Introduction

The B2800 is a technologically advanced flow monitor designed to be comprehensive, user-friendly, flexible and cost efficient. This microprocessor-based display comes pre-calibrated by the factory when purchased with a Blancett turbine flow meter, or it can easily be configured in the field. The user may choose between the Simplified model which is programmed in seven simple steps and the Advanced model which provides additional programming options.

The B2800 is offered in six mounting configurations: meter, remote, swivel and hand-held, as well as a panel version and explosion-proof display allowing for flexible installation. The B2800, when paired with a rugged, reliable Blancett turbine flow meter, will provide dependable and accurate flow information for many years to come. The B2800 may also be used with almost any flow sensor that outputs a low-amplitude AC signal.
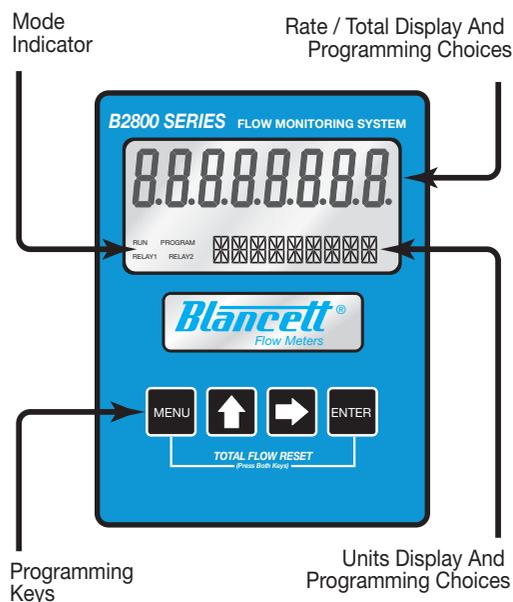
Features

- Displays rate and/or total
- Large 8 digit by 3/4" display for easy viewing (meter, remote and swivel mount plus hand-held versions)
- Battery-powered unit utilizes one "D" size 1.5 volt alkaline battery for up to 3-1/2 years of service
- Loop-powered, 4-20 mA version available
- User friendly front panel programming
- Ten point linearization (Advanced model only)
- NEMA 4X enclosure suitable for outdoor monitoring (meter, remote, and swivel mount versions)
- Intrinsically safe (meter, remote and swivel mount versions)
- Microprocessor-based, low power consumption
- Six mounting options: meter, remote, swivel, hand-held, panel or explosion-proof
- Simplified model displays in five selectable units of measure: GPM/gallons, LPM/liters, M3PD/cubic meters, BPD/barrels, or M3PH/cubic meters
- Advanced model offers thirteen selectable units of measure: gallons, oil barrels, liters, cubic meters, Mgal, MCF, MMCF, cubic ft, Mliters, acre ft, liquid barrels, lbs, or kgs
- Advanced model allows selection of time intervals for rate measurement in either day, hour, minute, or second
- Advanced model includes gas measurement with correction software for pressure and temperature

METER MOUNT VERSION

Operating Principle

The B2800 flow monitor accepts a low-level frequency input, such as the input from a Blancett turbine meter, to calculate flow rate and total. These calculations are then displayed in user selected units of measurement. All B2800 flow monitors come pre-calibrated from the factory if ordered with a Blancett flow meter. However, they can be easily reconfigured in the field. The B2800 is available in a battery-powered or loop-powered version. The battery version utilizes one "D" size, 1.5 volt alkaline battery that provides up to 3-1/2 years of service.

The loop-powered B2800 offers a 2-wire 4-20 mA output for electronic integration. The meter mount, remote, swivel and hand-held monitors are equipped with a large 8 digit by 3/4" numerical LCD making extended range viewing practical. The second 8 character by 3/8" alphanumeric display provides for selectable units viewing in run mode and prompts variables in programming mode. Additionally, the user can choose between displaying rate, total or alternating between both rate and total.

Specifications

LCD Display:	Rate & total, fixed or toggle modes of operation
	8 digit, 0.7 inches (18 mm) numeric (top line)
	8 character, 0.35 inches (9 mm) alphanumeric (bottom line); resettable
LCD Display: (Panel Mount & Explosion-Proof Models only)	Rate & total, fixed or toggle modes of operation
	8 digit, 0.5 inches (13 mm) numeric (top line)
	8 character, 0.25 inches (6.4 mm) alphanumeric (bottom line); resettable
Power:	
Battery	1 "D" size 1.5 VDC alkaline battery included Less than 1 milliwatt (~3.5 years on 1 "D" battery)
Loop-Powered	4-20 mA, two-wire current loop 25 mA maximum consumption
Pulse Output Signal:	One pulse for each increment of the least significant digit of totalizer
Pulse Type	Opto-isolated open collector transistor
Max Voltage	30 VDC
Pulse Width	(ON State) 20 ms/max pulse rate 20 Hz
Current	(ON State) 0.9 V drop @ 5.0 mA or 0.7 V drop @ 0.1 mA
Inputs:	Magnetic pickup
Frequency Range	1 to 3500 Hz
Trigger Sensitivity	30 mV p-p
Over Voltage Protected	30 VDC
Frequency Measurement Accuracy:	±0.1%
Analog Output: (Loop-Powered Version)	4-20 mA
Operating Temperature:	-22 °F (-30 °C) to 158 °F (70 °C)
Humidity:	0-90% non-condensing
Enclosure Rating:	Meter, Remote and Swivel mount: NEMA/UL/CSA Type 4X (IP-66)
	Panel mount: NEMA 4 (front only)
	Hand-Held: General Purpose
	Explosion-proof: NEMA 4X (IP-66)

Mode Indicator

Rate / Total Display And Programming Choices

B2800 SERIES FLOW MONITORING SYSTEM

8.8.8.8.8.8.8.8.

RUN PROGRAM
RELAY1 RELAY2

Blancett ®
Flow Meters

MENU   ENTER

TOTAL FLOW RESET
[Press Both Keys]

Programming Keys

Units Display And Programming Choices

Certifications:	
CSA Intrinsically Safe: (Meter, Remote & Swivel Mount)	Class I, Division 1, Groups C & D Class II, Division 1, Groups E, F & G
CE: (Meter, Remote & Swivel Mount)	IEC 61326-1
CSA: (Panel Mount Only)	Ordinary Area
CSA Hazardous Locations: (Explosion-Proof Model Only)	Class I, Division 1, Groups B, C & D Class II, Groups E, F & G Class III, Type 4, T6 @ 70 C
Units of Measure (Rate/total): (Simplified Version - user selectable)	GPM/gallons, LPM/liters, M3PD/cubic meters, BPD/barrels, M3PH/cubic meters
Units of Measure (Total): (Advanced Version - user selectable)	Gallons, Oil Barrels, Liters, Cubic Meters, MGal, Cubic Ft, MLiters, MCF, MMCF, Acre Ft, Liquid Barrels, Lbs, Kgs
Time Intervals (Rate): (Advanced Version - user selectable)	Day, Hour, Minute, Second

Flow Monitor Part Numbering Information

B 2 8   X   X   X - XX

Program Level
A = Advanced
S = Simplified

Power Option
B = Battery
L = Loop

Mounting Style
M = Meter Mount
R = Remote Mount
S = Swivel Mount
H = Hand-Held
P = Panel Mount
X = Explosion-Proof

Units of Measure
AB = Gallons
ED = Barrels
HB = Liters
ID = Cubic Meters
CS = Customer Selectable*

*Note: *Advanced* B2800 monitors only. The default is gallons per minute.

B2800 Mounting Configurations

Meter Mount
- Monitor is assembled to the flow meter, creating a compact flow measurement system
- NEMA 4X (IP-66) enclosure
- 8 digit 0.7 inches (18 mm) numeric rate/total display
- 8 digit 0.35 inches (9 mm) alphanumeric display
- Fixed or toggle modes of operation for flow rate and total display

Remote Mount
- Ideal for installations where flow sensor is located in a challenging environment such as high temperature, excessive noise or inaccessible area
- NEMA 4X (IP-66) enclosure
- 8 digit 0.7 inches (18 mm) numeric (rate/total display; programming choices)
- 8 digit 0.35 inches (9 mm) alphanumeric display (run/programming mode)
- Mounting hardware included
- Fixed or toggle modes of operation for flow rate and total display
- Cable lengths from 10' (3 meters) up to 100' (30.5 meters) sold separately

Swivel Mount
- Capable of adjusting orientation up to 180 degrees
- Offers additional protection from the sun/elements
- Increased visibility in difficult viewing installations
- Remote swivel mount also available, consult factory for details
- NEMA 4X (IP-66) enclosure
- 8 digit 0.7 inches (18 mm) numeric display (rate/total display; programming choices)
- 8 digit 0.35 inches (9 mm) alphanumeric display (run/programming mode)
- Fixed or toggle modes of operation for flow rate and total display

Hand-Held
- Battery-powered
- Portable, includes handle, extendable cable and sensor dock
- On/Off switch for power conservation
- Magnetic pickup included with monitor
- 8 digit 0.7 inches (18 mm) numeric display (rate/total display; programming choices)
- 8 digit 0.35 inches (9 mm) alphanumeric display (run/programming mode)
- Fixed or toggle modes of operation for flow rate and total display
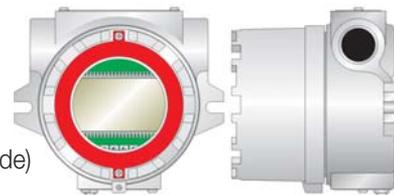- General Purpose enclosure

Panel Mount
- NEMA 4 (front only)
- Designed to be mounted in 3.6" x 3.6" (91 x 91 mm) opening
- Fixed or toggle modes of operation for flow rate and total display
- 8 digit 0.5 inches (12.7 mm) numeric display (rate/total display; programming choices)
- 8 digit 0.25 inches (6.4 mm) alphanumeric display (run/programming mode)
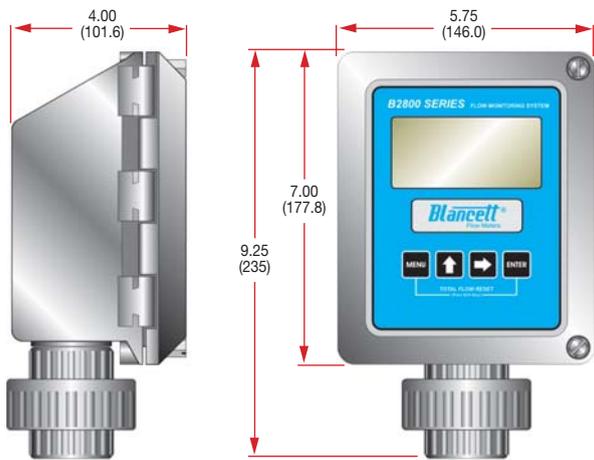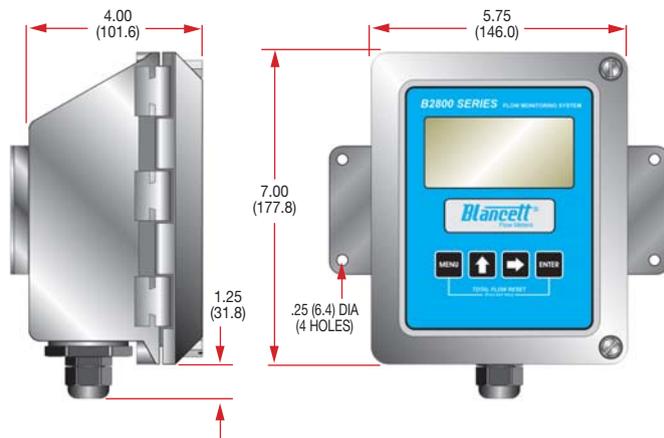
Explosion-Proof
- Ideal for hazardous locations
- Rugged compact design
- 8 digit 0.5 inches (12.7 mm) numeric display (rate/total display; programming choices)
- 8 digit 0.25 inches (6.4 mm) alphanumeric display (run/programming mode)
- Fixed or toggle modes of operation for flow rate and total display
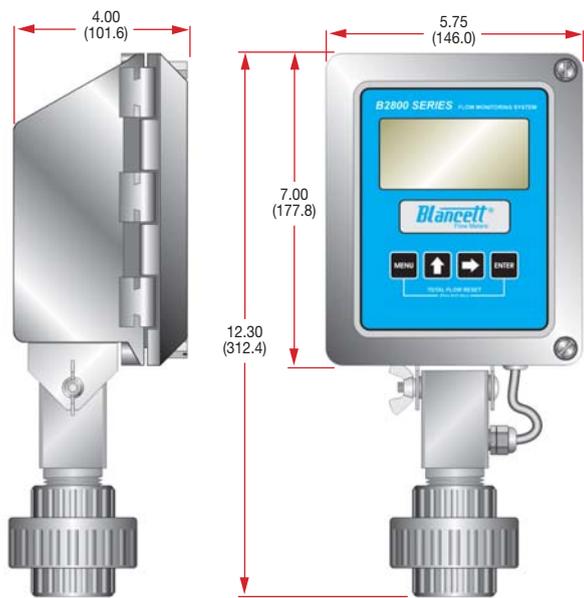- NEMA 4X (IP-66) enclosure
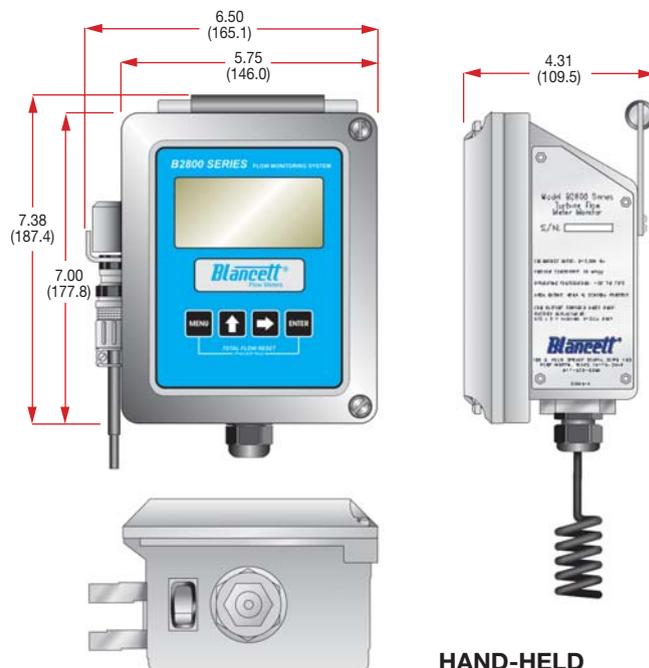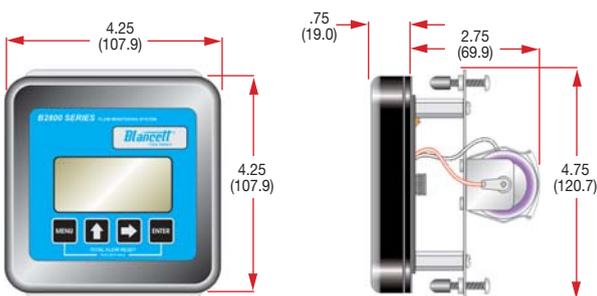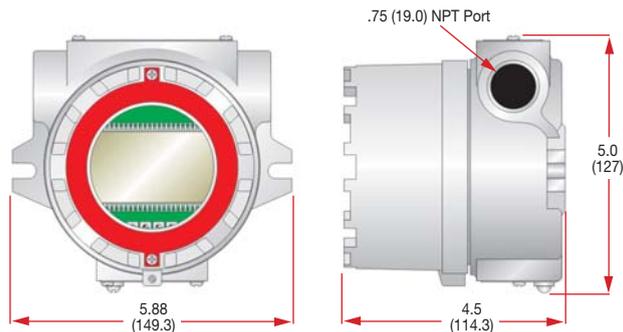
Dimensions - Inches (mm)

METER MOUNT

4.00 (101.6)
5.75 (146.0)
7.00 (177.8)
9.25 (235)

REMOTE MOUNT

4.00 (101.6)
5.75 (146.0)
7.00 (177.8)
1.25 (31.8)
.25 (6.4) DIA (4 HOLES)

SWIVEL MOUNT

4.00 (101.6)
5.75 (146.0)
7.00 (177.8)
12.30 (312.4)

HAND-HELD

6.50 (165.1)
5.75 (146.0)
7.38 (187.4)
7.00 (177.8)
4.31 (109.5)

PANEL MOUNT

4.25 (107.9)
4.25 (107.9)
.75 (19.0)
2.75 (69.9)
4.75 (120.7)

EXPLOSION-PROOF

.75 (19.0) NPT Port
5.0 (127)
5.88 (149.3)
4.5 (114.3)