

# STANDARD *Pump*

## F202 Battery Powered Flow Meter



## SAFETY INSTRUCTIONS

### General Statements

- Do not install and service the product without following the Instruction Manual.
- This item is designed to be connected to other instruments which can be hazardous if used improperly. Read and follow all associated instrument manuals before using with it.
- Product installation and wiring connections should only be performed by qualified staff.
- Do not modify product construction.

### Installation and Commissioning Statements

- Do not exceed maximum specifications using the instrument.
- To clean the unit, use only chemical compatible products.

## PACKING LIST

Please verify that the product is complete and without any damage.

The following items must be included:

- F202 Battery Powered Flow Monitor
- Instruction Manual for F202 Battery Powered Flow Monitor

## DESCRIPTION

The new F202 is a smart battery powered flow monitor designed to convert the frequency signal of FLS sensors into a flow rate. F202 is equipped by a long life lithium battery which powers the sensor also. A wide 4" display is used to show measured values clearly. A first procedure will grant a easy set up of main parameters. A flow rate reference can be used for a recalibration or a alignment through a intuitive "in-line calibration". A safe icon alerts when it's time to replace battery and instrument stores all main parameters automatically. A customizable string allows to tailor easily the view level.

## TECHNICAL DATA

### General

- Associated flow sensor: FLS Coil effect with frequency output and FLS Reed effect
- Materials:
  - Case: ABS
  - Display window: PC
  - Panel & Wall gasket: silicone rubber
  - Keypad: 5-button silicone rubber
- Display
  - transfective technology
  - Update rate: 1 second
  - Enclosure: IP65 front
- Flow input Range (frequency): 0.5 to 500 Hz
- Flow input accuracy: 0,5%

### Electrical

- Supply Voltage: 3.6 volt Lithium Thionylchloride Battery, size B, 8.5 AHR
- Battery life: nominal 5 years
- FLS Coil effect flow Sensor power:
  - 3.6 Volts

### Environmental

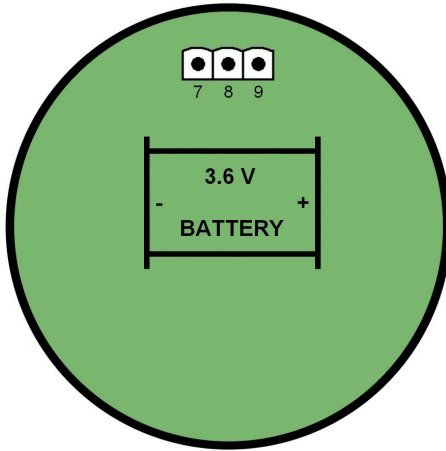
- Operating temperature: -5 to +60°C (23 to 140°F)
- Storage temperature: -10 to +80°C (14 to 176°F)
- Relative humidity: 0 to 95% not condensing

### Standards & Approvals

- Manufactured under ISO 9001
- Manufactured under ISO 14001
- CE
- RoHS Compliant
- GOST R

# WIRING CONNECTIONS

Rear Terminal View

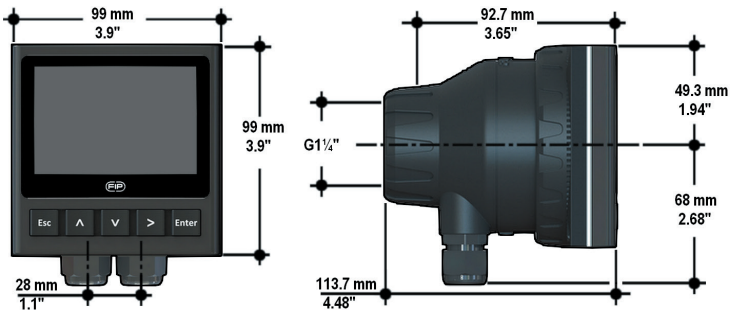


9	V+	Flow Sensor
8	FREQ IN	
7	GND	

Refer to dedicated sensor manual for its wiring.

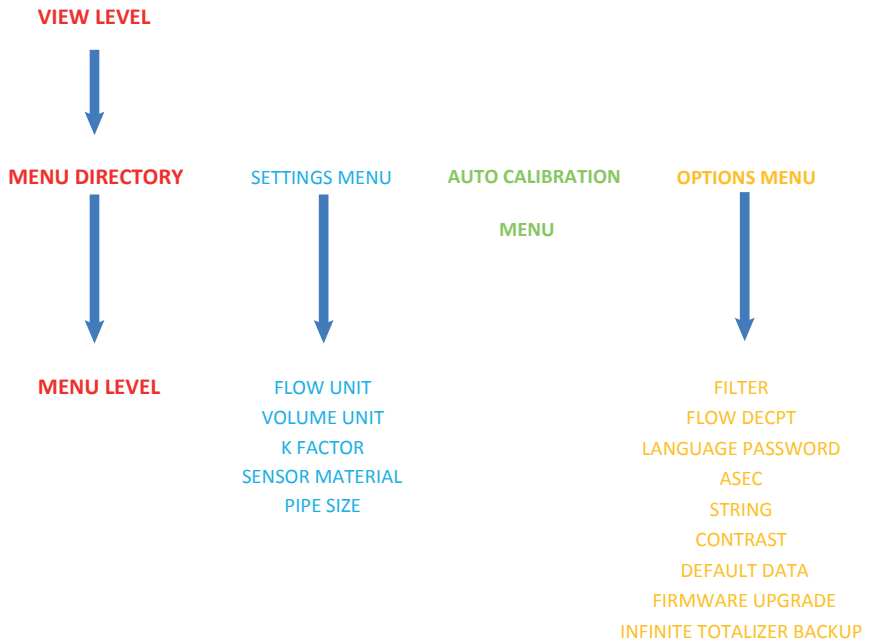
# DIMENSIONS

## COMPACT MOUNTING



# OPERATIONAL OVERVIEW

The F202 flow monitor and transmitter features an LCD display and a five-button keypad for system set-up, calibration and operation.



## EDIT LEVEL

### PUSH BUTTON



to modify an item



to scroll right



to return to the upper Menu  
without saving



to save new settings

## VIEW LEVEL



**Flow Rate and Permanent Totalizer values**



**Flow rate and Resettable Totalizer values.**  
Press the **RIGHT** arrow key to reset.  
If locked, you will need to enter the **Password** first.  
Lock or Unlock the **Totalizer reset** in **Option Menu**.

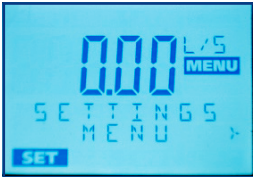


**Flow rate and Custom string.**



**Flow rate and Hardware Release and Software Release.**

## MENU DIRECTORY



The **F202 basic settings** are selected in this menu.



The **F202 auto-calibration** is selected in this menu.



The **F202 options** are selected in this menu.

## MENU LEVEL

### SETTINGS MENU



Set the **Engineering Unit** for the **Instant Flow Rate**.  
All the options available are displayed on the LCD.



Set the **Engineering Unit** for the **Total Flow Rate**.  
All the options available are displayed on the LCD.



Set the **K-Factor** for the proper conversion of the **frequency** of the flow sensor into a **flow rate**. The **K-factor** is correlated to: **Sensor Model and Actual Internal Diameter** (Pipe Size, Pipe Material, Pipe Standard). Refer to **Flow Sensor Instruction Manual** for the correct value. **K factor range: 000.01 to 99999** (the K-Factor cannot be set to 0)



The choice of **Sensor Material** allows **ASEC to improve instrument performances**.  
You can choose among: **CPVC, PVDF or METAL** (for Brass and Stainless Steel).  
**Warning:** the **ASEC function set OFF** makes **Material Options** unavailable.

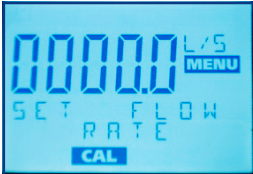


The choice of **Pipe Size** allows **ASEC to improve instrument performances**.  
You can choose standard sizes from **DN15 to DN300**. For pipes bigger than DN300 choose DN300.  
**Warning:** the **ASEC function set OFF** makes **Size Options** unavailable.



## MENU LEVEL

### AUTO CALIBRATION MENU



Set the **Reference Flow Rate**.  
 Press **Enter** and the instrument will calculate the **New k-factor**  
 in according with application features (**Custom k-factor**).  
**Warning: The flow has to be stable, otherwise the monitor  
 will abort the calculation.**

## MENU LEVEL

## OPTION MENU



Select the **Filter Level** to dampen fluctuations in measurement.  
**OFF:** no damping effect, near instantaneous response.



Set the **Decimal Point Position** to get the best resolution for the application.

Select one of the following options:  
**X.XXXX ; XX.XXX ; XXX.XX ; XXXX.X ; XXXXX.**



Set the **Language** among following options:  
**English – Italiano – Deutsch- Francais - Espanol**



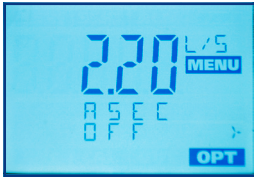
Set **ON** the **ResTot PWD** to **protect** access to **Menu Directory Level** and to avoid undesired **reset** of Resettable Totalizer.

**NOTE:** the **Password** is **right** arrow, **up** arrow, **right** arrow and **enter**. The **Password Combination** can't be modified. If the **Password** is **not correct** on the display will appear the notice: **"Password wrong"**.

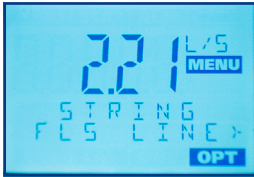


Set the backup of infinite totalizer for storing its value.

**NOTE:** the backup is automatically done when **LOW BATTERY** icon appears.



**ASEC (Automatic Systematic Error Compensation)** improves instrument performances. ASEC function works basing on: **Sensor Body Material** and **Pipe Size**. When **ASEC** is set **OFF**, **Sensor Body Material** and **Pipe Size** options are unavailable in **Calibration Menu**. **WARNING: ASEC** is designed to work **ONLY** in conjunction with F3.00 sensor. Don't activate this function when monitor manage a other sensor.



Set a **string** of 10 characters/digits.



Adjust the **LCD contrast** for view improving.



Use to return back to the **factory data**

## TROUBLESHOOTING

**MAX FREQ ERROR** > Input frequency is too high

**OVERFLOW ERROR** > Flow rate is in OVERFLOW: it exceeds the maximum display capability. Solution can be to change the flow rate engineering units.

**SET MORE THAN ZERO** > The K-FACTOR and the FLOW RATE during the auto calculation procedure can't be set 0.



**LOW BATTERY ICON** > Battery has to be replaced as soon as possible. Monitor continues to work properly for a maximum of 4 months (in according with enviromental conditions).

# STANDARD *Pump*

Standard Pump, Inc.  
1610 Satellite Blvd, Suite D  
Duluth, Georgia 30097 USA  
Ph: 770-307-1003 Fax: 770-307-1009