PRO6143

pH Composite Electrode for Low-Conductivity Water

Ultrapure water pH electrode · Longlife Reference · Porous PTFE junction · S7 connector

PRO6143 pH Composite Electrode is designed for accurate pH measurement in **ultrapure water, deionized water, distilled water and other low-conductivity samples** where conventional pH electrodes may show slow response or unstable readings due to very low ionic strength. The electrode combines a pH measuring element and reference system in one compact body, using an **epoxy shaft**, **Longlife Reference** system and **porous PTFE junction** for stable performance in high-purity water workflows.

ULTRAPURE WATER | LOW CONDUCTIVITY | PH COMPOSITE ELECTRODE | PH 0-11 | 0-80 °C | EPOXY BODY | LONGLIFE REF. | POROUS PTFE | UNFILLABLE | S7 CONNECTOR

Document type: **Technical Specification Sheet**
Product family: **Electrochemical Instruments / pH Electrodes**
Model / SKU: **PRO6143**
Product category: **pH composite electrodes for low-conductivity and ultrapure water samples**
Format: **A4 landscape · COLO.Science TechSpec v2.4 with navigation links**

PRO6143 · low-conductivity pH composite electrode · main electrode view

MODEL / SKU
PRO6143
pH electrode

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PRO6143 · technical specification

pH composite electrode for ultrapure water and low-conductivity samples

PH RANGE 0-11 | WORKING TEMP. 0-80 °C | EPOXY | LONGLIFE REF. | POROUS PTFE | S7 - Specialized low-conductivity electrode for high-purity water laboratories

Product Overview

Application profile

Ultrapure water: optimized for pH measurement in deionized, distilled and high-purity water samples.

Low ionic strength: intended for samples where standard pH electrodes can drift, respond slowly or become unstable.

Laboratory workflows: suitable for pharmaceutical water checks, semiconductor support labs, research laboratories and purified-water monitoring.

Compact format: standard Φ12×120 mm electrode body for use with common holders, stands and beakers.

Design and measurement advantage

Composite electrode: pH measuring element and reference electrode are integrated in one practical probe.

Longlife Reference: designed to provide stable reference potential in demanding low-conductivity media.

Porous PTFE junction: supports controlled contact between reference system and sample while reducing clogging risk.

Low maintenance: unfillable construction simplifies routine use because electrolyte refilling is not required.

Key features

pH measurement: specified pH range from 0 to 11.

Body material: epoxy body for robust laboratory handling.

Reference system: Longlife Reference for stable low-conductivity operation.

Junction: porous PTFE junction for ultrapure water applications.

Connection: S7 connector for use with compatible S7 cable or S7-BNC(Q9) cable setup.

Temperature: specified for 0-80 °C working conditions.

Core technical summary

Parameter	Specification
Model / SKU	PRO6143
Electrode type	pH composite electrode for low-conductivity samples
Fill solution	Unfillable
Body / sensor material	Epoxy
Reference type	Longlife Reference
Junction material	Porous PTFE
pH range	0-11
Working temperature	0-80 °C
Dimensions	Φ12×120 mm
Connector	S7

SAMPLE TYPE
Ultrapure / low-conductivity water

PH RANGE
0-11

REFERENCE
Longlife Ref. · Porous PTFE

CONNECTOR
S7

Technical Specifications

Electrode construction and measurement profile

Parameter	Specification
Product name	pH composite electrode (Low conductivity) for ultrapure water
Model / SKU	PRO6143
Electrode type	pH composite electrode
Measurement parameter	pH
Recommended sample type	Ultrapure water, deionized water, distilled water and other low-conductivity aqueous samples
pH range	0-11 pH
Working temperature	0-80 °C
Body / sensor material	Epoxy
Reference type	Longlife Reference
Junction material	Porous PTFE
Fill solution	Unfillable
Dimensions	Φ12×120 mm
Connector type	S7

Compatibility and use notes

Topic	Technical note
Meter input	Requires compatible S7 connection or an S7-BNC(Q9) cable for pH meters with BNC input.
Temperature compensation	This is a pH electrode. Temperature compensation depends on the connected meter and separate temperature probe configuration.
Calibration	Calibrate with fresh pH buffers according to the laboratory method, expected range and purified-water measurement practice.
Measurement stability	For low-conductivity water, allow sufficient stabilization time and avoid sample contamination during measurement.
Maintenance	Unfillable construction reduces routine electrolyte handling. Cleaning and storage should follow the application method.

Product selection table

Selection item	Specification / guidance
Recommended use	pH measurement in ultrapure water and low-conductivity aqueous samples where standard electrodes may be unstable.
Best fit	Pharmaceutical water systems, semiconductor support labs, purified-water QC, analytical laboratories and research use.
Handling advantage	Epoxy body and sealed unfillable construction support practical routine laboratory use.
Reference design	Longlife Reference system for stable reference behavior in low-ionic-strength samples.
Junction behavior	Porous PTFE junction supports stable contact with low-conductivity media and helps reduce junction-related instability.
Instrument match	Confirm S7 connector compatibility or required S7-BNC(Q9) cable before ordering.
Product family	Open COLO.Science electrochemical instruments
Request quote	Contact COLO.Science for configuration confirmation

Specification note

Connector matching: confirm whether the meter requires S7, BNC(Q9) or an S7-BNC(Q9) cable before ordering.

Low-conductivity practice: ultrapure water has very low buffering capacity, so careful handling, clean vessels and stable conditions are important.

Electrode selection: for aggressive chemicals, high temperature or non-aqueous samples, confirm whether a specialized electrode is required.

Quotation control: final supplied configuration, cable, accessories and documentation should be confirmed in the official COLO.Science quotation.

Technical values are provided for product selection and orientation. Final delivered configuration, electrode type, accessory set, connector/cable arrangement and documentation should be confirmed through the official COLO.Science quotation or manufacturer-confirmed offer.

Electrode Body and Connector Visual Support

PRO6143 · complete electrode body · low-conductivity pH composite electrode

Visual reference and functional elements

Electrode body: epoxy shaft in standard Φ12×120 mm format for common laboratory holders and sample vessels.

Sensor area: pH-sensitive measuring end intended for low-conductivity and ultrapure water pH measurement.

Reference system: Longlife Reference system to support stable performance in high-purity water samples.

Junction: porous PTFE junction for controlled contact between reference system and sample.

Connector: S7 connection; use compatible S7 connection or S7-BNC(Q9) cable when connecting to BNC meters.

Product image references

Electrode body · low-conductivity pH composite electrode

Connector reference · S7 / S7-BNC(Q9) compatibility check required

Compatibility notice - connector and meter matching are essential

PRO6143 uses an S7 connector. When the pH meter has a BNC input, an S7-BNC(Q9) cable is required. Before ordering, verify the exact meter connector type, cable requirement and whether a separate temperature probe is needed for the intended measurement workflow.

Selection and Use Notes

For ultrapure water

Sample handling: use clean vessels and avoid CO_2 absorption or contamination during measurement.

Stabilization: allow adequate reading stabilization time because low-conductivity samples respond differently from buffered samples.

For low maintenance

Main feature: unfillable design reduces routine electrolyte handling and refilling work.

Routine care: follow application-specific cleaning and storage procedures to preserve electrode performance.

For ordering

Connector: confirm S7 connection or S7-BNC(Q9) cable requirement.

Documentation: request final quotation confirmation for supplied cable, packaging and accessories.

MANUFACTURER AND SUPPORT

COLO Lab Experts

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Selection guidance: Send the meter model, connector type, sample type, expected pH range, working temperature and sample conductivity. COLO.Science can help confirm whether PRO6143 is the correct low-conductivity pH electrode or whether another electrode, cable or temperature probe configuration is required.

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Product family: Electrochemical instruments

COLO.SCIENCE TECHNICAL SUPPORT

PRO6143 · pH composite electrode for ultrapure water and low-conductivity samples

Use PRO6143 when a specialized low-conductivity pH electrode is required for ultrapure water, deionized water or purified-water laboratory workflows. Confirm connector/cable compatibility and measurement configuration before ordering.

Request quote | Electrochemical instruments | Water quality knowledge

Technical specification page for product selection, quotation support and customer communication. For official procurement, final configuration and specifications must be confirmed by COLO.Science quotation or manufacturer-confirmed offer.