

For measuring
pH/ORP,
conductivity or oxygen.
Digital or analog.

Sensors

MEMO SENS








Sensors











pH Sensors with Application-Specific Properties

pH sensors from Knick have been developed and optimized in close cooperation with users for a wide range of applications. Special glasses, a large variety of junctions (open, PTFE, ceramic, platinum), special reference systems, analog or, of course, digital with Memosens – Knick has the right sensor for every application.

Alpha glass	Medium impedance, universal glass, fluoride resistant
Sigma glass	Low impedance for low-temperature applications
Omega glass	High impedance for high-temperature applications, very low alkali error, CIP/SIP capable

Model	Measured value	Memosens	VarioPin	DIN coax	Temperature Rel. pressure	Electrolyte Junction	Measuring electrode	Special features / Applications
SE 515 	pH	•			-5 ... 80 °C 0 ... 4 bar	Viscous gel Ground glass	Sigma glass	Water, water treatment, surface water, drinking water
SE 554 	pH	•	•		0 ... 130 °C 0 ... 10 bar	Solid polymer Hole	Alpha glass	Industrial applications, dyes, precipitation reactions, polluted media
	pH/ORP	•					Alpha glass platinum	
SE 564 	ORP	•		•	0 ... 130 °C 0 ... 10 bar	Solid polymer Hole	Platinum	Industrial applications, dyes, precipitation reactions, polluted media

Model	Measured value	Memosens	VarioPin	DIN coax	Temperature Rel. pressure	Electrolyte Junction	Measuring electrode	Special features / Applications
 SE 555	pH	•	•	•	0 ... 135 °C -1 ... 6 bar	Viscous gel with internal pressure Ceramic	Omega glass	Fermentation, food and beverages, aggressive media, poisonous media, extreme pH values
	pH/ORP	•					Omega glass platinum	
 SE 565	ORP	•			0 ... 135 °C -1 ... 6 bar	Viscous gel with internal pressure Ceramic	Platinum	Fermentation, food and beverages, aggressive media, extreme pH values, electroplating
 SE 557	pH	•	•		-20 ... 100 °C -1 ... 6 bar	Liquid, refillable Ceramic	Alpha glass	All applications from ultrapure water to highly aggressive and blocking media
		•	•		0 ... 135 °C -1 ... 6 bar		Omega glass	
 SE 558	pH	•	•		-5 ... 100 °C -1 ... 3 bar	Viscous gel, KCl reservoir Ceramic 3x	Alpha glass	Boiler feedwater, condensate, ultrapure water, WFI (water for injection), cooling water, low-conductivity media
 SE 559	pH	•			-5 ... 100 °C 0 ... 6 bar	Solid polymer Ground glass	Alpha glass	Wastewater, industrial water treatment
 SE 560	pH	•			-20 ... 100 °C -1 ... 3 bar	Liquid, refillable Platinum	Alpha glass	Low-temperature applications, cooling brine, electroplating, low-conductivity media
		•			-20 ... 80 °C -1 ... 0.5 bar			
 SE 571	pH	•			-5 ... 130 °C 0 ... 16 bar	Viscous gel, KCl reservoir, silver ion trap PTFE ring	Alpha glass	Applications with high pressures, high temperatures, heavily polluted media
 SE 546	pH	•			-15 ... 135 °C 0 ... 10 bar	Viscous gel, polymer Ceramic, double- chamber	ISFET	Glass-free sensor, hygienic and sterile applications, food industry, cosmetics
















Sensors



Conductivity Sensors for the Complete Range of Aqueous Solutions

The conductivity of aqueous solutions covers a range of more than eight decades, starting with 0.055 $\mu\text{S}/\text{cm}$ for ultrapure water and going as far as over 1,000 mS/cm for fully dissociated acids or bases. These very different requirements are fulfilled by the special Knick sensors: Depending on the application, they come as two- or four-electrode sensors or toroidal sensors. All sensors are equipped with a temperature detector for automatic temperature compensation.

Model	Principle	Memosens	VarioPin	M12 digital	Plug-in connection	Fixed cable	Measuring range	Temperature Pressure	Materials	Process adaptation	Special features / Applications
SE 604 	2 electrodes, coaxial				•		0.001 ... 1000 $\mu\text{S}/\text{cm}$	-30 ... 120 °C Max. 25 bar	1.4571	G 1"	Boiler feed water, feed water, cooling water, water vapor cycle, pure water, condenser monitoring
		•					0.001 ... 500 $\mu\text{S}/\text{cm}$	-20 ... 120 °C Max. 25 bar			
SE 605H 	2 electrodes, coaxial	•					0.001 ... 600 $\mu\text{S}/\text{cm}$	-20 ... 135 °C Max. 25 bar	1.4435	Ingold socket (25 mm), clamp	Ultrapure water, WFI (water for injection), pharmaceutical and food industry, biotechnology
SE 610 	2 electrodes, coaxial					•	0.1 ... 1000 $\mu\text{S}/\text{cm}$	10 ... 90 °C Max. 6 bar	1.4571	G 1/2"	Drinking water, industrial water, surface water, ion exchangers and reverse osmosis plants, rinse water, seawater desalination plants
SE 620 	2 electrodes, coaxial	•					0.001 ... 50 $\mu\text{S}/\text{cm}$	0 ... 135 °C Max. 16 bar	1.4435	Clamp	Pure and ultrapure water, WFI (water for injection), food, ion exchangers, reverse osmosis plants; also chip manufacturing

Model	Principle	Memosens	VarioPin	M12 digital	Plug-in connection	Fixed cable	Measuring range	Temperature Pressure	Materials	Process adaptation	Special features / Applications
SE 615 	2 electrodes	•					0.01 ... 20 mS/cm	-5 ... 80 °C Max. 4 bar	Polysulfone, graphite	Pg 13.5	Water and wastewater treatment
SE 630 	2 electrodes	•		•			0.005 ... 50 mS/cm	-20 ... 135 °C Max. 16 bar	PES / graphite	G 1"	Water, polluted wastewater, process solutions with medium conductivities, also corrosive media
		•				0.01 ... 20 mS/cm					
SE 600 	4 electrodes				•		0.0005 ... 600 mS/cm	Max. 210 °C Max. 25 bar	AISI 316 L, PTFE	1" weld-in socket	Special chemical processes; condenser monitoring, also for heavily polluted (e.g., fibrous) media, pulp production
SE 603 	4 electrodes				•		0.005 ... 600 mS/cm	Max. 120 °C Max. 12 bar	PTFE, platinum	Special flange	Pure water up to high conductivities; highly corrosive processes, bleaching liquors, oxidizing and heavily polluted media, condenser leakage monitoring
SE 655 	Inductive				•		0.002 ... 2000 mS/cm	-20 ... 125 °C Max. 20 bar	PEEK	G 3/4"	Concentration measurement of acids and bases, fouling media, salt spring, heavily polluted wastewaters, cooling water blowdown
SE 656 	Inductive				•		0.002 ... 2000 mS/cm	-20 ... 125 °C Max. 16 bar	PFA	G 3/4"	Measurement of highly concentrated acids and bases, hydrofluoric acid, nitric acid, concentrated sulfuric acid, oleum, strongly oxidizing media
SE 660 	Inductive				•		0.02 ... 2000 mS/cm	0 ... 60 °C Max. 10 bar	PP	Coupling nut G 1 1/2"	Fresh water and wastewater treatment, monitoring of salts and alkaline solutions, general concentration monitoring, tanneries, washers, automotive engineering, rinsing processes
SE 670 	Inductive			•			0.02 ... 2000 mS/cm	0 ... 60 °C Max. 10 bar	PP	Coupling nut, dairy pipe, adaptation to flow-through cells	Fresh water and wastewater treatment, monitoring of salts and alkaline solutions, general concentration monitoring, tanneries, caustic treatment, washers, rinsing processes
SE 680 	Inductive			•			0.002 ... 2000 mS/cm	-10 ... 125 °C Max. 10 bar	PEEK	Varivent, clamp, dairy pipe, adaptation to flow-through cells	Electroplating, CIP monitoring in the beverage industry, breweries, bottling plants, pharmaceuticals, monitoring concentrations of salt solutions, alkalis and acids, chemistry







Sensors



Oxygen Sensors with Low Maintenance

Robust design, durable materials and modular structure:
 Oxygen sensors from Knick are characterized by a high level of process safety. The membrane of the amperometric sensors is steel-mesh-reinforced and PTFE-coated and can be replaced quickly and easily, as can the electrode system with its complete inner body. The product portfolio includes sensors for trace measurements and low-maintenance digital optical oxygen sensors.

Model	Principle	Memosens	VarioPin	M12 digital	Measuring range (resolution)	Temperature Rel. pressure	Materials	Special features / Applications
SE 706 	Amperometric	•	•		0 ... 50 mg/l (6 µg/l)	0 ... 80 °C -0.8 ... 5 bar	1.4404	Biotechnology, pharmaceutical industry, fermentation, various fields of analytical chemistry
SE 707 	Amperometric	•	•		0 ... 50 mg/l (1 µg/l)	0 ... 80 °C -0.8 ... 5 bar	1.4404	Beverage filling (e.g., milk, beer) measurement in boiler feed water
SE 715 	Amperometric	•			0 ... 20 mg/l (20 µg/l)	-5 ... 45 °C Max. 3 bar	Polysulfone Stainless steel	Water, wastewater, aeration, ventilation control, fish farming, aquariums
SE 740 	Optical, luminescence quenching			•	0 ... 25 mg/l (4 µg/l)	-10 ... 85 °C -1 ... 12 bar	1.4435	Food, pharmaceuticals, fermentation and process, condensate containing dissolved H ₂

Maintenance work
when using
Memosens sensors



Maintenance work
when using
conventional sensors



Memosens

Interference-free coupling

The Memosens inductive sensor connector system transfers both energy and data without contact between electrochemical sensors and analyzers.

Pre-calibrated sensors

By using pre-calibrated sensors, Memosens ensures maximum availability and lower maintenance requirements at the point of measurement.

Intelligent diagnostics

Memosens allows saving and analyzing process-related data directly in the sensor (e.g., operating time, wear and tear, CIP/SIP counter).

Memosens.

The benefits at a glance:

- Plug & Measure – Sensor replacement in seconds with pre-calibrated sensors
- Simple and safe plugging with bayonet coupling
- Contactless, digital data transfer
- All key data available in the sensor
- Longer sensor service life
- Error-free measurements, even in the toughest conditions
- Just one cable system for all sensors
- Measured values not influenced by excessively long cables



www.knick.de/memosens



Interface Technology

Indicators

Process Analytics

Portables

Laboratory

Sensors

Fittings

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