

Flow Monitor **Model B2800**

Blancett®

Flow Meters



Model B2800 Flow Monitor

- Microprocessor-based flow monitor and totalizer
- Use with Blancett turbine flow meters as well as other flow meters with a frequency output
- Battery (1.5 VDC) and Loop-Powered (4-20 mA) versions
- Meter, Remote, Panel and Swivel mounting options
- Hand-Held and Explosion-Proof models also available



B2800 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 Standard 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.



METER MOUNT VERSION

B2800 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 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 4 enclosure suitable for outdoor monitoring (meter, remote and swivel mount)
- Intrinsically safe (meter, remote and swivel mount)
- Microprocessor-based, low power consumption

Six mounting options: meter, remote, swivel, hand-held, panel or explosion-proof

Standard model displays in four selectable units of measure: GPM/gallons, LPM/liters, M3PD/cubic meters, or BPD/barrels

Advanced model offers eleven selectable units of measure: gallons, oil barrels, liters, cubic meters, Mgal, 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

B2800 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.

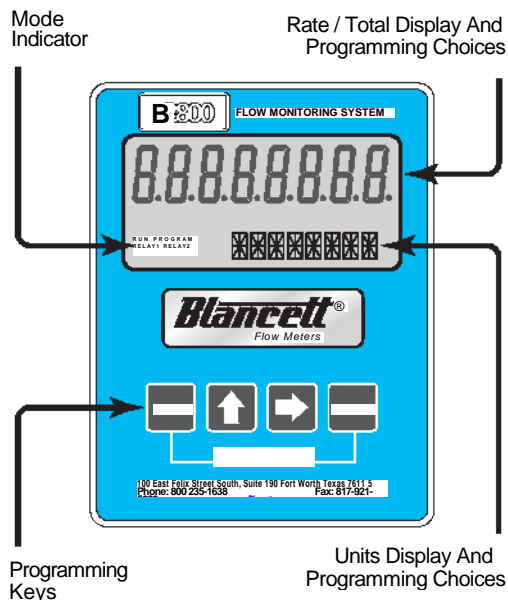
The loop-powered B2800 offers a 2-wire 4-20 mA output for electronic integration. The meter mount, remote, swivel and hand-held monitors are equipped with a large 8 digit by 3/4" numerical LCD making extended range viewing practical. The second 8 character by 3/8" alphanumeric display provides for selectable 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.

B2800 Specifications

LCD Display:	Rate & total, fixed or toggle modes of operation 8 digit, 3/4" numeric (top line) 8 character, 3/8" alphanumeric (bottom line)
LCD Display: (Panel Mount & Explosion-Proof Models only)	Rate & total, fixed or toggle modes of operation 8 digit, 1/2" numeric (top line) <u>8 character, 1/4" alphanumeric (bottom line)</u>
Power:	
Battery	1 "D" size 1.5 VDC alkaline battery
Loop-Powered	4-20 mA, two-wire current loop
Power Consumption:	
Battery	Less than 1 milliwatt (~3.5 years on 1 "D" battery)
Loop-Powered	25 mA maximum
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 25 Hz
Current	(ON State) 0.9 V drop @ 5.0 mA or

0.7 V drop @
0.1 mA

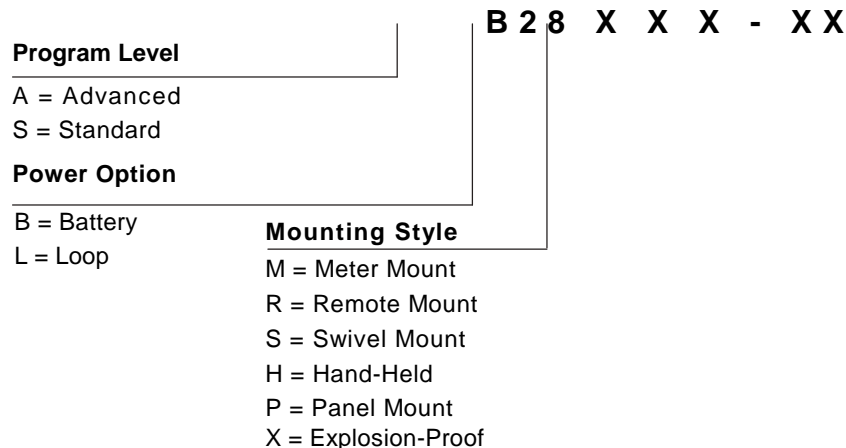
Inputs:	Magnetic pickup
Frequency Range	1 to 3500 Hz
Trigger Sensitivity	30 mV p-p
Over Voltage Protected	±30 VDC
Frequency Measurement	
Accuracy:	±0.1%
Analog Output:	4-20 mA
(Loop-Powered Version)	
Operating	
Temperature:	-22 °F (-30 °C) to 158 °F (70 °C)
Humidity:	0-90% non-condensing
Enclosure Rating:	NEMA/UL/CSA Type 4X (IP66)



Certifications:

CSA Intrinsically Safe:	Class I, Division 1, Groups C & D Class II, Division 1, Groups E, F & G IEC 61326-1
CE:	
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): (Standard Version)	GPM/gallons, LPM/liters, M3PD/ cubic meters, BPD/barrels
Units of Measure: (Advanced Version)	Gallons, Oil Barrels, Liters, Cubic Meters, MGal, Cubic Ft, MLiters, Acre Ft, Liquid Barrels, Lbs, Kgs
Time Intervals (Rate): (Advanced Version)	Day, Hour, Minute, Second

B2800 Flow Monitor Part Numbering Information



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 (IP66) enclosure

- 8 digit 3/4" numeric display (rate/total display; programming choices) 8 digit 3/8" alphanumeric display (run/programming mode) Fixed or toggle modes of operation for flow rate and total display



Remote Mount

Standard 10' (3 meters) cable length: optional lengths up to 100' (30.5 meters)

- Ideal for installations where flow sensor is located in challenging environment such as high temperature, excessive noise or inaccessible area
- NEMA 4X (IP66) enclosure
- 8 digit 3/4" numeric display (rate/total display; programming choices) 8 digit 3/8" alphanumeric display (run/programming mode) Mounting hardware included
- Fixed or toggle modes of operation for flow rate and total display



Swivel Mount

- Capable of adjusting orientation up to 180°
- Offers additional protection from the sun/elements
- Increased visibility in difficult viewing installations
- Remote swivel mount also available, consult factory for details
- NEMA 4X (IP66) enclosure
- 8 digit 3/4" numeric display (rate/total display; programming choices) 8 digit 3/8" 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 3/4" numeric display (rate/total display; programming choices) 8 digit 3/8" alphanumeric display (run/programming mode) Fixed or toggle modes of operation for flow rate and total display



Panel Mount

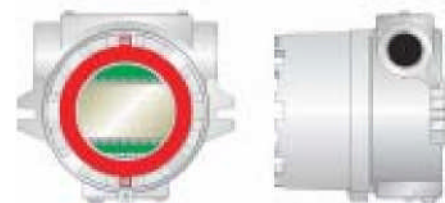
- NEMA 4X (IP66) front panel
- Designed to be mounted in 3.6" x 3.6" (91 x 91 mm) opening
- Fixed or toggle modes of operation for flow rate and total display



- 8 digit 1/2" numeric display (rate/total display; programming choices) 8 digit 1/4" alphanumeric display (run/programming mode)

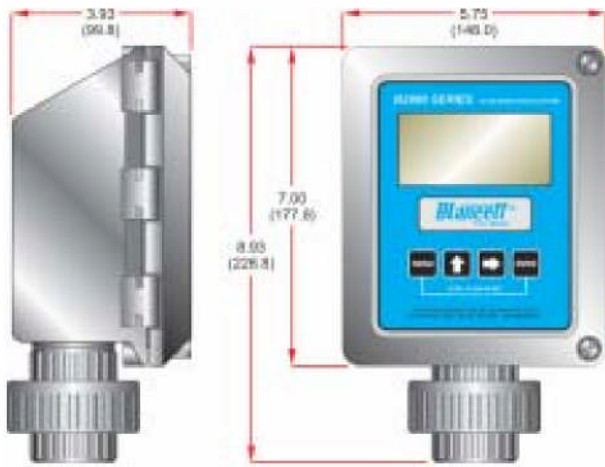
Explosion-Proof

- Ideal for hazardous locations Rugged compact design
- 8 digit 1/2" numeric display (rate/total display; programming



choices) 8 digit 1/4" alphanumeric display (run/programming mode)
Fixed or toggle modes of operation for flow rate and total display NEMA 4
(IP66) enclosure

B2800 Dimensions – Inches (mm)



METER MOUNT

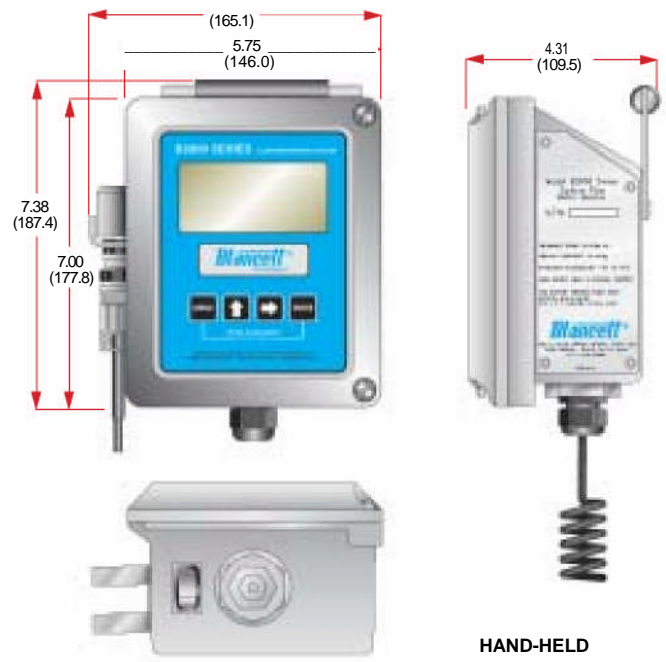


REMOTE MOUNT

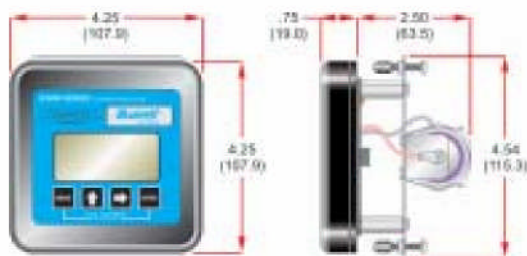
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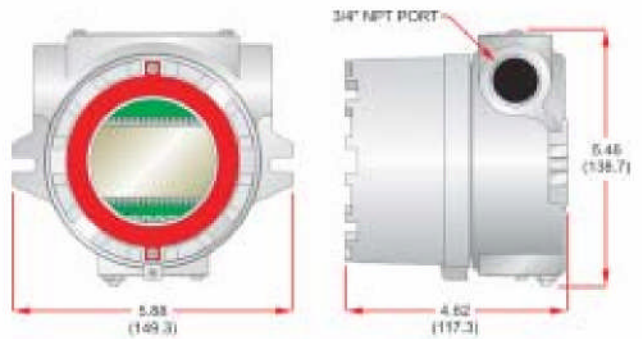
SWIVEL MOUNT



HAND-HELD



PANEL MOUNT



EXPLOSION PROOF

Related Blancett Products

Model 1100 In-Line Turbine Flow Meter

- Accuracy: $\pm 1\%$ of reading
- Repeatability: $\pm 0.1\%$
- Flow ranges from 0.3 - 3 GPM to 500 - 5,000 GPM in line sizes from 1/2" to 10"
- Rugged 316 stainless steel construction
- NIST traceable calibration certificates available



QuikSert™ In-Line Turbine Flow Meter

- Modified flow straighteners for enhanced fluid dynamics
- Body dimensions allow for installation in confined areas
- "Between the flange" design eliminates the need for mating flanges
- Flow ranges from 0.3 - 3 GPM to 500 - 5,000 GPM in line sizes from 1/2" to 10"
- NIST traceable calibration certificates available
- Optional installation kit available



K-Factor Scaler

- Scales turbine meter output to desired engineering units
- Amplifies turbine meter pulse output
- Converts frequency outputs into recognizable units for PLCs and other devices
- Accepts input frequencies up to 4000 Hz
- Switch-selectable or programmable versions available
- Configurable pulse width and polarity
- Mounted in an explosion-proof housing
- CSA approved

