Blancett

**More Options and Features
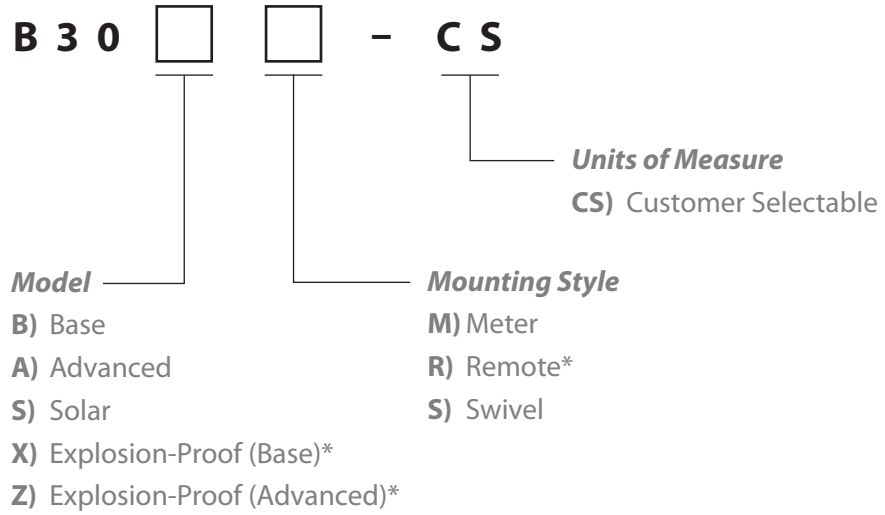Same Trusted Brand**

Badger Meter

B3000 Series Flow Monitors

Introduction

The NEW B3000 Series flow monitor provides you with a flexible, durable, easy-to-use platform for your flow metering applications. Blancett's trusted flow metering technology now offers an exciting new flow monitor with more options and features than ever before with the B3000 Series.

- Robust alarm parameters provide faster warning when something changes in the process or pipeline.

- Greater control, greater visibility of batch operations.

- Advanced connectivity options allow you to connect meters to your network for remote monitoring and process automation capabilities.

- Solar, battery, and 4-20 milliamperes loop power options provide a number of benefits including: ability to install in remote location and be up and running immediately, maintain readings and settings during power loss, and battery-life up to 8 years.

- Updated display and totalization options provide more flow information including simultaneous display of rate and total as well as standard, batch and grand totals.

- Various mounting and enclosure options ensure there is a B3000 model for your operation.
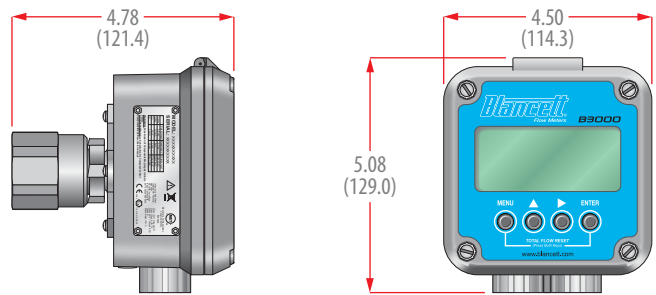
Part Number Construction

B 3 0 ☐ ☐ – C S

Units of Measure

CS) Customer Selectable

Model

B) Base
A) Advanced
S) Solar
X) Explosion-Proof (Base)*
Z) Explosion-Proof (Advanced)*

Mounting Style

M) Meter
R) Remote*
S) Swivel

* Explosion-Proof models available as Remote Mount only.

Dimensions:
Inches (mm)

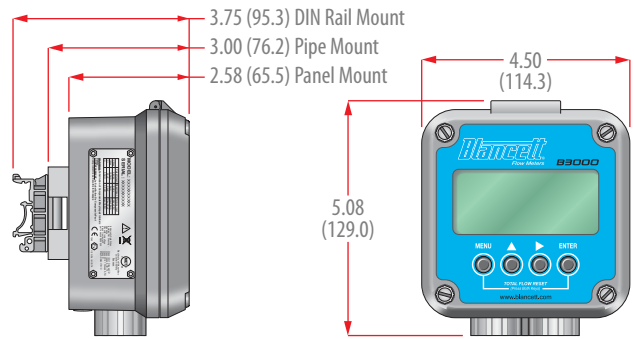## Meter Mount
- Monitor is assembled to the flow meter, creating a compact flow measurement system.
- NEMA 4X (IP 66) enclosure.

4.78
(121.4)
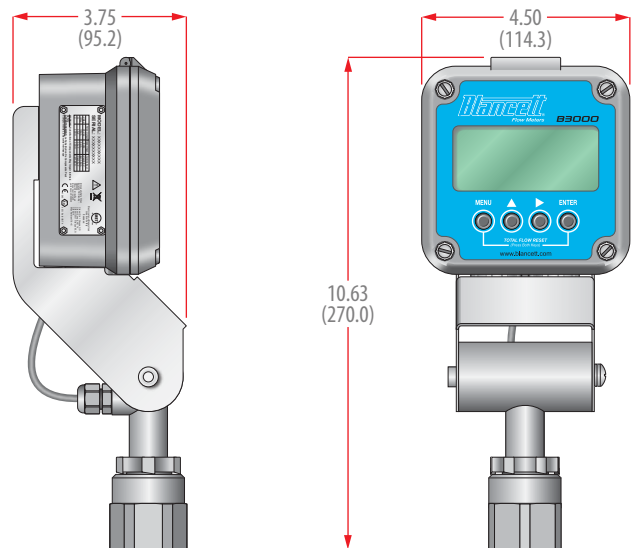
4.50
(114.3)

5.08
(129.0)

Remote Mount
- Ideal when monitor needs to be located away from flow meter; suitable for high temperature, excessive noise, or inaccessible areas.
- NEMA 4X (IP 66) enclosure.
- Panel, DIN rail, and pipe mounting hardware included.
- Cable lengths from 10…100 ft (3…30.5 m) sold separately.

3.75 (95.3) DIN Rail Mount
3.00 (76.2) Pipe Mount
2.58 (65.5) Panel Mount

4.50
(114.3)

5.08
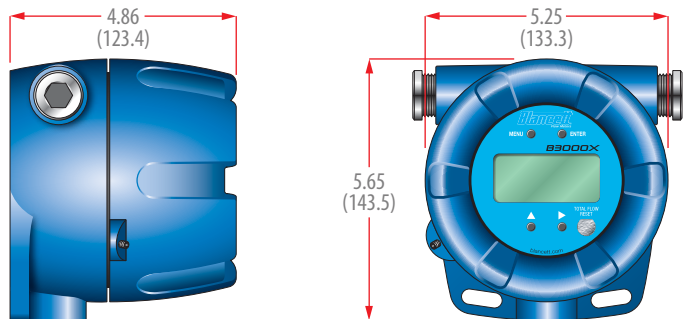(129.0)

3.75
(95.2)

4.50
(114.3)

Swivel Mount
- Capable of adjustment pivot of 180 degrees for ease of viewing.
- NEMA 4X (IP 66) enclosure.
- Remote Swivel mount also available, consult factory for details.
- Offers additional protection from elements.

10.63
(270.0)

Explosion-Proof
- Ideal for hazardous locations.
- NEMA 4X (IP 66) enclosure.
- Rugged compact design.

4.86
(123.4)

5.25
(133.3)

5.65
(143.5)

Specifications

Display	Dot matrix LCD, STN Fluid
	Simultaneous display of Rate and Total
B30A/B/S:	6-digit Rate/7-digit Total, 0.5 in. (12.7 mm)
B30X/Z:	6-digit Rate/7-digit Total, 0.37 in. (9.4 mm)
B30A/B/S:	Engineering Unit Labels: 0.34 in. (8.6 mm)
B30X/Z:	Engineering Unit Labels: 0.24 in. (6.1 mm)
B30A/Z:	Two status alarm icons, RS485 communication icon
	Battery gauge
Power	Auto switching between internal battery and external loop power; B30A and B30Z includes isolation between loop power and other I/O
Battery:	3.6V lithium "D Cell", up to 8 years service life
Loop:	4-20 mA, 2-wire, 25 mA limit, reverse polarity protected, 7V DC loop loss
Power (solar model only)	Internal 3.6V NiCd battery provides up to 30 days of power after 6…8 hours exposure of the integrated photovoltaic cell to direct sunlight
Flow Sensor Input	User selection of magnetic pickup or amplified sensor signal
Range:	1…3500 Hz
Magnetic:	Direct connection to magnetic flow sensor pickup (variable reluctance); 30 mVp-p or 60 mVp-p trigger sensitivity, user selectable; 30V overvoltage protection
Amplified:	Direct connection to amplified signal (pre-amp output from sensor)
Pulse Output	One pulse for each increment of the least significant digit of the totalizer
Pulse Type:	Opto-isolated open collector transistor and non-isolated open drain FET, user selectable
B30S Pulse Type:	Non-isolated open drain FET
	30V DC max., 0.1 A max., 30 ms pulse width, 16 Hz max.
Status Alarms (B30A and B30Z only)	Two adjustable flow rate alarms with programmable dead band and phase. Open drain FET, 30V DC Max., 0.1 A Max.
Digital Communications (B30A and B30Z only)	Modbus RTU over RS485, 127 addressable units / 2-wire network, 9600 baud, long integer and single precision IEEE754 formats; retrieve: flow rate, job totalizer, grand totalizer, alarm status and battery level; write: reset job totalizer, reset grand totalizer
Data/Configuration Protection	Two 4-digit user selectable passwords; level one password enables Job Total reset only, level two Protection password enables all configuration and totalizer reset functions
Measurement Accuracy	0.05%
Response (Damping)	1…100 seconds response to a step change input, user adjustable
Environment	–22…158° F (–30…70° C); 0…90% humidity, non-condensing

Specifications Cont'd.

Totalizer Operation	Monitors contain two totalizers: Job and Grand. User can enable/disable the Grand Totalizer function. If Grand Totalizer is enabled, it shares the 7-digit display line with the Job Totalizer – dwelling between Job and Grand. Grand Totalizer rollovers are displayed with a Count value that increments at each rollover. Totalizers are automatically backed up into non-volatile FLASH memory every 20 minutes and prior to battery expiration; manually via keypad or when signaled via Modbus (B30A and B30Z only)
Totalizer Reset:	**B30A/B/S:** Job Totalizer can be reset by momentarily contacting the Total Reset terminal to ground or pressing the MENU and ENTER buttons simultaneously. Grand Totalizer can be reset via selection in the Advanced Menu or Modbus. (Modbus n/a on Solar Powered units) **B30X/Z:** Job Totalizer can be reset via the "through the glass" touch sensor, by momentarily contacting the Total Reset terminal to ground or pressing the MENU and ENTER buttons simultaneously. Grand Totalizer can be reset via selection in the Advanced Menu or Modbus command
Totalizer Preset:	User can preset Job Total values
Construction	
B30A/B/S:	Polycarbonate, stainless steel, polyurethane, thermoplastic elastomer, acrylic; Type 4X (IP 66)
B30X/Z:	Copper free, epoxy-coated aluminum, buna seal, Type 4X (IP 66)
Certifications	
Safety:	**B30A/B/S:** Class I, Division 1, Groups C, D; Class II, Division 1 Groups E, F, G; Class III for US and Canada. Complies with UL 913 and CSA C22.2 No. 153 ATEX II 2 GD Ex ib IIB T4. Complies with Directive 94/9/EC* **B30X/Z:** Class I, Division 1, Groups B, C, D; Class II, Division 1 Groups E, F, G; Class III for US and Canada. Complies with UL 1203 and CSA C22.2 No. 30 ATEX II 2 G Ex d IIC T4 Gb and ATEX II 2 D Ex tb IIIC T135° C Db. Complies with Directive 94/9/EC
Entity Parameters:	**B30A/B only:** 4-20 mA Loop: V_{max} = 28V DC, I_{max} = 26 mA, C_i = 0.5 µF, L_i = 0 mH **B30A/B/S only:** Pulse Output: V_{max} = 28V DC, I_{max} = 100 mA, C_i = 0 µF, L_i = 0 mH **B30A/B/S only:** Reset Input: V_{max} = 5V DC, I_{max} = 5 mA, C_i = 0 µF, L_i = 0 mH **B30A/B only:** RS485: V_{max} = 10V DC, I_{max} = 60 mA, C_i = 0 µF, L_i = 0 mH **B30A/B/S only:** Turbine Input: V_{oc} = 2.5 V, I_{sc} = 1.8 mA, C_a = 1.5 µF, L_a = 1.65 H
EMC:	Complies with Directive 2004/108/EC

Pending

Specifications Cont'd.

Engineering Units	
Liquid:	Gallons, Liters, Oil Barrels (42-gallon), Liquid Barrels (31.5-gallon), Cubic Meters, Million Gallons, Cubic Feet, Million Liters, Acre Feet
Gas:	Cubic Feet, Thousand Cubic Feet, Million Cubic Feet, Standard Cubic Feet, Actual Cubic Feet, Normal Cubic Meters, Actual Cubic Meters, Liters
Rate Time:	Seconds, Minutes, Hours, Days
Total Exponents:	0.00, 0.0, x1, x10, x100, x1,000
K factor Entry:	Pulses/Gallon, Pulses/Cubic Meter, Pulses/Liter, Pulses/Cubic Foot

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