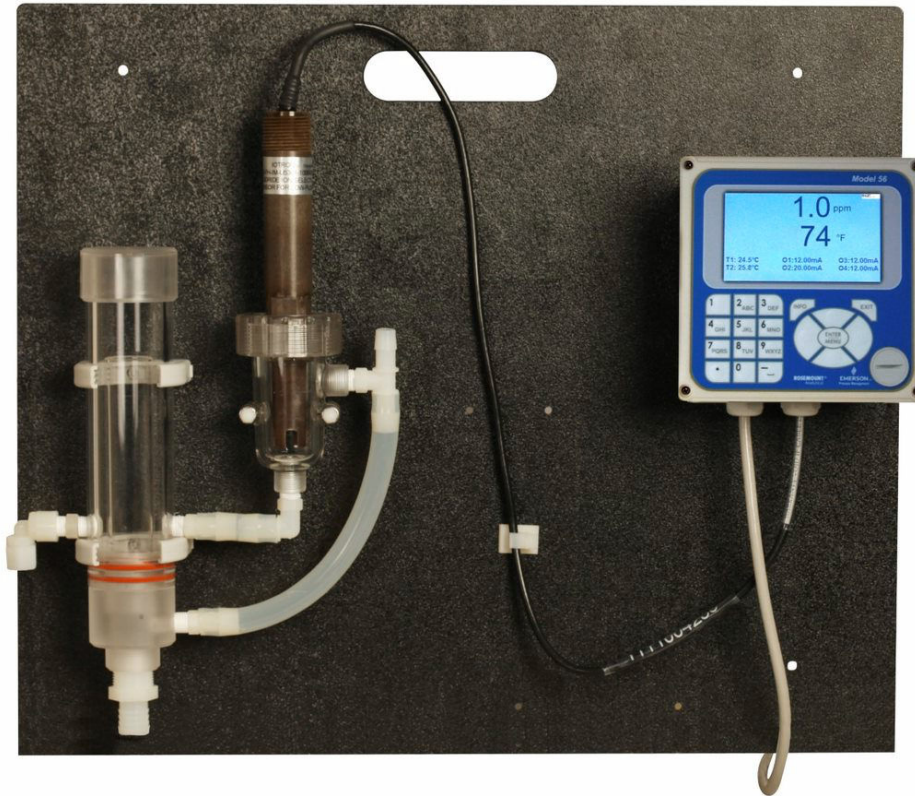


Rosemount™ Free Ammonia Monitoring System



Complete system for total ammonia monitoring

The Rosemount free ammonia monitoring system provides accurate and low maintenance measurement of free ammonia ($\text{NH}_3 + \text{NH}_4^+$) in drinking water.

Overview

Robust solid-state ammonium sensor

- Ammonium (NH₄) ion selective sensor with polyvinyl chloride (PVC) sensing element and virtually maintenance free solid-state reference system.
- Ammonium sensor can be used to monitor total free ammonia in drinking water because below 8.5 pH nearly all free ammonia (NH₃ + NH₄) exists as ammonium (NH₄).

Simple reagent-less sample handling system

Constant head flow controller uses gravity to provide stable flow rate that enables accurate measurement with minimal waste and without the use of reagents.

56 Transmitter

- Pertinent information provided by the large customizable display
- Event logger stores up to 300 events with data and time stamp: faults, warnings, calibration data, calibration results (pass or fail), power on/off cycles, and hold on/off. Data and event downloading available through USB port on front panel.

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Ordering information

The Rosemount Free Ammonia Monitoring System includes an ammonium (NH₄) sensor, a constant head flow controller and flow cell, and a Rosemount 56 transmitter. For a complete system order each of the part numbers listed in Table 1 in the order they are presented in the table. The system will ship as a single unit as pictured with the Rosemount 56 transmitter mounted to the panel and the ammonia sensor wired to the transmitter. Power cord is not included.

Rosemount Free Ammonia Monitoring System ordering information

Part Number	Description
SQP10102-LQD-99SQ11102A	Sample handling system includes constant head flow controller, low flow cell with bubble shedding nozzle, vented 3/4-in. adapter with all necessary tubing and fittings mounted on panel.
56-03-22-38-HT-99SQ14431	Rosemount 56 Transmitter with 4-20 mA output, AC powered ⁽¹⁾ , and configured for single channel ISE sensor.
S10046-LQD-99SQ10353	Ammonium sensor with integral cable

(1) For DC powered Rosemount 56 Transmitter configured for ISE sensor order 56-02-22-38-HT-99SQ14431.

Specifications

Rosemount Total Ammonia Monitoring System Specifications

Temperature

42 to 104 °F (5 to 40 °C)

Flow rate

Minimum flow 3 gal/hr (11L/h)

Maximum flow 80 gal/hr (303 L/hr); high flow causes the overflow tube to back up

Process connection

¼-in. OD tubing compression fitting (can be removed and replaced with a barbed fitting for use with soft tubing).

Drain connection

¾-in. barbed fitting. Sample must drain to open atmosphere.

Wetted parts

Sensor body	Ultem (Poly-Ether-Imide)
Sensor junction	HDPE
Sensor membrane	Ammonium sensitive membrane
Flow system	acrylic, polycarbonate, polyester, Kynar®, nylon, silicone

Sample conductivity

>50 µS/cm at 25 °C

Sample pH

Less than 8.5 pH

Ammonium measuring range

0.1 to 10 ppm Ammonium (lower limit of detection depends on application conditions)

Accuracy

Accuracy depends on the accuracy of the chemical test used to calibrate the sensor.

Response time to step change in ammonium concentration

<80 sec to 95% of final reading for inlet sample flow of 3 gph (11 L/hr)

Sensor shelf life

1 year from date of manufacture at room temperature with closed protector cap

Weight/shipping weight

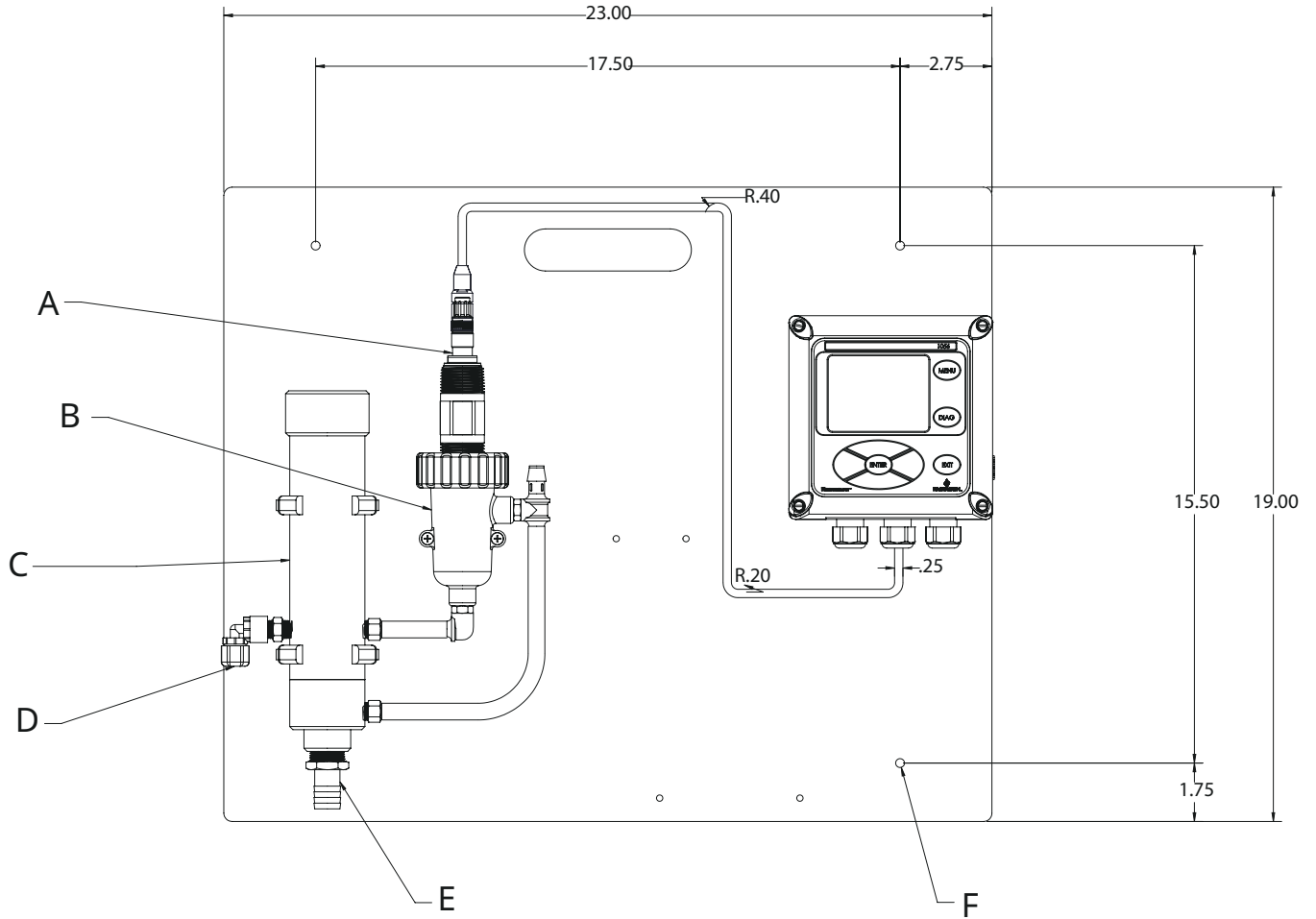
Free ammonia monitoring system: 10 lb/13 lb (4.5 kg/6.0 kg)

Rosemount 56 Transmitter Specifications

Refer to [Rosemount 56 Transmitter Product Data Sheet](#).

Dimensional drawings

Figure 1: SQP10102-LQD-99SQ11102A drawing with sensor and transmitter mounted



- A. Sensor
- B. Low flow cell
- C. Constant head flow controller
- D. Inlet
- E. Drain 3/4-in. barb fitting
- F. 4X ø.27 thru all

Dimensions in drawing are in inches.

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

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