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Find the *Emerson / Rosemount Analytical 56-03-20-31-HT* at our website: *Click HERE*

Product Data Sheet
April 2017
LIQ-PDS-56

Rosemount 56 Dual Channel Transmitter

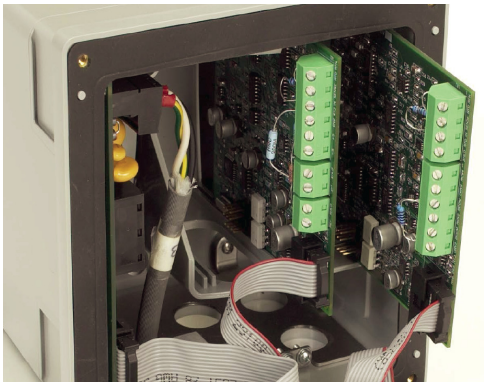


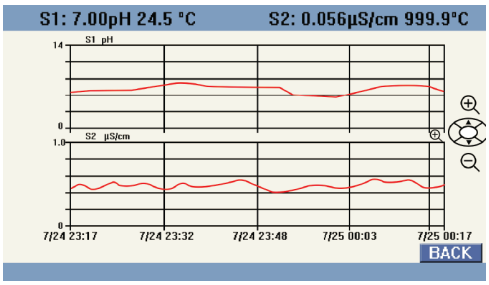
Multi-parameter Transmitter for Liquid Analysis

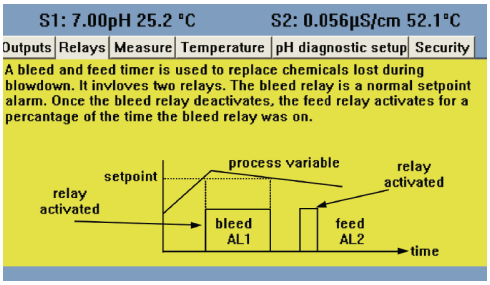
The Rosemount 56 Dual Channel Transmitter displays up to two independent liquid analytical measurements. PID Control, Quick Start Programming, and Data Logging features provide added functionality beyond the simple displaying and transmitting of measurement readings. Digital communication options allow for connection to HART hosts and Profibus networks for increased visibility of process parameters.

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Overview









Independent Dual Input Measurements

- Expandable to two channels of liquid analytical measurements: pH/ORP, Conductivity, Free Chlorine, Total Chlorine, Dissolved Oxygen, Ozone, and Turbidity.
- Modular boards with auto-recognition of sensor board.
- Large, easy to read, user customizable screen that displays two measurements in addition to diagnostic and temperature readings.

Reduced Installation and Maintenance Time

- Do more using a powerful device with data logging capability and PID control.
- Shorter installation times using Quick Start programming at initial install or after factory reset.
- Effortlessly connect with PLCs and DCS' by choosing the HART or Profibus DP communication options and manage devices using AMS/475 Communicators.
- Display measurements, configure alarms, and conduct maintenance with a graphical local operator interface.

Accurate, Linear, and Reliable Measurements of Analytical Sensors

- Faster calibration of pH sensors using auto pH Buffer solution detection.
- Linear conductivity measurements with on-board concentration curves for common acids and bases
- Built-in features to easily display accurate amperometric and turbidity measurements.

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56 Dual Channel Transmitter



Rosemount 56 Dual Channel Transmitter is a line powered device that can accept inputs from pH/ORP, ISE, flow, conductivity (contacting and toroidal), turbidity, and amperometric (dissolved oxygen, chlorine, and ozone) sensors.

- Retrieve calibration and measurement information by accessing the data logger via USB.
- Design efficient processes by utilizing the built-in PID controller.
- At a glance view of pertinent information provided by the large customizable display.
- Transmit process parameters by utilizing HART or Profibus DP digital communications.

Additional Information

Specifications: see "Specifications" on page 5
Certifications: see "Product Certifications" on page 6
Dimensional drawings: see "Dimensional Drawings" on page 7

Table 1. Rosemount 56 Dual Channel Transmitter Ordering Information

Model	Transmitter Type
56	Dual Channel Transmitter
Power	
02	24 V_{DC} with 4 Alarm Relays
03	85-265 V_{AC} Switching, 50/60 Hz with four Alarm Relays
Measurement 1	
20	Contacting Conductivity
21	Toroidal Conductivity
22	pH/ORP/ISE
23	Flow/Current input
24	Chlorine
25	Dissolved Oxygen
26	Ozone
27	Turbidity
Measurement 2	
30	Contacting Conductivity
31	Toroidal Conductivity
32	pH/ORP/ISE
33	Flow/Current input
34	Chlorine
35	Dissolved Oxygen
36	Ozone

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Table 1. Rosemount 56 Dual Channel Transmitter Ordering Information(continued)

37	Turbidity
38	None
Communication	
DP	Profibus DP Digital Communication
HT	HART® Digital Communication (Standard)

Table 2. Rosemount 56 Dual Channel Transmitter Accessories List

Part Number	Description
23554-00	Cable Gland Kit (Qty 5)
23820-00	2 in. Pipe Mounting Kit (Includes U-bolts, mounting bracket, nuts, washers, and screws)
23820-01	2 in. Stainless Steel Pipe Mounting Kit (Includes U-bolts, mounting bracket, nuts, washers and screws)
9240048-00	Stainless Steel Tag (customer specified marking)

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Specifications

General Analyzer

Enclosure

Material: Polycarbonate.
Rating: Type 4X and IP65.
Dimensions: 6.2 in. L x 6.2 in. W x 5.2 in. H
(157 mm x 157 mm x 132 mm)
Conduit openings: 1/2 in. or PG 13.5 conduit fittings.

Display

Features: User customizable, full color LCD, back-lit display
Display Resolution: 480 x 272 color TFT
Dimensions: 4.3 in. (109 mm) (Diagonal)

Ambient Conditions

Temperature: 14 to 131 °F (-10 to 55 °C)
Temperature for Turbidity: 14 to 122 °F (-10 to 50 °C)
Relative Humidity: 5 to 95% (non-condensing)
Storage Temperature: -4 to 140 °F (-20 to 60 °C)

Note: Some degradation in display response or performance may occur below 23 °F (-5 °C) and above 131 °F (55 °C). Above 140 °F (60 °C), the following components will progressively and automatically shut down: display, USB communications port, current outputs, alarm relays, and main circuit board.

⚠WARNING

Always remove USB memory device if ambient temperature exceeds 140 °F (60 °C). Do not access USB port if combustible atmosphere is present.

Power

02: 20 to 30 Vdc. 15 W.
03: 84 to 265 Vac, 47 to 63.0 Hz. 15 W.
Power option codes 02 and 03 include four programmable relays.

Relays

Form C, SPDT, epoxy sealed



Maximum Relay Current	
	Resistive
28 Vdc	5.0 A
115 Vac	5.0 A
230 Vac	5.0 A

Inductive Load: 1/8 HP motor (maximum) at 115/230 Vac

Alarm Relays

Four configurable alarm relays for process measurement as alarms or faults with interval timer settings.

Outputs

Current Outputs: four actively powered (4-20 mA or 0-20 mA, scalable)
Max Load: 550 Ohms

Note: Outputs can be programmed for PID control. Output dampening can be enabled with time constants from 0 - 999 seconds. Units with HART option contain the HART digital communication superimposed on output 1.

Terminal Wire Sizes

Power: 24-12 AWG
Signal Board: 26-16 AWG
Alarm Relays: 24-12 AWG
Current outputs: 26-16 AWG

Weight/Shipping Weight (rounded to nearest 1 lb. or 0.5 kg)

3 lb./4 lb. (1.5 kg/2.0 kg)

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Product Certifications

Hazardous Location Approvals

Class I, Division 2, Group A, B, C, and D

Class II, Division 2, Groups E, F, and G

Class III T4A Tamb = 50 °C

Evaluated to the ANSI/UL Standards. The 'C' and 'US' indicators adjacent to the CSA Mark signify that the product has been evaluated to the applicable CSA and ANSI/UL Standards, for use in Canada and the U.S. respectively.

Class I, Division 2, Group A, B, C, and D

Class II and III, Division 2, Groups E, F, and G

T4A Tamb = 50 °C, Enclosure Type 4X

Ordinary Locations: (only with UL ordering option)

Pollution Degree

Normally only non-conductive pollution occurs. Temporary conductivity caused by condensation possible.

Altitude: 6562 ft. (2000 meter) maximum

Radio Frequency Immunity/Electromagnetic Interference (RFI/EMI)

EN-61326

Low Voltage Directive (LVD)

EN-61010-1

European Directive Information

A copy of the EC Declaration of Conformity can be found at the end of the Quick Start Guide and the User's Manual. The most recent revision of the EC Declaration of Conformity can be found at www.Emerson.com/RosemountLiquidAnalysis

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Dimensional Drawings

Figure 1. Panel Mount Dimensions

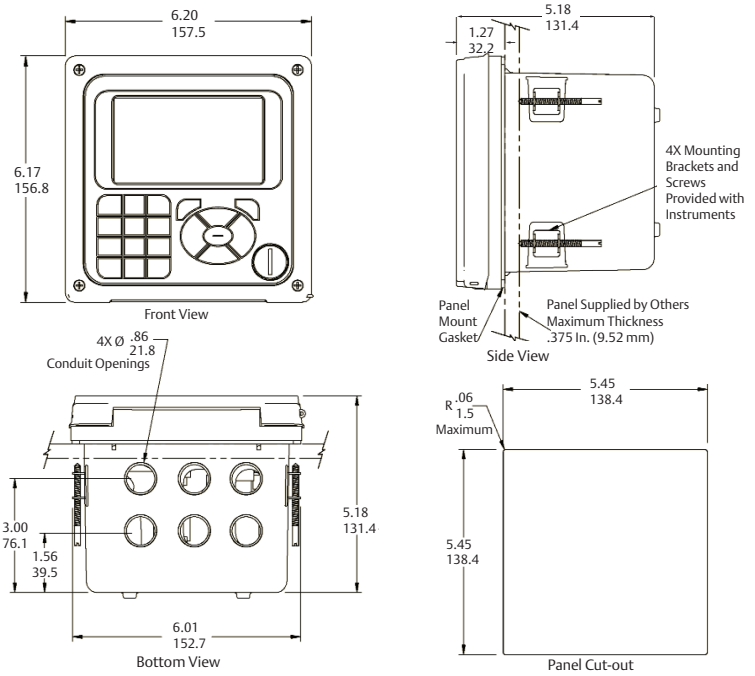
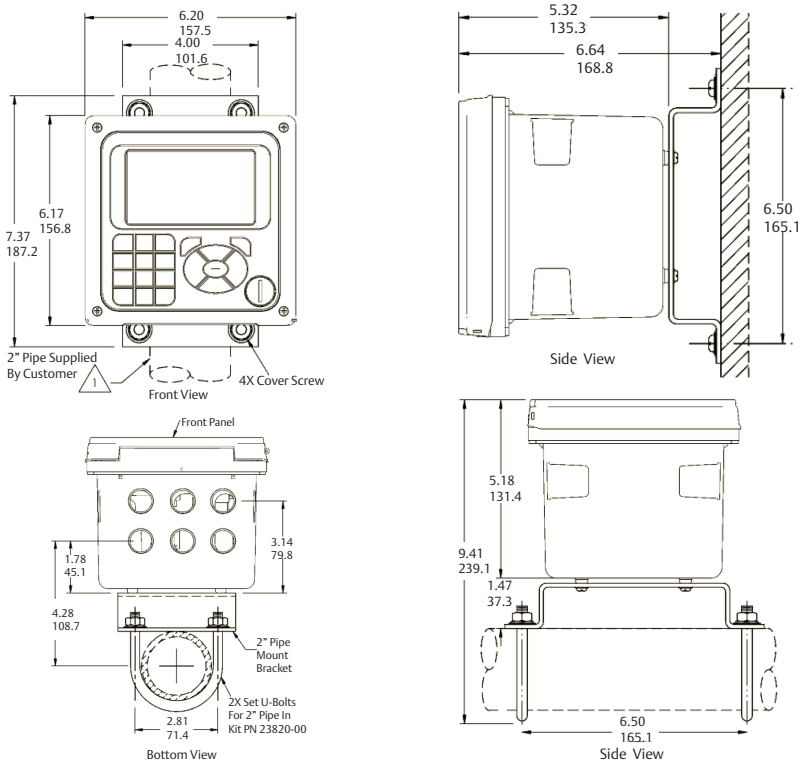


Figure 2. Wall Mount Dimensions



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