OPERATING INSTRUCTIONS
STYLE 9301 PORTABLE FLOW METER

A. GENERAL

The Akron Brass Style 9301 Portable Flow Meter is designed for testing nozzle and hydrant flows. The unit operates with a self contained 12 VDC rechargeable sealed lead acid battery and includes a Console with Meter and a Body with adapters for the Flow and Pressure Sensors and necessary Wiring, all housed in a convenient Carrying Case.

The rechargeable sealed lead acid battery has an average life of 10-12 hours on a full charge. A 110 VAC and a 12 VDC charger are also included.

Note: A battery low on charge may result in erratic readings. Therefore, it is recommended the battery be charged before it's initial use and after each use.

B. SET-UP

Check the O-Rings in the Flow Sensor for proper lubrication. If needed, apply a light coating of grease (O-Ring Lube or silicone).

Insert the Flow Sensor into the Sensor Port and align the locator pin to the hole and push down to seat. Then slip the Retaining Ring over the Sensor Cable and thread it down until snug.

The other end of the Cable is split into 2 Weatherpack connectors. One connector attaches to the Flow Sensor and one to the Pressure Transducer. Connect the one end of the cable to the Control Unit using the Screw Ring Plug.

When testing a nozzle with a pumper, connect a hose off a male discharge to the swivel inlet of the Portable Flow Meter. Run another hose between the unit and the nozzle. Turbulance at the inlet of the Portable Flow Meter may effect the accuracy of the unit. For best results the following guidelines should always be followed:

Do not use any reducing adapter immediately prior to the Flow Meter inlet. If reduction is necessary a short section (minimum 6') of 2 1⁄2" hose is recommended. If the portable flow meter is being used to test a hydrant, the unit should not be connected directly to the hydrant. A short section (minimum 3') of a hose should be used between the hy drant and the portable flow meter.

Once the unit is assembled, flip up the red switch cover and turn the toggle switch on.
The Portable Flow Meter is preset at the factory and ready to operate. No calibration should be required. If the unit would need calibration refer to the Operating Instructions on the following pages.

C. OPERATING INSTRUCTIONS

CAUTION: - This 9301 Portable Flow Meter is intended for training and/or testing of fire ground procedures, not actual use during fire ground operations.

These instructions describe the features and operational steps for general service after the system is set up. The Meter consists of a LCD display screen and two operation buttons located directly beneath the display.
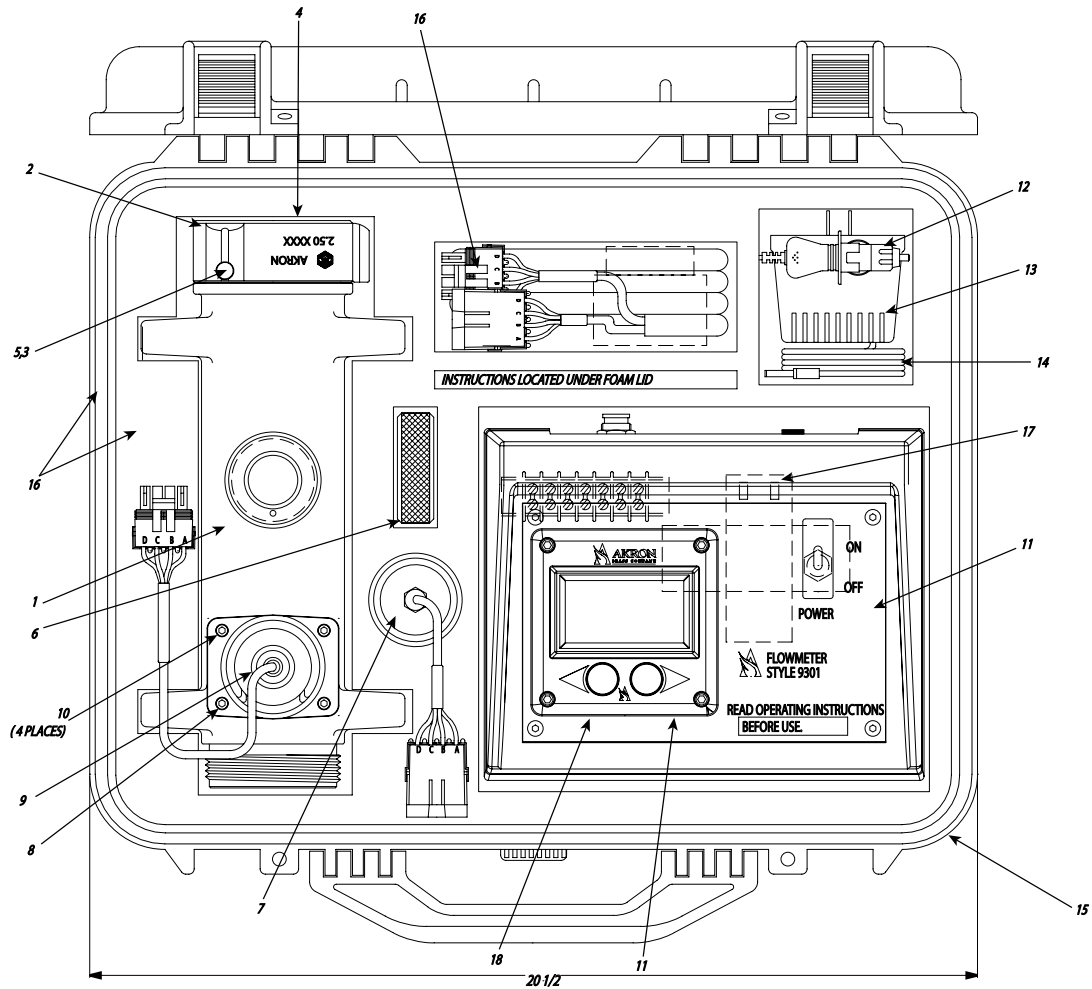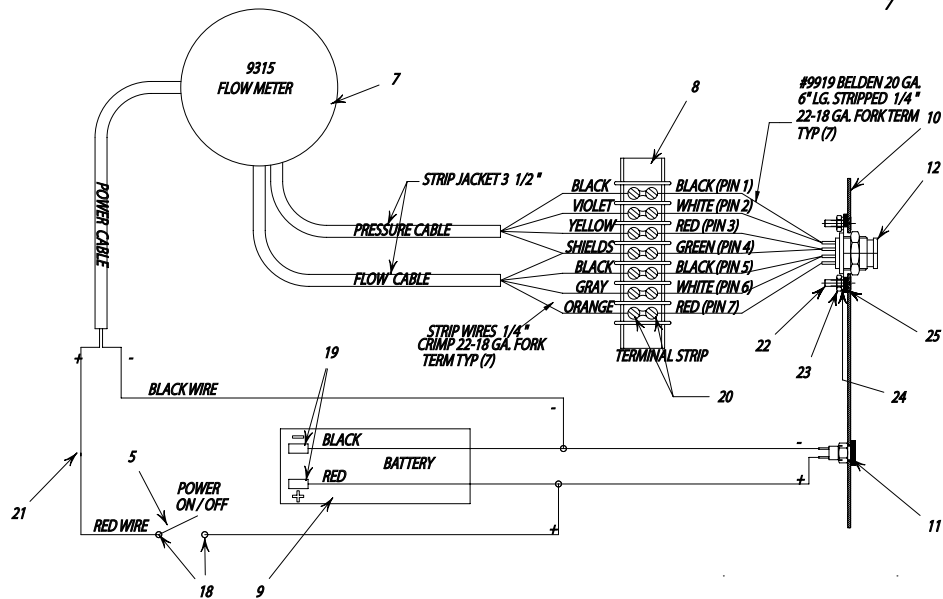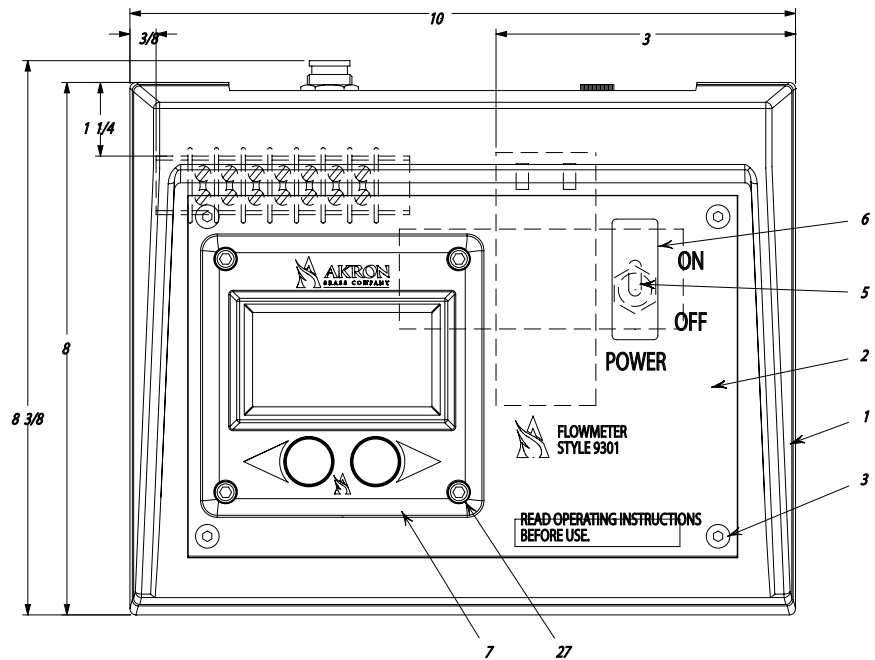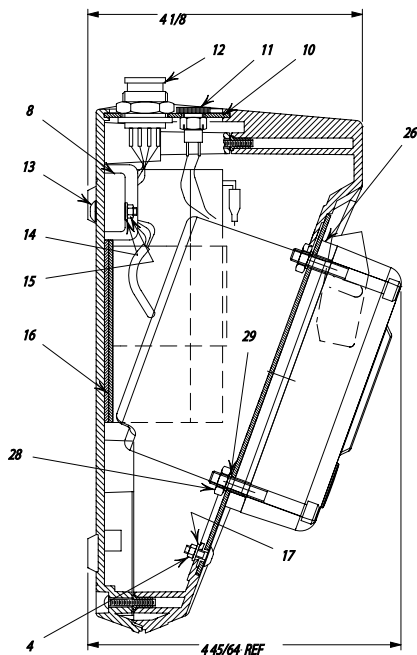
*Complete unit 93010101 as shown

NO.	ITEM	PART NO
1	Body (2-1/2" NH)	115498
2	Swivel (2-1/2" NH)	101420
3	Swivel Plug	7-42-023
4	Gasket	7-17-043
5	Ball Bearings (39)	*
6	Retaining Nut	115497
7	Flow Sensor	9300-0046
8	Pressure Transducer Guard	115499
9	Pressure Transducer	9300-0050
10	Screw (4)	7-65-029
11	Control Unit (PSI/GPM) (LPM/kPa)	9315-1000
12	12VDC Vehicle Power Adapter	7-07-390
13	110 VAC Charger	7-07-386

NO.	ITEM	PART NO
13	240 VAC Charger	7-07-497
14	Cable for Battery Charger	707387
15	Case & Inserts	7-07-420
16	Pressure & Flow Cable	7-07-385
--	Replacement Battery	9301-0026
--	Spacer	770330

* Packet of 50 Ball Bearings - P/N 109041

Dimensions and labels (assembly drawings):

- 4 1/8
- 4 45/64 REF
- 10
- 3/8
- 3
- 1 1/4
- 8
- 8 3/8
- ON
- OFF
- POWER
- AKRON BRASS COMPANY
- FLOWMETER STYLE 9301
- READ OPERATING INSTRUCTIONS BEFORE USE.

Wiring diagram labels:

- 9315 FLOW METER
- POWER CABLE
- STRIP JACKET 3 1/2"
- PRESSURE CABLE
- FLOW CABLE
- STRIP WIRES 1/4" CRIMP 22-18 GA. FORK TERM TYP (7)
- BLACK
- VIOLET
- YELLOW
- SHIELDS
- BLACK
- GRAY
- ORANGE
- BLACK (PIN 1)
- WHITE (PIN 2)
- RED (PIN 3)
- GREEN (PIN 4)
- BLACK (PIN 5)
- WHITE (PIN 6)
- RED (PIN 7)
- TERMINAL STRIP
- #9919 BELDEN 20 GA. 6" LG. STRIPPED 1/4" 22-18 GA. FORK TERM TYP (7)
- BLACK WIRE
- RED WIRE
- BLACK
- RED
- BATTERY
- POWER ON / OFF

ITEM	DESCRIPTION	QTY
1	PLASTIC ENCLOSURE	1
2	FACE PLATE	1
3	SCREW	4
4	NUT	4
5	MICRO SWITCH	1
6	TOGGLE GUARD	1
7	CONTROLLER FLOW METER GPM/PSI, LPM/KPA	1
8	TERMINAL STRIP	1
9	12V BATTERY	1
10	REAR MOUNTING PLATE	1
11	JACK	1
12	PANEL PLUG	1
13	BUTTON HEAD CAP SCREW	2
14	SPLIT LOCK WASHER	2
15	NUT	2

ITEM	DESCRIPTION	QTY
16	VELCRO STRIP	18"
17	SPLIT LOCK WASHER	4
18	RING	2
19	FEMALE DIS	2
20	FORK TERMINALS	14
22	SCREW	4
23	NUT	4
24	SPLIT LOCK WASHER	4
25	SQUARE FLANGE ADAPTER	1
26	SPACER	1
27	WASHER	4
28	HEX NUT	4
29	SPLIT LOCK WASHER	4

Once powered up a quick AKRON logo will appear, followed by a screen showing what device(s) have been connected.


Figure #1 shows Pressure Sensor and Flow Sensor connected.

To access the ROOT (MAIN) MENU, hold down both buttons for approximately 15 seconds to access the ROOT MENU.
Note: While holding both buttons TOTAL VOLUME will appear. This should be ignored during setup.
However, once flowing, holding both buttons for approximately 2 seconds will provide the total flow since the last start up.

The ROOT (MAIN) MENU contains 5 Sub Menus:
      Units Menu
      Flow Menu
      Pressure Menu
      Display Menu
      Valve Menu
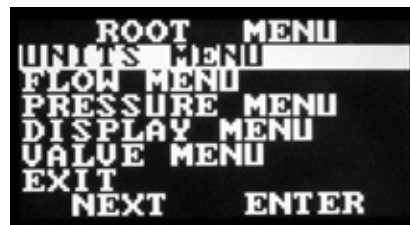
Root Menu

To navigate through all menus the left button **(SELECT)** will highlight an individual line.
Once highlighted, the right button **(ENTER)** will open the selected menu.

EXPLANATION OF INDIVIDUAL MENU SCREENS

UNITS MENU

Units Menu

This Menu is used to select GPM or LPM, Gallons or Liters and PSI or kPa.

Example: With FLOW highlighted, press ENTER to choose between GPM and LPM. Once the correct selection is made, press NEXT to move to the next menu item.
When finished, press NEXT to move to the BACK selection. Press ENTER to return to the ROOT (MAIN) MENU.

FLOW MENU
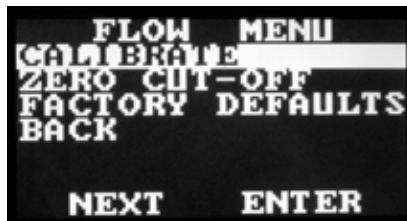
Flow Menu

The FLOW MENU provides the ability to set the pipe size and add a "zero cutoff" for the flow.

SELECT the pipe size for the location of the Flow Sensor (normally 2.5").
Once CALIBRATE is selected, press ENTER to record the valve size. The unit will automatically assign the flow ranges.
This will complete this step of the initial set up unless a unique plumbing configuration requires Custom Flow Calibration.
For information on Custom Flow Calibration, go to the Akron Brass web site.
www.AkronBrass.com/9315customflowcal

Zero Cutoff is the ability to eliminate nuisance or shadow flow readings of up to 59 units.
The FACTORY DEFAULTS option, if entered, will change a custom flow setting back to the original factory setting.
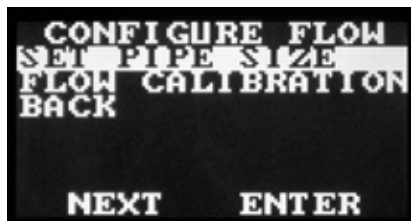
Configure Flow Screen

PRESSURE MENU
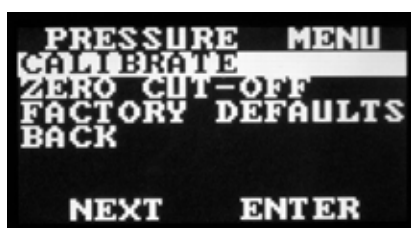
The PRESSURE MENU provides the ability to change the pressure range and to add a "zero cutoff" for the pressure. The pressure range is 0 to 600 psi (0-4000 kPa).
When used with and Akron valve and Navigator, the pressure read out will show zero at powerup. Therefore, custom calibration is not required.

Zero Cutoff is the ability to eliminate nuisance or shadow pressure readings up to 59 units.
The FACTORY DEFAULTS option, if entered, will change a custom pressure setting back to the original factory setting.

DISPLAY MENU

The DISPLAY MENU provides the ability to determine "Brightness" and "Contrast".
In this menu when BRIGHTNESS or CONTRACT is selected, the left button becomes NEXT. Use the NEXT button to move either the BRIGHTNESS or CONTRAST to the desired level. Press the ENTER button to lock in the setting.

Sensors

Part Number	Description
9300-0046	Flow Meter Sensor
9300-0050	Pressure Sensor

AKRON
BRASS COMPANY

ISO 9001 REGISTERED COMPANY

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