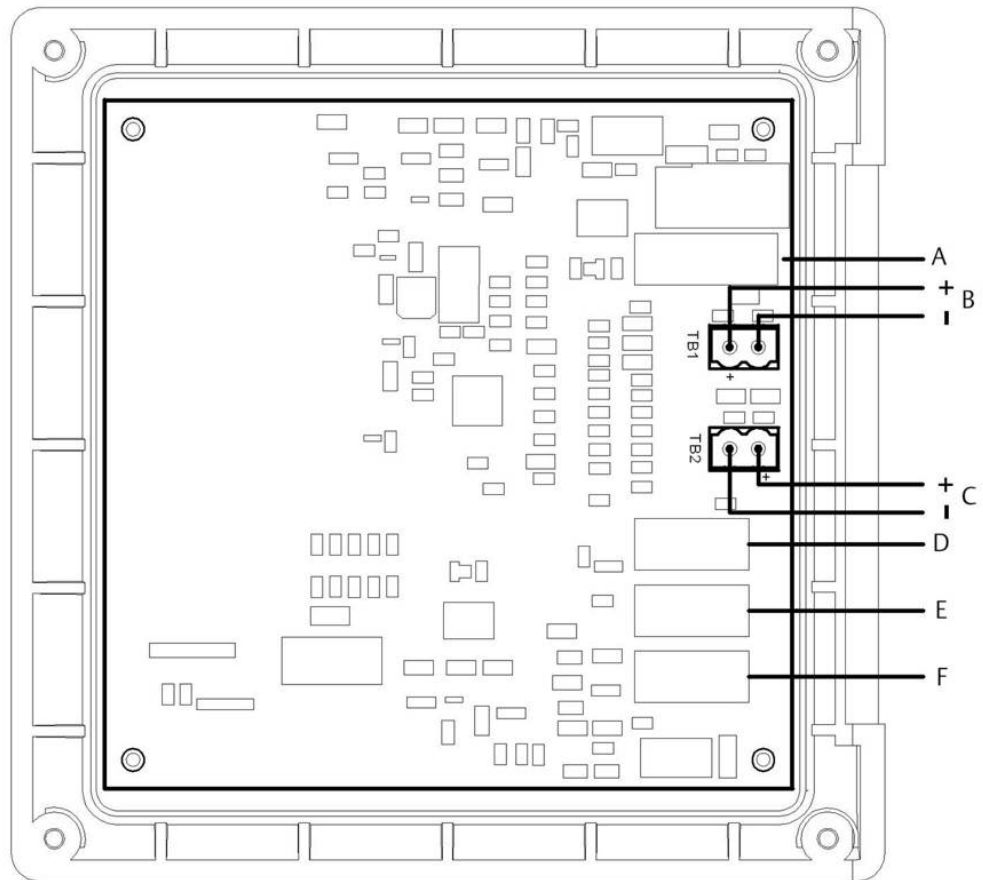


Figure 2-15: Output wiring for Rosemount 1056 main PCB



- A. To power supply PCB
- B. Analog output 1
- C. Analog output 2
- D. To digital input/output PCB
- E. To sensor 1 PCB
- F. To sensor 2 PCB

A. To main board

3 Navigating the display

3.1 User interface

The Rosemount 1056 has a large display which shows two live measurement readouts in large digits and up to four additional process variables or diagnostic parameters concurrently. The display is back-lit, and you can customize the format to meet your requirements.

Press **MENU** to access calibration, hold (of current outputs), programming, and display functions. In addition, a dedicated **DIAGNOSTIC** button is available to provide access to useful operational information on installed sensor(s) and any problematic conditions that might occur. The display flashes *Fault* and/or *Warning* when these conditions occur.

The transmitter displays **Help** screens for most fault and warning conditions to guide you in troubleshooting. During calibration and programming, key presses cause different displays to appear. The displays are self-explanatory and guide you step-by-step through the procedure.



3.2 Keypad

Press **MENU** to access menus for programming and calibrating the transmitter. There are four function keys and four selection keys on the keypad.

Function keys

Four top-level menu items appear when you press **MENU**.

- | | |
|------------------|---|
| Calibrate | Calibrate the attached sensor(s) and analog output(s). |
| Hold | Suspend analog output(s). |
| Program | Program outputs, measurement, temperature, security, and reset. |
| Display | Program display format, language, warnings, and contrast. |

Press **MENU** to display the main menu screen. Press **MENU** followed by **EXIT** to display the main display.

Press **DIAG** to display active Faults and Warnings and detailed transmitter information and sensor diagnostics, including:

- Faults
- Warnings

- Sensor 1 and 2 information
- Output 1 and 2 live current values
- Transmitter software version
- AC frequency

Press **ENTER** on Sensor 1 or Sensor 2 to display useful diagnostics and information, such as:

- Measurement
- Sensor type
- Raw signal value
- Cell constant
- Zero offset
- Temperature
- Temperature offset
- Selected measurement range
- Cable resistance
- Temperature sensor resistance
- Signal board software version

Press **ENTER** to store numbers and settings and move the display to the next screen.

Press **EXIT** to return to the previous screen without storing changes.

Selection keys

Surrounding the **ENTER** key, four selection keys (**Up**, **Down**, **Right**, and **Left**) move the cursor to all areas of the screen while using the menus.

Use selection keys to:

- Select items on the menu screens.
- Scroll up and down the menu lists.
- Enter or edit numeric values.
- Move the cursor to the right or left.
- Select measurement units during operation.

3.3 Main display

The Rosemount 1056 displays:

- One or two primary measurement values
- Up to four secondary measurement values
- Fault and Warning banner
- Alarm relay flags
- Digital communication icon

Process measurements

Two process variables are displayed if two signal boards are installed. One process variable and process temperature are displayed if one signal board is installed with one sensor. The upper display area shows the Sensor 1 process reading. The center display area shows the Sensor 2 process reading. For dual conductivity, you can assign the upper and center display areas to different process variables as follows:

Process variables for upper display	Process variables for center display
Measure 1	Measure 1
% Reject	Measure 2
% Pass	% Reject
Ratio	% Pass
	Ratio
	Blank

For single input configurations, the upper display area shows the live process variable, and you can assign the center display area to Temperature or blank.

Secondary values

Up to four secondary values are shown in display quadrants at the bottom half of the screen. You can program all four secondary value positions to any displayable parameter available.

Possible secondary values include:

- Slope 1
- Reference off 1
- GI impedance 1
- Reference impedance 1
- Raw
- mV input
- Temperature 1
- Manual temperature 1
- Manual temperature 2
- Output 1 mA
- Output 2 mA
- Output 1%
- Output 2%
- Measure 1
- Relay 1⁽¹⁾
- Relay 2⁽¹⁾
- Relay 3⁽¹⁾
- Relay 4⁽¹⁾

⁽¹⁾ Only for the 1056-02 or 1056-03.

- Blank

Fault and Warning banner

If the transmitter detects a problem with itself or the sensor, the word `Fault` or `Warning` will appear at the bottom of the display. A fault requires immediate attention. A warning indicates a problematic condition or an impending failure. For troubleshooting assistance, press **DIAG**.

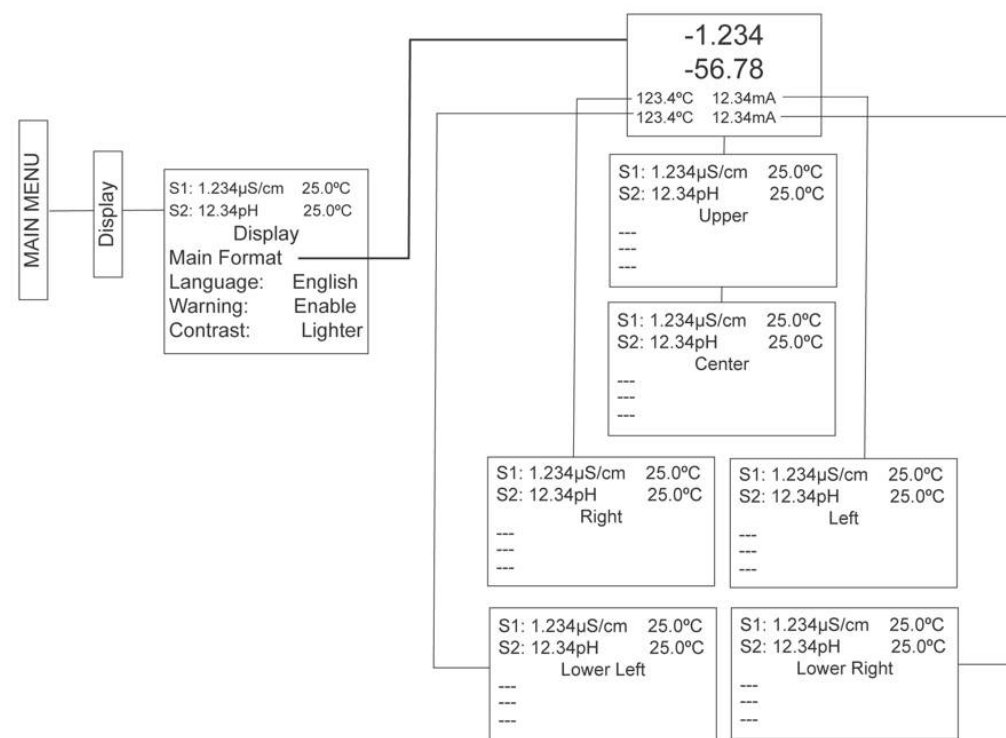
Formatting the main display

You can program the main display screen to show primary process variables, secondary process variables, and diagnostics.

1. Press **MENU**.
2. Scroll down to `Display`. Press **ENTER**.
3. `Main Format` is highlighted. Press **ENTER**.
4. The Sensor 1 process value is highlighted in reverse video. Press the selection keys to navigate down to the screen sections that you wish to program. Press **ENTER**.
5. Choose the desired display parameter or diagnostic for each of the four display sections in the lower screen.
6. Continue to navigate and program all desired screen selections. Press **MENU** and **EXIT**. The screen returns to the main display.

For single sensor configurations, the default display shows the live process measurement in the upper display area and temperature in the center display area. You can elect to disable the display of temperature in the center display area using the Main Format function. For dual sensor configurations, the default display shows Sensor 1 live process measurement in the upper display area and Sensor 2 live process measurement in the center display area.

Figure 3-1: Formatting the main display



3.4 Menu system

The transmitter uses a scroll and select menu system. Press **MENU** at any time to open the top-level menu, including Calibrate, Hold, Program, and Display functions.

To find a menu item, scroll with the **Up** and **Down** keys until the item is highlighted. Continue to scroll and select menu items until the desired function is chosen. To select the menu item, press **ENTER**. To return to a previous menu level or to enable the main live display, press **EXIT** repeatedly. To return immediately to the main display from any menu level, press **MENU** and then **EXIT**.

The selection keys have the following functions:

- The **Up** key (above **ENTER**) increments numerical values, moves the decimal point one place to the right, or selects units of measurement.
- The **Down** key (below **ENTER**) decrements numerical values, moves the decimal point one place to the left, or selects units of measurement.
- The **Left** key (left of **ENTER**) moves the cursor to the left.
- The **Right** key (right of **ENTER**) moves the cursor to the right.

During all menu displays (except main display format and **Quick Start**), the live process measurements and secondary measurement values are displayed in the top two lines of the upper display area. This conveniently allows display of the live values during important calibration and programming operations.

Menu screens time out after two minutes and return to the main display.

4 Start up the transmitter

Procedure

1. Wire sensor(s) to the signal boards.
Refer to the sensor Quick Start Guide for additional details. Make current output, alarm relay, and power connections.
2. Once connections are secured and verified, apply power to the transmitter.

⚠ WARNING

Electrical shock

Installation and servicing of this product may expose personnel to dangerous voltages.

Electrical installation must be in accordance with the National Electrical Code (ANSI/National Fire Protection Agency-70) and/or any other national or local codes.

The equipment is protected throughout by double insulation.

Disconnect main power, wired to separate power source, before servicing.

Ensure that all equipment doors are closed and protective covers are in place, except when maintenance is being performed by qualified personnel.

Signal wiring must be rated at least 240 V.

Non-metallic cable strain reliefs do not provide grounding between conduit connections. Use grounding type bushings and jumper wires.

Make sure that the instrument is connected and properly grounded through a three-wire power source.

Proper use and configuration is the operator's responsibility.

Install all protective equipment covers and safety ground leads after installation.

Operate only with front panel fastened and in place.

Disconnect and lock out power before connecting the power supply.

When the transmitter is powered up for the first time, **Quick Start** screens appear. Quick Start operating tips are as follows:

- a. A back-lit field shows the position of the cursor.
 - b. To move the cursor left or right, use the keys to the left or right of the **ENTER** key. To scroll up or down or to increase or decrease the value of a digit, use the keys above and below the **ENTER** key. Use the **Left** or **Right** keys to move the decimal point.
 - c. Press **ENTER** to store a setting. Press **EXIT** to leave without storing changes. Press **EXIT** during Quick Start to return the display to the initial startup screen (**Select language**).
3. Complete the steps as shown in the [Figure 4-1](#).