

For Additional Product Information:

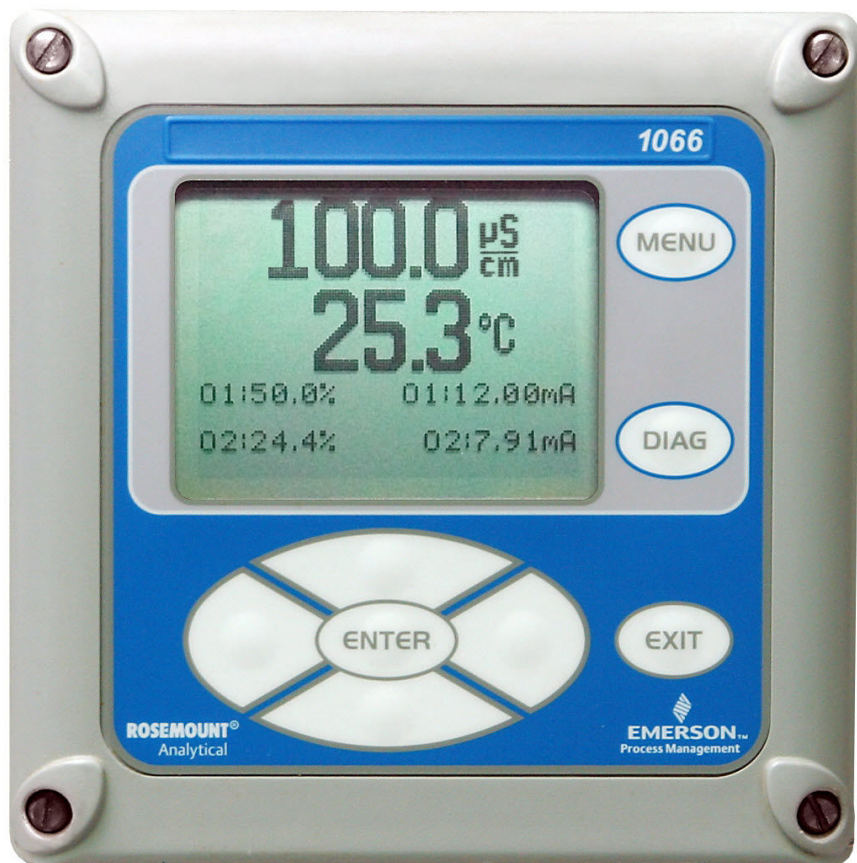
If QR code is not affixed here, product documents can be located by entering your product's S/N into the search tool (magnifier icon) at the top of the webpage found at www.emerson.com



Quick Start Guide
00825-0100-3166, Rev AF
March 2026

Rosemount™ 1066

Single Channel Transmitter



ROSEMOUNT™


EMERSON™
Process Management

Safety messages

For information on specifications, programming, calibration, and HART® communications, see the [Rosemount 1066 Transmitter Reference Manual](http://www.Emerson.com/global) at www.Emerson.com/global.

Emerson designs, manufactures, and tests its products to meet many national and international standards. Because these instruments are sophisticated technical products, you must properly install, use, and maintain them to ensure they continue to operate within their normal specifications. You must adhere to the following instructions and integrate them into your safety program when installing, using, and maintaining Emerson's Rosemount products.

WARNING

Failure to follow the proper instructions may cause any one of the following situations to occur: loss of life, personal injury, property damage, damage to this instrument, and warranty invalidation. Unauthorized parts and procedures can affect the product's performance, place the safe operation of your process at risk, and may result in fire, electrical hazards, or improper operation.

Read all instructions prior to installing, operating, and servicing the product.

If you do not understand any of the instructions, contact your Emerson representative for clarification.

Follow all warnings, cautions, and instructions marked on and supplied with the product.

Inform and educate your personnel in the proper installation, operation, and maintenance of the product.

Install equipment as specified in the installation instructions of the appropriate Quick Start Guide and per applicable local and national codes. Connect all products to the proper electrical and pressure sources.

When replacement parts are required, ensure that qualified people use replacement parts specified by Emerson.

Ensure that all equipment doors are closed and protective covers are in place, except when maintenance is being performed by qualified people, to prevent electrical shock and personal injury.

Risk of electrical shock

Do not open while the circuit is live.

Only clean with a damp cloth.

Electrostatic ignition hazard

Special conditions for safe use (when installed in hazardous areas)

The plastic enclosure, except the front panel, must only be cleaned with a damp cloth. The surface resistivity of the non-metallic enclosure materials is greater than one gigohm. Take care to avoid electrostatic charge build-up. Do not rub or clean the transmitter with solvents or a dry cloth.

The panel mount gasket has not been tested for type of protection IP66 or Class II and III. Type of protection IP66 and Class II, III refer to the enclosure only.

Special condition of use of Rosemount 1066 C FF/FII5 and 1066 T FF/FII5. For use with simple apparatus Rosemount 140, 141, 142, 150, 400, 401, 402, 402VP, 403, 403VP, 404, and 410VP contacting conductivity sensors and Rosemount 222, 225, 226, and 228 toroidal sensors.

Physical access

Unauthorized personnel may potentially cause significant damage to and/or misconfiguration of end users' equipment. This could be intentional or unintentional and needs to be protected against.

Physical security is an important part of any security program and fundamental in protecting your system. Restrict physical access by unauthorized personnel to protect end users' assets. This is true for all systems used within the facility.

If a HART® Communicator is used with these transmitters, the software within the HART Communicator may require modification. If a software modification is required, please contact your local Emerson Service Group or National Response Center at 1-800-654-7768.

1 Product certifications

1.1 European Directive information

A copy of the EU Declaration of Conformity can be found at the end of the Quick Start Guide. The most recent revision of the EU Declaration of Conformity can be found at [Emerson.com/global](https://emerson.com/global).

1.2 Ordinary location certification

As standard, the transmitter has been examined and tested to determine that the design meets the basic electrical, mechanical, and fire protection requirements by a nationally recognized test laboratory (NRTL), as accredited by the Federal Occupational Safety and Health Administration (OSHA).

1.3 Installing equipment in North America

The US National Electrical Code® (NEC) and the Canadian Electrical Code (CEC) permit the use of Division marked equipment in Zones and Zone marked equipment in Divisions. The markings must be suitable for the area classification, gas, and temperature class. This information is clearly defined in the respective codes.

1.4 USA

1.4.1 USA intrinsically safe and non-incendive

Certificate	FM16US0181X
Markings	IS CL I,II,III, DIV 1, GP ABCDEFG CL I, ZN 0, AEx ia IIC; T4 NI, CL I, DIV 2, GP ABCD DIP, CL II, III, DIV 1, GP EFG T4 Tamb = -20 °C to +65 °C Install per control drawing 1400670 IP66

Specific Conditions of Use (X):

1. The panel mount gasket has not been tested for type of protection IP66 or Class II and III. Type of protection IP66 and Class II, III refer to the enclosure only.
2. The surface resistivity of the non-metallic enclosure materials is greater than one gigohm. Care must be taken to avoid electrostatic charge build up. The transmitter must not be rubbed or cleaned with solvents or a dry cloth.

1.4.2 USA intrinsically safe and non-incendive

Certificate	70176165
Markings	Class I, Division 1, Groups ABCD; Class II, Division 1, Groups EFG; Class III: Ex ia IIC T4 Ga Class I Zone 0 AEx ia IIC T4 G Tamb: -20 to +65 °C; Temperature Code T4; Enclosure Type 4X Intrinsically safe when installed in accordance with installation drawing 1400669 Class I, Division 2, Groups ABCD; Class II, Division 2, Groups FG; Class III: Tamb: -20 to +65°C; Temperature Code T4; Enclosure Type 4X, IP66 Nonincendive field wiring when installed in accordance with drawing 1400669

1.5 Canada

1.5.1 Canada intrinsically safe and non-incendive

Certificate	70176165
Markings	Class I, Division 1, Groups ABCD; Class II, Division 1, Groups EFG; Class III: Ex ia IIC T4 Ga Class I Zone 0 AEx ia IIC T4 G Tamb: -20 to +65 °C; Temperature Code T4; Enclosure Type 4X Intrinsically safe when installed in accordance with installation drawing 1400669 Class I, Division 2, Groups ABCD; Class II, Division 2, Groups FG; Class III: Tamb: -20 to +65°C; Temperature Code T4; Enclosure Type 4X, IP66 Nonincendive field wiring when installed in accordance with drawing 1400669

1.6 Europe

1.6.1 ATEX/UKEX intrinsically safe

ATEX Certificate	Baseefa11ATEX0195X
UKEX Certificate	BAS21UKEX0390X
Markings	 II 1 G Ex ia IIC T4 Ga (-20 °C ≤ Ta ≤ +65 °C)

Specific Conditions of Use (X):

1. The plastic enclosure, excluding the front panel, may constitute a potential electrostatic ignition risk and must only be cleaned with a damp cloth.

1.7 International

1.7.1 IECEx intrinsically safe

Certificate	IECEx BAS 11.0098X
Markings	Ex ia IIC T4 Ga IP66 -20 °C ≤ Ta ≤ +65 °C

Specific Conditions of Use (X):

1. The plastic enclosure, excluding the front panel, may constitute a potential electrostatic ignition risk and must only be cleaned with a damp cloth.

1.8 Brazil

1.8.1 Brazil intrinsically safe

Certificate	UL-BR 18.0477X
Markings	Ex ia IIC T4 Ga IP66 (-20 °C ≤ Ta ≤ +65 °C)

Specific Conditions of Use (X):

1. The plastic enclosure, excluding the front panel, may constitute a potential electrostatic ignition risk and must only be cleaned with a damp cloth.

2 Declaration of Conformity

**EMERSON**

Declaration of Conformity



No: 1118 Rev. D

We,

Rosemount Inc.
6021 Innovation Blvd
Shakopee, MN 55379
USA

declare under our sole responsibility that the product,

Rosemount™
Smart-enabled, 2-wire Transmitter, Model 1066

Authorized Representative in Europe:

Emerson S.R.L., company No. J12/88/2006, Emerson 4
street, Parcul Industrial
Tetaron II, Cluj-Napoca 400638, Romania

Regulatory Compliance Shared Services Department
Email: europaeproductcompliance@emerson.com Phone:
+40 374 132 035

For product compliance destination sales
questions in Great Britain, contact Authorized
Representative:

Emerson Process Management Limited at
ukproductcompliance@emerson.com or +44 11
6282 23 64, Regulatory Compliance Department.

Emerson Process Management Limited, company
No 00671801, Meridian East, Leicester LE19 1UX,
United Kingdom

to which this declaration relates, is in conformity with:

1) the relevant statutory requirements of Great Britain, including the latest amendments

2) the provisions of the European Union Directives, including the latest amendments


(signature & date of issue)

Mark Lee

Vice President, Quality

Shakopee, MN, USA

(name)

(function)

(place of issue)

ATEX Notified Body for EU Type Examination Certificate:
CSA Group Netherlands B.V. [Notified Body Number: 2813]
Ulrichsaweg 310
6812 AR ARNHEM
Netherlands

UK Conformity Assessment Body for UK Type Examination
Certificate:
CSA Group Testing UK Ltd [Approved Body Number: 0518]
Unit 6 Hawarden Industrial Park, Hawarden, CH6 3US
United Kingdom

ATEX Notified Body for Quality Assurance:
SGS Fimko Oy [Notified Body Number: 0568]
Takomatie 8
00380 Helsinki
Finland

UK Approved Body for Quality Assurance:
SGS Baseefa Ltd. [Approved Body Number: 1180]
Rockhead Business Park, Staden Lane
Buxton, Derbyshire. SK17 9RZ
United Kingdom

**EMERSON****Declaration of Conformity****EMC Directive (2014/30/EU)**

Harmonized Standards:
EN 61326-1:2013

ATEX Directive (2014/34/EU)

Baseefa11ATEX0195X – Intrinsically Safe
Equipment Group II,
Category 1 G Ex ia IIC T4 Ga (-20°C ≤ T_{amb} ≤ +65°C)

Harmonized Standards:
EN IEC 60079-0:2018
EN 60079-11:2012

Specific Conditions of Use: The plastic enclosure, excluding the front panel, may constitute a potential electrostatic ignition risk and must only be cleaned with damp cloth.

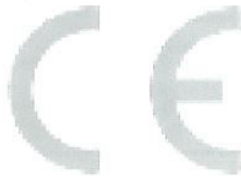
Electromagnetic Compatibility Regulations 2016 (S.I. 2016/1091)

Designated Standards:
EN 61326-1:2013

Equipment and Protective Systems Intended for use in Potentially Explosive Atmospheres Regulations 2016 (S.I. 2016/1107)

BAS21UKEX0390X – Intrinsically Safe
Equipment Group II,
Category 1 G Ex ia IIC T4 Ga (-20°C ≤ T_{amb} ≤ +65°C)

Designated Standards:
EN IEC 60079-0:2018
EN 60079-11:2012



3 China RoHS table

含有 China RoHS 管控物质超过最大浓度限值的部件型号列表 Rosemount 1066
List of Rosemount 1066 Parts with China RoHS Concentration above MCVs

产品中有害物质的名称及含有的信息表 Names and information table of hazardous substances in product					
部件名称 Part Name				电子组件 Electronics Assembly	传感器组件 Sensor Assembly
有害物质 Hazardous Substances	铅	Lead	(Pb)	X	X
	汞	Mercury	(Hg)	○	○
	镉	Cadmium	(Cd)	○	○
	六价铬	Hexavalent chromium	(Cr{VI})	○	○
	多溴联苯	Polybrominated biphenyls	(PBBs)	○	○
	多溴联苯醚	Polybrominated diphenyl ethers	(PBDEs)	○	○
	邻苯二甲酸二正丁酯	Dibutyl phthalate	(DBP)	○	○
	邻苯二甲酸二异丁酯	Diisobutyl phthalate	(DIBP)	○	○
	邻苯二甲酸丁苯酯	Butyl benzyl phthalate	(BBP)	○	○
	邻苯二甲酸二(2-乙基)己酯	Bis(2-ethylhexyl) phthalate	(DEHP)	○	○

注 1: ○: 表示该有害物质在该部件所有均质材料中的含量均不超出电器电子产品有害物质限制使用国家标准要求。
X: 表示该有害物质至少在该部件的某一均质材料中的含量超出电器电子产品有害物质限制使用国家标准要求。

Note1: ○: Indicate that said hazardous substance contained in all of the homogeneous materials for this part does not exceed the limit requirement of the national standard for the restriction of the use of hazardous substances in electrical and electronic products.
X: Indicate that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of the national standard for the restriction of the use of hazardous substances in electrical and electronic products.

注 2: 以上未列出的部件，表明其有害物质含量均不超过电器电子产品有害物质限制使用国家标准要求。

Note2: For components not listed above, indicates that their hazardous substance content does not exceed the limit requirements of the national standard for the restriction of the use of hazardous substances in electrical and electronic products.

4 Installation

4.1 Unpack and inspect

Procedure

Inspect the shipping container.

- If it is damaged, then contact the shipper immediately for further instructions.
- If there is no apparent damage, then unpack the container. Ensure all items shown on the packing list are present. If items are missing, then notify Emerson immediately.

4.2 Mounting

Note

Dimensions in the following drawings show inches above and millimeters below.

Figure 4-1: Panel mount front

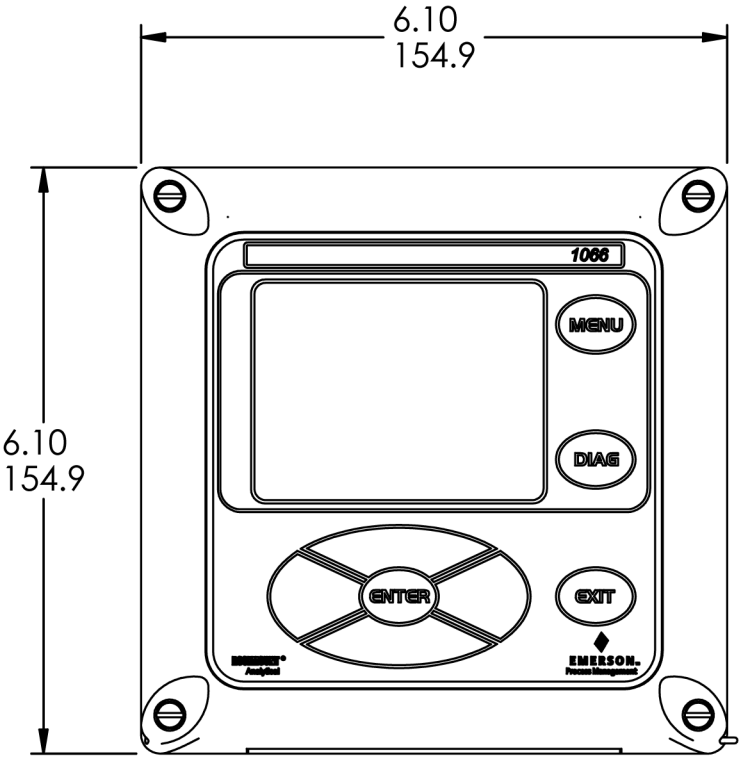
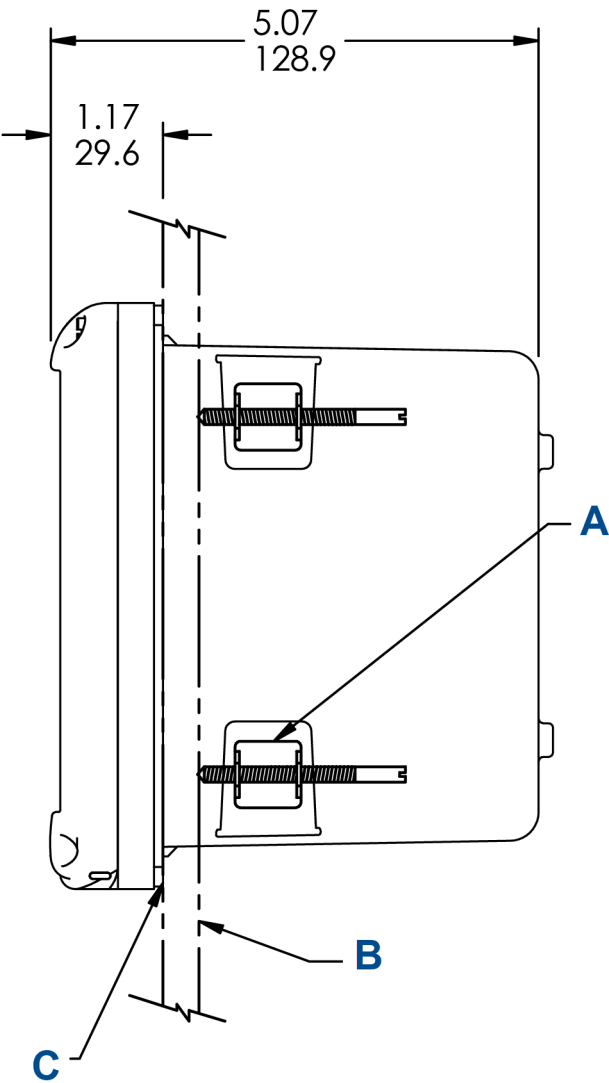
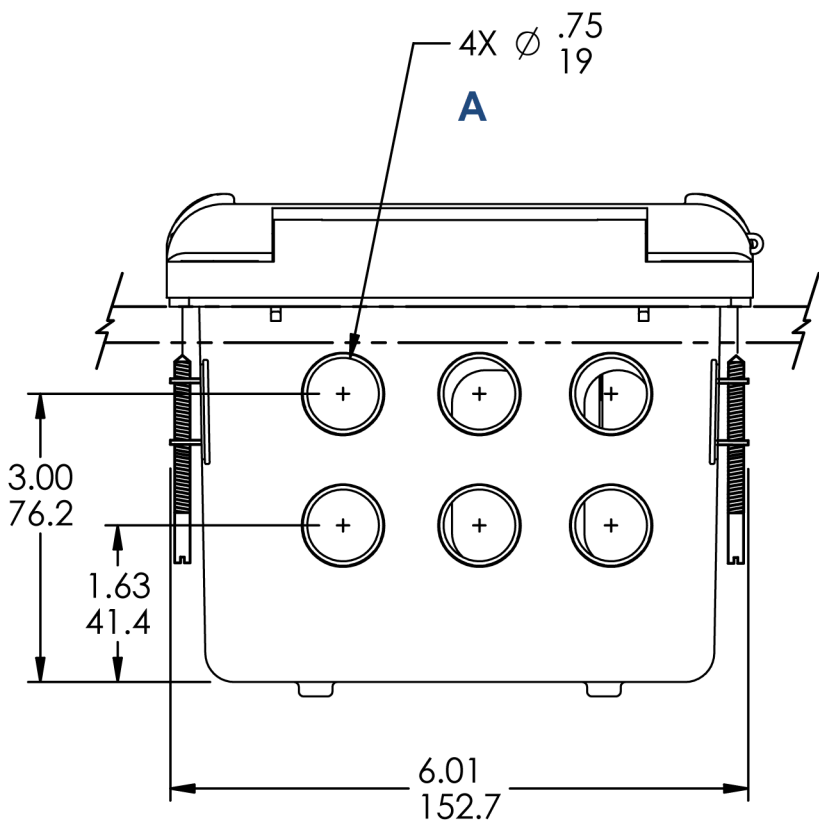


Figure 4-2: Panel mount side



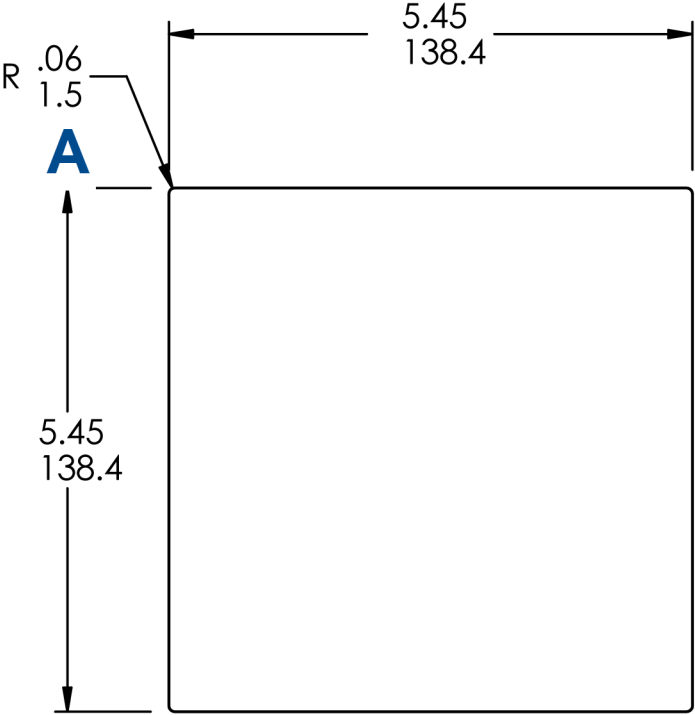
- A. Four mounting brackets and screws provided with instrument
- B. Panel supplied by others. Maximum thickness: 0.375 in. (9.52 mm)
- C. Panel mount gasket

Figure 4-3: Panel mount bottom



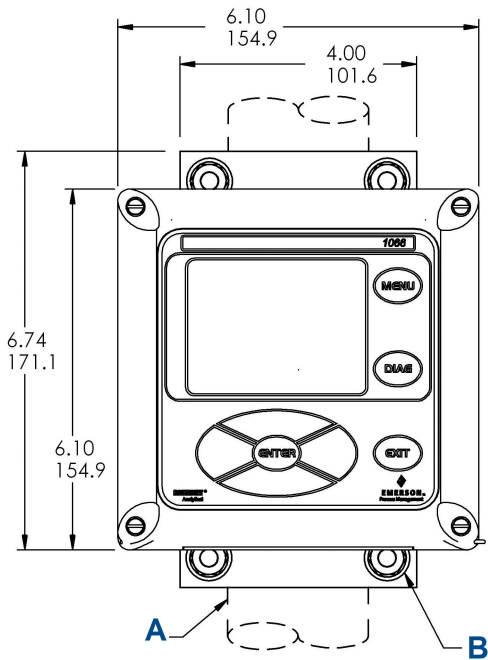
A. Conduit openings

Figure 4-4: Panel cut-out



A. Maximum

Figure 4-5: Wall mount front



- A. 2 in. (50.8 mm) pipe supplied by customer
B. Four cover screws

Figure 4-6: Wall mount side

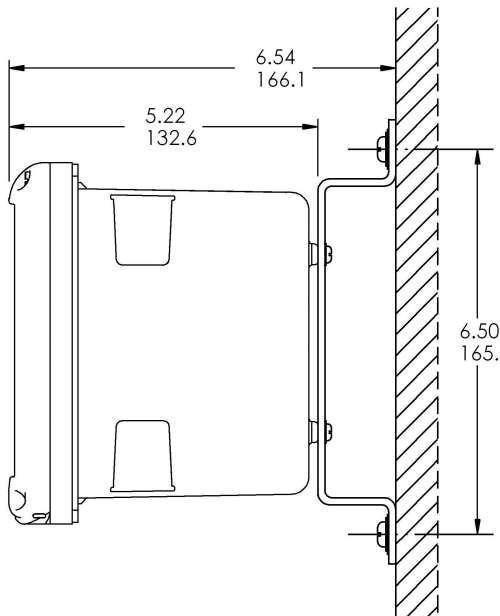
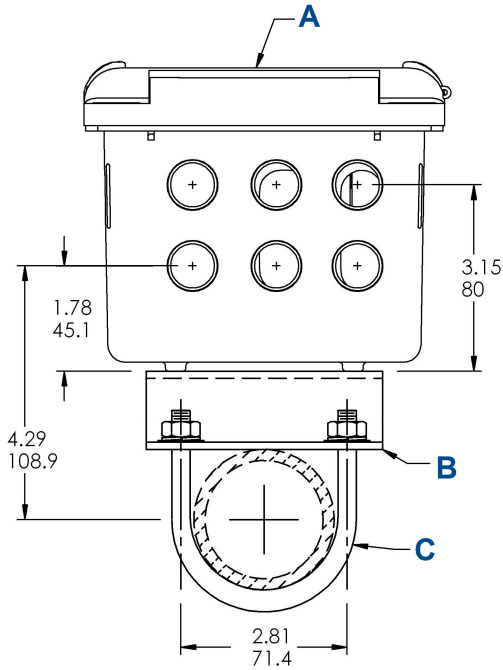
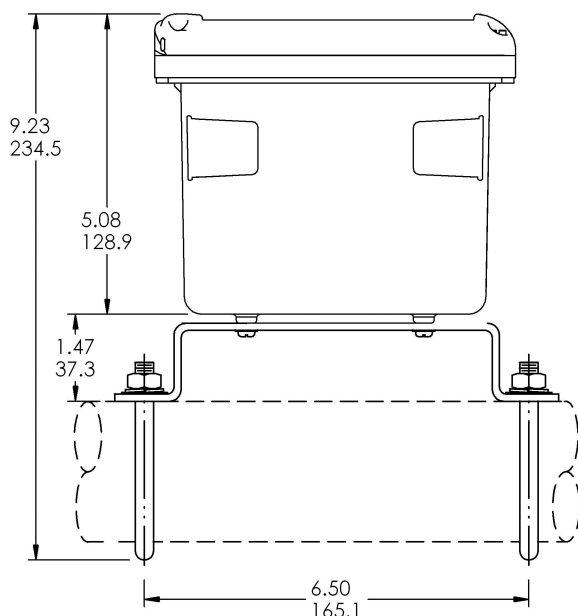


Figure 4-7: Pipe mount bottom



- A. Front panel
- B. 2 in. (50.8 mm) pipe mount bracket
- C. Two sets of U-bolts for 2-in (50.8 mm) pipe in kit PN 23820-00

Figure 4-8: Pipe mount side



4.3 General installation information

1. Install the transmitter with a sun shield or out of direct sunlight and areas with extreme temperatures.
2. Install the system in an area where vibrations and electromagnetic and radio frequency interference are minimized or absent.
3. Keep the transmitter and sensor wiring at least 1 ft. (0.30 m) from high voltage conductors. Ensure there is easy access to the transmitter and sample conditioning system.
4. The transmitter is suitable for panel, pipe, or surface mounting.
5. The transmitter case has six ½ in. (12.7 mm) conduit openings. Use separate conduit openings for the power/output cable, the sensor cable, and the other sensor cable as needed (pH input for free chlorine with continuous pH correction).
6. Use weathertight cable glands to keep moisture out of the transmitter. If using a conduit, plug and seal the connections at the transmitter housing to prevent moisture from getting inside the instrument.
7. Install cable gland fittings and plugs as needed to properly seal the transmitter on all six enclosure openings. The USB port cover must be fully installed on the front cover to ensure proper transmitter sealing.

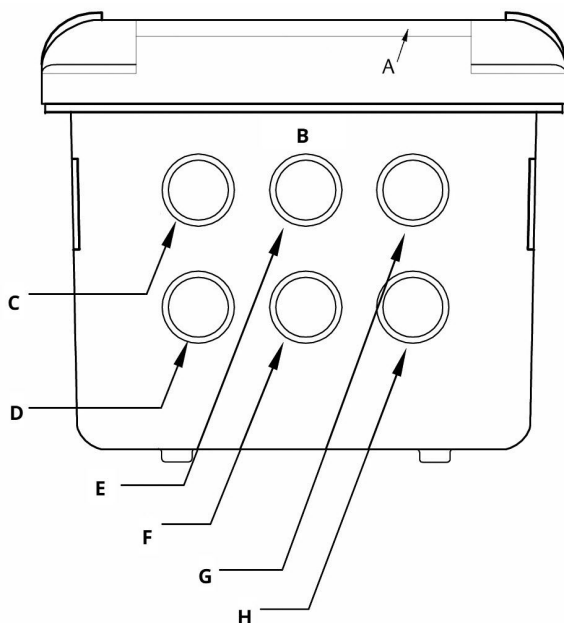
4.4 Preparing conduit openings

There are six conduit openings in all configurations of the transmitter.

Note

Emerson fits four of the openings with plugs upon shipment.

Figure 4-9: Conduit openings



- A. Front panel/keypad
- B. Power leads
- C. Alarm relay leads
- D. Sensor 1 cable
- E. 4-20 mA/HART®/Profibus® leads
- F. Sensor 2 cable
- G. Spare opening

NOTICE

Always use proper cable gland fittings and plugs for wire and cable installations.

Conduit openings accept 0.5 in. (13 mm) conduit fittings or PG13.5 cable glands. To keep the case watertight, block unused openings with Type 4X or IP66 conduit plugs.

To maintain ingress protection for outdoor use, seal unused conduit holes with suitable conduit plugs.

NOTICE

Use watertight fittings and hubs that comply with your requirements. Connect the conduit hub to the conduit before attaching the fitting to the transmitter.

Important

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

5 Wiring

5.1 General wiring information

All wiring connections are located on the main circuit board. The front panel is hinged at the bottom. The panel swings down for easy access to the wiring locations.

5.2 Digital communication

HART® and FOUNDATION™ Fieldbus communications are available as ordering options for the Rosemount 1066. HART units support Bell 202 digital communications over analog 4-20 mA current output 1.

5.3 HART® power supply - current loop wiring

Refer to [Figure 5-1](#).

Run the power/signal wiring through the opening nearest TB-2.

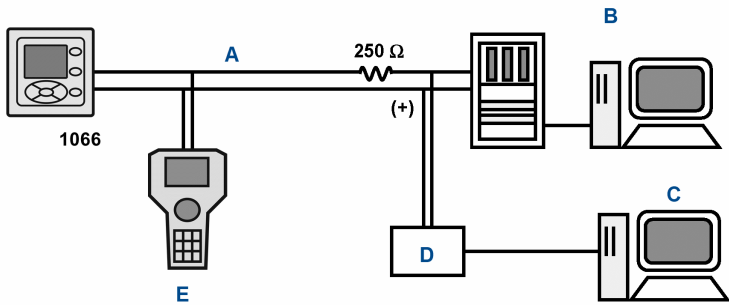
For optimum EMI/RFI protection:

1. Use shielded power/signal cable and ground the shield at the power supply.
2. Use a metal cable gland and be sure the shield makes good electrical contact with the gland.
3. Use the metal backing plate when attaching the gland to the transmitter enclosure. The power/signal cable can also be enclosed in an earth-grounded metal conduit.

Note

Do not run power supply/signal wiring in the same conduit or cable tray with loop power lines. Keep power supply/signal wiring at least 6 ft. (2 m) away from heavy electrical equipment.

Figure 5-1: Rosemount 1066 System Block Diagram



- A. 4-20 mA and HART signal
 - B. Control system
 - C. Computer
 - D. Bridge
 - E. Field Communicator
-

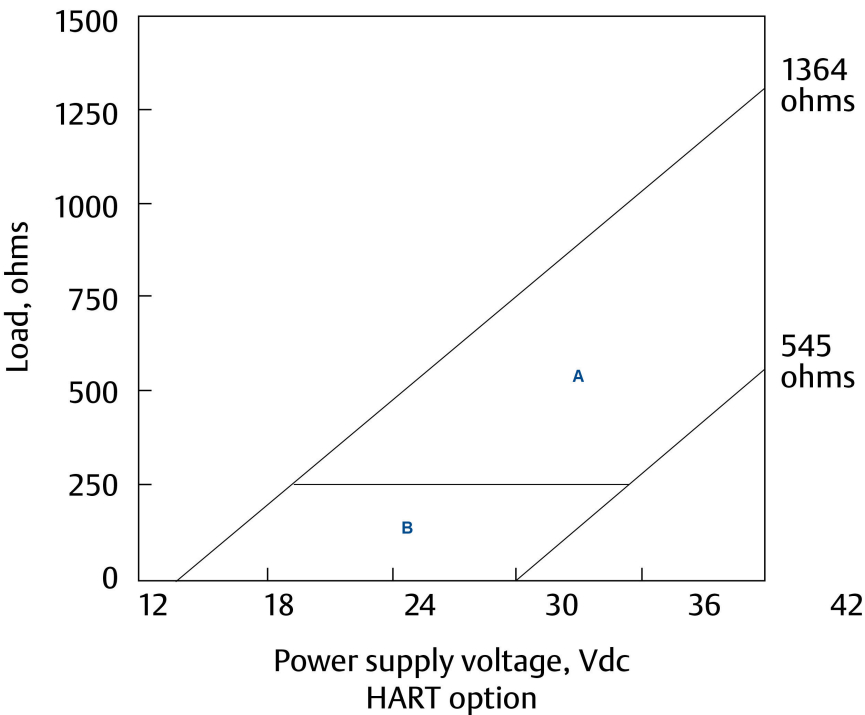
5.3.1 HART® power supply and load requirements

Refer to [Figure 5-2](#). The supply voltage must be at least 12.7 Vdc at the transmitter terminals. The power supply must be able to cover the voltage drop on the cable as well as the load resistor (250 Ω minimum) required for HART communication. The maximum power supply voltage is 42.0 Vdc. For intrinsically safe installations, the maximum power supply voltage is 30.0 Vdc.

[Figure 5-2](#) shows load and power supply requirements. The upper line is the power supply voltage needed to provide 12.7 Vdc at the transmitter terminals for a 22 mA current. The power supply must provide a surge current during the first 80 milliseconds of start-up. The maximum current is about 24 mA.

For digital communication, the load must be at least 250 ohms. To supply the 12.7 Vdc lift off voltage at the transmitter, the power supply voltage must be at least 17.5 Vdc.

Figure 5-2: Load/Power Supply Requirements



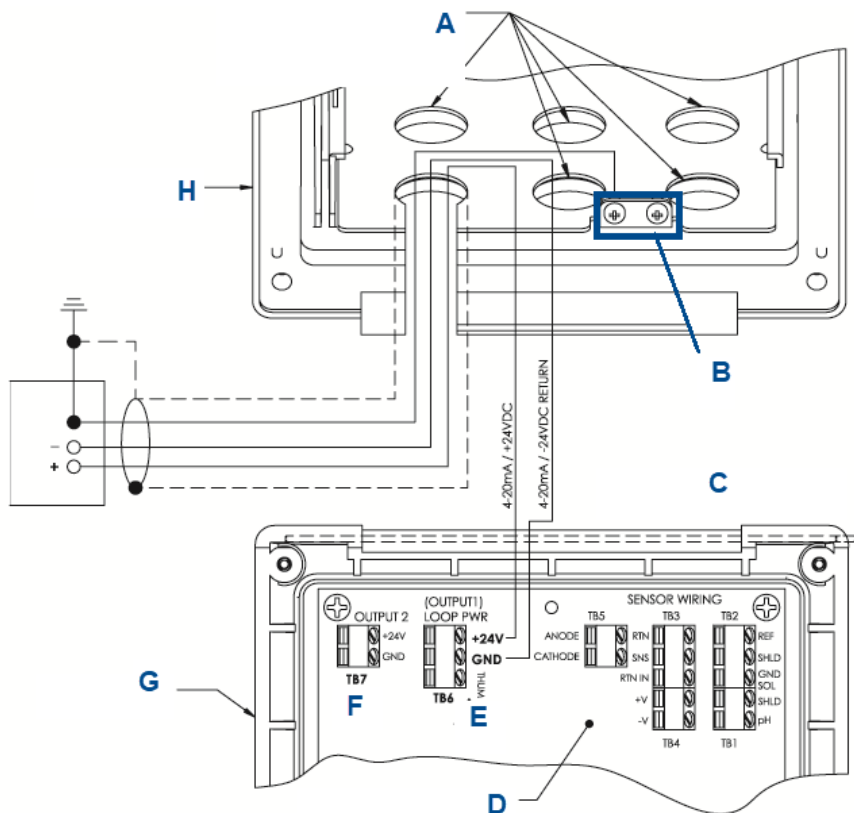
- A. With HART communication
- B. Without HART communication

5.3.2 HART® current output wiring

Emerson ships all instruments with two 4-20 mA current outputs. Current output 1 is the HART communications channel. Current output 2 is available to report process temperature measured by the temperature sensing element or resistance temperature device (RTD) within the sensor.

Wiring locations for the outputs are on the main board, which is mounted on the hinged door of the instrument. Wire the output leads to the correct position on the main board using the lead markings (+/positive, -/negative) on the board.

Figure 5-3: Rosemount 1066 HART loop power wiring



- A. Install plugs in all other openings as needed
- B. Ground lugs
- C. Hinge side of front panel
- D. Rosemount 1066 HART circuit board (pH/amperometric) ASSY 24539-00
- E. TB5/THUM terminal is only used for wireless THUM adaptor installations
- F. TB7/output 2 requires external DC power
- G. Hinged panel
- H. Inner enclosure

5.4 Wire FOUNDATION™ Fieldbus power supply

Procedure

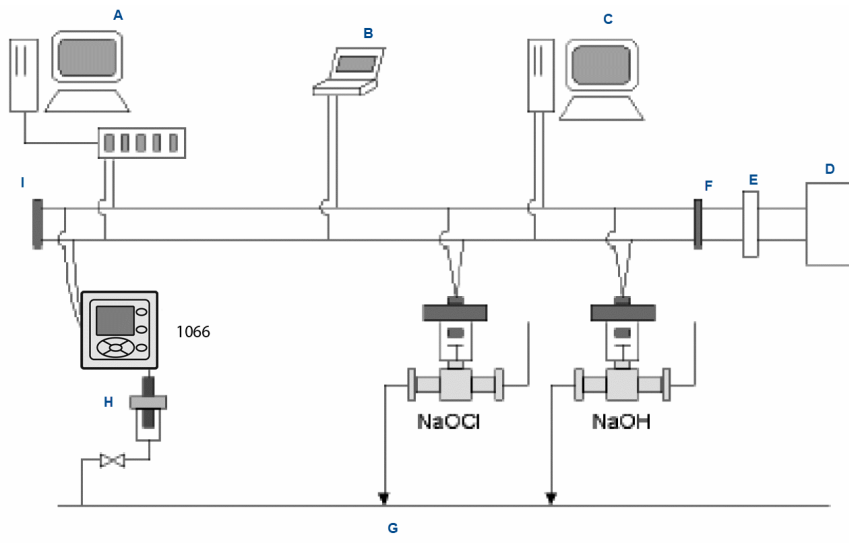
1. Run the power /signal wiring through the opening nearest TB2.
2. Use shielded cable and ground the shield at the power supply.
3. To ground the transmitter, attach the shield to TB2-3.

Note

For optimum electromagnetic interference (EMI) and radio frequency interference (RFI) immunity, shield the power supply/output cable and enclose it in an earth-grounded metal conduit. Do not run power supply/signal wiring in the same conduit or cable tray with loop power lines. Keep power supply/signal wiring at least 6 ft. (2 m) away from heavy electrical equipment.

Figure 5-4 shows the Rosemount 1066PFF being used to measure and control pH and chlorine levels in drinking water. The figure also shows three ways in which Fieldbus communication can be used to read process variables and configure the transmitter.

Figure 5-4: Configuring Rosemount 1066P Transmitter with FOUNDATION Fieldbus



- A. DeltaV configurator and host
- B. Fieldbus technician configurator
- C. Other host
- D. Power supply
- E. Filter
- F. Terminator
- G. Process line
- H. pH sensor
- I. Terminator

5.5 Wire sensor to transmitter

Procedure

1. Wire the correct sensor leads to the main board using the lead locations marked directly on the board.
Use integral cable SMART sensors or compatible VP8 pH cables to wire the Rosemount SMART pH sensors to the transmitter.
2. After wiring the sensor leads, use wiring diagrams found in the sensor manual to guide you as you carefully take up the excess sensor cable through the cable gland.

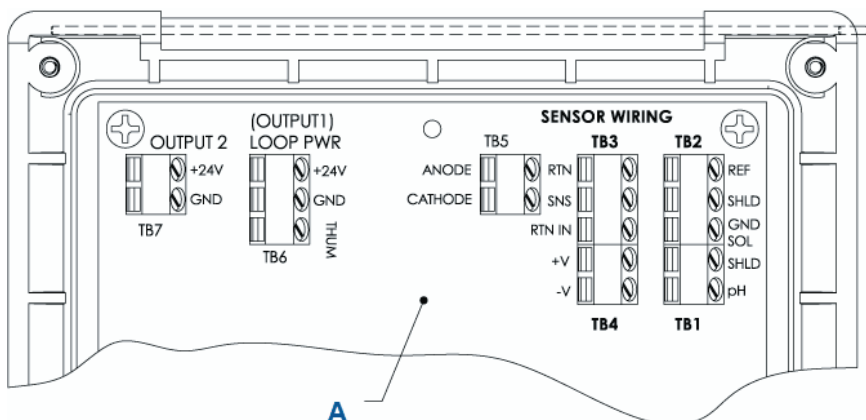
⚠ CAUTION

Keep sensor and output signal wiring separate from loop power wiring. Do not run sensor and power wiring in the same conduit or close together in a cable tray.

When wiring a pH/ORP sensor to the transmitter, follow this order:

1. Wire **TB3**/RTD to the return, sense, and RTD in terminals.
2. Wire **TB2**/reference and solution ground to the reference in, reference shield, and solution ground terminals.
3. Wire **TB4**/preamplifier (if present) to the +volts and -volts terminals.
4. Wire **TB1**/pH input to the pH shield and pH in terminals.

Figure 5-5: pH/ORP Sensor Wiring to the Transmitter Printed Circuit Board



A. Rosemount 1066 circuit board ASSY 24539-00 (HART®)

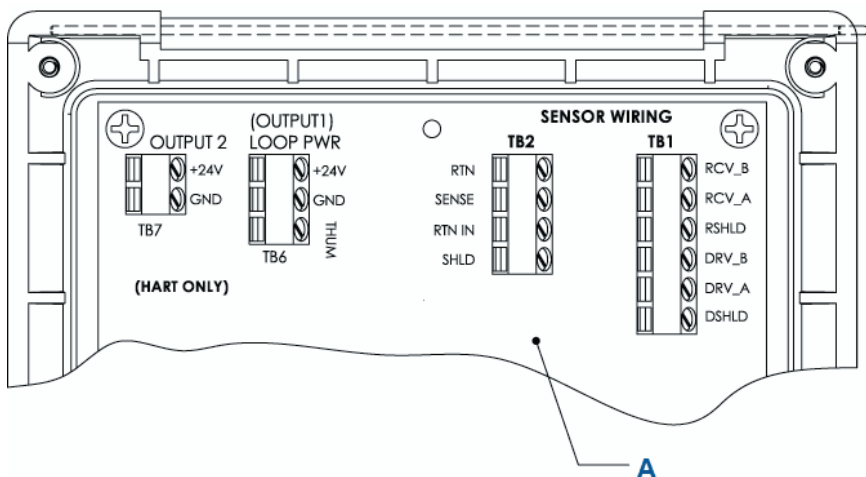
Note

- A. If ground lead is present, terminate it to green ground screw on inner enclosure.
- B. TB5, TB6, and TB7 are not used for pH/ORP sensor wiring.

When wiring a contacting or toroidal conductivity sensor to the transmitter, follow this order:

1. Wire **TB2**/RTD to the return, sense, RTD in, and shield terminals.
2. Wire **TB1**/conductivity to the receive B, receive A, shield, drive B, drive A, and shield terminals.

Figure 5-6: Contacting and Toroidal Conductivity Sensor Wiring to the Transmitter Circuit Board



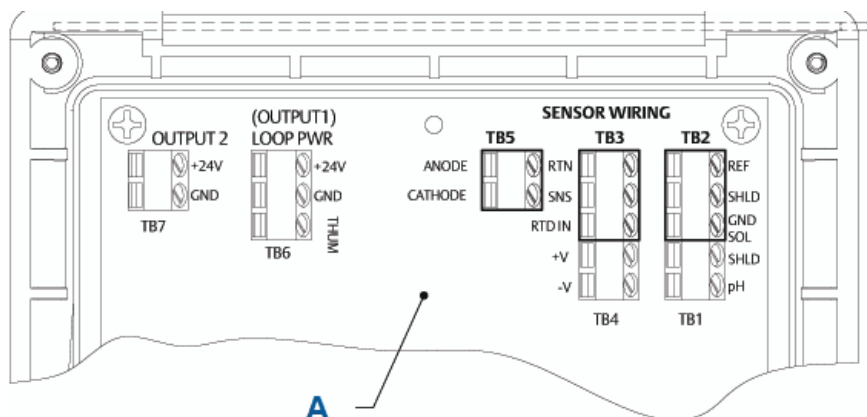
A. Rosemount 1066 circuit board ASSY 24638-00 (HART)

When wiring a chlorine, oxygen, or ozone sensor to the transmitter, follow this order:

1. Wire **TB5**/anode and cathode to the anode and cathode terminals.
2. Wire **TB3**/RTD to the return, sense, and RTD in terminals.

3. Wire **TB2**/solution ground to the solution ground terminal.

Figure 5-7: Chlorine, Oxygen, Ozone Sensor Wiring to Transmitter Printed Circuit Board

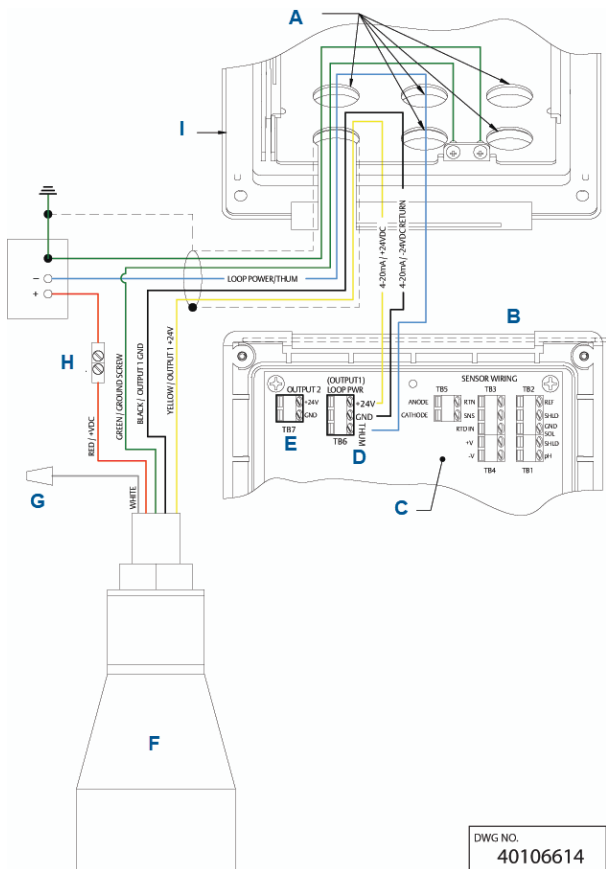


A. Rosemount 1066 circuit board ASSY 24406-xx

Note

A. TB1, TB4, TB6, and TB7 not used for oxygen and ozone sensor wiring.

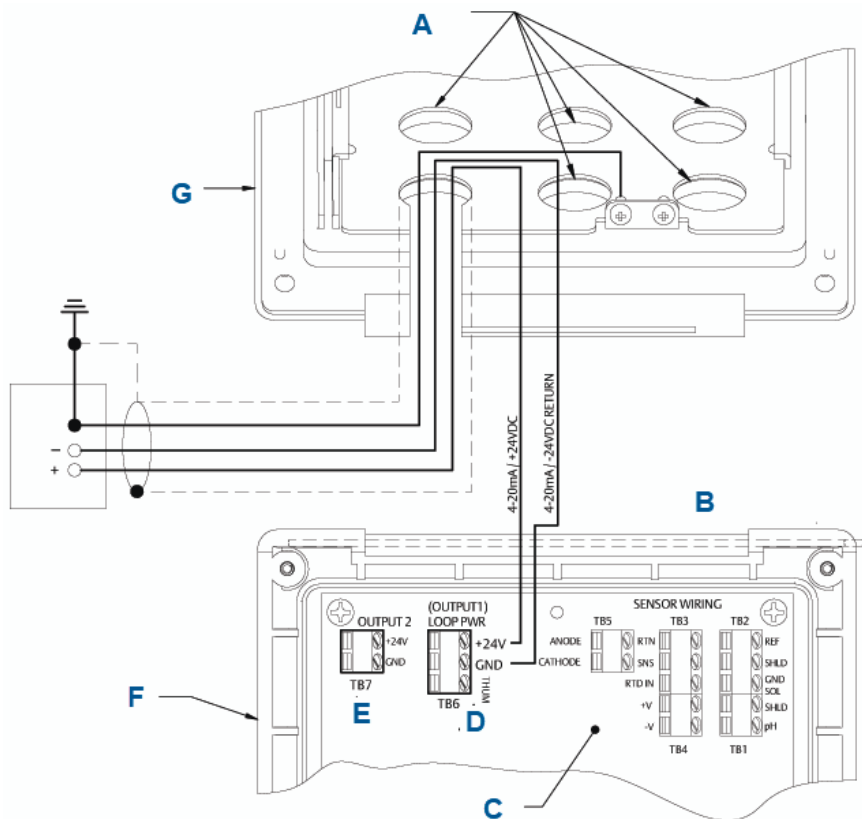
Figure 5-8: Power/Current Loop Wiring with Wireless THUM™ Adapter



- A. Install plugs in all other openings as needed.
- B. Hinge side of front panel
- C. HART circuit board (pH/chlorine/dissolved oxygen/ozone) ASSY 24406-xx
- D. TB6/THUM terminal is used only for wireless THUM adapter installations. 250 ohm resistor is pre-installed in-circuit.
- E. TB7/output 2 requires external DC power
- F. Wireless THUM adapter
- G. Wire nut
- H. Splice connector - provided by end user
- I. Inner enclosure

DWG NO.
40106614

Figure 5-9: HART Loop Power Wiring



- A. Install plugs in all other openings as needed
- B. Hinge side of front panel
- C. HART circuit board (pH/chlorine/dissolved oxygen/ozone) ASSY 24406-xx
- D. TB6/THUM terminal is used only for wireless THUM adapter installations
- E. TB7/output 2 requires external DC power
- F. Hinged panel
- G. Inner enclosure

For recommended wire entry points, see [Figure 4-9](#).

6 Navigating the display

6.1 User interface

The transmitter has a large display which shows the measurement readout and temperature in large digits and up to four additional process variables or diagnostic parameters concurrently. You can customize the displayed variables to meet your requirements. This is called display format.

The intuitive menu system allows access to Calibration, Hold (of current outputs), Programming, and Display functions. In addition, a dedicated **DIAG** 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 appear. **Help** screens are displayed 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.



6.2 Instrument keypad

There are four function keys and four selection keys on the instrument 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 outputs.
- Program** Program outputs, measurements, temperature, and security. You can also reset the transmitter.
- 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.

Pressing the **DIAG** key displays active faults and warnings and provides detailed instrument information and sensor diagnostics, including: faults, warnings, sensor information, Out 1 and Out 2, the current values, model configuration string (e.g. 1066-P-Ht-60), and instrument software version. Pressing **DIAG** on Sensor 1 or Sensor 2 provides useful diagnostics and information (as applicable): measurement, sensor type, raw signal value, cell constant, zero offset, temperature, temperature offset, selected measurement range, cable resistance, temperature sensor resistance, and 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.

Selection keys are used to:

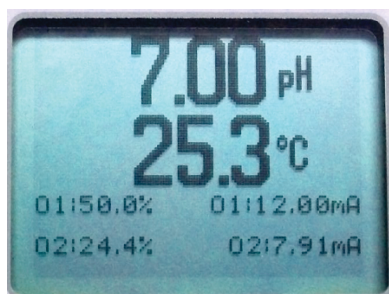
1. Select items on the menu screens.

2. Scroll up and down the menu lists.
3. Enter or edit numeric values.
4. Move the cursor to the right or left.
5. Select measurement units during operation.

6.3 Main display

The transmitter displays: the primary measurement value and temperature and up to four secondary measurement values, a fault and warning banner, and a digital communications icon.

Process measurements



One process variable and process temperature are displayed by default. For all configurations, the upper display area shows the live process variable, and the center display area shows the temperature (default screen settings).

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.

Fault and Warning banner

If the transmitter detects a problem with itself or the sensor, then 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**.

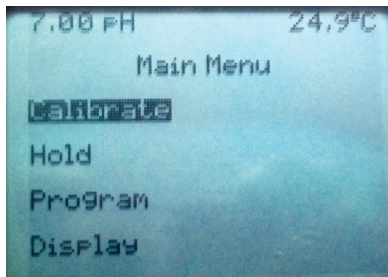
Formatting the main display

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.

The default display shows the live process measurement in the upper display area and the 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.

6.4 Menu system



The transmitter uses a scroll and select menu system. Pressing the **MENU** key at any time opens 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 item, press **ENTER**. To return to a previous menu level or to enable the main live display, press the **EXIT** key repeatedly. To return immediately to the main display from any menu level, simply 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 place 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.

To access desired menu functions, use the Quick Reference Guide. During all menu displays (except main display format and Quick Start), the live process measurement and temperature value 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 will time out after two minutes of inactivity and return to the main live display.

7 Start up transmitter

Procedure

1. Wire sensor(s) to the signal boards.

See [Wiring](#) for wiring instructions. 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 DC power to the transmitter.



This symbol identifies a risk of electrical shock.



This symbol identifies a potential hazard. When this symbol appears, consult the manual for appropriate action.

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

- A highlighted field shows the position of the cursor.
 - 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.
 - 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. Choose the desired language and press **ENTER**.

4. Choose measurement and press **ENTER**.
5. For pH, choose preamplifier location.
 - a) Select **Analyzer** to use the integral preamplifier in the transmitter.
 - b) Select **Sensor/J-Box** if your sensor is SMART or has an integral preamplifier or if you are using a remote preamplifier located in a junction box.
6. If applicable, choose units of measurement.
7. For contacting and toroidal conductivity, choose the sensor type and enter the numeric cell constant using the keys.
8. Choose temperature units: °F or °C.
The main display appears. The outputs are assigned to default values.
9. To change output settings, to scale the 4-20 mA current outputs, to change measurement-related settings from the default values, and to enable pH diagnostics, press **MENU**. Select **Program** and follow the prompts.
Refer to the appropriate menu.
10. To return the transmitter to the factory default settings, choose **Program** under the **Main Menu** and then scroll to **Reset**.
If you need further support, see [Emerson.com/global](https://www.emerson.com/global).



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

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