

Radiometer pH Electrodes

compatible with sensION+



Applications	General purpose	General purpose	General purpose	General purpose	General purpose	General purpose	Alkaline samples	Alkaline samples	Surface measurement	Soils	Cl sensitive samples	Viscous samples	High KCl flow	General purpose	General purpose
Model	pHC2001	pHC2002	pHC2003	pHC2401	pHC2005	pHC2085	pHC2011	pHC2015	pHC2441	pHC2051	pHC2501	pHC2601	pHC2701	pHC3001	pHC3081
Probe part no.	E16M313	E16M315	E16M334	E16M400	E16M500	E16M345	E16M317	E16M318	E16M320	E16M319	E16M321	E16M322	E16M323	E16M300 E16M301*	E16M344
Combination probe	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Reference system	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod	Red Rod
Liquid junction	Porous pin	Porous pin	Porous pin	Annular ring	Porous pin	Porous pin	Porous pin	Porous pin	Annular ring	Porous pin	Double/Porous	Sleeve	Annular ring	Porous pin	Porous pin
pH range	0 - 12	0 - 12	0 - 12	0 - 12	0 - 12	0 - 12	0 - 14	0 - 14	0 - 12	0 - 12	0 - 12	0 - 12	0 - 12	0 - 12	0 - 12
Temperature included	NO	NO	NO	NO	NO	YES	NO	NO	NO	NO	NO	NO	NO	NO	YES
Temperature range	-10 - 100°C	-10 - 100°C	-10 - 100°C	-10 - 100°C	-10 - 100°C	-10 - 100°C	0 - 100°C	0 - 100°C	-10 - 100°C	-10 - 100°C	-10 - 100°C	-10 - 100°C	-10 - 100°C	0 - 80°C	0 - 80°C
Diameter	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm
Minimum sample depth	18 mm	18 mm	18 mm	14 mm	14 mm	14 mm	18 mm	14 mm	flat	18 mm	18 mm	18 mm	14 mm	18 mm	18 mm
Special features	—	Long	Long	—	Robust	Temp. sensor	—	Robust	—	—	—	—	—	—	Temp. sensor
Salt-bridge solution	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	Sat. KCl	3 M KCl + sat. AgCl	3 M KCl + sat. AgCl
Recommended Reference Electrode	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—



Applications	General purpose	General purpose	General purpose	Alkaline samples	Penetration	Microsamples	Microsamples	General-purpose Gel-filled	Penetration Gel-filled	Microsamples	General-purpose	Alkaline samples	General purpose	Alkaline samples	Alkaline samples
Model	pHC3006	pHC3006L	pHC3005	pHC3011	pHC3031	XC161	pHC3359	pHC3105	pHC3131	pHG200	pHG201	pHG211	pHG301	pHG311	XG250
Probe part no.	E16M306*	E16M307*	E16M302 E16M303*	E16M324*	E16M325*	B10C161*	E16M343	E16M308*	E16M328*	E11M002	E11M006	E11M003	E11M001*	E11M004*	B10B250*
Combination probe	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO
Reference system	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Red Rod	Red Rod	Red Rod	Ag/AgCl	Ag/AgCl	Ag/AgCl
Liquid junction	Porous pin	Porous pin	Porous pin	Porous pin	Porous pin	Porous pin	Fibre	Opening	Opening	—	—	—	—	—	—
pH range	0 - 12	0 - 12	0 - 12	0 - 14	0 - 12	0 - 12	0 - 12	2 - 12	2 - 12	0 - 12	0 - 12	0 - 14	0 - 12	0 - 14	0 - 14
Temperature included	YES	YES	YES	YES	YES	YES	YES	YES	YES	NO	NO	NO	NO	NO	NO
Temperature range	0 - 80°C	0 - 80°C	0 - 80°C	0 - 80°C	0 - 80°C	0 - 80°C	0 - 80°C	0 - 80°C	0 - 80°C	10 - 100°C	-10 - 100°C	10 - 100°C	0 - 80°C	0 - 80°C	0 - 80°C
Lower diameter	6.5 mm	6.5 mm	12 mm	12 mm	8 mm	5 mm	3 mm	12 mm	8 mm	4 mm	7.5 mm	7.5 mm	12 mm	12 mm	10 mm**
Minimum sample depth	14 mm	14 mm	12 mm	18 mm	14 mm	8 mm	2 mm	18 mm	14 mm	4 mm	7 mm	7 mm	12 mm	12 mm	12 mm
Special features	Small Ø	Long, small Ø	Robust	—	—	—	—	Robust	Solid gel	—	—	—	—	—	—
Salt-bridge solution	3 M KCl + sat. AgCl	3 M KCl + sat. AgCl	3 M KCl + sat. AgCl	3 M KCl + sat. AgCl	3 M KCl + sat. AgCl	3 M KCl + sat. AgCl	3 M KCl + sat. AgCl	3 M KCl + sat. AgCl	Solid gel (3 M KCl)	—	—	—	—	—	—
Recommended Reference Electrode	—	—	—	—	—	—	—	—	—	REF200	REF201/251/261 REF201 for general use	REF201/251/261 REF201 for general use	REF421 REF321	REF421 REF321	XR100

*Screw cap electrode. Requires CL114 connection cable (part no. A94L114) for sensION+ meter compatibility

**under ground joint

Radiometer Reference Electrodes

compatible with sensION+



Applications	Micro-samples	General purpose	General purpose	General purpose	Non-aqueous media	Voltammetry	Impedance
Model	REF200	REF201	REF251	REF321	REF361	XR300	XR820
Probe part no.	E21M008	E21M009	E21M001	E21M002*	E21M003	B20B300*	B20C820*
Reference system	Red Rod	Red Rod	Red Rod	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl
Liquid junction	Porous pin	Porous pin	Porous pin / porous pin	Porous pin	Glass sleeve	Porous pin	Porous pin / fibre
Temperature range	-10 - 100°C	-10 - 100°C	-10 - 100°C	-5 - 80°C	-5 - 80°C	-5 - 80°C	-5 - 80°C
Lower diameter	4 mm	7.5 mm	12 mm	8 mm	12 mm	8 mm	8 mm
Special features	For use with pHG200	—	Double junction	—	—	—	—
Salt-bridge solution	Sat. KCl	Sat. KCl	Sat. KCl	3 M KCl with sat. AgCl	3 M KCl with sat. AgCl	Sat. KCl + sat. AgCl	Sat. KCl + sat. AgCl upper res.

*Screw cap electrode. Requires CL111 connection cable (part no. A94L111) for sensION+ meter compatibility

Radiometer Temperature Sensors

compatible with sensION+



Model	T203
Probe part no.	E51M008
Temperature range	-10 - 105°C
Diameter	7.5 mm
Material	Glass

Radiometer Metal Electrodes

compatible with *sensiON+*



Applications	General purpose	Redox meas.	Silver halides titration
Model	M231Pt	MC3051Pt	M291Ag
Probe part no.	E31M002*	E31M003*	E34M002*
Combination probe	NO	YES	NO
Reference system	—	Ag/AgCl	—
Liquid junction	—	Porous pin	—
Sensing element	Platinum wire ϕ 1 mm	Platinum ring	Silver rod
Temperature range	-10 - 100°C	0 - 80°C	0 - 80°C
Lower diameter	8 mm	12 mm	8 mm
Salt-bridge solution	—	3 M KCl with sat. AgCl	—

*Screw cap electrode. Requires CL114 connection cable (part no. A94L114) for *sensiON+* meter compatibility

Radiometer Ion Selective Electrodes

compatible with *sensiON+*



Ion Species	Br ⁻	Ca ²⁺	Cl ⁻	Cl ⁻	CN ⁻	Cu ²⁺	F ⁻	F ⁻	I ⁻	K ⁺	Na ⁺	NH ₄ ⁺	NO ₂ ⁻	Pb ²⁺	S(Ag ⁺) [*]
Model	ISE25Br	ISE25Ca	ISE25Cl	ISE/HS25Cl	ISE25CN	ISE25Cu	ISE25F	ISEC301F	ISE25I	ISE25K	ISE21Na	ISE25NH4	ISE25NO3	ISE25Pb	ISE25S
Probe part no.	E41M001	E41M002	E41M003	E41M004	E41M005	E41M006	E41M007	E41M017	E41M008	E41M009	E41M010	E41M013	E41M014	E41M015	E41M016
Combination probe															
Concentration range (M)	10 ⁻⁶ - 10 ⁰	2 x 10 ⁻⁶ - 10 ⁰	5 x 10 ⁻⁵ - 10 ⁰	10 ⁻⁶ - 10 ⁰	5 x 10 ⁻⁷ - 10 ⁻³	10 ⁻⁶ - 10 ⁰	5 x 10 ⁻⁷ - 10 ⁰	5 x 10 ⁻⁷ - 10 ⁰	10 ⁻⁶ - 10 ⁻¹	2 x 10 ⁻⁶ - 10 ⁰	2 x 10 ⁻⁶ - 10 ⁰	3 x 10 ⁻⁶ - 10 ⁰	3 x 10 ⁻⁶ - 10 ⁰	10 ⁻⁶ - 10 ⁰	5 x 10 ⁻⁷ - 10 ⁰
Concentration range (ppm)	0.08 - 80000	0.1 - 40000	1.8 - 35000	0.04 - 35000	0.013 - 25	0.06 - 60000	0.01 - 20000	0.01 - 20000	0.13 - 13000	0.08 - 40000	0.04 - 20000	0.06 - 20000	0.2 - 60000	0.2 - 200000	0.02 - 30000
Temperature range	0 - 60°C	0 - 50°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 60°C	0 - 50°C	0 - 60°C	0 - 50°C	0 - 70°C	0 - 50°C	0 - 50°C	0 - 60°C	0 - 60°C
Diameter	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	7 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm
pH range	2 - 14	4 - 12	2 - 14	2 - 4	9 - 14	0 - 14	5 - 11	5 - 7	2 - 12	2 - 12	5 - 12	3 - 8	3 - 10	3 - 7	11 - 14
Sensor type	Solid-state	PVC membrane	Solid-state	Solid-state	Solid-state	Solid-state	Solid-state	Solid-state	Solid-state	PVC membrane	Glass	PVC membrane	PVC membrane	Solid-state	Solid-state
Interfering ions	I ⁻ , S ²⁻ , CN ⁻ , SCN ⁻	Zn ²⁺ , Pb ²⁺	I ⁻ , CN ⁻ , Br ⁻ , SCN ⁻	I ⁻ , CN ⁻ , Br ⁻ , SCN ⁻	I ⁻ , Br ⁻ , S ²⁻	Hg ₂ , Ag ⁺ , Cl ⁻	OH ⁻	OH ⁻	CN ⁻ , Hg ₂ ⁺ , Br ⁻ , SCN ⁻	NH ₄ ⁺ , Rb ⁺	Li ⁺ , NH ₄ ⁺ , Rb ⁺ , Ag ⁺	K ⁺	Cl ⁻ , Br ⁻ , NO ₂ ⁻	Hg ₂ ⁺ , Cu ²⁺ , Ag ⁺	Precipitated cations forming complexes with sulphides
Recommended reference electrodes	REF251	REF201 REF251 REF451	REF251 REF451 REF601	REF251 REF451 REF601	REF201 REF251 REF451	REF201 REF251 REF451	REF201 REF251 REF451	—	REF201 REF251 REF451	REF201 REF251 REF451	REF251 REF451	REF251 REF451	REF201 REF251 REF451	REF251 REF451	REF251 REF451
Inner solution	—	S41M001	—	—	—	—	—	—	—	S41M002	—	S41M003	S41M004	—	—
Membrane kit part no.	—	E91M001	—	—	—	—	—	—	—	E91M002	—	E91M003	E91M004	—	—

*Screw cap electrode. Requires CL114 connection cable (part no. A94L114) for *sensiON+* meter compatibility

Radiometer Conductivity Cells

compatible with sensION+



Applications	General purpose	General purpose	General purpose	General purpose	General purpose	Sample changer	Resistant media	Viscous Titration
Model	CDC536	CDC836T	CDC641T	CDC745-9	XE100	CDC741T	CDC267-9	CDC241-9
Probe part no.	E61M021	E61M020	E61M022	E61M013*	B60E100*	E61M023	E61M011*	E61M008*
Body material	Epoxy ¹	Epoxy ¹	Glass	Epoxy	Glass	Glass	Glass	Glass
Cell constant (cm⁻¹)	1.0	1.0	1.0	1.0	1.0	1.0	0.1	1.0
Number of poles	4	3	2	2	2	2	2	2
Platinised	NO	YES	YES	YES	YES	YES	NO	NO
Temperature included	YES	YES	YES	NO	NO	YES	NO	NO
Max. temperature	80°C	80°C	100°C	100°C	100°C	100°C	100°C	100°C
Diameter	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm	12 mm
Minimum sample depth	35 mm	35 mm	14 mm	14 mm	10 mm	10 mm	26 mm	10 mm

*Screw cap electrode. Requires CL143 connection cable (part no. A94L143) for sensION+ meter compatibility