



Sensor technology

Lutz-Jesco GmbH

safety is our concern

Measuring cell for the measurement of disinfection in water



Sensor type	CS120 - Pt/Cu	CS120 - Pt/Ag	DMZ3*	DMZ3.1
Measuring unit	all oxidising ions	all oxidising ions	all oxidising ions	all oxidising ions
Part number	23722968	23732271	44302002	44302006
Applications	swimming pool water, drinking water, process water	swimming pool water, drinking water, process water, salt water		
Measuring range	0 – 20 mg/l Cl ₂	0 – 20 mg/l Cl ₂	0 – 10 mg/l Cl ₂	0 – 15 mg/l Cl ₂
Transfer/slope	20 – 30 µA / mg/l			
Electrolyte	Sample water			
Electrical connection	Free wire end			N attachment head
Hydraulic connections	G5/8 mm		hose 6/8mm	
Pressure range	0–6 bar			
Flow rate	40–50 l/h		30 l/h	
Measuring principle	Amperometric open 2-electrode measuring cell		amperometric 3-electrode measuring cell with potentiostatic control	

Can be used for water sampling station:				
EASYPRO 1	•	•	-	•
EASYPRO 2	-	-	-	•
EASYPRO 3	-	-	-	•
EASYPRO 4	-	-	-	•
EASYPRO MB-C	-	-	-	•
EASYPRO ME-C	-	-	-	-
EASYPRO MC-C	-	-	-	•
EASYPRO MD-C	-	-	-	-
EASYPRO MP-C	-	-	-	•
EASYPRO MK-C	-	-	-	•
EASYPRO MG-C	-	-	-	-
EASYPRO SMART CPL	-	•	-	-
EASYPRO SMART CP	•	•	-	-
EASYPRO SMART RP	-	-	-	-
EASYPRO COMPACT	-	-	-	•
EASYPRO 1 CS	•	•	-	-
EASYPRO 1 PH	-	-	-	-
EASYPRO 1 RD	-	-	-	-
EASYPRO 1 CD	-	-	-	-
EASYPRO 1 CH	-	-	-	-
EASYPRO 1 LF	-	-	-	-
EASYPRO 1 GC	-	-	-	-
EASYPRO 1 DO	-	-	-	-
EASYPRO 1 TR	-	-	-	-

*Available as a spare part for: EASYPRO LB-C, LC-C, LP-C and LK-C, as well as EASYPRO CD and EASYPRO CP

Measuring cell for the measurement of disinfection in water



Sensor type	Cl 4.2	Cl 4.2	Cl 4.2	Cl 4.2
Measuring unit	free chlorine	free chlorine	free chlorine	free chlorine
Part number	23700613	23700608	23700614	23700616
Applications	swimming pool water, drinking water, process water	swimming pool water, drinking water, process water, salt water	swimming pool water, drinking water	
Measuring range	0 – 0.5 mg/l Cl ₂	0 – 2 mg/l Cl ₂	0 – 5 mg/l Cl ₂	0 – 10 mg/l Cl ₂
Transfer/slope	4 – 20 mA			
Electrolyte	Diaphragm cap with electrolyte			
Connection	Free wire end			
Pressure range	0–0.5 bar			
Flow rate	30 l/h			
Measuring principle	amperometric membrane-covered measuring cell			

Can be used for water sampling station:

EASYPRO 1	•	•	•	•
EASYPRO 2	•	•	•	•
EASYPRO 3	•	•	•	•
EASYPRO 4	•	•	•	•
EASYPRO MB-C	-	-	-	-
EASYPRO ME-C	-	-	-	-
EASYPRO MC-C	-	-	-	-
EASYPRO MD-C	•	•	•	•
EASYPRO MP-C	-	-	-	-
EASYPRO MK-C	-	-	-	-
EASYPRO MG-C	•	•	•	•
EASYPRO SMART CPL	-	-	-	-
EASYPRO SMART CP	-	-	-	-
EASYPRO SMART RP	-	-	-	-
EASYPRO COMPACT	-	-	-	-
EASYPRO 1 CS	-	-	-	-
EASYPRO 1 PH	-	-	-	-
EASYPRO 1 RD	-	-	-	-
EASYPRO 1 CD	-	-	-	-
EASYPRO 1 CH	•	•	•	•
EASYPRO 1 LF	-	-	-	-
EASYPRO 1 GC	-	-	-	-
EASYPRO 1 DO	-	-	-	-
EASYPRO 1 TR	-	-	-	-

Measuring cell for the measurement of disinfection in water



Sensor type	CD 4.2	CD 4.2	GCM	GCM	GCM
Measuring unit	Chlorine dioxide		Total chlorine		
Part number	23700604	23700605	23700751	23700752	23700753
Applications	drinking water, process water	drinking water, rinsing water, process water	swimming pool water, drinking water, process water		
Measuring range	0 – 0,5 mg/l ClO ₂	0 – 2 mg/l ClO ₂	0 – 2 mg/l Cl _{total}	0 – 5 mg/l Cl _{total}	0 – 10 mg/l Cl _{total}
Transfer/slope	4 – 20 mA				
Electrolyte	Diaphragm cap with electrolyte				
Connection	Free wire end				
Pressure range	0–0.5 bar		0–1 bar		
Flow rate	30 l/h				
Measuring principle	amperometric membrane-covered measuring cell				
Can be used for water sampling station:					
EASYPRO 1	•	•	•	•	•
EASYPRO 2	•	•	•	•	•
EASYPRO 3	•	•	•	•	•
EASYPRO 4	•	•	•	•	•
EASYPRO MB-C	-	-	-	-	-
EASYPRO ME-C	-	-	-	-	-
EASYPRO MC-C	-	-	-	-	-
EASYPRO MD-C	-	-	-	-	-
EASYPRO MP-C	-	-	•	•	•
EASYPRO MK-C	-	-	-	-	-
EASYPRO MG-C	-	-	•	•	•
EASYPRO SMART CPL	-	-	-	-	-
EASYPRO SMART CP	-	-	-	-	-
EASYPRO SMART RP	-	-	-	-	-
EASYPRO COMPACT	-	-	-	-	-
EASYPRO 1 CS	-	-	-	-	-
EASYPRO 1 PH	-	-	-	-	-
EASYPRO 1 RD	-	-	-	-	-
EASYPRO 1 CD	•	•	-	-	-
EASYPRO 1 CH	-	-	-	-	-
EASYPRO 1 LF	-	-	-	-	-
EASYPRO 1 GC	-	-	•	•	•
EASYPRO 1 DO	-	-	-	-	-
EASYPRO 1 TR	-	-	-	-	-

Measuring cell for the measurement of disinfection in water



Sensor type	WP7	BR 1	BR 1	MST 1	P10
Measuring unit	Hydrogen peroxide	free bromine	free bromine	Chlorite	Peracetic acid
Part number	23700615	23700618	23700619	23700625	23700631
Applications	Process water			swimming pool water, drinking water, process water	process water, salt water
Measuring range	0.5 – 200 mg/l	0 – 2 mg/l	0 – 5 mg/l	0.5 – 2 mg/l	0.1 – 20 mg/l
Transfer/slope	4 – 20 mA				
Electrolyte	Diaphragm cap with electrolyte				
Connection	Free wire end				
Pressure range	0–0.5 bar				
Flow rate	30 l/h				
Measuring principle	Membrane-covered measuring cell				
Can be used for water sampling station:					
EASYPRO 1	•	•	•	•	•
EASYPRO 2	•	•	•	•	•
EASYPRO 3	•	•	•	•	•
EASYPRO 4	•	•	•	•	•
EASYPRO MB-C	-	-	-	-	-
EASYPRO ME-C	-	-	-	-	-
EASYPRO MC-C	-	-	-	-	-
EASYPRO MD-C	-	-	-	-	-
EASYPRO MP-C	-	-	-	-	-
EASYPRO MK-C	-	-	-	-	-
EASYPRO MG-C	-	-	-	-	-
EASYPRO SMART CPL	-	-	-	-	-
EASYPRO SMART CP	-	-	-	-	-
EASYPRO SMART RP	-	-	-	-	-
EASYPRO COMPACT	-	-	-	-	-



Measuring cell for measuring pH value



Sensor type	PE110	PE110	PE110	PE110
Part number	44101001	44101002	44101003	44101004
Applications	Drinking water Process water, light soiling warm water	Drinking water Process water heavy soiling warm water	Boiler water Drinking water	Swimming pool water Drinking water
Measuring range	0 – 14 pH			2 – 12 pH
Transfer/slope	52 – 59 mV / pH value			
Electrolyte	KCl (Gel)		KCl (liquid)	KCl (Gel)
Connection	N attachment head with screw-in thread PG 13.5			
Pressure range	0–6 bar		max. 6 bar with pressure cap	0–6 bar
Temperature range	0 – 80 °C	0 – 130 °C	0 – 60 °C	0 – 50 °C
Installation length	120 mm		180 mm	120 mm
Shaft diameter	approx. 12mm			
Measuring principle	pH single-rod measuring cell			

Can be used for water sampling station:

EASYPRO 1	•	•	•	•
EASYPRO 2	•	•	•	•
EASYPRO 3	•	•	•	•
EASYPRO 4	•	•	•	•
EASYPRO MB-C	•	-	-	•
EASYPRO ME-C	•	-	-	•
EASYPRO MC-C	•	-	-	•
EASYPRO MD-C	•	-	-	•
EASYPRO MP-C	•	-	-	•
EASYPRO MK-C	•	-	-	•
EASYPRO MG-C	•	-	-	•
EASYPRO SMART CPL	•	-	-	•
EASYPRO SMART CP	•	-	-	•
EASYPRO SMART RP	•	-	-	•
EASYPRO COMPACT	-	-	-	•
EASYPRO 1 CS	-	-	-	-
EASYPRO 1 PH	•	•	•	•
EASYPRO 1 RD	-	-	-	-
EASYPRO 1 CD	-	-	-	-
EASYPRO 1 CH	-	-	-	-
EASYPRO 1 LF	-	-	-	-
EASYPRO 1 GC	-	-	-	-
EASYPRO 1 DO	-	-	-	-
EASYPRO 1 TR	-	-	-	-

Measuring cells for measuring the Redox value



Sensor type	ME110	ME110	ME110	ME110
Part number	44102011	44102013	44102014	44102019
Applications	Swimming pool water Process water, light soiling	Heavily contaminated process water	Boiler water	Salty waters
Measuring range	0 – 1000 mV			
Electrolyte	KCl (Gel)		KCl (liquid)	KCl (Gel)
Connection	N attachment head with screw-in thread PG 13.5			
Pressure range	0–6 bar			
Temperature range	0 – 80 °C			0 – 50 °C
Installation length	120 mm			
Shaft diameter	approx. 12mm			
Measuring principle	Redox single-rod measuring cell			
Can be used for water sampling station:				
EASYPRO 1	•	•	•	•
EASYPRO 2	•	•	•	•
EASYPRO 3	•	•	•	•
EASYPRO 4	•	•	•	•
EASYPRO MB-C	-	-	-	-
EASYPRO ME-C	•	-	-	•
EASYPRO MC-C	•	-	-	•
EASYPRO MD-C	•	-	-	•
EASYPRO MP-C	•	-	-	•
EASYPRO MK-C	•	-	-	•
EASYPRO MG-C	•	-	-	•
EASYPRO SMART CPL	-	-	-	-
EASYPRO SMART CP	-	-	-	-
EASYPRO SMART RP	•	-	-	•
EASYPRO COMPACT	•	-	-	-
EASYPRO 1 CS	-	-	-	-
EASYPRO 1 PH	-	-	-	-
EASYPRO 1 RD	•	•	•	•
EASYPRO 1 CD	-	-	-	-
EASYPRO 1 CH	-	-	-	-
EASYPRO 1 LF	-	-	-	-
EASYPRO 1 GC	-	-	-	-
EASYPRO 1 DO	-	-	-	-
EASYPRO 1 TR	-	-	-	-

Further measuring cells

**Conductivity****Dissolved oxygen****Turbidity****Turbidity**

Sensor type	LE110	DO20	TR10	TR100
Part number	41100044	44305003	44305000	44305001
Applications	swimming pool water, drinking water, salt water	swimming pool water, drinking water, process water		
Measuring range	0 – 100 mS/cm	0 – 20 mg/l	0 – 10 NTU	0 – 100 NTU
Transfer/slope		approx. 1 mA/(mg/l)	approx. 0.6 mA/NTU	approx. 0.06 mA/NTU
Connection	M12 4-pin	Fixed cable 5 m	Fixed cable 10 m	
Pressure range	0–6 bar	0–5 bar	0–4 bar	
Temperature range	0 – 60 °C	0 – 50 °C		
Installation length	120 mm			
Shaft diameter	12 mm	25 mm	42 mm	
Measuring principle	Conductive two-electrode measuring cell	optical membrane-covered measuring cell		

Can be used for water sampling station:

EASYPRO 1	•	•	-	-
EASYPRO 2	•	•	-	-
EASYPRO 3	•	•	-	-
EASYPRO 4	•	•	-	-
EASYPRO MB-C	-	-	-	-
EASYPRO ME-C	-	-	-	-
EASYPRO MC-C	-	-	-	-
EASYPRO MD-C	-	-	-	-
EASYPRO MP-C	-	-	-	-
EASYPRO MK-C	•	-	-	-
EASYPRO MG-C	-	-	-	-
EASYPRO SMART CPL	•	-	-	-
EASYPRO SMART CP	-	-	-	-
EASYPRO SMART RP	-	-	-	-
EASYPRO COMPACT	-	-	-	-
EASYPRO 1 CS	-	-	-	-
EASYPRO 1 PH	-	-	-	-
EASYPRO 1 RD	-	-	-	-
EASYPRO 1 CD	-	-	-	-
EASYPRO 1 CH	-	-	-	-
EASYPRO 1 LF	•	-	-	-
EASYPRO 1 GC	-	-	-	-
EASYPRO 1 DO	-	•	-	-
EASYPRO 1 TR	-	-	•	•

Sensors for measuring the temperature



Sensors for measuring the temperature	TE110	TE110	
Part number	41100021	411000022	41000301
Applications	swimming pool water, process water		swimming pool water, process water, electrolytic cells
Measurement resistance	100 ohms		
Connection	N attachment head with screw-in thread PG 13.5	Cable 2.5 m long	M12 4-pin + 5 m cable
Pressure range	0–6 bar	0–5 bar	0–10 bar
Temperature range	0 – 150 °C	0 – 80 °C	-10 to +180
Sensor type	Pt100		
Installation length	120 mm	50 mm	14 mm
Shaft diameter	approx. 12mm	approx. 6mm	approx. 19 mm / process connection G1/4
Shaft material	Glass shaft	Metal protective pipe (stainless steel)	Titanium + FPM

Fittings for accepting the sensors

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 type	PRMZ	LMZ	DC111-2	DC111-3	DW111-3	DC111-DN20	DC111-DN25
Part number	44302004	44302007	37700	37701	37702	41100101	41100102
Version	PRMZ measuring cell fitting	LMZ measuring cell fitting	Throughflow fitting				
Number take-up electrodes	1		2	3		1	
Type of the electrodes	pH, redox single-rod measuring cells	Conductivity electrode	Single-rod measuring cells Conductivity measuring cells				
for connection	Screw-in thread PG 13.5						
Temperature	60 °C		40 °C				
Discharge	max. 6 bar					max. 10 bar at 20 °C	
Material	Luran		PMMA			PVC	
Can be shut-off	Cannot be shut-off						

Fittings for accepting the sensors



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



Fitting type	DW111-PP	DW111-PVDF	Throughflow fitting	TR10/TR100
Part number	41100115	41100116	37699	44305002
Version	Changeover device		Throughflow fitting	
Number take-up electrodes	1			
Type of the electrodes	pH or Redox single-rod measuring cells		Membrane-covered measuring cells	Turbidity sensor
Connection	3/4"		for hose 6/12 mm	hose 8/12mm
Temperature	max. 70 °C	max. 120 °C	max. 40 °C	max. 50 °C
Discharge	5 bar (at 50 °C)		depending on the measuring cell used	4 bar
Material	PP	PVDF	PMMA	PP black
Can be shut-off	Cannot be shut-off			

Sensor technology accessories

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 measuring cells 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.





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