

# 3900-02-10

## Rosemount 3900 general-purpose pH sensor

It measures general-process pH using a 15 ft integral cable and built-in solution ground.

### PRODUCT SNAPSHOT

**BRAND**

Rosemount

**FAMILY**

Rosemount liquid-analysis measurement syst

**PART**

3900-02-10

**HS CODE**

8537101190

### APTER POWER SALES TEAM

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## PRODUCT OVERVIEW

It measures general-process pH using a 15 ft integral cable and built-in solution ground.

1

Uses a double-junction reference architecture

2

Includes a built-in solution ground

3

Supports automatic temperature compensation

4

Mounts through documented threaded process connections

## SYSTEM COMPONENTS

Compatible Rosemount analyzer/transmitter

Approved insertion or flow-through fitting

Shielded sensor cable

Process-compatible seal and cleaning arrangement

### TECHNICAL NOTE

Mount through the documented MNPT connection, protect the GPLR glass bulb, terminate the integral cable at the assigned analyzer and verify two-point calibration plus temperature response before service.

## TECHNICAL DATA

| PARAMETER             | VALUE           |
|-----------------------|-----------------|
| Model                 | 3900            |
| Integral preamplifier | None            |
| Integral cable length | 15 ft (5 m)     |
| Measuring electrode   | GPLR pH glass   |
| Measurement range     | 0 to 14 pH      |
| Operating temperature | -10 to 100 degC |

| PARAMETER                | VALUE                |
|--------------------------|----------------------|
| Temperature compensation | Pt-100               |
| Front process connection | 3/4 in and 1 in MNPT |
| Rear process connection  | 1 in MNPT            |
| Body material            | PPS (Ryton)          |
| Solution ground          | Built in             |

### RELATED PRODUCTS ON APTER POWER

| MODEL                    | SYSTEM ROLE               | APTER POWER PAGE                                   |
|--------------------------|---------------------------|----------------------------------------------------|
| 5X00121G01               | Related Rosemount product | <a href="#">View 5X00121G01 page</a>               |
| 5X00119G01               | Related Rosemount product | <a href="#">View 5X00119G01 page</a>               |
| KJ3222X1-BA1-12P2532X122 | Related Rosemount product | <a href="#">View KJ3222X1-BA1-12P2532X122 page</a> |
| KJ4006X1-BD1             | Related Rosemount product | <a href="#">View KJ4006X1-BD1 page</a>             |
| KC4011X1-BZ1             | Related Rosemount product | <a href="#">View KC4011X1-BZ1 page</a>             |
| KC4011X1-BW1             | Related Rosemount product | <a href="#">View KC4011X1-BW1 page</a>             |
| KJ2201X1-BA1             | Related Rosemount product | <a href="#">View KJ2201X1-BA1 page</a>             |
| 396P-02-12-55            | Related Rosemount product | <a href="#">View 396P-02-12-55 page</a>            |

# APPLICATIONS & PRECAUTIONS

## COMMON APPLICATIONS

### Wastewater pH monitoring

Uses a double-junction reference architecture

### Chemical neutralization control

Includes a built-in solution ground

### Scrubber and effluent analysis

Supports automatic temperature compensation

### Abrasive or coating process measurement

Mounts through documented threaded process connections

## PRODUCT PRECAUTIONS

- 1 Verify the complete 3900-02-10 marking and the assigned Rosemount liquid-analysis measurement system position before work.
- 2 Place the connected machine or process in the approved maintenance state before disturbing 3900-02-10.
- 3 Isolate the applicable power and field energy, then confirm a safe state before disconnecting 3900-02-10.
- 4 Record connector, conductor, slot and configuration identities before removal of 3900-02-10.
- 5 Use ESD controls and protect keyed interfaces, exposed contacts and electronic assemblies during handling.
- 6 Confirm that the installed companion hardware and approved project match the 3900-02-10 arrangement.
- 7 Restore power in a controlled sequence and review device, rack and host diagnostics.
- 8 Prove the intended function and retain the final test result before returning 3900-02-10 to service.

## ENGINEER FAQ

### Q1 Does 3900-02-10 match Compatible Rosemount analyzer/transmitter in a Wastewater pH monitoring installation?

Verify the complete 3900-02-10 marking, the documented Rosemount liquid-analysis measurement system position and the installed Compatible Rosemount analyzer/transmitter before fitting the assembly.

### Q3 Which Rosemount liquid-analysis measurement system records should be captured before removing 3900-02-10?

Record the as-found wiring, installed position, active configuration and diagnostic state associated with 3900-02-10 before disconnection.

### Q5 Which Approved insertion or flow-through fitting condition should be checked when 3900-02-10 reports an abnormal state?

Check the Approved insertion or flow-through fitting supply, seating and connection first, then compare channel diagnostics with the recorded 3900-02-10 baseline.

### Q7 What maintenance evidence is required after 3900-02-10 is used for Scrubber and effluent analysis?

Retain the nameplate record, corrective action, final diagnostics and a controlled scrubber and effluent analysis functional-test result for 3900-02-10.

### Q2 How should 3900-02-10 be wired when it must uses a double-junction reference architecture?

Isolate the circuit, identify every terminal and reproduce the approved polarity, shield and channel assignment for 3900-02-10; then continuity-test the affected path.

### Q4 What controlled test confirms that 3900-02-10 can includes a built-in solution ground?

Apply the approved field or simulated stimulus, observe the Rosemount liquid-analysis measurement system indication and confirm the intended response without bypassing the normal interlocks.

### Q6 Can 3900-02-10 be moved directly into Chemical neutralization control without validating Process-compatible seal and cleaning arrangement?

No. Confirm the Process-compatible seal and cleaning arrangement, revision, connection scheme and Rosemount liquid-analysis measurement system configuration before transferring 3900-02-10 to that duty.

### Q8 How should 3900-02-10 be returned to service in Abrasive or coating process measurement?

Restore power under control, verify supports automatic temperature compensation, exercise the intended signal path and release 3900-02-10 only after the Rosemount liquid-analysis measurement system remains in its approved operating state.

**SOURCE** Rosemount 396/396P or 3900 product data sheet | 00813-0100-3396 / 00813-0100-3900

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