SECTION 1.0.
DESCRIPTION AND SPECIFICATIONS

- MULTI-PARAMETER INSTRUMENT – single or dual input. Choose from pH/ORP/ISE, Resistivity/Conductivity, % Concentration, Chlorine, Oxygen, Ozone, Temperature, Turbidity, Flow, and 4-20mA Current Input.
- LARGE DISPLAY – large easy-to-read process measurements.
- EASY TO INSTALL – modular boards, removable connectors, easy to wire power, sensors, and outputs.
- INTUITIVE MENU SCREENS with advanced diagnostics and help screens.
- SEVEN LANGUAGES included: English, French, German, Italian, Spanish, Portuguese, and Chinese.
- HART® AND PROFIBUS® DP Digital Communications options

FEATURES AND APPLICATIONS

The Model 1056 dual-input analyzer offers single or dual sensor input with an unrestricted choice of dual measurements. This multi-parameter instrument offers a wide range of measurement choices supporting most industrial, commercial, and municipal applications. The modular design allows signal input boards to be field replaced making configuration changes easy. Conveniently, live process values are always displayed during programming and calibration routines.

QUICK START PROGRAMMING: Exclusive Quick Start screens appear the first time the Model 1056 is powered. The instrument auto-recognizes each measurement board and prompts the user to configure each sensor loop in a few quick steps for immediate deployment.

DIGITAL COMMUNICATIONS: HART and Profibus DP digital communications are available. Model 1056 HART units communicate with the Model 375 HART® hand-held communicator and HART hosts, such as AMS Intelligent Device Manager. Model 1056 Profibus units are fully compatible with Profibus DP networks and Class 1 or Class 2 masters. HART and Profibus DP configured units will support any single or dual measurement configuration of Model 1056.

MENUS: Menu screens for calibrating and programming are simple and intuitive. Plain language prompts and help screens guide the user through these procedures.

DUAL SENSOR INPUT AND OUTPUT: The Model 1056 accepts single or dual sensor input. Standard 0/4-20 mA current outputs can be programmed to correspond to any measurement or temperature.

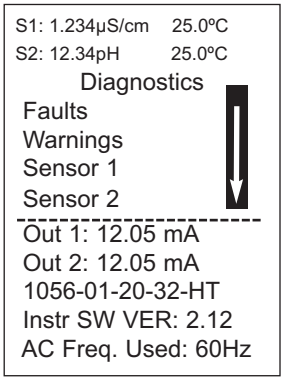
ENCLOSURE: The instrument fits standard ½ DIN panel cutouts. The versatile enclosure design supports panel-mount, pipe-mount, and surface/wall-mount installations.

ISOLATED INPUTS: Inputs are isolated from other signal sources and earth ground. This ensures clean signal inputs for single and dual input configurations. For dual input configurations, isolation allows any combination of measurements and signal inputs without cross-talk or signal interference.

TEMPERATURE: Most measurements require temperature compensation. The Model 1056 will automatically recognize Pt100, Pt1000 or 22k NTC RTDs built into the sensor.

SECURITY ACCESS CODES: Two levels of security access are available. Program one access code for routine calibration and hold of current outputs; program another access code for all menus and functions.

DIAGNOSTICS: The analyzer continuously monitors itself and the sensor(s) for problematic conditions. The display flashes Fault and/or Warning when these conditions occur.



Information about each condition is quickly accessible by pressing DIAG on the keypad. User help screens are displayed for most fault and warning conditions to assist in troubleshooting.

DISPLAY: The high-contrast LCD provides live measurement readouts in large digits and shows up to four additional process variables or diagnostic parameters. The display is back-lit and the format can be customized to meet user requirements.

LOCAL LANGUAGES :
Rosemount Analytical extends its worldwide reach by offering seven local languages – English, French, German, Italian, Spanish, Portuguese, and Chinese. Every unit includes user programming menus; calibration routines; faults and warnings; and user help screens in all seven languages. The displayed language can be easily set and changed using the menus.

CURRENT OUTPUTS: Two 4-20 mA or 0-20 mA current outputs are electrically isolated. Outputs are fully scalable and can be programmed to linear or logarithmic modes. Output dampening can be enabled with time constants from 0 to 999 seconds. Output 1 includes digital signal 4-20 mA superimposed HART (option -HT only)

SPECIAL MEASUREMENTS: The Model 1056 offers measuring capabilities for many applications.

- **Single or Dual Turbidity:** Ideal in municipal applications for measurement of low-NTU filtered drinking water. Must be used with Clarity II sensor, sensor cable and debubbler.

- **4-Electrode Conductivity:** The Model 1056 is compatible with Rosemount Analytical 4-electrode Model 410VP in the PURE-SENSE™ family of conductivity sensors. This sensor supports a wide array of applications and is capable of measuring a large range of conductivity with one geometric configuration. Wired to the Model 1056, this sensor can measure 2µS/cm to 300mS/cm with an accuracy of 4% of reading throughout the entire range.
- **4-20mA Current Input:** Accepts any analog current input from an external device for temperature compensation of measurements and atmospheric pressure input for partial pressure correction of oxygen.
- **Selective Ions:** The analyzer is able to measure ammonia and fluoride using commercially available ion-selective electrodes. All analyzers with installed pH boards can be programmed to measure selective ions.
- **pH Independent Free Chlorine:** With Rosemount Analytical's Model 498Cl-01 sensor, the analyzer is able to measure free chlorine with automatic correction for process pH without the need for a pH sensor.
- **Inferential pH:** The analyzer is able to derive and display inferred pH (pHCalc) using two contacting conductivity signal boards and the appropriate contacting conductivity sensors. This method will calculate the pH of condensate and boiler water from conductivity and cation conductivity measurements.
- **Differential Conductivity:** Dual input conductivity configurations can measure differential conductivity. The analyzer can be programmed to display dual conductivity as ratio, % rejection, or % passage.

SPECIFICATIONS - General

Enclosure: Polycarbonate. NEMA 4X/CSA 4 (IP65).

Dimensions: Overall 155 x 155 x 131mm (6.10 x 6.10 x 5.15 in.). Cutout: 1/2 DIN 139mm x 139mm (5.45 x 5.45 in.)

Conduit Openings: Accepts 1/2" or PG13.5 conduit fittings

Display: Monochromatic graphic liquid crystal display. 128 x 96 pixel display resolution. Backlit. Active display area: 58 x 78mm (2.3 x 3.0 in.).

Ambient Temperature and Humidity: 0 to 55°C (32 to 131°F). Turbidity only: 0 to 50°C (32 to 122°F), RH 5 to 95% (non-condensing)

Storage Temperature Effect: -20 to 60ºC (-4 to 140°F)

Hazardous Location Approvals -

Options for CSA: -01, 02, 03, 20, 21, 22, 24, 25, 26, 27, 30, 31, 32, 34, 35, 36, 37, 38, AN, and HT.

C US –LR 34186

Class I, Division 2, Groups A, B, C, & D
Class II, Division 2, Groups E, F, & 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

Options for FM: -01, 02, 03, 20, 21, 22, 24, 25, 26, 30, 31, 32, 34, 35, 36, 38, AN, and HT.

FM APPROVED

Class I, Division 2, Groups A, B, C, & D
Class II & III, Division 2, Groups E, F, & G
T4A Tamb= 50°C Enclosure Type 4X

POLLUTION DEGREE 2: Normally only non-conductive pollution occurs. Occasionally, however, a temporary conductivity caused by condensation must be expected. Altitude: for use up to 2000 meter (6562 ft.)

Power: Code -01: 115/230 VAC ±15%, 50/60 Hz. 10W.

Code -02: 20 to 30 VDC. 15 W.

Code -03: 85 to 265 VAC, 47.5 to 65.0 Hz, switching. 15 W.

Note: Code -02 and -03 power supplies include 4 programmable relays

⧈ Equipment protected by double insulation

RFI/EMI: EN-61326
LVD: EN-61010-1

CE

Alarms relays*: Four alarm relays for process measurement(s) or temperature. Any relay can be configured as a fault alarm instead of a process alarm. Each relay can be configured independently and each can be programmed with interval timer settings.

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 (max.), 40 VAC

⚠ CAUTION

RISK OF ELECTRICAL SHOCK

*Relays only available with -02 power supply (20 - 30 VDC) or -03 switching power supply (85 - 265 VAC)

⚠ WARNING

Exposure to some chemicals may degrade the sealing properties used in the following devices: Zettler Relays (K1-K4) PN AZ8-1CH-12DSEA

Inputs: One or two isolated sensor inputs

Outputs: Two 4-20 mA or 0-20 mA isolated current outputs. Fully scalable. Max Load: 550 Ohm. Output 1 has superimposed HART signal (configurations 1056-0X-2X-3X-HT only)

Current Output Accuracy: ±0.05 mA @ 25 ºC

Terminal Connections Rating: Power connector (3-leads): 24-12 AWG wire size. Signal board terminal blocks: 26-16 AWG wire size. Current output connectors (2-leads): 24-16 AWG wire size. Alarm relay terminal blocks: 24-12 AWG wire size (-02 24 VDC power supply and -03 85-265VAC power supply)

Weight/Shipping Weight: (rounded up to nearest lb or nearest 0.5 kg): 3 lbs/4 lbs (1.5 kg/2.0 kg)