range	max. 0.6 bar	max. 6 bar	max. 5 bar	max. 9 bar	max. 9 bar	max. 9 bar	max. 6 bar
Temperature range	0 – 80 °C	0 – 80 °C	0 – 95 °C	0 – 135 °C	0 – 135 °C	0 – 135 °C	
Installation lengths measuring cell	120 mm	120 mm	40 mm	100 mm	100 mm	100 mm	min. 100 mm
Shaft diameter	approx. 12 mm	approx. 12 mm	3/4" screw-in thread	3/4" screw-in thread	3/4" screw-in thread	3/4" screw-in thread	Union nut G1 1/2", PVC
Measuring principle	Conductive two-electrode measuring cell with measurement amplifier	Conductive two-electrode measuring cell with measurement amplifier	Conductive two-electrode measuring cell with measurement amplifier	Conductive two-electrode measuring cell	Conductive two-electrode measuring cell	Conductive two-electrode measuring cell	Inductive conductivity measuring cell with measurement amplifier
Auxiliary voltage	Measurement amplifier 230 V AC	Measurement amplifier 230 V AC	Measurement amplifier 230 V AC	-	-	-	24 V DC
Can be used for:							
Water Sampling station EASYPRO	•	•	-	-	-	-	-
Water sampling station EASYPOOL SMART	-	-	-	-	-	-	-
Water sampling station EASYPOOL	-	-	-	-	-	-	-
Water sampling station DCM 01	-	-	-	-	-	-	-
Water sampling station PM 01	•	•	-	-	-	-	-
Water sampling station PM 03	-	-	-	-	-	-	-
Water sampling station PM 04	-	-	-	-	-	-	-

# Accessories fittings

The chlorine measuring cell, pH and Redox electrodes, temperature sensor and flow control have been combined into a single unit to facilitate integration into the system. Lutz-Jesco provides a wide range of different fittings, so that you always have the correct solution for connecting the sensors into your process.






## Fitting for accepting the sensors

						
Part number	41191	37700	37701	37702	41100101	41100102
Version	measuring cell fitting	Throughflow fitting	Throughflow fitting	Throughflow fitting	Throughflow fitting	Throughflow fitting
Number take-up electrodes	1	2	3	3	1	1
Type of the electrodes	Single-rod measuring cells	Single-rod measuring cells Conductivity measuring cells	Single-rod measuring cells Conductivity measuring cells	Single-rod measuring cells Conductivity measuring cells	Single-rod measuring cells Conductivity measuring cells	Single-rod measuring cells Conductivity measuring cells
For connection	Screw-in thread PG 13.5	Screw-in thread PG 13.5	Screw-in thread PG 13.5	Screw-in thread PG 13.5	Screw-in thread PG 13.5	Screw-in thread PG 13.5
Temperature	60 °C	40 °C	40 °C	40 °C	40 °C	40 °C
Discharge	max. 6 bar	max. 6 bar	max. 6 bar	max. 6 bar	max. 10 bar at 20 °C	max. 10 bar at 20 °C
Material	PMMA	PMMA	PMMA	PMMA	PVC	PVC
Can be shut-off	Cannot be shut-off	Cannot be shut-off	Cannot be shut-off	Can be shut-off	Cannot be shut-off	Cannot be shut-off
Description	Type B	DC111-2	DC111-3	DW111-2	DC111-DN20	DC111-DN25






# Accessories fittings

## Fitting for accepting the sensors



					
Part number	41100103	41131288	41100104	41100110	41100105
Version	Throughflow fitting	Throughflow fitting	Immersion fitting	Immersion fitting	Immersion fitting
Number take-up electrodes	3	2	1	1	3
Type of the electrodes	Single-rod measuring cells Conductivity measuring cells	Single-rod measuring cells Conductivity measuring cells	Single-rod measuring cells Conductivity measuring cells	Single-rod measuring cells Conductivity measuring cells	Single-rod measuring cells Conductivity measuring cells
For connection	Screw-in thread PG 13.5	Screw-in thread PG 13.5	Screw-in thread PG 13.5	Screw-in thread PG 13.5	Screw-in thread PG 13.5
Temperature	max 95 °C	max 40 °C	max 95 °C	max 95 °C	max. 95 °C
Pressure	6 bar at 25 °C	6 bar at 25 °C	pressureless	pressureless	pressureless
Material	PP	Plastic housing	PP	PP	PP
Can be shut-off	Cannot be shut-off	Cannot be shut-off	Cannot be shut-off	Cannot be shut-off	Cannot be shut-off
Immersion tube length	-	-	500 mm	1000 mm	426 mm
Description	DP111	Throughflow fitting DT111	EC 111-500 mm	EC 111-1000 mm	EP 111-426 mm

# Sensor technology accessories

## Fitting for accepting the sensors

			
Part number	41100115	41100116	37699
Version	Changeover device	Changeover device	Throughflow fitting
Number take-up electrodes	1	1	1
Type of the electrodes	Single-rod measuring cell pH value or REDOX	Single-rod measuring cell pH value or REDOX	Encapsulated electrodes
Connection	3/4"	3/4"	for hose 6/12 mm
Temperature	70 °C	120 °C	40 °C
Discharge	5 bar at 50 °C	5 bar at 50 °C	depending on the measuring cell used
Material	PP	PVDF	PMMA
Can be shut-off	Cannot be shut-off	Cannot be shut-off	Cannot be shut-off
Description	Changeover device DW111-PP	Changeover device DW111-PVDF	

## Temperature sensor PT100

		
Part number	41100021	411100022
Applications	Swimming pool Industry	Swimming pool Industry
Measuring resistor	100 ohms	100 ohms
Connection	N attachment head with Screw-in thread PG 13.5	Cable 2.5 m long
Pressure range	max. 6 bar	max. 5 bar
Temperature range	0 – 150 °C	0 – 80 °C
Sensor type	TE110	TE110
Installation lengths	120 mm	50 mm
Shaft diameter	approx. 12 mm	approx. 6 mm
Shaft material	Glass shaft	Metal protective pipe (stainless steel)

# Sensor technology accessories



## Accessories sensor technology

---

Choose from a comprehensive range of accessories for sensor technology. Measuring lines and sockets for various designs. Buffer, calibration, potassium chloride and cleaning solutions complete our offer.



## Photometer

---

Photometers serve the adjustment of measurement systems through reference measurements. Systems with multiple sampling points need simple and quick reference measurements. The Lutz-Jesco photometer combines this requirement with high measurement accuracy and a robust structure.



## An overview of the three measuring principles

---

- **Potentiometry**

Potentiometry measures the potential of the electrode in a measurement solution.

- **Amperometry**

This enables the determination of the concentration of various substances by current measurement in watery solutions.

- **Conductometry**

This measurement principle measures the electrolytic conductivity.



**Product range**

**Lutz Pumpen GmbH**  
Post Office Box 1462  
D-97864 Wertheim  
www.lutz-pumpen.de

**Product range**

**Lutz-Jesco GmbH**  
Post Office Box 100164  
D-30891 Wedemark  
www.lutz-jesco.com



Barrel and container pumps



Dosing pumps



Measuring and control equipment



Flow meters



Chlorinators



Disinfection



Double diaphragm pumps



Chemical centrifugal pumps



System and process technology



Centrifugal pumps



**TECHNOPOOL**

Products for the disinfection of swimming pool water based on salt water electrolysis and domestic water technology



**The Lutz-Jesco App for iPads and iPhone is available from the iTunes App Store. Further information on this can be found at [www.lutz-jesco.com](http://www.lutz-jesco.com)**



Head Office  
**Lutz-Jesco GmbH**  
Am Bostelberge 19  
30900 Wedemark  
Germany

Tel.: +49 5130 5802-0  
Fax: +49 5130 580268

E-mail: [info@lutz-jesco.com](mailto:info@lutz-jesco.com)  
Website: [www.lutz-jesco.com](http://www.lutz-jesco.com)

Hungary  
**Lutz-Jesco Üzetág**  
Vasvári P. u. 9.  
9024 Győr  
Hungary

Tel.: +36 96 523046  
Fax: +36 96 523047

E-mail: [info@lutz-jesco.hu](mailto:info@lutz-jesco.hu)  
Website: [www.lutz-jesco.hu](http://www.lutz-jesco.hu)

Austria  
**Lutz-Jesco GmbH**  
Aredstraße 7/2  
2544 Leobersdorf  
Austria

Tel.: +43 2256 62180  
Fax: +43 2256 6218062

E-mail: [info@lutz-jesco.at](mailto:info@lutz-jesco.at)  
Website: [www.lutz-jesco.at](http://www.lutz-jesco.at)

Netherlands  
**Lutz-Jesco Nederland B.V.**  
Nijverheidstraat 14 C  
2984 AH Ridderkerk  
Netherlands

Tel.: +31 180 499460  
Fax: +31 180 497516

E-mail: [info@lutz-jesco.nl](mailto:info@lutz-jesco.nl)  
Website: [www.lutz-jesco.nl](http://www.lutz-jesco.nl)



Great Britain  
**Lutz-Jesco (GB) Ltd.**  
Gateway Estate  
West Midlands Freeport  
Birmingham B26 3QD  
Great Britain

Tel.: +44 121 782 2662  
Fax: +44 121 782 2680

E-mail: [info@lutz-jesco.co.uk](mailto:info@lutz-jesco.co.uk)  
Website: [www.lutz-jesco.co.uk](http://www.lutz-jesco.co.uk)

USA  
**Lutz-JESCO America Corp.**  
55 Bermar Park  
Rochester, N.Y. 14624  
USA

Tel.: +1 585 426-0990  
Fax: +1 585 426-4025

E-mail: [mail@jescoamerica.com](mailto:mail@jescoamerica.com)  
Website: [www.lutzjescoamerica.com](http://www.lutzjescoamerica.com)

East Asia  
**Lutz-Jesco East Asia Sdn Bhd**  
6 Jalan Saudagar U1/16  
Hicom Glenmarie Industrial Park  
40150 Shah Alam/ Selangor  
Malaysia

Tel.: +603 55692322  
Fax: +603 55691322

E-mail: [info@lutz-jescoasia.com](mailto:info@lutz-jescoasia.com)  
Website: [www.lutz-jescoasia.com](http://www.lutz-jescoasia.com)

Middle East  
**Lutz-Jesco Middle East FZE**  
P.O. Box 9614  
SAIF-Free Zone Center  
Sharjah  
UAE

Tel.: +971 6 5572205  
Fax: +971 6 5572230

E-mail: [info@jescome.com](mailto:info@jescome.com)  
Website: [www.jescome.com](http://www.jescome.com)

