

Rosemount™ 396A

Anti-Coating pH/ORP Sensor



Anti-coating sensors for tough pH/ORP applications

Rosemount 396A pH/ORP sensors are robustly designed to meet a number of difficult application requirements. Sensors feature a variety of options suited to meet dirty, abrasive, coating, and high solid applications.

Overview



396A M12

Digital sensor output for fast and reliable readings

- Digital plug-and-play connection allows for easy and quick installation.
- Features advanced diagnostics with predictive sensor health indicators with built-in troubleshooting.
- Improved reliability and reduced errors due to ground loops, vibration, and electromagnetic interference (EMI).



396A Integral

Robust sensor design to maximize sensor life

- Anti-coating reference technology minimizes sensor maintenance and ensures a steady pH/ORP signal even when sensor is coated.
- Maximize sensor life with poisoning-resistant helical reference pathway design.



M12 Connector

Versatile mounting options to meet installation requirements

- Features 3/4-in. and 1-in. NPT front-facing and 1-in. NPT rear-facing process threads.
- Offered with a variety of sensor connection options to meet your installation needs.

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Ordering information

Rosemount 396A

396A pH/ORP sensors feature a reinforced polypropylene body with forward-facing ¾-in. and 1-in. NPT and rear-facing 1-in. NPT threads suitable for insertion, submersion, and flow-through installations. The digital 396A is available with either an M12 connector or an integral cable with M12 connector.

Model

Code	Description
396A	Anti-Coating pH/ORP Sensor

Measuring electrode

Code	Description
P1	pH general purpose glass
R1	Oxidation reduction potential (ORP) platinum electrode

Mounting style

Code	Description
N1	NPT: ¾-in., 1-in.

Body material

Code	Description
B	Polypropylene

O-ring material

Code	Description
A	Ethylene propylene diene monomer (EPDM)

Electrolyte solution

Code	Description
B	Plugging resistant

Sensor output connection

Sensor output	Sensor Connection	
D00	Digital	M12 connector (cable sold separately)
D04	Digital	4 ft. (1.2 m) integral cable with male M12 connector
D10	Digital	10 ft. (3.0 m) integral cable with male M12 connector
D15	Digital	15 ft. (4.6 m) integral cable with male M12 connector

Sensor output	Sensor Connection	
D25	Digital	25 ft. (7.6 m) integral cable with male M12 connector

Optional selections

Product certifications

Code	Description
N5	US Division 2, Non-Incendive
N6	Canada Division 2, Non-Incendive

Calibration certificates

Code	Description
Q4	Calibration certificate

Material traceability certificates

Code	Description
Q8	Supplier material traceability certificates

Tags

Code	Description
Y2	Wire-On Stainless Steel Tag (customer specified marking)

Accessories

Refer to [Liquid Sensor Accessories Product Data Sheet](#) for more information.

Table 1: Mounting Assemblies

Part number	Description
11275-01	Handrail mounting assembly
20002011	CPVC flow through tee: 1½-in. (38 mm) NPT process connection
24091-00	Cell, low flow, ¼-in. (6 mm) inlet and outlet
915240-03	Tee, flow-through, 2-in. (51 mm) PVC, 0.75-in. (19 mm) NPT
915240-04	Tee, flow-through, 2-in. (51 mm) PVC, 1-in. (25 mm) NPT
915240-05	Tee, flow-through, 2-in. (51 mm) PVC, 1.5-in. (38 mm) NPT

Table 2: Other Accessories

Part number	Description
12707-00	Jet spray cleaner
23242-02	Mounting adapter, 1½-in. (38 mm) insertion, 1-in. (25 mm) x 0.75-in. (19 mm)
9210012	Buffer solution, pH 4.01, 16 oz.

Table 2: Other Accessories (continued)

Part number	Description
9210013	Buffer solution, pH 6.86, 16 oz.
9210014	Buffer solution, pH 9.18, 16 oz.
9320057	Union, PVC
R508-80Z	Oxidation reduction potential (ORP) standard, 475 mV, 8 oz.
33946-00	Shroud, Rosemount 396/396P
BG0228	Union for flow-through tee

Specifications

Table 3: Rosemount 396A Sensor Specifications

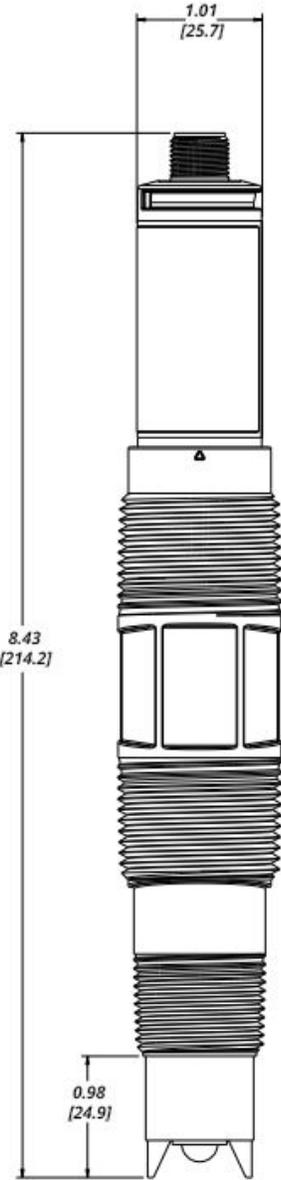
Specifications	396A Digital
Measurements and ranges	pH: 0-14 Oxidation reduction potential (ORP): -1500 mV to 1500 mV
Available glass types	General purpose GPHT hemi bulb ORP glass
Wetted materials	Titanium, polypropylene, glass, O-ring (EPDM), Platinum (ORP only)
Process connection	¾-in. NPT and 1-in. NPT forward-facing threads. 1-in. NPT rear-facing threads.
Temperature range	+32 to +212 °F (0 to +100 °C)
Pressure ranges	0 to 150 psig (0 to 10.3 bars)
Water ingress rating	IP67, IP68
Minimum conductivity	100 µS/cm
Weight/shipping weight	With M12: 1 lb./2 lbs. With integral: 3 lbs./4 lbs.

Table 4: Percent Linearity over Various pH Ranges

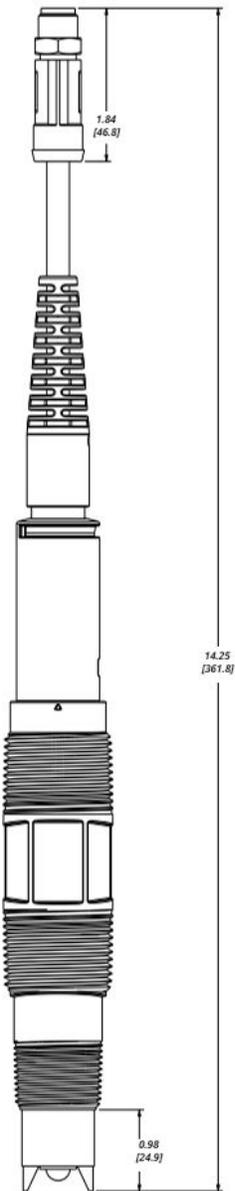
pH value	Linearity
0-7	98%
4-7	99%
7-10	97%
7-14	95%

Dimensional drawings

Figure 1: Dimensional Drawing - 396A M12



Note
Dimensions are in inches [millimeters].

Figure 2: Dimensional Drawing - 396A Integral**Note**

Dimensions are in inches [millimeters].

Note

Cable length shown as a visual example and not drawn to scale. The shortest integral cable length offered on the 396A is 4 ft.

For more information: [Emerson.com/global](https://emerson.com/global)

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