Instructions

Informer® In–Line Fluid Monitoring Package

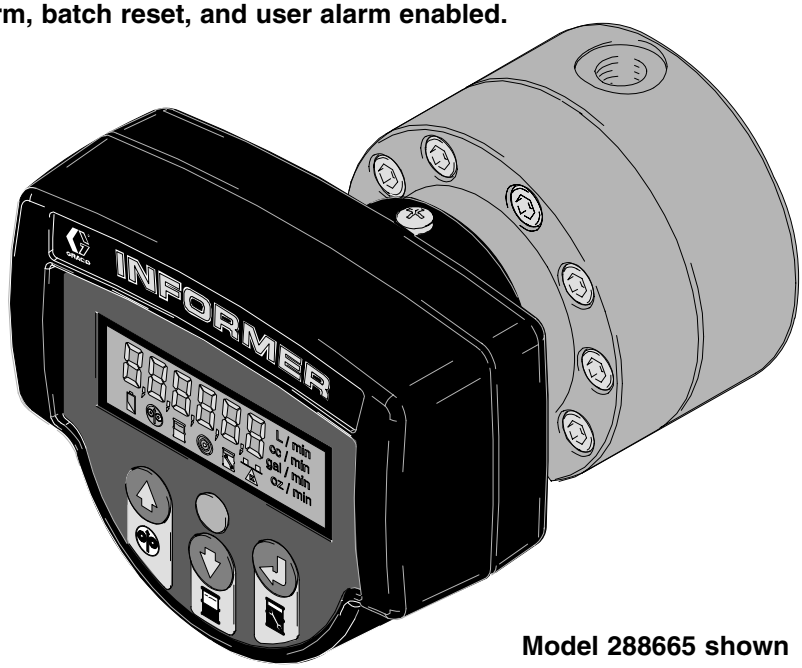
312013C

For use with paints and coatings with a flashpoint greater than –10°F (–23°C). Not for use in hazardous locations.

4000 psi (28 MPa, 276 bar) Maximum Working Fluid Pressure

Important Safety Instructions.
Read all warnings and instructions in this manual.
Save these instructions.
See page 2 for Table of Contents and page 3 for List of Models.

Output contacts for batch alarm, batch reset, and user alarm enabled.



Model 288665 shown

PROVEN QUALITY. LEADING TECHNOLOGY

CE

GRACO INC. P.O. BOX 1441 MINNEAPOLIS, MN 55440–1441

Table of Contents

List of Models

Model No.	Parts Included	Not Included
288665	G3000 Flow Meter and Informer Display	
288666	Remote Informer Display with 1/2 in. pipe mounting hardware	G3000 Flow Meter with 50 ft. sensor cable (P/N 243554) Order kit 243554
288667	Remote Informer Display with 3/4 in. pipe mounting hardware	G3000 Flow Meter with 50 ft. sensor cable (P/N 243554) Order kit 243554
288668	Remote Informer Display with 1 in. pipe mounting hardware	G3000 Flow Meter with 50 ft. sensor cable (P/N 243554) Order kit 243554
288669	Remote Informer Display with wall mounting hardware	G3000 Flow Meter with 50 ft. sensor cable (P/N 243554) Order kit 243554
288670	Remote Informer Display with din rail mounting hardware	G3000 Flow Meter with 50 ft. sensor cable (P/N 243554) Order kit 243554
288717	G3000HR Flow Meter and Informer Display	

Warnings

The following warnings are for the setup, use, grounding, maintenance, and repair of this equipment. The exclamation point symbol alerts you to a general warning and the hazard symbol refers to procedure–specific risk. Refer back to these warnings. Additional, product–specific warnings may be found throughout the body of this manual where applicable.

⚠ WARNING

SKIN INJECTION HAZARD

Spray from leaks, or ruptured components can inject fluid into your body and cause extremely serious injury, including the need for amputation. Splashing fluid in the eyes or on the skin can also cause serious injury.

- Fluid injected into the skin might look like just a cut, but it is a serious injury. **Get immediate surgical treatment.**
- Do not stop or deflect fluid leaks with your hand, body, glove, or rag.
- Follow the **Pressure Relief Procedure** on page 13 whenever you: are instructed to relieve pressure; stop operation; or clean, check, or service the equipment.
- Tighten all the fluid connections before operating the equipment.
- Check the hoses, tubes, and couplings daily. Replace worn, damaged, or loose parts immediately.

FIRE, EXPLOSION, AND ELECTRIC SHOCK HAZARD

Improper grounding, poor air ventilation, open flames, or sparks can cause a hazardous condition and result in fire or explosion and serious injury.

- Ground the equipment as instructed in **Grounding**, page 13.
- Never use the flow meter with an electrostatic gun isolation stand.
- Keep liquids away from the electronic sensor device.
- Follow the material supplier recommendations when flushing or servicing the meter.
- Do not service the electronic sensor. Return it to your Graco distributor for service.
- If there is any static sparking while using the equipment, **stop spraying immediately**. Identify and correct the problem.
- Keep a fire extinguisher in the work area.

EQUIPMENT MISUSE HAZARD

Equipment misuse can cause the equipment to rupture, malfunction, or start unexpectedly and result in serious injury.

- This equipment is for professional use only.
- Read all instruction manuals, tags, and labels before operating the equipment.
- Use the equipment only for its intended purpose. If you are uncertain about usage, call your Graco distributor.
- Do not alter or modify this equipment. Use only genuine Graco parts and accessories.
- Check the equipment daily. Repair or replace worn or damaged parts immediately.
- Do not exceed the maximum working pressure of the lowest rated system component. This equipment has a **4000 psi (28 MPa, 276 bar) maximum working pressure**.
- Use fluids or solvents that are compatible with the equipment wetted parts. See the **Technical Data** section of all the equipment manuals. Read the fluid and solvent manufacturer's warnings.
- Comply with all applicable local, state and national fire, electrical and other safety regulations.

Intrinsic Safety

Intrinsically safe equipment that is installed improperly or connected to non–intrinsically safe equipment will create a a hazardous condition and can cause fire, explosion, or electric shock. Follow local regulations and the following safety requirements.

- Be sure your installation complies with national, state, and local codes for the installation of an electrical apparatus in a Class I, Group D, Division I Hazardous Location, including all of the local safety fire codes, NFPA 33, NEC 500 and 516, and OSHA 1910.107.
- Equipment that comes in contact with the safety barrier's intrinsically safe terminals must be rated for Intrinsic Safety. This includes DC voltage meters, ohmmeters, cables, and connections. Remove the unit from the hazardous area when troubleshooting.
- The equipment is intrinsically safe when no external electrical components are connected to it, If a printer, computer, or other electrical component is connected, it must be used in conjunction with a safety barrier.
- Do not install equipment approved only for non–hazardous location in a hazardous area. See the ID label for the intrinsic safety rating for your model.
- Do not substitute system components as this may impair intrinsic safety.

Installation

Typical Installation: Remote Informer Display and Meter (in a non-hazardous area)

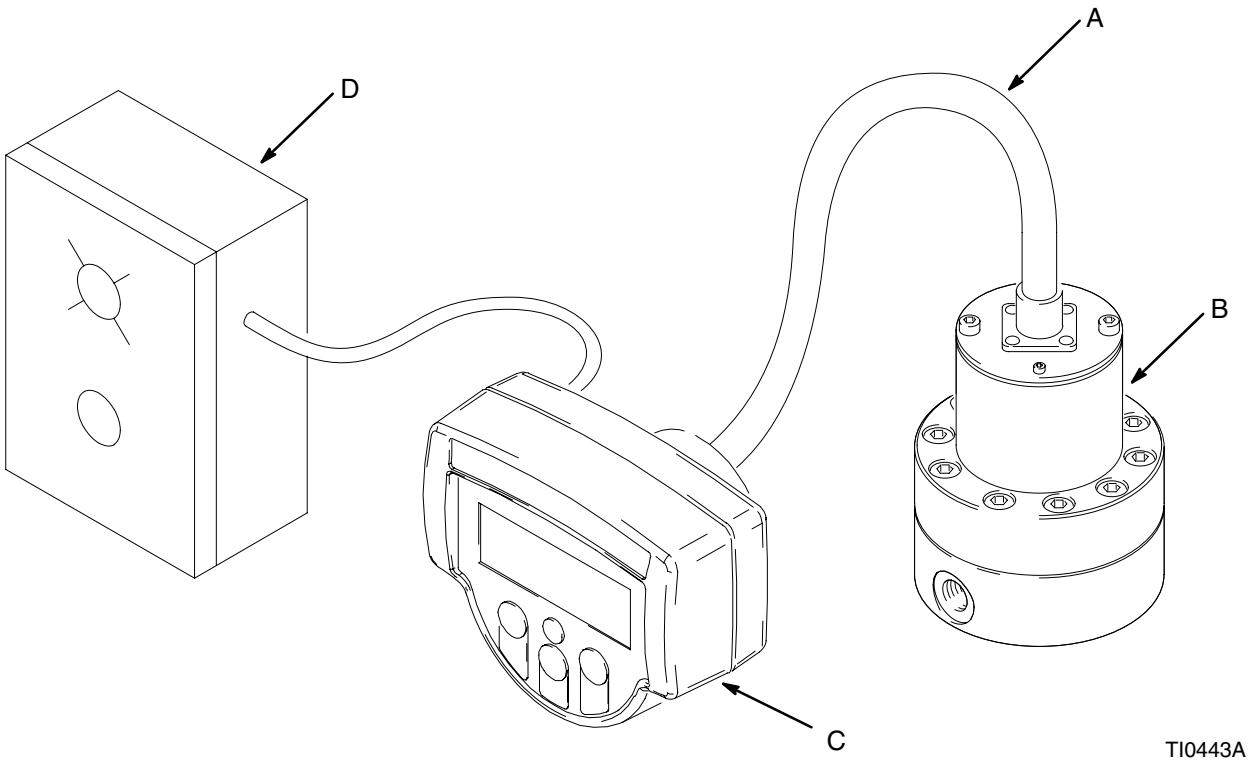


Fig. 1

Ref. No.	Part No.	Description
A	948924	Cable
B	239716	Meter
C	*	Informer
D	↙	Control Box

* *See Informer Display Models Chart for part numbers.*

↙ *Customer supplied component. Includes power supply, lights, push buttons, relays, valves, cable.*

Informer Display Models

Ref. No.	Part No.	Description
C	288666	Remote display with 1/2 in. pipe mounting
C	288667	Remote display with 3/4 in. pipe mounting
C	288668	Remote display with 1 in. pipe mounting
C	288669	Remote display with wall mounting
C	288670	Remote display with din rail mounting

Installation

The Informer display is an easy to use means of collecting fluid data to help reduce fluid waste and improve processes. The Informer display performs the following functions:

- Monitors flow rate real time
- Outputs a signal when flow rate preset is reached
- Tracks batch totals
- Outputs a signal when a batch total preset is reached
- Tracks grand totals
- Communicates with data reporting software for process or environmental reporting

The Informer display can be directly mounted to the Graco flow meter or remotely mounted from a flow meter. Informer display models are available for mounting on a din rail, wall, or pipe.

The Informer display can be battery powered when it is mounted on the flow meter or externally powered when it is remotely mounted from the meter.

Installing Equipment in Hazardous and Non-hazardous Areas

⚠ WARNING

FIRE, EXPLOSION, AND ELECTRIC SHOCK HAZARD
To reduce the risk of fire, explosion, or electric shock:

- All electrical equipment must only be installed by a qualified electrician.
- Understand and follow your local code and safety regulations for hazardous location wiring of intrinsically safe circuits.

The Graco Informer display and fluid flow meter, are intrinsically safe for Class I; Division 1; Group D hazardous indoor (NEMA 12) locations when installed as shown in Fig. 4, page 10; “Typical Installation: Remote Informer Display in Non–hazardous Area, Meter in Hazardous Area”. Refer to ANSI standards ISA-RP12.6, NEC Article 504 and the Canadian Electrical Code Appendix F.

The wiring schematics on pages 9–10 show typical installations of a flow meter and display. Your installation may consist of different components. Not all the components shown are supplied by Graco.

- To install a flow meter and display in a non-hazardous area, refer to Fig. 3, page 9.
- To install an intrinsically safe flow meter in a hazardous area and the Informer display in a non-hazardous area, refer to Fig. 4, page 10.

Do not use more than 50 ft. (15 m) of cable between the meter and display.

Follow grounding instructions on page 13.

When intrinsically safe barriers are used for hazardous installations, close attention should be paid to selecting an appropriate power supply so that valid signals are applied to the inputs and outputs in accordance with the technical data on page 38.

Cable shields should be connected to the chassis ground, not the power supply common, inside the Informer Display housing. The battery cover screw, mounting adaptor (51) or sensor housing (31) may be used for this ground.

Recommended Cables

For power, communication, and I/O

Brand	Alpha Part No.	Type
Alpha	58612	2 pairs, 22 AWG
Alpha	58613	3 pairs, 22 AWG
Alpha	58616	6 pairs, 22 AWG

Installation

Flow Meter Installation

Refer to Fig. 2 to locate and install the flow meter, connectors, and fluid shutoff valves.

- Flow volume can only be measured at the location where the flow meter is installed.
- Install a check valve to prevent back-flow. The arrows on the flow meter and check valve show the direction of fluid flow.
- The shutoff valves allow you to isolate the meter for service.

Avoid having dust or foreign matter enter the flow meter by taking the following precautions:

- Thoroughly flush the fluid supply lines before installing the flow meter.
- When installing fittings, make sure that no sealing tape overlaps into the inside of the pipe.
- Install a 100 mesh fluid filter upstream of the flow meter.

Calibrate the meter as instructed on page 19 before using the meter for production.

Refer to the **Dimensional Drawings** on page 37 and **Technical Data** on page 38 for equipment specifications.

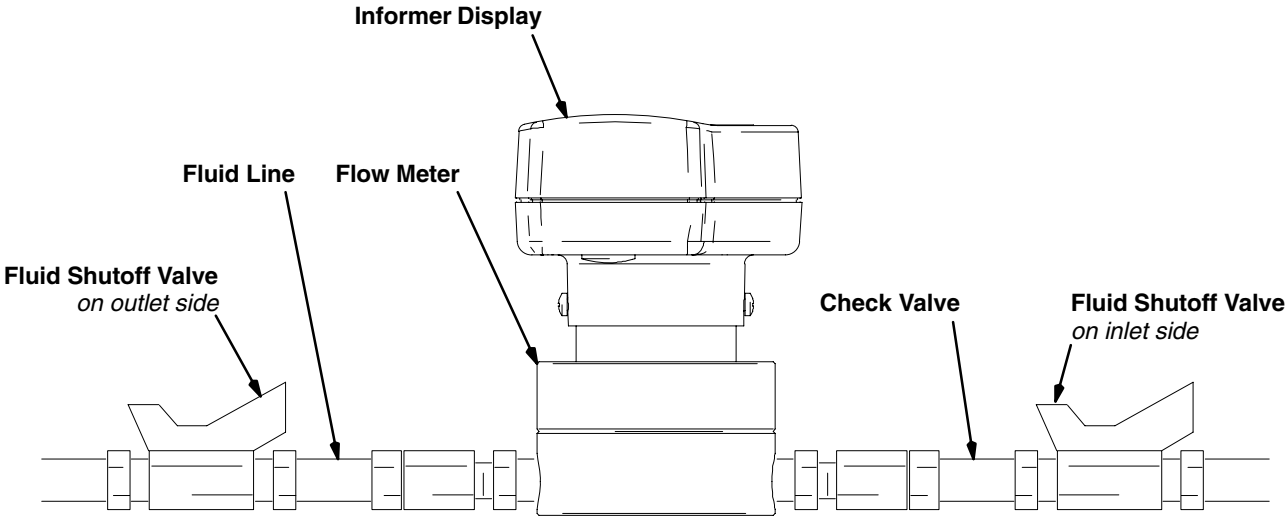


Fig. 2

Installation

Typical Installation: Remote Informer Display and Meter in Non-hazardous Area

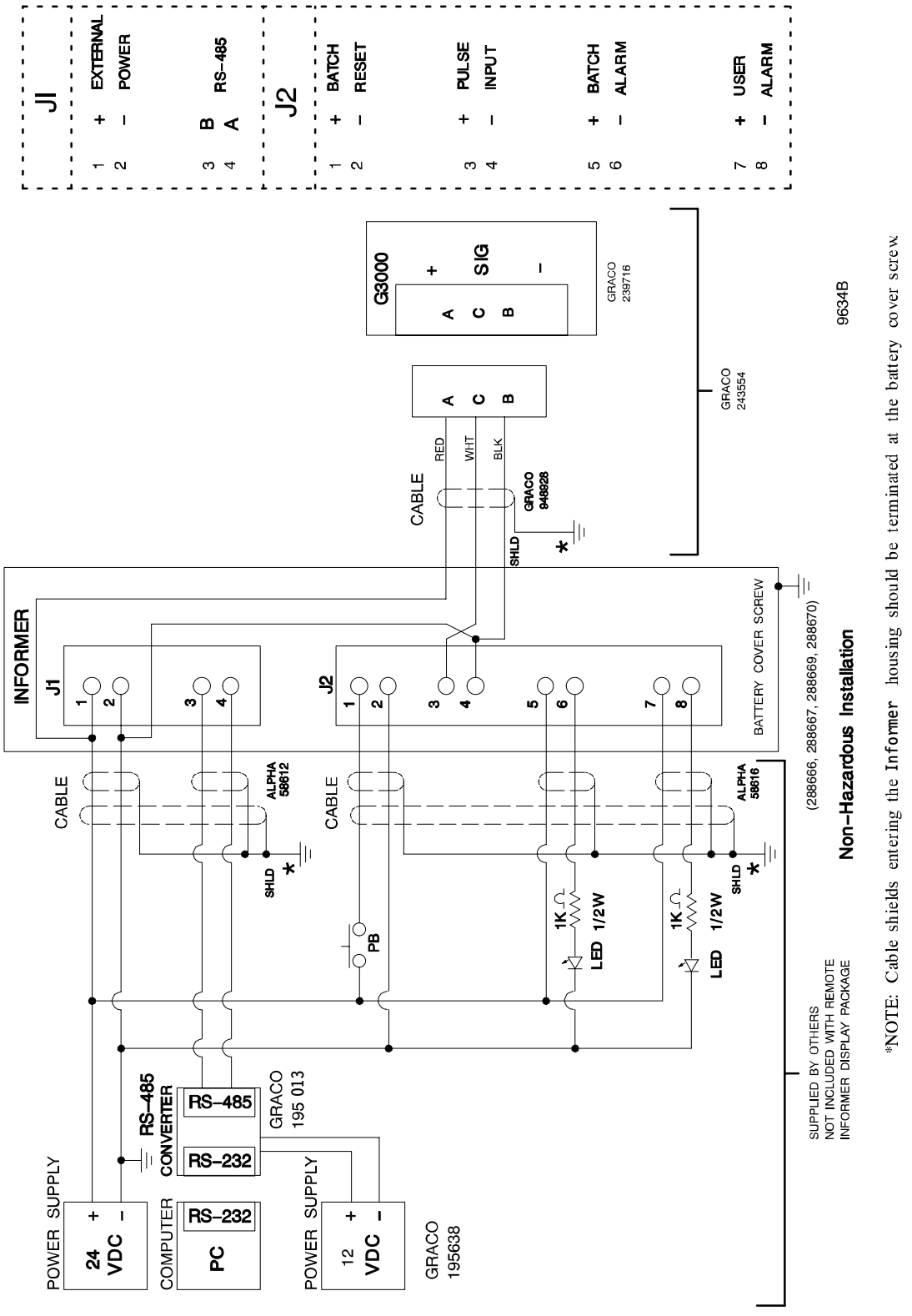


Fig. 3

Installation

Typical Installation: Remote Informer Display in Non-hazardous Area, Meter In Hazardous Area

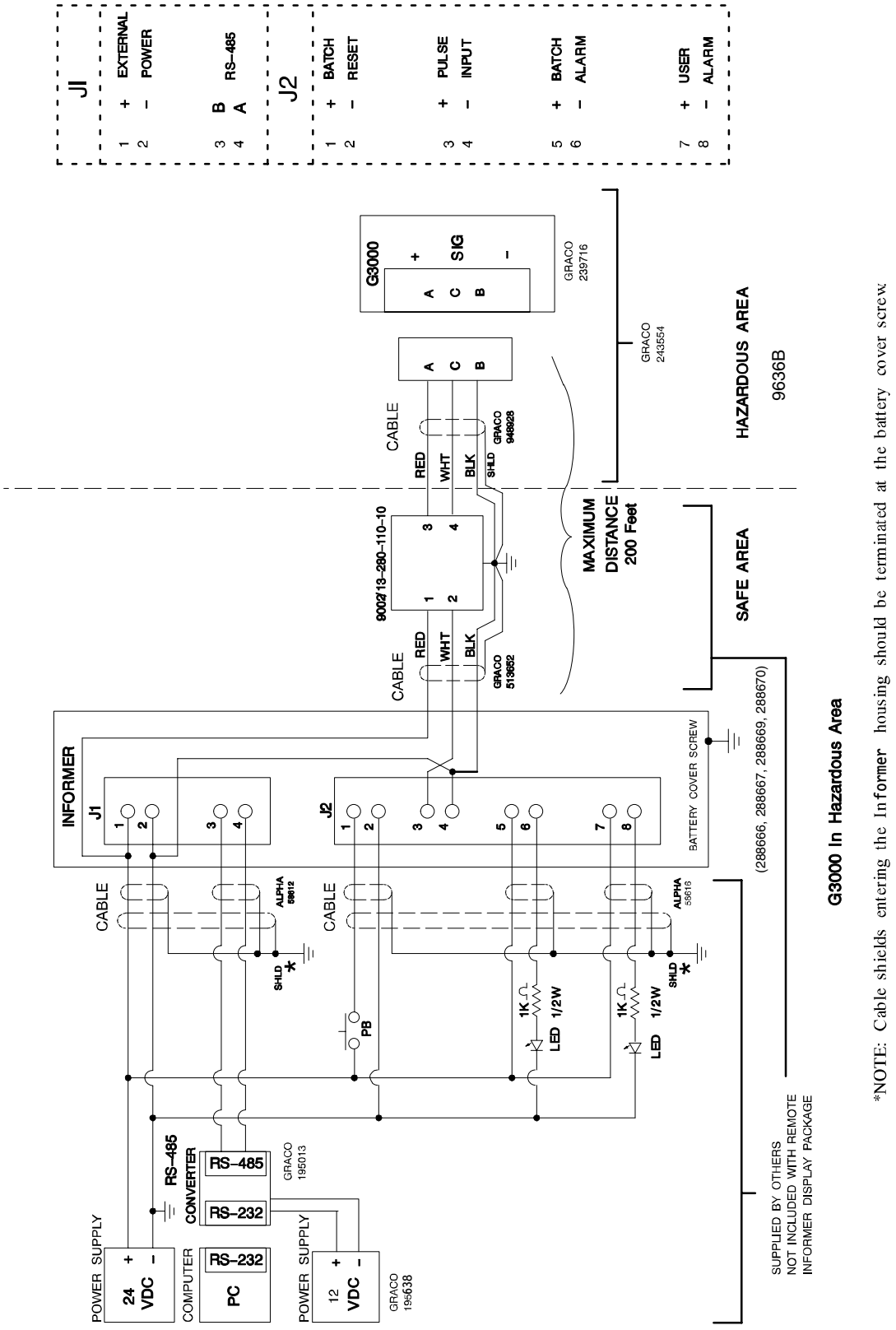


Fig. 4 9636A

Display Jumpers and Terminals

The default jumper positions are shown in Table 1. The hardware configuration of the Informer display can be customized by changing jumper positions and wiring the terminals for the desired configuration.

Jumpers

Jumpers JP1, JP2, and JP3 are 3-pin connectors with 2-pin shunt connectors installed. The pins are numbered 1, 2, and 3. See Fig. 5.

JP1

Jumper JP1 determines the meter pulse source. When pins 1 and 2 are jumpered together, the Informer display is configured to receive pulses from an external meter, which must be connected to terminals 3 and 4 on connector J2. When pins 2 and 3 are jumpered together (the default position for Model 288665), the Informer display is configured to accept pulses from the meter it is mounted on. This position minimizes power consumption for battery operated configurations.

JP2

Jumper JP2 determines the source of power for the Informer display. When pins 1 and 2 are jumpered together, the Informer display is configured to receive power from an external DC power source, which must be connected to terminals 1 and 2 on connector J1. When pins 2 and 3 are jumpered together (the default position for Model 288665), the Informer display is configured to receive power from the internal 9 Volt battery.

JP3

This jumper is not used. It should be removed or left on pins 2 and 3.

Table 1

Jumpers	Pins		Defines
	1–2	2–3	
JP1	Remote meter connection to pulse input	Display mounted on meter	Pulse source
JP2	External power source	Internal 9 V battery	Power source
JP3			Not used

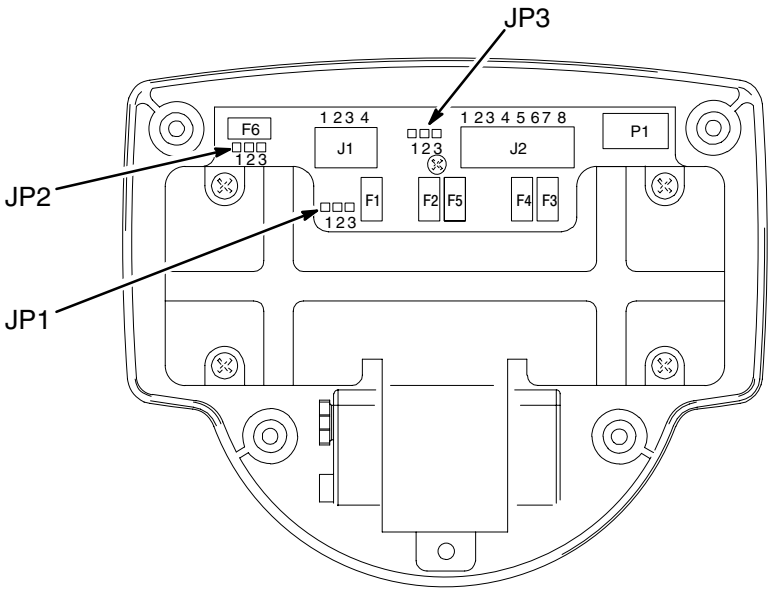


Fig. 5 **Inside Front Cover of Informer Display** TI0049

Installation

Terminals

Connector J1 terminals are numbered 1 through 4. Connector J2 terminals are numbered 1 through 8. Terminal definitions and typical wiring connections are shown in figures 3 to 4 on pages 9 to 10.

J1 – 1 and 2 External Power

External power is supplied to these terminals. Terminal 1 is the positive connection. The external power connection supplies power for the Informer display's internal circuitry. See the T**echnical Data** on page 38 for details.

An external power supply is required for operation when any of the external inputs or outputs described below are used. This includes: external alarms, external batch reset, remote mounted meter, and networking with a computer. Battery operation can only be used with the meter mounted option (Model 243312).

If Graco Power Supply 195638 is used:

For North American power connection, select a power supply cord that fits the following requirements:

- UL Listed and CSA Certified
- 18 AWG
- Terminated in a molded on plug cap rated 125 V, 15 A
- Minimum length of 6 ft (1.8 m)

For European power connection, select a power supply cord that is internationally harmonized and fits the following requirements:

- Marked "<HAR>" 0,75 mm^2 minimum mm^2 wire
- Rated 300 V
- PVC insulated jacket
- Molded on plug cap rated 250 V, 10 A

J1 – 3 and 4 RS–485

The Modbus RS–485 communication signals are connected to these terminals. Terminal 3 is the B signal and terminal 4 is the A signal. Due to very low power RS–485 transceivers, the Informer should not be directly connected to a terminated RS–485 network. If terminators are present on the network, an isolator/repeater should be used to isolate the Informer from the rest of the network. The maximum cable length that can be connected to the Informer's RS–485 port is approximately 1200 feet. Isolator/repeaters may be used to extend the entire RS–485 network length and the number of units on the network. Contact Graco customer service for more information.

J2 – 1 and 2 Batch Reset

An external signal applied to this input will reset the Batch Totalizer to zero if the totalizer is a type t1 or t3, or it will preset the Batch Totalizer if it is a type t2 (see setup parameters for details, page 17). Terminal 1 is the positive connection. The input is internally current limited. See the **Technical Data** on page 38 for details on input signal specification.

J2 – 3 and 4 Pulse Input

An external signal applied to this input will increment the internal pulse counter of the Informer display. Terminal 3 is the positive connection. The internal pulse counter is used to increment the Totalizers viewed by the user. The rate of the Totalizer increments are determined by the setup parameters. The input is internally current limited. See the **Technical Data** on page 38 for details on input signal specification.

J2 – 5 and 6 Batch Alarm

The Batch Alarm output is a signal that is turned on by the Informer if a target value is set for the Batch Totalizer and the Batch Alarm output is enabled in the setup parameters. The output is a solid-state device, with terminal 5 as the positive connection. The output is not internally current limited so you should ensure that the output current specification is not exceeded. See the **Technical Data** on page 38 for details on output signal specification.

J2 – 7 and 8 User Alarm

The User Alarm output is a signal that is turned on, based on the parameters that are configured during setup of the Informer display. The output is a solid-state device, with terminal 7 as the positive connection. The output is not internally current limited so you should ensure that the output current specification is not exceeded. See the **Technical Data** on page 38 for details on output signal specification.

Installation

Grounding

⚠ WARNING

FIRE, EXPLOSION, AND ELECTRIC SHOCK HAZARD
Proper electrical grounding of your system is essential. For your safety, read the warning section, **FIRE, EXPLOSION, OR ELECTRIC SHOCK HAZARD**, on page 4.

NOTE: Numbers in parenthesis in the text refer to the reference numbers in the figures (Fig.) and in the parts lists.

1. Follow the instructions in manual 308778 to ground the Graco flow meter and check its electrical grounding continuity.

2. Ground the Informer display by connecting the ground wire (44 or 64) from the screw (35 or 54) to a true earth ground. See Fig. 6.

3. Always ground the fluid supply unit, using one of the following options:

   a. Mount the meter to a grounded conductive surface, or

   b. Connect the conductive fluid hose to the meter inlet and outlet, or

   c. Connect a ground wire to the meter's M6 mounting holes.

4. Never use the flow meter with an electrostatic gun isolation stand.

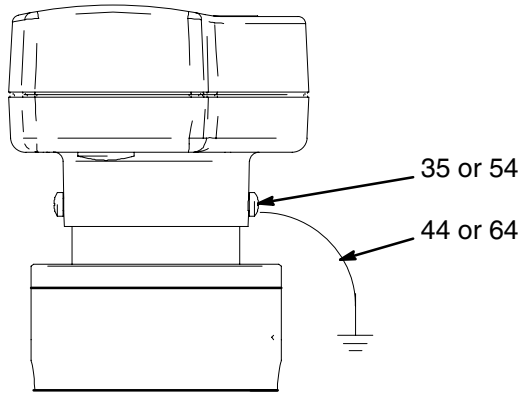


Fig. 6

Operation

Pressure Relief Procedure

⚠ WARNING

SKIN INJECTION HAZARD
The system pressure must be manually relieved to prevent the system from starting or spraying accidentally. Fluid under high pressure can be injected through the skin and cause serious injury. To reduce the risk of an injury from injection, splashing fluid, or moving parts, follow the **Pressure Relief Procedure** whenever you:

- are instructed to relieve the pressure,
- stop spraying,
- check or service any of the system equipment.

1. Turn off the fluid supply to the meter.

2. Shut off all electrical power to the fluid system.

3. Follow the Pressure Relief Procedure for your fluid system dispensing device.

Flow Meter Operation

For information on Graco flow meter, part no. 239719, see manual 308778. Calibrate the meter as instructed on page 19 before using the meter for production.

⚠ WARNING

COMPONENT RUPTURE HAZARD
Do not exceed the maximum working pressure of your meter or any component or accessory in your system.

⚠ CAUTION

The flow meter gears and bearings can be damaged if they rotate at too high a speed. To avoid high speed rotation, open the fluid valve gradually. Do not over-speed the gear with air or solvent. To prolong meter life, do not use the meter above its maximum flow rate.

Operation

Operating the Informer Display

Press any button to activate the Informer display (bring it out of “Sleep Mode”).

The Informer has two operation modes: Run Mode (page 15) and Setup Mode (page 16).

Icons

As you move through the various Informer screens, you will notice icons appear at the bottom of the screen. The icons for Flow Rate, Batch Totalizer, and Maintenance Totalizer also appear on the Informer buttons. The icons represent various run and setup functions and alarm activation. All of the icons are shown displayed in Fig. 7.

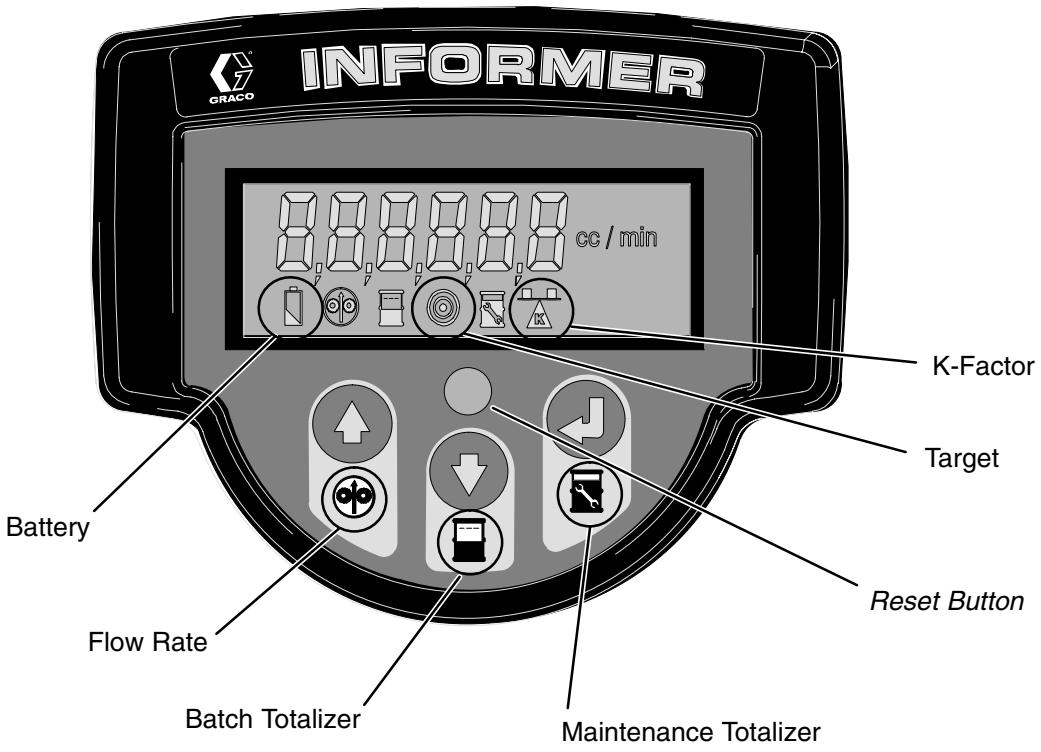


Fig. 7 9658A

Operation

Run Mode

When the Informer display is in Run Mode, the current flow rate, batch totalizer, maintenance totalizer, and grand totalizer values can be viewed for the flow meter the Informer display is connected to.

Flow Rate Monitoring Screen

Alarms

There are two ways the Informer display can be used to notify a user when the Batch Totalizer Target, Maintenance Totalizer Target, or the Flow Rate Maximum or Minimum Thresholds have been reached. There is an alert on the Informer screen in the form of a flashing icon when the user is in Run Mode and viewing the related screen information. For example, the flow rate icon will flash in the flow rate, Run mode screen when a threshold value is reached.

Alarm outputs can also be enabled so the Informer display will send a signal to turn on an external alarm to signal an alarm condition. This enables the user to be alerted to an alarm condition regardless of which Informer screen is being viewed. See **Alarm Outputs** on page 18.

Button Functions in Run Mode

Button	Function
	Flow Rate: Press the up arrow button to display the current flow rate. If either the flow rate maximum or the flow rate minimum threshold values are greater than zero, holding the button down will toggle the display between the flow rate maximum and the flow rate minimum threshold values entered in Setup Mode. Refer to D2 and D3 setup parameter information on page 18. The flow rate icon will flash in this screen when a threshold value is reached.
	Batch Totalizer: Press the down arrow button to display the current batch totalizer. If the batch target value is greater than zero, holding the button down will display the target value entered in Setup Mode. Refer to A2 setup parameter information on page 17. The batch totalizer icon will flash in this screen when the target value is reached.
	Reset Batch Totalizer Pressing the reset button for about one-half second while the batch totalizer is displayed will either set the totalizer to zero if the totalizer is set to count up or preset the totalizer to the target value if the totalizer is set to count down.
	Maintenance Totalizer: Press the enter button to display the current maintenance totalizer. If the maintenance target value is greater than zero, holding the button down will display the target value. The maintenance totalizer icon will flash in this screen when the target value is reached.
	Reset Maintenance Totalizer Pressing the reset button for about one-half second while the maintenance totalizer is displayed will set the totalizer to zero.
	Grand Totalizer: Press the enter and down arrow buttons simultaneously to display the current grand totalizer.
	Enter Setup Mode: Hold down the enter button, then press the up arrow button to enter Setup Mode.

NOTE: The battery icon will flash to alert you if a low battery alarm occurs, regardless of which Run Mode screen is displayed.

Operation

Setup Mode

The Setup Mode is used to set parameters for monitoring fluid flow with the Informer display. Setup parameters are described on page 17.

To enter Setup Mode, hold down the enter button, then press the up arrow button. While in Setup Mode, the same button sequence will exit Setup Mode.

Setup Mode is represented by a letter and number on the left side of the display, which indicate the current setup parameter. Setup Mode starts with the A1 (Batch Totalizer Units).

Batch Totalizer Units Setup Screen

Button Functions in Setup Mode

The function of the buttons in Setup Mode varies, depending on which parameter is being set. See the table below for the basic function of the buttons while in Setup Mode. See page 17 for a description of each setup parameter and how to configure them.

NOTE: When setting parameters, the value selected for editing will flash.

Button	Function
	Enter and Advance to the Next Parameter: Use the enter button to enter the current value selected (flashing) and advance to the next setup parameter.
	Scrolling Through Fields: Use the down arrow button to go to the next field of the current setup parameter. *Field:* Each of the following numbers is in a separate field: 0 5 . 5
	Scrolling Through Selections: Use the up arrow button to scroll through the valid selections of the current setup parameter. *Valid Selections:* 0 to 9 are valid selections for number fields. L, cc, gal, and oz are valid selections for units.
	Reset Value to Zero: Press the reset button to zero the entire numerical value.
	Exit Setup Mode: Hold down the enter button, then press the up arrow button to exit Setup Mode.

Operation

Setup Parameters

NOTE: If the related alarm output is enabled, the values set for the Batch Totalizer Target, Maintenance Totalizer Target, and Flow Rate Maximum and Minimum Thresholds determine when an external alarm will be signaled. See **Alarm Outputs** on page 18.

A1 – Batch Totalizer Units

Select liters (L), cubic centimeters (cc), gallons (gal), or ounces (oz) for units of measure. The default setting is cc. Use the up ▲ or down ▼ arrow buttons to scroll through the selections. Press the enter ↵ button to enter the selection.

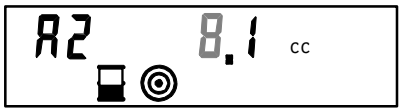
A2 – Batch Totalizer Target Value

Set a target value for the batch totalizer that will alert a user in Run Mode, viewing the batch totalizer screen, that a batch is complete. The default setting is 0.0.

Repeatedly press the up arrow ▲ button until the desired value appears for the selected digit.

Press the down arrow ▼ button to move to the next digit.

Continue using the arrow buttons to set each digit until the entire number is set to the desired value.



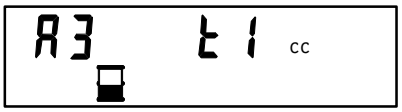
NOTE: Press the reset ● button to zero the entire numerical value.

Press the enter ↵ button to enter the selection.

A3 – Batch Totalizer Type

Select t1, t2, or t3 for the batch totalizer type. The default setting is t1, which sets the display to count up from zero to the target value and automatically reset when the target is reached.

- **t1:** Count Up, auto reset to zero when target value is reached.
- **t2:** Count down, auto reset to target value when counter is zero.
- **t3:** Count up, manual reset.

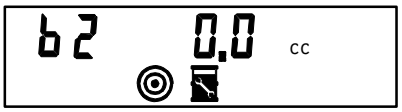


b1 – Maintenance Totalizer Units

Follow the same process as setting the A1 parameter.

b2 – Maintenance Totalizer Target Value

Set a target value for the maintenance totalizer that will alert a user in Run Mode, viewing the maintenance totalizer screen, when it is time to do preventative maintenance on the fluid handling system. Follow the same process as setting the A2 parameter.



C1 – Grand Totalizer Units

The Grand Totalizer cannot be reset. The reading shows the total amount of fluid that has passed through the unit since it was started up. To set the units, follow the same process as setting the A1 parameter.

Operation

D1 – Flow Rate Units

Setting the maximum and minimum flow rate threshold values will provide an alarm to alert you that the process is out of specification.

Select liters per minute (L/min), cubic centimeters per minute (cc/min), or ounces per minute (oz/min) for units of measure. The default setting is cc/min. Follow the same process as setting the A1 parameter.

D2 – Flow Rate Maximum Threshold Value

Follow the same process as setting the A2 parameter. The default setting is 0.

D3 – Flow Rate Minimum Threshold Value

Follow the same process as setting the A2 parameter. The minimum threshold value should be no less than 22 * K-factor. The default setting is 0.

E1 – K-factor

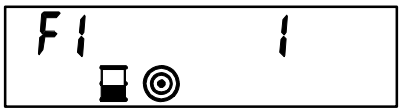
The K-factor setting is the scale factor for the meter and is specified in units of cc/pulse. The valid range for K-factor is 0.010 cc/pulse to 1.000 cc/pulse. The default setting is 0.120, which is the K-factor for the meter.

Alarm Outputs

The next series of setup parameters allow you to enable (1) or disable (0) the alarm outputs. If the alarm outputs are enabled, the Informer display will send a signal to turn on an external alarm to signal an alarm condition. The default setting for all the alarms is disabled (0).

F1 – Batch Totalizer Alarm Enable

If enabled (F1=1), the batch alarm output is activated when the batch totalizer reaches the target (if the batch totalizer type is count up) or reaches zero (if the batch totalizer type is count down).



F2 – Diagnostic Alarm Enable

If enabled (F2=1), the user alarm output will activate when the diagnostic status is a non-zero value. The diagnostic status will repeatedly flash on the screen in Run Mode until the fault is corrected.

For example, the display will show E=1 for a diagnostic status of 1. The following is a list of diagnostic status codes:

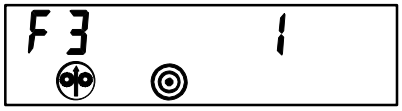
Diagnostic Status Codes

- **E = 1** **Invalid node address:** The Modbus network node address is set outside the valid range of 1 through 247.
- **E = 2** **Invalid K-factor:** The K-factor is set outside the valid range of 0.010 cc/pulse to 1.000 cc/pulse.
- **E = 3** **Invalid Batch Totalizer Type:** The Batch Totalizer Type is set to a value other than t1, t2, or t3.
- **E = 4** **Invalid Flow Rate Threshold:** The Flow Rate Minimum Threshold value is greater than the Flow Rate Maximum Threshold value.

Operation

F3 – Flow Rate Alarm Enable

If enabled (F3=1), the user alarm output will activate when the flow rate is greater than the flow rate maximum threshold value. The user alarm output is also active if the flow rate is less than the flow rate minimum threshold value for three consecutive samples. The alarm occurs after three consecutive samples to avoid alarms when stopping or starting fluid flow.



F4 – Maintenance Totalizer Alarm Enable

If enabled (F4=1), the user alarm output will activate when the maintenance totalizer reaches the target value.

F5 – Battery Alarm Enable

If enabled (F5=1), the user alarm output will activate when the battery voltage falls below the useable limit. The grand totalizer will be saved to non-volatile memory.

H1 – Station ID

Set the station ID between 1 – 246. The default setting is 1. The actual modbus address will be <*station ID*> +1.

J1 – Battery Powered Operation

If J1 is set to 1, which is the default setting, the Informer display will go into sleep mode after 5 minutes without any activity on the keypad. This helps conserve on battery power. If J1 is set to 0, the Informer display will never enter sleep mode so it is always available to respond to Modbus communications requests and external Batch Reset inputs. When the J1 parameter is displayed the battery icon will flash.

Calibrating the Meter

1. Enter Setup Mode by holding down the enter button ↵, then pressing the up arrow button ▲.
2. Set the Maintenance Totalizer Units [b1] to “cc”. See page 17.
3. Set the K-factor [E1] value to “1.000”. See page 18.
4. Hold down the enter button ↵, then press the up arrow ▲ button to exit Setup Mode.
5. Press the enter button ↵ to display the Maintenance Totalizer value.
6. Reset the Maintenance Totalizer value by pressing the reset ● button for about one-half second.
7. Dispense at least 500 cc of material through the flow meter into a graduated cylinder or beaker.
8. Read the Maintenance Totalizer value.
9. Calculate the new K-factor (cc/pulse) value by dividing the measured volume of dispensed material by the value of the Maintenance Totalizer.

   K-factor = dispensed volume / Maintenance Totalizer.
10. Enter Setup Mode.
11. Set the K-factor [E1] value to the calculated value.
12. Verify calibration by exiting Setup Mode, resetting the Maintenance Totalizer, dispensing material, and comparing the volume of the dispensed material with the displayed value of the Maintenance Totalizer.

Operation

Examples

NOTE: In the following examples it is assumed:

- Meter-mounted Informer package (243312) is used
- Default K-factor of 0.12 cc/pulse is accurate
- External power supply is used
- Jumper JP2 is set to position 1–2, all other jumpers and setup parameters not specifically mentioned in the example, are assumed to be in the default position or setting

Example 1: Gun Flow Rate Detection

The informer is used to monitor the flow rate through a gun. If the gun tip is plugged, the flow is restricted and the flow rate is reduced. If the gun tip is worn, the flow rate through the gun is increased.

A power supply is used to power the Informer and the alarm light. The Informer is set up with maximum and minimum flow rate threshold values and the flow alarm is enabled. The alarm light will turn on whenever the maximum flow rate threshold is reached or exceeded, or whenever the flow rate is less than or equal to the minimum threshold value for more than three seconds. If the flow rate drops to zero in less than three seconds (e.g., gun shut off) the alarm light will stay off. Optionally, the Informer's output can be wired to a PLC instead of the alarm light, for integration into a control system.

Example 2: Batch Dispense Control

The Informer is used as a batch dispense controller. The desired batch volume is entered into the Informer's batch totalizer target value. Fluid flows through the pipe until the selected volume is reached and the flow valve is closed. The process repeats when the batch reset button is pressed.

A power supply is used to power the Informer, the batch complete light, the batch reset push button signal, the batch alarm control relay, and the flow valve. The Informer is set up by selecting the batch totalizer units, target value, selecting the count-up with manual reset function, and enabling the batch alarm output. When the batch totalizer reaches the programmed target value, the batch alarm output turns on, pulling in the control relay. The normally open contact of the control relay illuminates the "batch complete" light when the batch alarm is active. The normally closed contact turns off the fluid valve when the batch alarm is active.

Example 1: Gun Flow Rate Detection (*continued)*

INFORMER SETUP RECIPE *Date: _____*
Informer S/N: _____

Setup Parameters	*Description*	*Setup Configuration*
A1	Batch Totalizer Units	l, cc, gal, oz
A2	Batch Totalizer Target Value	
A3	Batch Totalizer Type t1–Count Up, Auto Reset t2–Count Down, Auto Reset t3–Count Up, Manual Reset	t1 t2 t3
B1	Maintenance Totalizer Units	l cc gal oz
B2	Maintenance Totalizer Target Value	
C1	Grand Totalizer Units	l cc gal oz
D1	Flow Rate Units	l (cc) gal oz
D2	Flow Rate Maximum Threshold Values	*150*
D3	Flow Rate Minimum Threshold Value	*50*
E1	K-Factor	
F1	Batch Totalizer Alarm Enable	0=No 1=Yes
F2	Diagnostics Alarm Enable	(0=No) 1=Yes
F3	Flow Rate Enable Alarm	0=No (1=Yes)
F4	Maintenance Totalizer Units	(0=No) 1=Yes
F5	Battery Alarm Enable	(0=No) 1=Yes
H1	Modbus Node Address	
J1	Battery Powered Operation	(0=No) 1=Yes

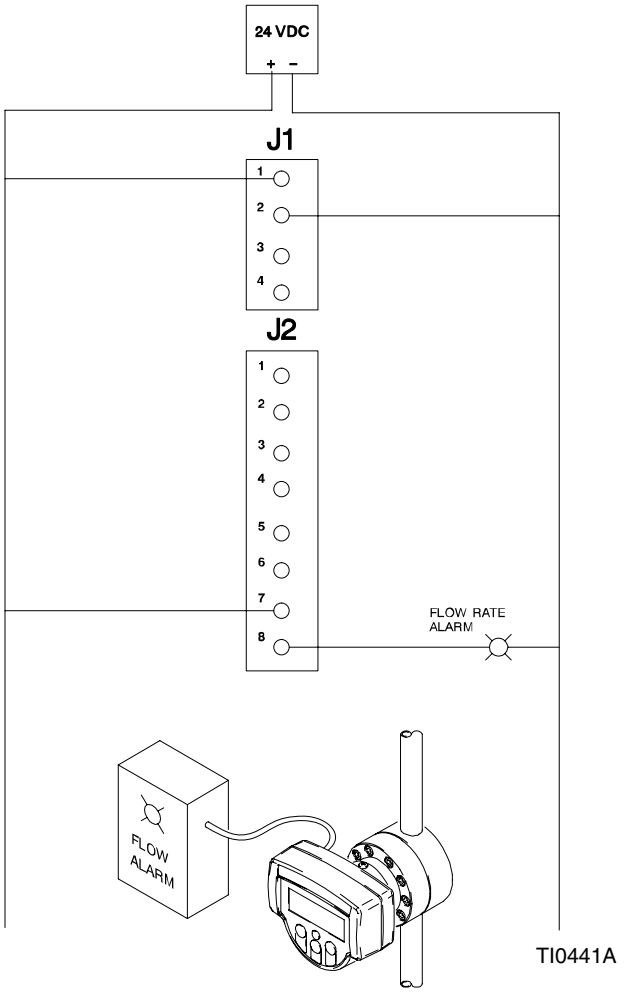


Fig. 8

Application Description

Manual or automatic gun application detecting minimum flow (tip plugging or low material flow) and high flow detection (tip wear or excessive flow).

Example 2: Batch Dispense Control (*continued)*

INFORMER SETUP RECIPE *Date:* _____
Informer S/N: _____

Setup Parameters	*Description*	*Setup Configuration*
A1	Batch Totalizer Units	l (cc) gal oz
A2	Batch Totalizer Target Value	185.0
A3	Batch Totalizer Type t1–Count Up, Auto Reset t2–Count Down, Auto Reset t3–Count Up, Manual Reset	t1 t2 (t3)
B1	Maintenance Totalizer Units	l cc gal oz
B2	Maintenance Totalizer Target Value	
C1	Grand Totalizer Units	l cc gal oz
D1	Flow Rate Units	l cc gal oz
D2	Flow Rate Maximum Threshold Values	
D3	Flow Rate Minimum Threshold Value	
E1	K-Factor	
F1	Batch Totalizer Alarm Enable	0=No (1=Yes)
F2	Diagnostics Alarm Enable	0=No 1=Yes
F3	Flow Rate Enable Alarm	0=No 1=Yes
F4	Maintenance Totalizer Units	0=No 1=Yes
F5	Battery Alarm Enable	0=No 1=Yes
H1	Modbus Node Address	
J1	Battery Powered Operation	(0=No) 1=Yes

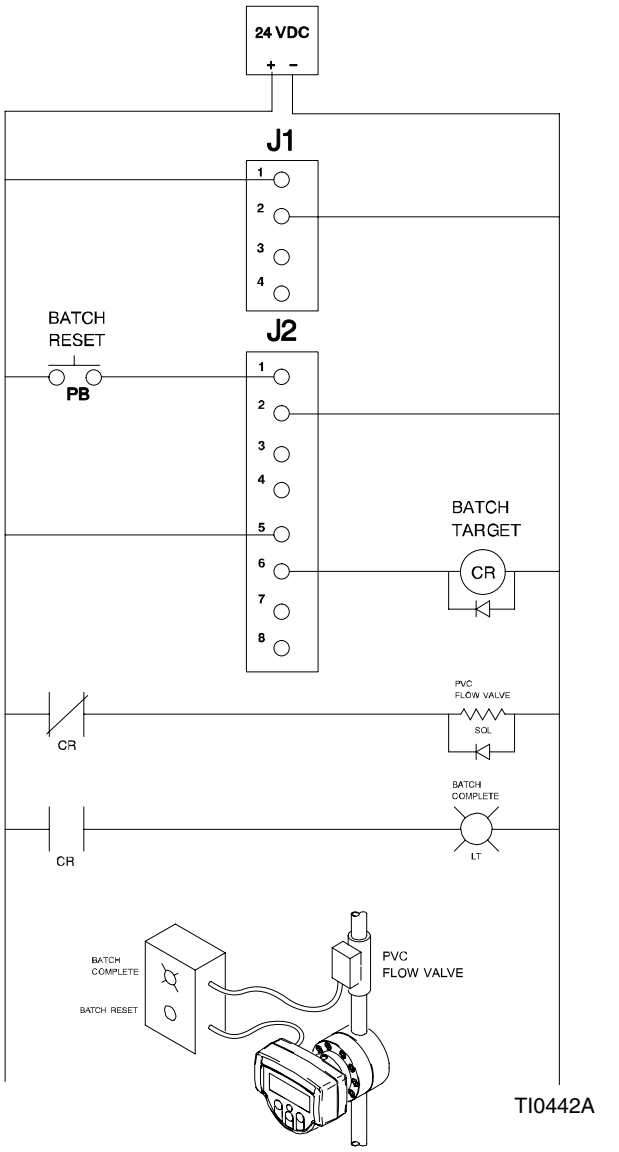


Fig. 9

Application Description

Batch dispense of 185 cc shots for metering PVC.

Operation

INFORMER SETUP RECIPE

Date: _____
Informer S/N: _____

Setup Parameters	***Description***	***Setup***
A1	Batch Totalizer Units	l cc gal oz
A2	Batch Totalizer Target Value	
A3	Batch Totalizer Type t1–Count Up, Auto Reset t2–Count Down, Auto Reset t3–Count Up, Manual Reset	t1 t2 t3
B1	Maintenance Totalizer Units	l cc gal oz
B2	Maintenance Totalizer Target Value	
C1	Grand Totalizer Units	l cc gal oz
D1	Flow Rate Units	l cc gal oz
D2	Flow Rate Maximum Threshold Values	
D3	Flow Rate Minimum Threshold Value	
E1	K-Factor	
F1	Batch Totalizer Alarm Enable	0=No 1=Yes
F2	Diagnostics Alarm Enable	0=No 1=Yes
F3	Flow Rate Enable Alarm	0=No 1=Yes
F4	Maintenance Totalizer Units	0=No 1=Yes
F5	Battery Alarm Enable	0=No 1=Yes
H1	Modbus Node Address	
J1	Battery Powered Operation	0=No 1=Yes

Application Description

-

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Troubleshooting

⚠ WARNING

SKIN INJECTION HAZARD
To reduce the risk of an injection injury or other serious injury, follow the **Pressure Relief Procedure** on page 13 before checking or servicing the meter assembly.

NOTE: The sensor is not a serviceable part. Replace it if it is malfunctioning.

Problem	Cause	Solution
No flow volume displayed at monitoring unit	Flow volume is too low to measure	Increase flow volume
	Fluid is not flowing	See **Problem:** Fluid is not flowing, below
	Damaged cable	Replace cable; see page 7 for recommended cables
	Improper input voltage to sensor	Make sure input power is 12–24 VDC
	Blow F5 fuse	Change fuse; see page 35 for replacement fuses
	Jumper JP1 is in the wrong position	Change jumper position; see page 11
	Damaged sensor	Replace sensor
Fluid is not flowing	Clogs in fluid line or in meter	Clean fluid line and/or meter; see manual 308778
	Gears worn or damaged	Service meter; see manual 308778
A diagnostic status code is flashing on the Informer display	Setup error	Correct setup; see page 18
Battery icon is flashing	Battery is low	Replace battery; see page 26
Batch and Target symbols are flashing	Batch totalizer setting has been reached	Press reset button to clear alarm and totalizer
Flow rate and Target symbols are flashing	Flow rate maximum threshold has been exceeded or flow rate is less than the flow rate minimum threshold value for three consecutive samples	Alarm will clear when the flow rate is within the threshold values
Target and Maintenance symbols are flashing	Maintenance totalizer has reached the target value	Press reset button to clear the alarm and totalizer
Display will not turn on	Dead battery	Replace battery (page 26) or install external power supply
	Blow F1 or F6 fuse	Change fuse; see page 35 for replacement fuses
	Jumper JP2 is in the wrong position	Change jumper position; see page 11
Inaccurate flow reading	Faulty flow sensor or meter Meter needs calibration	Replace sensor or meter Calibrate meter
	Meter needs calibration	Calibrate meter

Troubleshooting

Problem	Cause	Solution
No signal for alarm situation	Incorrect setup	Correct configuration
	Incorrect wiring	Correct wiring
	Blown F3 fuse (User Alarm)	Replace fuse; see page 35 for replacement fuses
	Blown F4 fuse (Batch Alarm)	Replace fuse; see page 35 for replacement fuses
	External power is off	Turn on power
	Auto reset enabled for batch totalizer	Change to manual reset
Cannot retain setup parameters	Flash memory cycle life exceeded	Replace programmed circuit chip
Display readout faulty	Excessive static discharge	Replace LCD display
	Ambient temperature too high	Lower ambient temperature
Keypad failure	Excessive wear	Replace membrane switch
Fuses blown	Short circuit	Check wiring
	Excessive load	Replace fuse; see page 35 for replacement fuses
Communication failure	Incorrect address	Check address configuration
	Incorrect communication parameters	Check communication parameters
	Incorrect data addresses	Check data addresses
	Too much data	Check size of data file
	Incorrect cabling	Check cable/wiring
	Display is in Sleep Mode	Change Setup parameter J1 to zero Retry communications
Flashing “999999” on the display	Display overflow. The value to be displayed contains a value greater than the maximum value that can be displayed	Read the desired parameter with modbus
Short battery life	System not configured for low power operation	Set jumpers JP1, JP3 to position 2–3. Setup parameters F1, F2, F3, F4, F5, J1, should be set to “0” (off) Network communications should not be used
Display flashes: /min /min /min /min	Informer is in Manufacturing Test mode	To exit Manufacturing Test mode, press the Up, Down, and Enter buttons simultaneously. The Informer will now be in the Setup mode. Hold the Enter button, then press the Up arrow button to exit the Setup mode

Maintenance

Battery Replacement (See Fig. 10)

⚠ WARNING

FIRE AND EXPLOSION HAZARD
To reduce the risk of fire or explosion:

- Do not remove or install the battery in a hazardous location.
- The internal (9a and 9b or 16) and external (44 or 64) ground wires for the display must be correctly connected.

NOTE:

- See page 35 for battery part numbers.
- Numbers in parenthesis in the text refer to the reference numbers in the figures (Fig.) and in the parts lists.
- The Grand Totalizer value is stored to non-volatile memory when the battery low condition first appears. If the battery low icon has been displayed for a significant amount of time before the battery is replaced, the flow data since the icon appeared will be lost. The Grand Totalizer value can be manually stored to non-volatile memory by entering the setup mode and exiting setup mode. If the Grand Totalizer is manually stored in this way before changing the battery, no data will be lost.

Display Assembly Mounted on the Meter

1. Remove the display mounting screws (35) and the external ground wire (44) from the sensor (31). Pull the sensor out of the lower housing (11).
2. Remove the screw (43) and disconnect the internal ground wire (9a) from the sensor (31).
3. Unplug the connector (9) from the sensor circuit board by pressing the connector latch (B), then pulling the connector off the receptacle (C).
4. Move the display assembly (A) to a non-hazardous location.
5. Remove the four screws (12) and remove the display assembly lower housing (11).
6. Remove the one screw (8) that secures the cover (7) and internal ground wire (9b) to the battery (3).
7. Replace the battery (3). The battery must be installed with the correct polarity.
8. Put the internal ground wire (9b) connector in place and install the screw (8).
9. Check the condition of the gasket (10) and replace it if it is damaged.
10. Guide the wire connector (9) through the lower housing (11) and secure the lower housing to the upper housing (1) with the screws (12).
11. Plug the connector (9) into the sensor circuit board receptacle (C).
12. Secure the internal ground wire (9a) to the sensor (31) with the screw (43).
13. Push the sensor (31) back into the housing (11).
14. Put the external ground wire (44) back in place and secure the display assembly (A) to the sensor (31) with the screws (35).

Remotely Mounted Display Assembly

1. Remove the display mounting screws (54) and the external ground wire (64) from the adapter (51).
2. Remove the screw (63) and disconnect the internal ground wire (16) from the adapter (51). Pull the adapter out of the lower housing (11).
3. Remove the four screws (12) and remove the display assembly lower housing (11).
4. Unplug the removeable terminal blocks from their receptacles (14, 15).
5. Move the display assembly (A) to a non-hazardous location.
6. Remove the one screw (8) that secures the cover (7) and internal ground wire (16) to the battery (3).
7. Replace the battery (3). The battery must be installed with the correct polarity.
8. Put the internal ground wire (16) connector in place and install the screw (8).

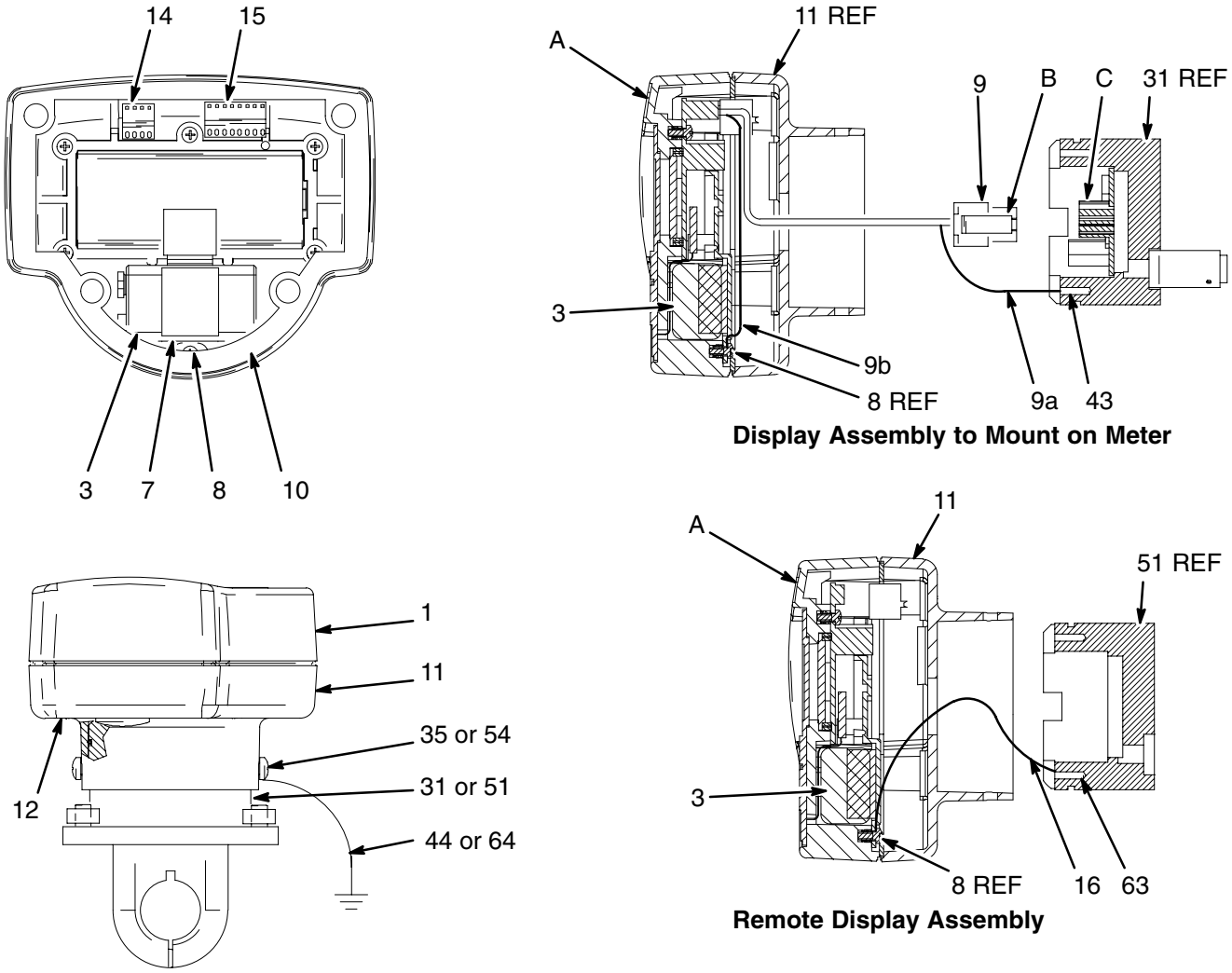


Fig. 10

9631A

Remotely Mounted Display Assembly (continued)

9. Plug the removable terminal blocks into their receptacles (14, 15).

10. Check the condition of the gasket (10) and replace it if it is damaged.

11. Guide the internal ground wire (16) through the lower housing (11) and secure the lower housing to the upper housing (1) with the screws (12).

12. Secure the internal ground wire (16) to the adapter (51) with the screw (63).

13. Push the adaptor (51) back into the housing (11).

14. Put the external ground wire (64) back in place, and secure the display assembly to the adapter (51) with the screws (54).

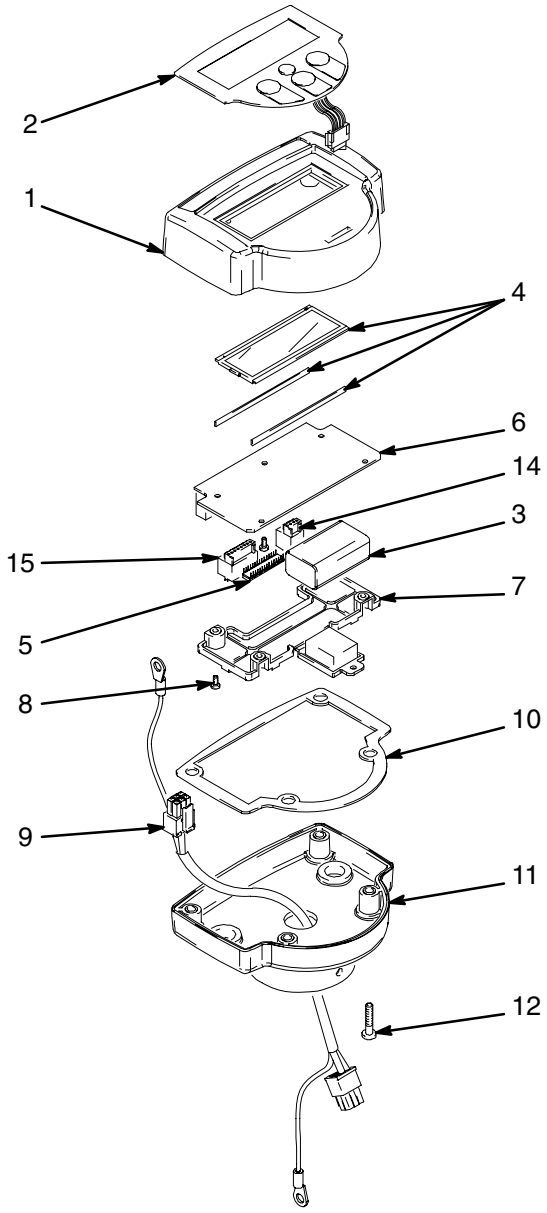
Flow Meter Maintenance

For flow meter maintenance information, see manual 308778.

Parts

Model 288680

Informer Display, for installation on meter (meter not included)

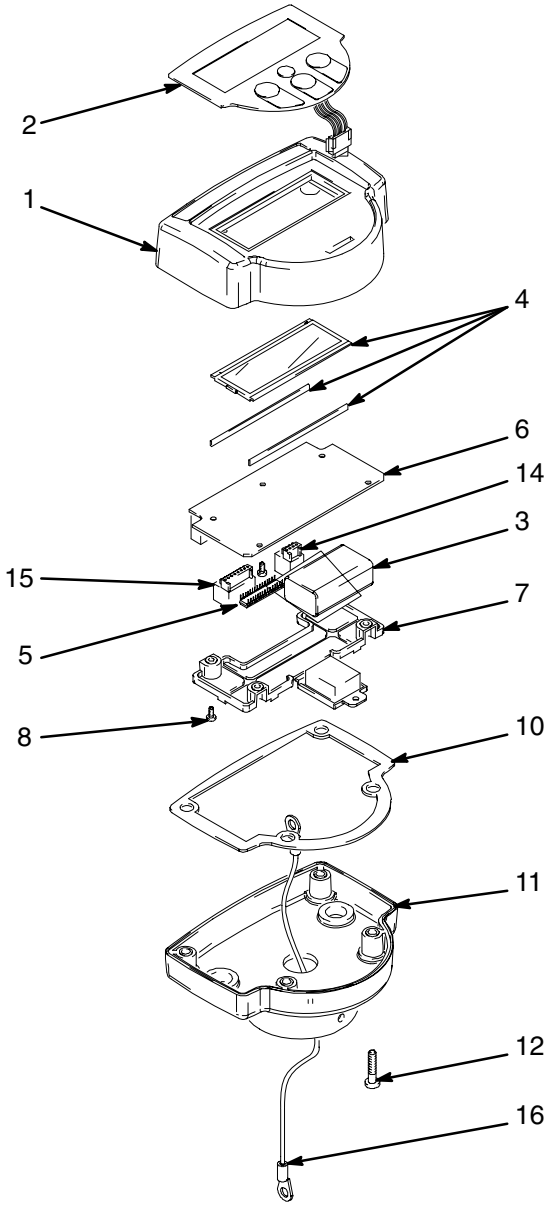


Ref. No.	Part No.	Description	Qty.
1	193647	HOUSING, upper display	1
2	243552	KIT, membrane switch	1
3		BATTERY, 9 volt *(See chart on page 35)*	1
4	243551	KIT, LCD display	1
5	243549	KIT, programmed integrated circuit chip	1
6	280529	KIT, circuit board, display; includes item 6a	1
6a	115839	• JUMPER; not shown	3
7	193650	COVER, circuit board	1
8	195853	SCREW, mach. phillips pan hd., M2.5 x 6	6
9	195880	ASSEMBLY, cable, w/ connectors	1
10	193649	GASKET	1
11	193648	HOUSING, lower display	1
12	105333	SCREW, mach., pan hd., M4 x 20	4
14	115732	TERMINAL, blocks	1
15	115733	TERMINAL, blocks	1

Parts

Model 288679

Informer Display, for remote installation

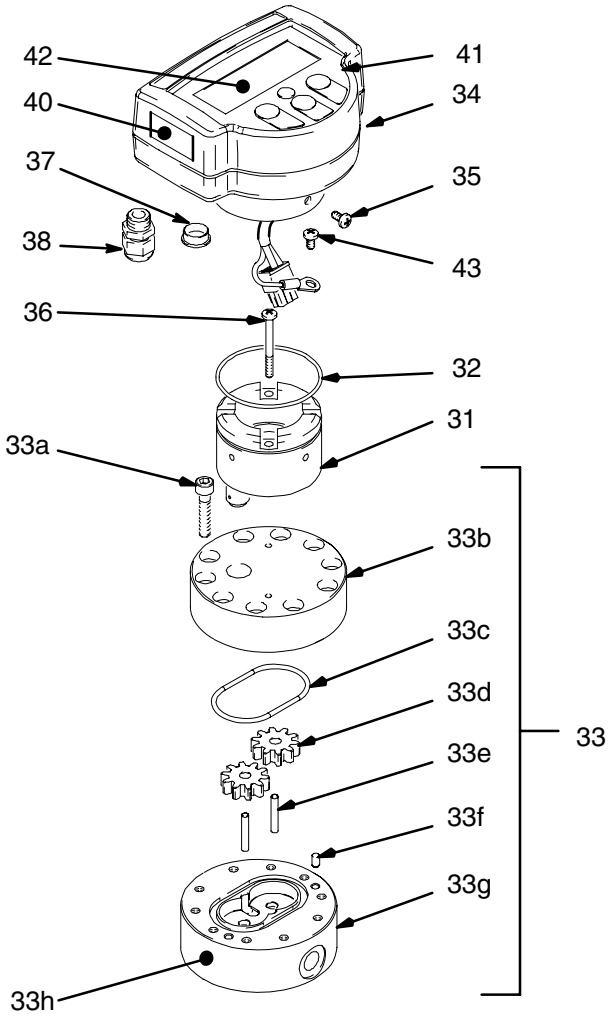


Ref. No.	Part No.	Description	Qty.
1	193647	HOUSING, upper display	1
2	243552	KIT, membrane switch	1
3		BATTERY, 9 volt *(See chart on page 35)*	1
4	243551	KIT, LCD display	1
5	243549	KIT, programmed integrated circuit chip	1
6	280529	KIT, circuit board, display; includes item 6a	1
6a	115839	• JUMPER; not shown	3
7	193650	COVER, circuit board	1
8	195853	SCREW, mach. phillips pan hd., M2.5 x 6	6
10	193649	GASKET	1
11	193648	HOUSING, lower display	1
12	105333	SCREW, mach., pan hd., M4 x 20	4
14	115732	TERMINAL, blocks	1
15	115733	TERMINAL, blocks	1
16	196141	WIRE, ground, internal	1

Parts

Model 288665

Informer Display, with Graco G3000 flow meter

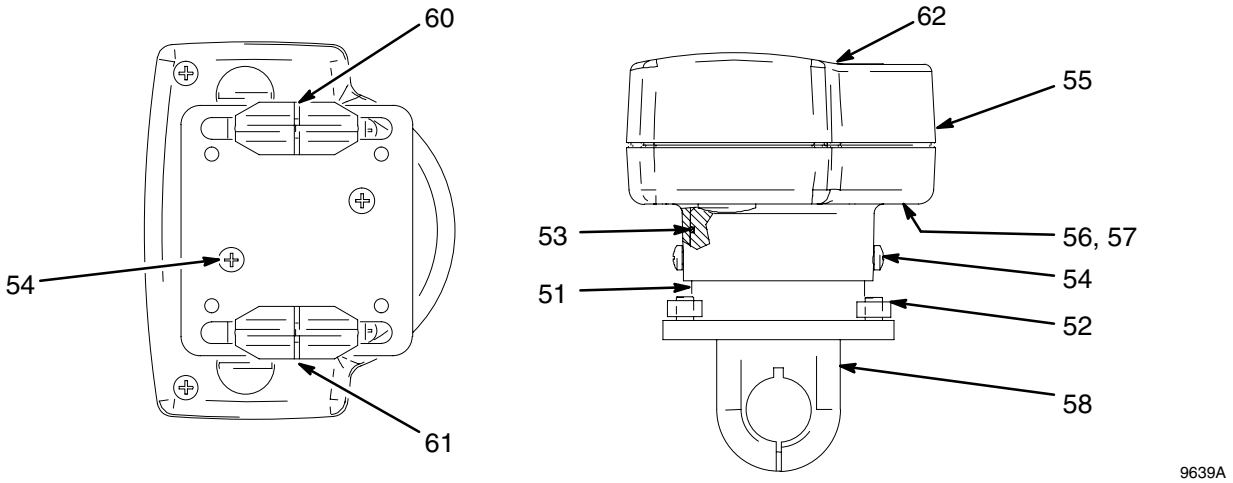


Ref. No.	Part No.	Description	Qty.
31	243309	SENSOR	1
32	113517	O-RING, fluoroelastomer	1
33	239719	BODY, gear meter, includes items 33a–33h	1
33a	110580	• SCREW, cap, socket hd., M6 x 30	12
33b	*	• HOUSING, meter upper	1
33c	110588	• O-RING; PTFE	1
33d	239718	• GEAR ASSEMBLY	2
33e	192383	• SHAFT, gear	2
33f	192387	• PIN, dowel	2
33g	*	• HOUSING, meter, lower	1
33h	290579	• LABEL, identification	1
34	288680	DISPLAY, Informer; See parts on page 28	1
35	195874	SCREW, mach., phillips pan hd., M4 x 8	2
36	105892	SCREW, mach., pan hd., M4 x 40	2
37	115698	PLUG, dome	2
38	195889	BUSHING, strain relief	2
40▲	195909	LABEL, warning, English	1
41▲	195910	LABEL, warning, French	1
42	195867	PAINT SHIELD KIT, includes 10 shields	1
43	195853	SCREW, mach. phillips pan hd., M2.5 x 6	1
44	222011	WIRE, ground, external; not shown	1

* *Not a replacement part. Order item 33, gear meter assembly.*

▲ *Replacement Warning labels are available at no cost.*

Parts



Model 288666

Informer Display, remote installation, 1/2 in. pipe mount

Ref. No.	Part No.	Description	Qty.
51	196301	ADAPTER	1
52	195857	PLATE, adapter mounting	1
53	113517	O-RING, fluoroelastomer	1
54	195874	SCREW, mach., phillips pan hd., M4 x 8	4
55	288679	DISPLAY, remote; See page 29 for parts	1
56	115698	PLUG, dome	2
57	195889	BUSHING, strain relief	2
58	195868	CLAMP, cushion, u-bolt, for 1/2 in. pipe	2
60▲	195909	LABEL, warning, English	1
61▲	195910	LABEL, warning, French	1
62	195867	PAINT SHIELD KIT, includes 10 shields	1
63	195853	SCREW, mach. phillips pan hd., M2.5 x 6; not shown	1
64	222011	WIRE, ground, external; not shown	1

Model 288667

Informer Display, remote installation, 3/4 in. pipe mount

Ref. No.	Part No.	Description	Qty.
51	196301	ADAPTER	1
52	195857	PLATE, adapter mounting	1
53	113517	O-RING, fluoroelastomer	1
54	195874	SCREW, mach., phillips pan hd., M4 x 8	4
55	288679	DISPLAY, remote; See page 29 for parts	1
56	115698	PLUG, dome	2
57	195889	BUSHING, strain relief	2
58	195869	CLAMP, cushion, u-bolt, for 3/4 in. pipe	2
60▲	195909	LABEL, warning, English	1
61▲	195910	LABEL, warning, French	1
62	195867	PAINT SHIELD KIT, includes 10 shields	1
63	195853	SCREW, mach. phillips pan hd., M2.5 x 6; not shown	1
64	222011	WIRE, ground, external; not shown	1

▲ *Replacement Warning labels are available at no cost.*

Parts

Model 288668

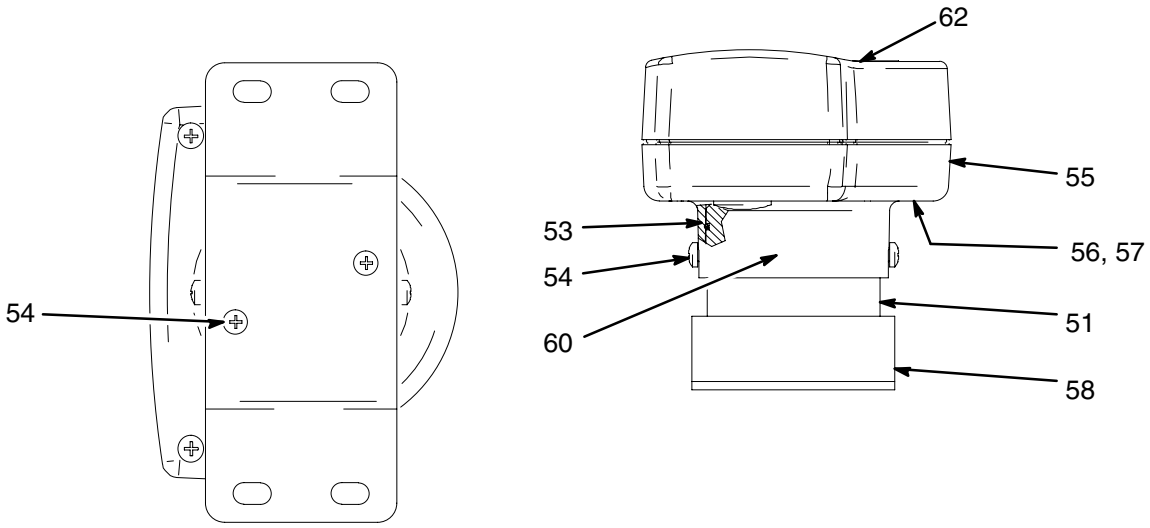
Informer Display, remote installation, 1 in. pipe mount

See drawing on page 31

Ref. No.	Part No.	Description	Qty.
51	196301	ADAPTER	1
52	195857	PLATE, adapter mounting	1
53	113517	O-RING, fluoroelastomer	1
54	195874	SCREW, mach., phillips pan hd., M4 x 8	4
55	288679	DISPLAY, remote; See page 29 for parts	1
56	115698	PLUG, dome	2
57	195889	BUSHING, strain relief	2
58	195870	CLAMP, cushion, u-bolt, for 1 in. pipe	2
60▲	195909	LABEL, warning, English	1
61▲	195910	LABEL, warning, French	1
62	195867	PAINT SHIELD KIT, includes 10 shields	1
63	195853	SCREW, mach. phillips pan hd., M2.5 x 6; not shown	1
64	222011	WIRE, ground, external; not shown	1

Model 288669

Informer Display, remote installation, wall mount



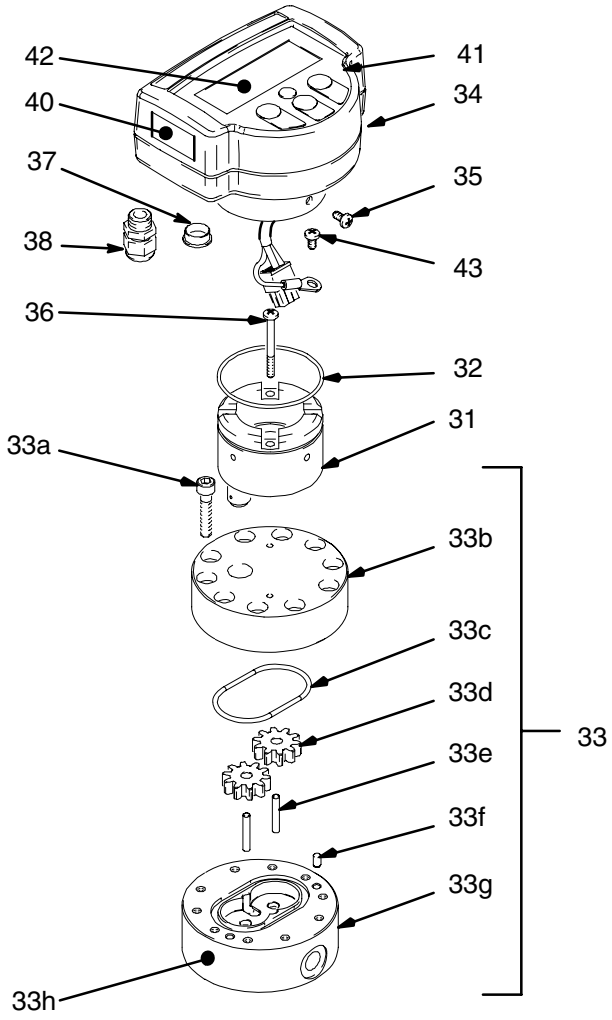
Ref. No.	Part No.	Description	Qty.
51	196301	ADAPTER	1
53	113517	O-RING, fluoroelastomer	1
54	195874	SCREW, mach., phillips pan hd., M4 x 8	4
55	288679	DISPLAY, remote; See page 29 for parts	1
56	115698	PLUG, dome	2
57	195889	BUSHING, strain relief	2
58	195856	BRACKET, wall mount	1
60▲	195909	LABEL, warning, English	1
61▲	195910	LABEL, warning, French; not shown	1
62	195867	SHIELD, paint	1
63	195853	SCREW, mach. phillips pan hd., M2.5 x 6; not shown	1
64	222011	WIRE, ground, external; not shown	1

▲ *Replacement Warning labels are available at no cost.*

Parts

Model 288717

Informer Display, with Graco G3000HR flow meter



Ref. No.	Part No.	Description	Qty.
31	243309	SENSOR	1
32	113517	O-RING, fluoroelastomer	1
33	244291	BODY, gear meter, includes items 33a–33h	1
33a	110580	• SCREW, cap, socket hd., M6 x 30	12
33b	*	• HOUSING, meter upper	1
33c	110588	• O-RING; PTFE	1
33d	244290	• GEAR ASSEMBLY	2
33e	197142	• SHAFT, gear	2
33f	192387	• PIN, dowel	2
33g	*	• HOUSING, meter, lower	1
33h	291643	• LABEL, identification	1
34	288680	DISPLAY, Informer; See parts on page 28	1
35	195874	SCREW, mach., phillips pan hd., M4 x 8	2

Ref. No.	Part No.	Description	Qty.
36	105892	SCREW, mach., pan hd., M4 x 40	2
37	115698	PLUG, dome	2
38	195889	BUSHING, strain relief	2
40▲	195909	LABEL, warning, English	1
41▲	195910	LABEL, warning, French	1
42	195867	PAINT SHIELD KIT, includes 10 shields	1
43	195853	SCREW, mach. phillips pan hd., M2.5 x 6	1
44	222011	WIRE, ground, external; not shown	1

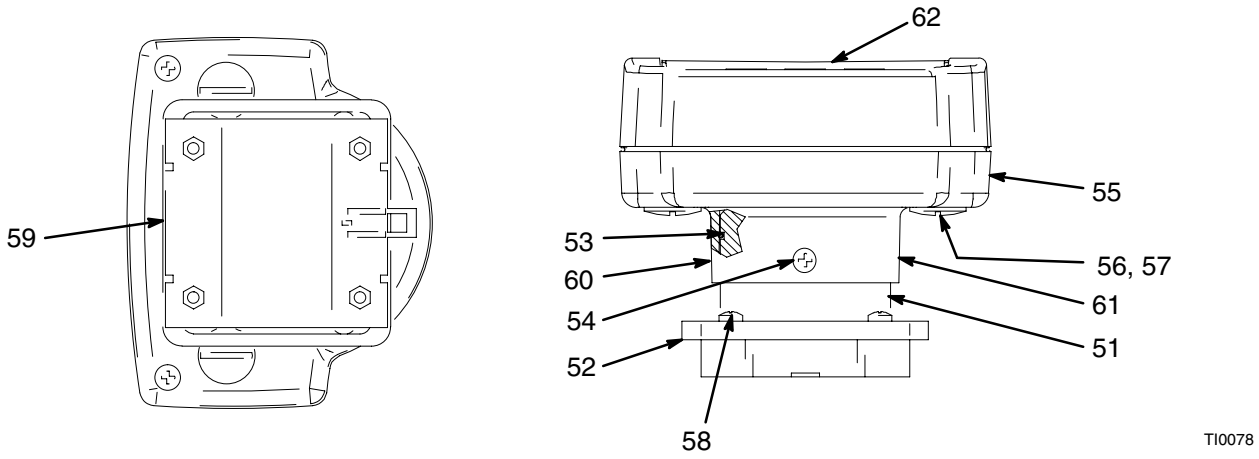
* *Not a replacement part. Order item 33, gear meter assembly.*

▲ *Replacement Warning labels are available at no cost.*

Parts

Model 288670

Informer Display, remote installation, din rail mount

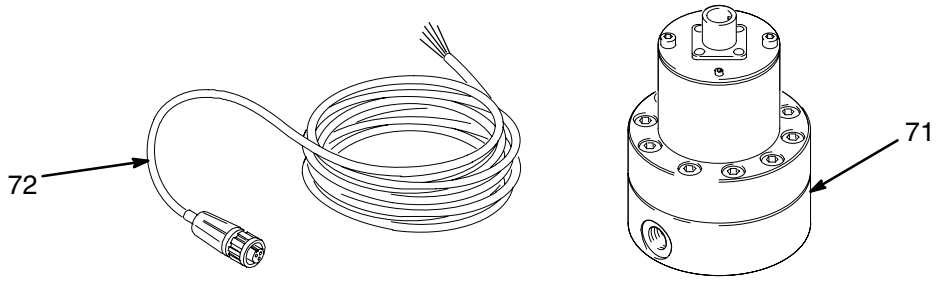


Ref. No.	Part No.	Description	Qty.
51	196301	ADAPTER	1
52	195857	PLATE, adapter mounting	1
53	113517	O-RING, fluoroelastomer	1
54	195874	SCREW, mach., phillips pan hd., M4 x 8	2
55	288679	DISPLAY, remote; See page 29 for parts	1
56	115698	PLUG, dome	2
57	195889	BUSHING, strain relief	2
58	195875	SCREW, mach., phillips pan hd., M4 x 16	4
59	195871	CLAMP, din rail	1
60▲	195909	LABEL, warning, English	1
61▲	195910	LABEL, warning, French	1
62	195867	SHIELD, paint	1
63	195853	SCREW, mach. phillips pan hd., M2.5 x 6; not shown	1
64	222011	WIRE, ground, external; not shown	1

▲ *Replacement Warning labels are available at no cost.*

Model 243554

Remote G3000 Flow Meter Installation Kit

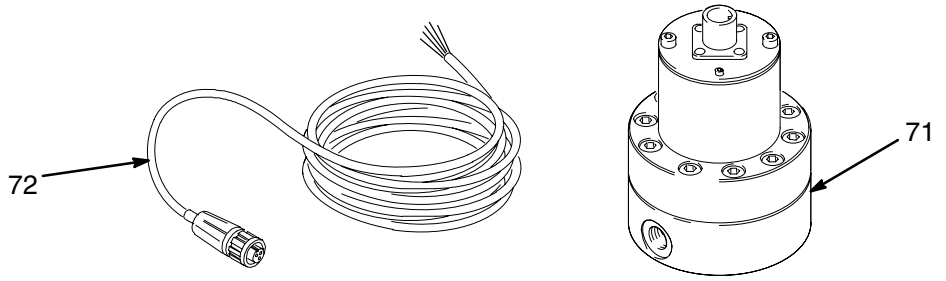


Ref. No.	Part No.	Description	Qty.
71	239716	G3000 FLOW METER; See manual 308778 for parts	1
72	948924	CABLE ASSY., 50 ft. (15.24 m)	1

Parts

Model 234106

Remote G3000HR Flow Meter Installation Kit



TI0077

Ref. No.	Part No.	Description	Qty.
71	244292	G3000HR FLOW METER; See manual 308778 for parts	1
72	948924	CABLE ASSY., 50 ft. (15.24 m)	1

9 Volt Battery for Display

Brand	Part No.	Type
Ultralife*	U9VL	Lithium
Duracell	MN1604	Alkaline
Duracell	PC1604	Alkaline
EverReady	EN22	Alkaline
EverReady	522	Alkaline

* An Ultralife battery is shipped with the Informer display in order to replace the Alkaline test battery. A Lithium battery is recommended for extended battery life.

Fuses

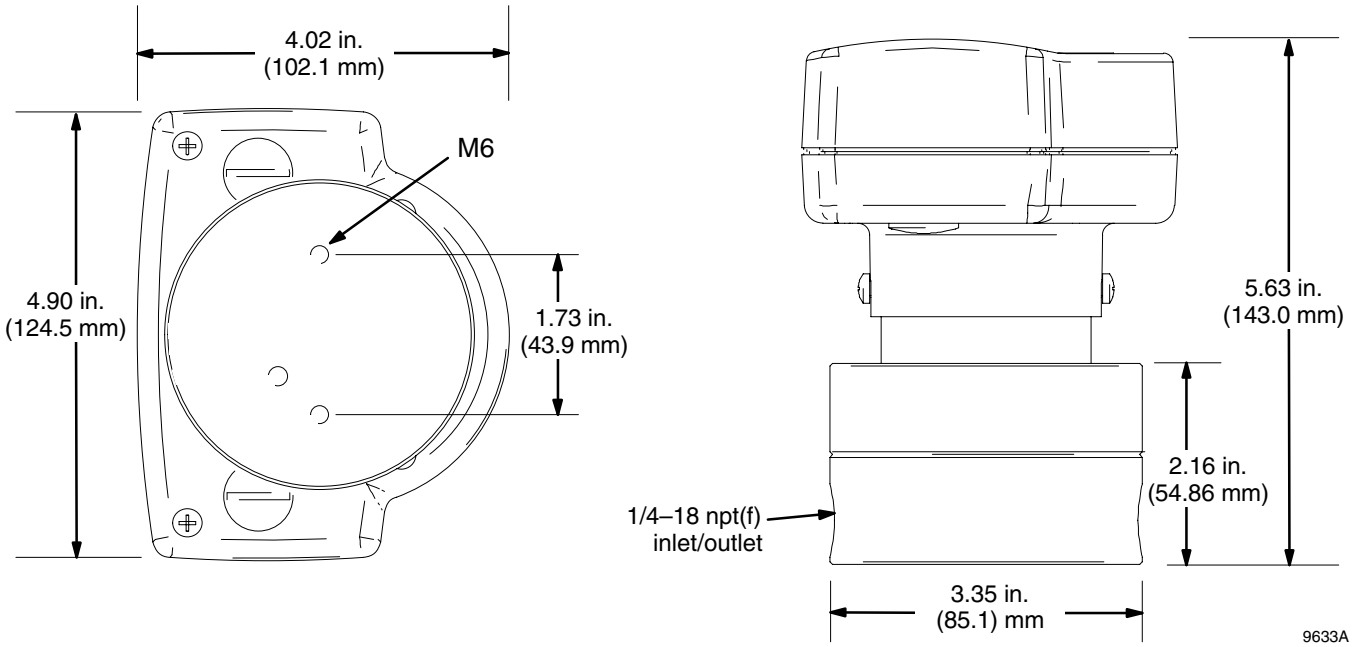
Fuse	Value	Description	Wickman Part No.	Graco Part No.
F1	0.1 A	External power source	3950100044	115838
F2	0.1 A	Batch reset input	3950100044	115838
F3	0.1 A	User alarm output	3950100044	115838
F4	0.1 A	Batch alarm output	3950100044	115838
F5	0.1 A	Pulse signal input	3950100044	115838
F6	0.1 A	Battery power source	3950100044	115838

NOTE: All fuses are fast acting, style TE5.

Dimensions

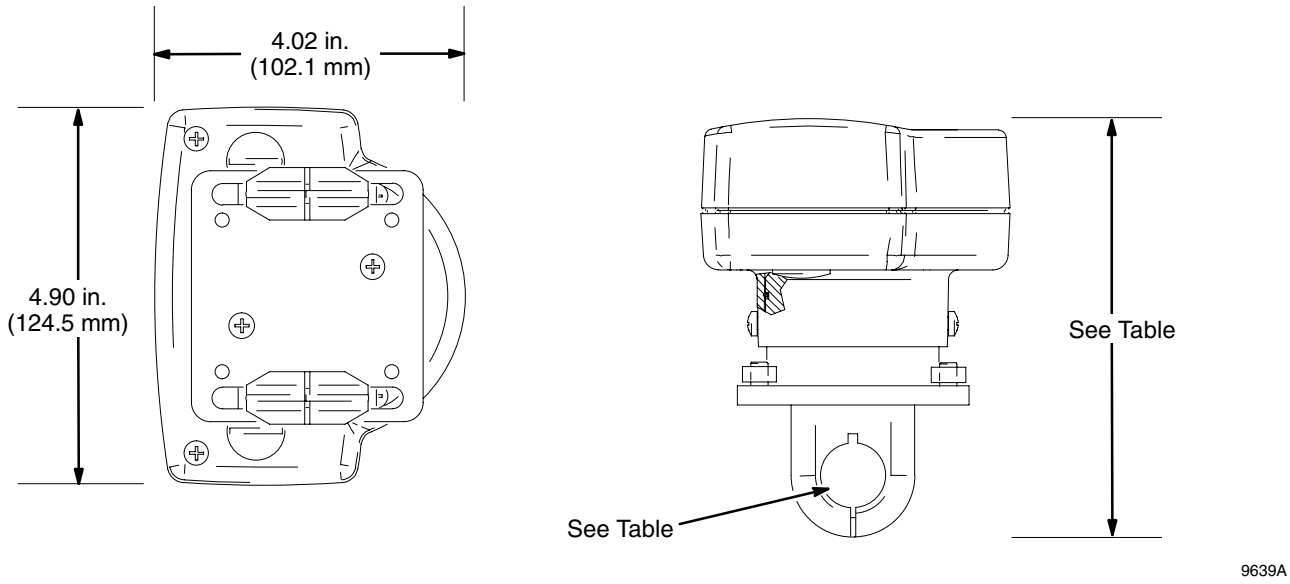
Model 288665 and 288717

Informer Display, with Graco flow meter



Model 288666, 288667, 288668

Informer Display, pipe mount

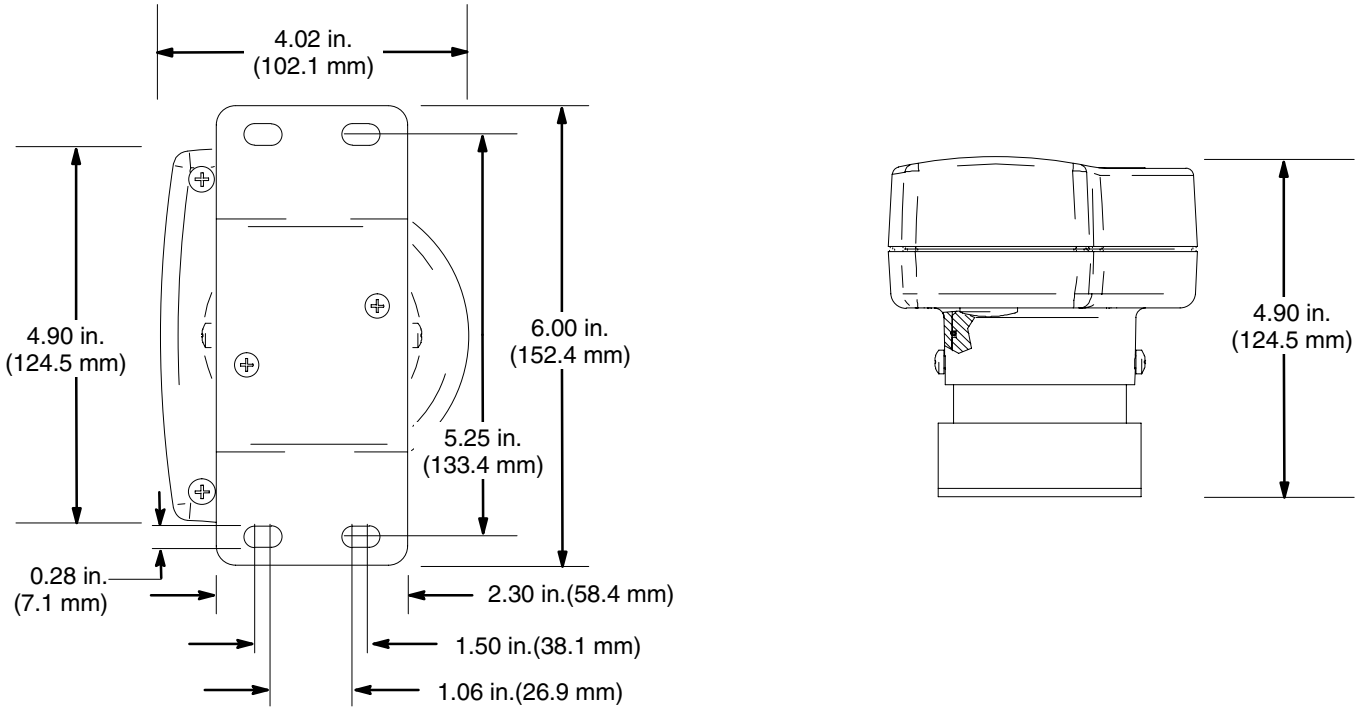


Model	Pipe Diameter	Height
288666	0.50 in. (12.7 mm)	5.42 in. (137.7 mm)
288667	0.75 in. (19.1 mm)	5.52 in. (140.2 mm)
288668	1.00 in. (25.4 mm)	5.64 in. (143.3 mm)

Dimensions

Model 288669

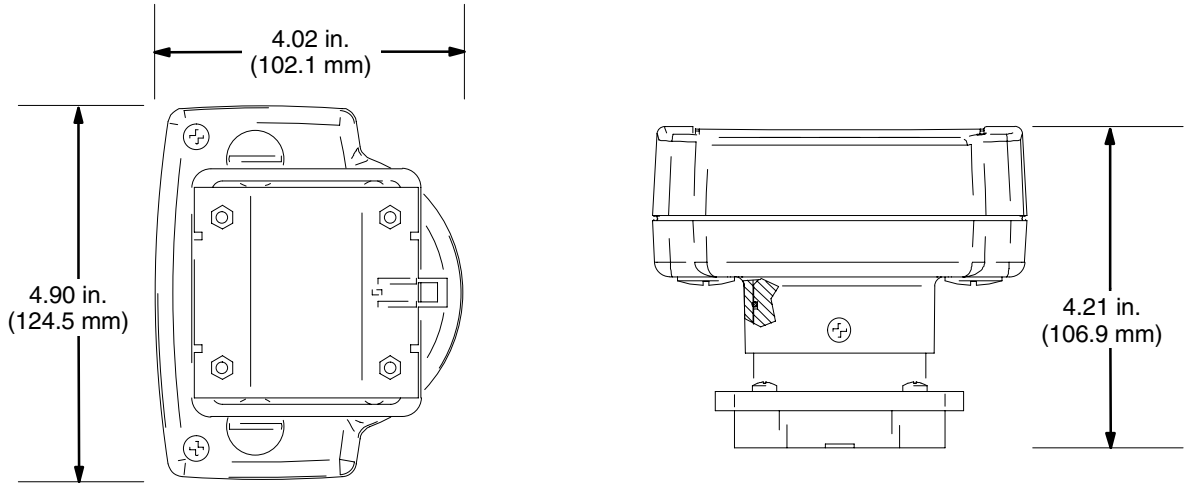
Informer Display, wall mount



9638A

Model 288670

Informer Display, din rail mount



T10077

Technical Data

Display

6 digit, 1 inch (25.4 mm) high LCD display

Keypad

4 button membrane with tactile feedback on 3 buttons

Power Requirements

- 9 VDC internal battery at 2 mA (display on)
- Or 12 to 24 VDC external power supply at 10 mA
- Replaceable fuse, reverse polarity protected

Pulse Input

- 8 VDC at 2.5 mA to 24 VDC at 16 mA
- Current sinking or sourcing
- 1000 pulses/sec. maximum, 50% duty cycle

Control Inputs and Outputs

- Optically isolated, replaceable fuse, reverse polarity and over-voltage protected
- Batch Reset Input
  - 8 VDC at 2.5 mA to 24 VDC at 16 mA
  - Current sinking or sourcing
  - 50 mS pulse width minimum
  - Not active while unit is in “Sleep Mode”–refer to page 39
- Batch Alarm Output
  - 24 VDC, 150 mA maximum
  - Current sinking or sourcing
- User Alarm Output
  - 24 VDC, 150 mA maximum
  - Current sinking or sourcing

RS–485 Communication Port

- Modbus RTU Communication Protocol (Function 3 and 16)
- Not active while unit is in “Sleep Mode”–refer to page 39

K-Factor Value Range

0.01 to 1.0 cc/pulse

Input, Output, Power, and Communication Connections

- Removable terminal block
- Cable Ports: 2 with strain reliefs, 0.312 in. (7.9 mm) diameter cable maximum

Environmental

- Operating temperature: 32° to 140° F (0° to 60°C)
- Storage temperature: –67° to 140° F (–55° to 60°C)
- Humidity: 0 to 95%, non-condensing
- Display housing meets NEMA 12 requirements
- Display housing is solvent resistant

Compliances

Intrinsically safe (Class I, Div. 1, Group D) when installed as shown in Fig. 4, page 10; “Typical Installation: Remote Informer Display in Non–hazardous Area, Meter in Hazardous Area”.

Technical Data

Display Parameters

Display updated in approximately 1/2 sec intervals.

- Grand Totalizer
  - Selectable Units (L, gal, cc, oz)
  - Count Up
  - Backed up to non-volatile memory
  - Maximum displayed value: “999999”
  - Maximum stored value: 429,496,729.5 cc (accessible with Modbus)
- Batch Totalizer
  - Selectable Units (L, gal, cc, oz)
  - Count Up or Down
  - Settable Target
  - Maximum displayed value: “99999.9”
  - Maximum stored value: 429,496,729.5 cc (accessible with Modbus)
  - Auto or Manual Reset
  - Alarm when Target value is reached causes flashing Icon and output active
- Preventative Maintenance Totalizer
  - Selectable Units (L, gal, cc, oz)
  - Count Up
  - Settable Target
  - Maximum displayed value: “99999.9”
  - Maximum stored value: 429,496,729.5 cc (accessible with Modbus)
  - Manual Reset
  - Alarm when Target value is reached causes flashing Icon and output active
- Flow Rate
  Display update time: 1 sec.

Sleep Mode

- To conserve battery power, if no external power supply is connected, the Informer will enter Sleep Mode after 5 minutes of no activity on the front panel push buttons.
- The Informer will leave Sleep Mode when flow is detected.

Software Upgrades

Software upgrades are performed by replacing the programmable chip on the circuit board.

Model 243312 Meter

See manual 308778 for meter technical data.

Graco Standard Warranty

Graco warrants all equipment manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

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Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

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TO PLACE AN ORDER, contact your Graco distributor, or call one of the following numbers to identify the distributor closest to you:

1–800–328–0211 Toll Free
612–623–6921
612–378–3505 Fax

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