

General Use Plastic and Glass pH and Reference Electrodes



Specifications

pH Range	0-14 (Na+ error at >12.3 pH)
Response	95% in 1 second (bulb-type only) 95% in 5 seconds (flat-type only)
Isopotential Point	pH 7.00 (0 mV)
Offset	+/- 0.20 pH
Span	97% of theoretical or higher

Fast—95 % response in less than one second (bulb-type only)

Combination or half cell designs

Single or double junction construction

Choose between sealed and re-fillable models

Choose between glass and plastic body models

Combination or Separate Electrodes?

Sensorex makes both separate and combination electrodes. The convenience of handling one combination electrode as compared to using separate pH and reference electrodes has been well established in laboratory and portable pH measurements. The price of Sensorex combination electrodes is much less than the total price of the separate electrodes. Individual half cell electrodes are used only for special purposes.

Glass or Plastic Body Electrodes?

Sensorex makes both body types and both provide the identical excellent pH measurement. Traditionally, pH electrodes have been made of all glass construction, but today's plastics allow pH electrodes to be constructed with sturdy and chemically resistant epoxy or premium ULTEM bodies. The recessed protected design of the Sensorex plastic body electrodes extends over the measuring surface, ensuring that the pH glass bulb is virtually unbreakable.

Single or Double Junction Reference?

Most pH measurements can be made with single junction reference electrodes. However, materials such as heavy metals, proteins and sulfides can precipitate at the junction. Double junction designs use a buffering salt such as KNO3 in the lower chamber contacting the sample, and preventing these reactions. They are also useful for pH measurement of tris buffers. Both combination or separate reference electrodes are available from Sensorex.



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How do I choose the appropriate laboratory electrode for my use?

OR: Select by electrode type you currently use:

- a) Combination pH or ORP
- b) Sealed or re-fillable reference
- c) Epoxy or glass body
- d) Dimension required Length and diameter (12mm dia x 150mm L is most common)
- e) Separate pH or ORP half-cell/separate reference half -cell

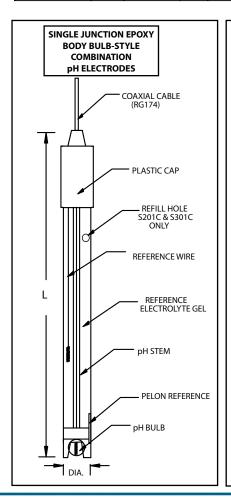
APPLICATION	SENSOREX PART NUMBER						
	Glass Body	Epoxy Body	pHASE				
Standard Lab use	SG201C	S200C	N/A				
Field use	Epoxy a better choice	S200CD	N/A				
Biological Samples, proteins,	SG201CIT - Best Choice SG360CD	S200CIT - Best Choice S350CD	S1021CD				
Fluoride in acidic conditions	Not available	S350CDHF S450CDHF	N/A				
Low ionic conditions	Not available	S200CD-LC	S1021CD*				
Viscous samples	SG360CD	S450CD	S1030CD				
Test tubes and small diameter containers	SG901C, SG900C SG900CIT(Calomel Free)	S900C, SG900CIT	N/A				
Tall flasks, deep reactors,	SG301C, SG300C SG300CIT(Calomel Free)	S300C, SG300CIT	N/A				
Meats, cheeses, jellies and other viscous foods	Not recommended	S450CD or S175CD Spear tip	N/A				
Varying temperatures from sample to sample	Not recommended	Not recommended	All pHASE				
High pH (up to 14pH)	Any model	Any model	Any model				
Mixed aqueous/organic solvents	SG201CD, SG360CD	Not recommended	SG1030CD SG1041CD				
Samples containing Heavy metals	SG200CD	S200CD	S1021CD				
Paints	Not recommended	S450CD	S1030CD				
Soil samples	Not recommended	S450CD	N/A				
Surface measurements (agar plates, electrophoresis gels,)	SG360CD	S350CD, S450CD	S1030CD				
Dairy product (milk, yogurt, cheese)	SG360CD	S350CD, S450CD	SG1041CD				
Photographic	SG200CD	S200CD	S1021CD SG1041CD				
Beer, wine and other liquors	SG201C	S200C	S1021CD				

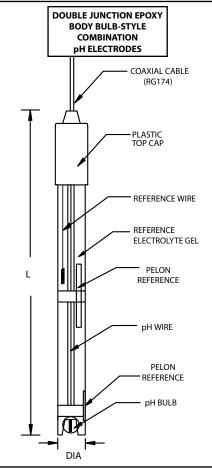
pHASE Electrode specs can be found on the pHASE Series Spec sheet.

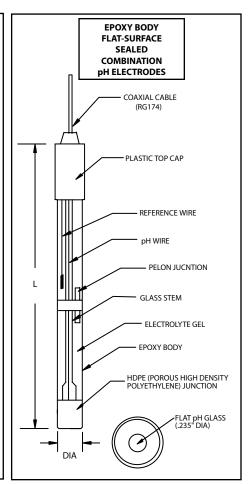


EPOXY BODY COMBINATION PH ELECTRODES

	SIZE					REF N		JUNCTION	REF	GLASS	
MODEL No.	Inches		mm		Sealed	Refillable	Single	Double	MATERIAL	SOLN	SHAPE
	dia	L	dia	L							
S900C	1/4	6	6	150	х		×		Pellon	3.5M KCI	Bulb
S100C	3/8	3.5	9.5	90	х		×		Pellon	3.5M KCI	Bulb
S120C	3/8	3.5	9.5	120	x		×		Pellon	3.5M KCI	Bulb
S700C	3/8	6	9.5	150	х		×		Pellon	3.5M KCI	Bulb
S300C	3/8	12	9.5	300	x		×		Pellon	3.5M KCI	Bulb
S301C	3/8	12	9.5	150		x	x		Pellon	3.5M KCI	Bulb
S300CD	3/8	12	9.5	300	х			×	Pellon	3.5M KCI	Bulb
S200C	1/2	6	12	150	x		×		Pellon	3.5M KCI	Bulb
S201C	1/2	6	12	150		х	×		Pellon	3.5M KCI	Bulb
S200CD	1/2	6	12	150	×			х	Pellon	3.5M KCI/ KNO ₃	Bulb
S350CD	1/2	6	12	150	х			Х	HDPE/ Pellon	3.5M KCI/ KNO ₃	Flat
S450C	9/16	4.5	15	115	х		×		HDPE/ Pellon	3.5M KCI	Flat
S450CD	9/16	4.5	15	115	Х			Х	HDPE/ Pellon	3.5M KCI	Flat



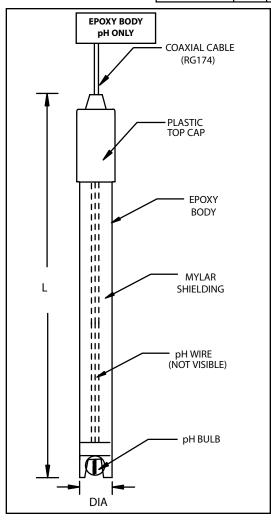


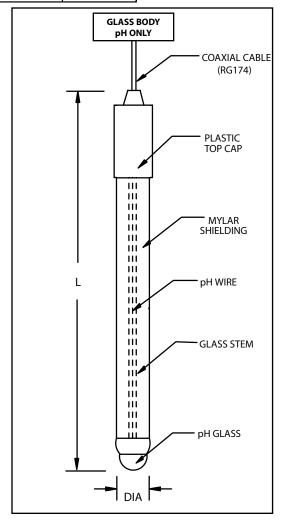




GLASS AND EPOXY BODY MEASURING pH HALF-CELL ELECTRODES

			SIZE			BODY		
	MODEL No.	Inches		mm		Glass	Ероху	
		dia	L	dia	L			
Obsolete 9/2009	SG900G	1/4	6	6	150	Х		
Obsolete 9/2009	SG700G	3/8	6	9.5	150	Х		
	S700G	3/8	6	9.5	150		Х	
	SG200G	1/2	6	12	150	х		
	S200G	1/2	6	12	150		Х	
Obsolete 9/2009	SG300G	3/8	12	9	300	Х		

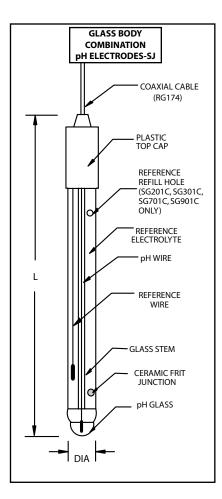


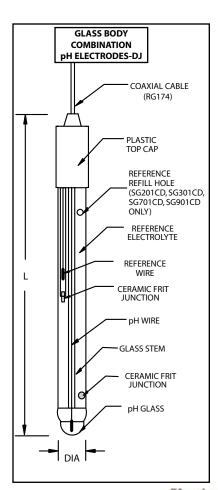


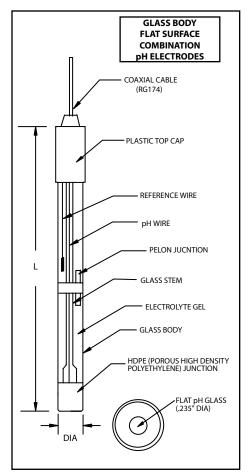


GLASS BODY COMBINATION PH ELECTRODES

SIZĘ		REFERENCE		REF N	REF No.		REF	GLASS			
MODEL No.	Inch	es	m	m	Sealed	Refillable	Single	Double	MATERIAL	SOLN	SHAPE
	dia	L	dia	L							
SG900C	1/4	6	6	150	×		×		Ceramic	3.5M KCI	Hemi
SG901C	1/4	6	6	150		х	X		Ceramic	3.5M KCI	Hemi
SG700C	3/8	6	9.5	150	× o	bsolete 9/200	9 ×		Ceramic	3.5M KCI	Hemi
SG701C	3/8	6	9.5	150		х	X		Ceramic	3.5M KCI	Hemi
SG300C	3/8	12	9.5	300	×		X		Ceramic	3.5M KCI	Hemi
SG301C	3/8	12	9.5	150		×	×		Ceramic	3.5M KCI	Hemi
SG300CD	3/8	12	9.5	300	×			х	Ceramic x2	3.5M KCI KNO ₃	Hemi
SG200C	1/2	6	12	150	×		×		Ceramic	3.5M KCI	Hemi
SG201C	1/2	6	12	150		х	X		Ceramic	3.5M KCI	Hemi
SG200CD	1/2	6	12	150	×			х	Ceramic x2	3.5M KCI/ KNO ₃	Hemi
SG360CD	1/2	6	12	150	Х			х	HDPE/ Pellon	3.5M KCI/ KNO ₃	Flat









All electrodes are supplied with 30 inch cable and a BNC connector. Many other optional connectors are available for an additional charge.



GLASS AND EPOXY BODY REFERENCE ELECTRODES

		SIZI			REFERI			No.	JUNCTION	REF	ВОЕ	
MODEL No.	Inch dia	es L	m dia	m L	Sealed	Refillable	Single	Double	MATERIAL	SOLN	TYP Glass	E Epoxy
SG900R	1/4	6	6	150	×	Obsolete 9	/2009		Ceramic	3.5M KCI	×	
SG901R	1/4	6	6	150		Obsolete 9.	/2009		Ceramic	3.5M KCI	×	
SG900RD	1/4	6	6	150	×	Obsolete 9	/2009	×	Ceramic x 2	3.5M KCI	×	
SG901R	1/4	6	6	150		Obsolete 9.	/2009		Ceramic	3.5M KCI	×	
S700R	3/8	6	9.5	150	×		×		Ceramic	3.5M KCI		×
S700RD	3/8	6	9.5	150		×	×		Ceramic x2	3.5M KCI/ KNO ₃		×
SG200R	1/2	6	12	150	×		×		Ceramic	3.5M KCI	×	
SG200RD	1/2	6	12	150	×			×	Ceramic x2	3.5M KCI KNO ₃	×	
SG201R	1/2	6	12	150		×	×		Ceramic	3.5M KCI	×	
SG201RD	1/2	6	12	150		×		×	Ceramic x2	3.5M KCI KNO ₃	×	
S200R	1/2	6	12	150	×		×		Ceramic	3.5M KCI		×
S201R	1/2	6	12	150		×	×		Ceramic	3.5M KCI		×
S200RD	1/2	6	12	150	×			×	Ceramic/Wood	3.5M KCI/ KNO ₃		×
S201RD	1/2	6	12	150		×		×	Ceramic/Wood	3.5M KCI/ KNO ₃		×

