

Orion pH Electrodes

Orion PerpHect®



Orion 8202BN
ROSS® Combination with glass body
Recommended Use: Precise pH determinations. The general purpose, top performance combination electrode. Ideal for Q.C. and research applications.
Orion # 8202BN (1)



Orion 8203BN
ROSS Combination with glass body, semi-micro
Recommended Use: Fits test tubes, measures samples as small as 0.2 mL. For use in clinical, pharmaceutical, and food labs, wherever sample size is a constraint.
Orion # 8203BN (1)



Orion 8235BN
ROSS Combination with epoxy body, flat surface
Recommended Use: pH of soft, moist surfaces both solid and semi-solid such as agar gel plates, meats, bread dough, and similar samples. Small samples in micro sample dish.
Orion # 8235BN (1)



Orion 8256BN
ROSS Combination with epoxy body
Recommended Use: General purpose when precise pH determination is required. Epoxy body for ruggedness and durability.
Orion # 8256BN (1)



Orion 8263BN
ROSS Combination with glass body, spear tip
Recommended Use: pH in semi-solid food material such as cheese, meat, fruit, bread, and other similar samples. Sample sizes to 100 µL.
Orion # 8263BN (1)



Orion 8272BN
ROSS Sure-Flow® Combination with glass body
Recommended Use: General purpose, superior performance ideal for dirty, difficult samples such as soils, sludges, colloids, viscous materials and organics.
Orion # 8272BN (1)
Detachable bulb guard (Orion 910005) included



Orion 9202BN
Combination with glass body
Recommended Use: General purpose pH for accurate Q.C. and research applications.
Orion # 9202BN (1)



Orion 9203BN
Combination with glass body, semi-micro
Recommended Use: Small samples, test tubes. Minimum sample volume 0.2-0.4 mL.
Orion # 9203BN (1)



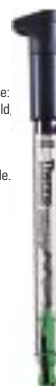
Orion 9206BN
Combination with epoxy body, non-refillable
Recommended Use: Routine pH for rugged use, schools, field and plant applications.
Orion # 9206BN (1)



Orion 9207BN
Epoxy-body, Triode™ 3-in-1 pH/ATC Probe, BNC/phono connectors, non-refillable
Recommended Use: Routine pH. Ideal for field or plant use. Portable, little or no maintenance needed.
Use with Orion PerpHect Meters and SensorLink® Systems.
Orion # 9207BN



Orion 9256BN
Combination with epoxy body
Recommended Use: Routine pH for field, school or lab use. Epoxy body for ruggedness and durability, refillable.
Orion # 9256BN (1)



Orion 9272BN
Glass-body Sure-Flow Combination pH
Recommended Use: General purpose, superior performance ideal for dirty, difficult samples such as soils, sludges, colloids, viscous materials and organics.
Orion # 9272BN (1)

Orion Standard



Orion 91-01
Ag/AgCl pH Half-Cell with glass body
Recommended Use: For accurate, reproducible results. Recommended general use electrode pair. Use with 90-01 Reference Electrode.
Orion # 9101BN (1)
910100 (2)
9101SC (3)
See also ROSS® 81-01 on page 4



Orion 91-02
Combination with glass body
Recommended Use: General purpose pH for accurate Q.C. and research work.
Orion # 9102BNWP (1)
910200 (2)
9102SC (3)
See also ROSS 81-02 on page 5



Orion 91-03
Combination with glass body, semi-micro
Recommended Use: Small samples, test tubes. Minimum sample volume 0.2-0.4 mL.
Orion # 9103BNWP (1)
910300 (2)
9103SC (3)
See also ROSS 81-03 on page 5



Orion 91-04
Combination with glass body, "hard nose" bulb
Recommended Use: For rugged, durable lab use.
Orion # 9104BNWP (1)
910400 (2)
9104SC (3)
See also ROSS 81-04 on page 5



Orion 91-07
Epoxy-Body, Triode™ 3-in-1 pH/ATC Probe. Non-refillable
Recommended Use: Routine pH. Ideal for field or plant use. Portable, little or no maintenance needed.
Orion # 9107BN (1) (4)
9107WP (6) (7) 1M cable
9107WL (6) (7) 6M cable
9107BNMMD (9) 1.5M cable
9107WMLMD (9) 6M cable



Orion 91-09
Epoxy-Body, Triode 3-in-1 pH/ATC Probe. Non-refillable
Recommended Use: Routine pH. Ideal for field or plant use. Portable, little or no maintenance needed.
Orion # 9109WP (5) (7) 1M cable
9109WL (5) (7) 6M cable



Orion 91-55/56
Combination with epoxy body
Recommended Use: Routine pH, for rugged use, for field, school, or lab use. Unbreakable body, refillable.
Orion # 915500 (2)
9156BNWP (1)
9156SC (3)
See also ROSS 81-55/56 on page 5



Orion 91-57
Epoxy-Body, Triode 3-in-1 pH/ATC Probe, BNC/DIN connectors, refillable
Recommended Use: Routine pH. Ideal for field or plant use.
Orion # 9157BN (1) (4)
9157WP (5) (7)
9157BNMMD (9) 1M cable



Orion 91-61
Low resistance pH Half-Cell with glass body, rugged bulb
Recommended Use: Routine pH where ruggedness is important. Use with 90-01 Reference Electrode.
Orion # 9161BN (1)
916100 (2)
9161SC (3)



Orion 91-62
Low Resistance Combination with glass body, rugged bulb
Recommended Use: More rugged, use in viscous solutions. Easy-to-clean bulb design.
Orion # 9162BNWP (1)
916200 (2)
9162SC (3)



Orion 9165BNWP
Epoxy-Body Sure-Flow® Combination pH Electrode with BNC Connector
Recommended Use: General purpose, ideal for dirty, difficult samples such as soils, sludges, colloids, viscous solutions. Easy to-clean-junction never clogs.
Orion # 9165BNWP (1)
See also ROSS 81-65 on page 5
Detachable bulb guard included



Orion 91-72
Glass-Body Sure-Flow Combination pH Electrode with BNC Connector
Recommended Use: Same as 9165BN. Ideal for general lab use.
Orion # 9172BNWP (1)
See also ROSS 81-72 on page 4

Orion pH Electrode Specifications

Orion PerpHect®						
	8202BN	8203BN	8235BN	8256BN	8263BN	8272BN
pH Range	0-14	0-14	0-14	0-14	0-14	0-14
Temp. Range	0-100 °C	0-100 °C	0-100 °C	0-100 °C	0-100 °C	0-100 °C
Internal Ref.	ROSS	ROSS	ROSS	ROSS	ROSS	ROSS
Junction	Ceramic	Ceramic	Glass fiber	Glass Fiber	Ceramic	Sure-Flow
Dimensions	120 mm x 12 mm	165 mm semi-micro section is 6 x 95 mm	120 mm x 12 mm	120 mm x 12 mm	110 x 4.5 mm 4.5 section is 23 mm	120 mm x 12 mm
Slope	92-102%	92-102%	92-102%	92-102%	92-102%	92-102%
Temp. Acc.	± 0.5 °C	± 0.5 °C	± 0.5 °C	± 0.5 °C	± 0.5 °C	± 0.5 °C

	9202BN	9203BN	9206BN	9207BN	9256BN	9272BN
pH Range	0-14	0-14	0-14	0-14	0-14	0-14
Temp. Range	0-90 °C	0-90 °C	0-80 °C	0-80 °C	0-90 °C	0-100 °C
Internal Ref.	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl
Junction	Ceramic	Ceramic	Wick	Glass Fiber	Glass Fiber	Sure-Flow
Dimensions	120 mm x 12 mm	140 mm semi-micro section is 100 x 6.5 mm	165 mm semi-micro section is 95 x 6 mm	120 mm x 12 mm	165 mm x 6 mm (6mm section is 95mm long)	120 mm x 12 mm
Slope	92-102%	92-102%	92-102%	92-102%	92-102%	92-102%
Temp. Acc.	± 0.5 °C	± 0.5 °C	± 0.5 °C	± 0.1 °C (2)	± 0.5 °C	± 0.5 °C

Orion Standard						
	91-01	91-02	91-03	91-04	91-07	91-09
pH Range	0-14	0-14	0-14	0-14	0-14	0-14
Temp. Range	0-90 °C	0-90 °C	0-90 °C	0-90 °C	0-90 °C	0-90 °C
Internal Ref.	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl
Junction	NA	Ceramic	Ceramic	Ceramic	Wick	Wick
Dimensions	110 mm x 12 mm	120 mm x 12 mm	140 mm semi-micro section is 100 x 6.5 mm	120 mm x 12 mm	120 mm x 6 mm	120 mm x 12 mm

	91-55/56	91-57	91-61	91-62	91-65	91-72
pH Range	0-14	0-14	0-14	0-14	0-14	0-14
Temp. Range	0-90 °C	0-90 °C	0-90 °C	0-90 °C	0-100 °C	0-100 °C
Internal Ref.	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl	Ag/AgCl
Junction	Glass Fiber	Glass Fiber	NA	Ceramic	Sure-Flow	Sure-Flow
Dimensions	120x12 mm	120x12 mm	110x12 mm	120x12 mm	120x12 mm	120x12 mm

Note

Using PerpHect digital LogR™ Meters, 20 °C calibration window (see instruction manual). The PerpHect Triode is offered for measurements where temperature accuracy to 0.1 °C is required, when the digital LogR function is not used. PerpHect LogR temperature measurement and compensation meter specifications are based on the use of PerpHect and PerpHect ROSS brand electrodes. Use of other brand electrodes may impact performance. PerpHect LogR meters and PerpHect ROSS electrodes are protected by U.S. Patents 4,321,544 and 4,495,050; other patents pending. All cap diameters are 16 mm. All PerpHect electrodes have a BNC Connector and 1 m cable.

Key for page 6

- (1) BNC connector, 1 m cable (2) U.S. Standard connector, 1 m cable (3) Screw cap connector, requires separate cable
 (4) Use with Orion 210A/A*, 230A/A*, 250A/A*, 410A/A*, 420A/A*, 520A/A*, 525A/A*, 710A/A*, 720A/A*, 920A/A*
 (5) Use with Orion 260A, 261, 261S, 265A, 266, 266S (6) Use with Orion 260, 265, 1230
 (7) Waterproof EDIN with banana plug (8) MiniDIN connector for Orion Star™ Series meters
 (9) BNC + MiniDIN connector for Orion Star™ Series meters
 All cap diameters are 16 mm except Orion 9157WP, Orion 9109WP and Orion 9109WL are 22 mm maximum See page 13 for Orion pH electrode cleaning kits.

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