

# Blancett®



The NEW B3000 Series flow meter from Blancett provides you with a flexible, durable, easy-to-use platform for your flow metering applications. The B3000 Series makes it easy to monitor flow, with a crisp dot-matrix display capable of simultaneous display of flow rate and flow total. With a wide variety of enclosure options for both liquid and gas applications, from intrinsically safe and explosion proof (flameproof) ratings, to an innovative solar-powered model, there's a B3000 to suit your needs. And, intrinsically safe models are housed in an UV-resistant, NEMA 4X-rated, enclosure available in direct, panel, pipe, DIN-rail or swivel mounts.

The B3000 Series was engineered with smart management of unit power in mind. All units feature extremely low power consumption in normal operating conditions and are both 4-20mA loop and battery-powered\*. You'll never have to worry about losing power, and the onboard battery will last in excess of 8 years.

The B3000 Series also provides you with a suite of powerful operating features. Multi-point linearization tables are supported in all models, providing increased reading accuracy. Accessing the powerful advanced programming mode is as easy as pressing a single button. The standard communications interface is 4-20mA and total pulse, while the advanced interface adds two control alarms and Modbus RTU over RS485\*.

Blancett's trusted flow metering technology is now available in an exciting NEW package with more options and features than ever before with the B3000 Series.

\*Solar version available as battery-powered monitor only

## FEATURES AND BENEFITS

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- 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
- Flexible power options include solar, battery, and 4-20mA loop power, providing a number of benefits including: ability to install in remote location and be up and running immediately, maintain readings and settings in the event of a power loss, and prolong the life of batteries up to 8 years
- An updated display and enhanced totalization options provide more flow information at your fingertips, including display of rate and total at the same time and standard, batch and grand totals
- Multiple enclosure options ensure there's a B3000 model for your operation, for everything from basic remote mount to ATEX explosion-proof (available Q4 2011)

## SPECIFICATIONS

# B3000 Series

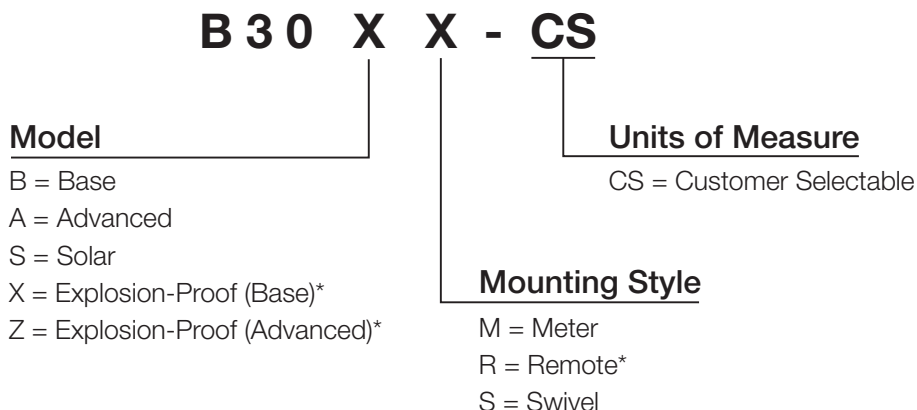
<b>Display</b>	<p>Dot matrix LCD, STN Fluid</p> <p>Simultaneous display of Rate and Total</p> <p><b>B30A/B/S:</b> 6-digit Rate, 0.5 inches (12.7 mm)</p> <p><b>B30A/B/S:</b> 7-digit Total, 0.5 inches (12.7 mm)</p> <p><b>B30X/Z:</b> 6-digit Rate, 0.37 inches (9.4 mm)</p> <p><b>B30X/Z:</b> 7-digit Total, 0.37 inches (9.4 mm)</p> <p><b>B30A/B/S:</b> Engineering Unit Labels: 0.34 inches (8.6 mm)</p> <p><b>B30X/Z:</b> Engineering Unit Labels: 0.24 inches (6.1 mm)</p> <p><b>B30A/Z:</b> Two status alarm icons, RS485 communication icon</p> <p>Battery gauge</p>
<b>Power</b>	<p>Auto switching between internal battery and external loop power; B30A and B30Z includes isolation between loop power and other I/O</p> <p><b>Battery:</b> 3.6 V lithium "D Cell", up to 8-year service life</p> <p><b>Loop:</b> 4-20mA, two-wire, 25mA limit, reverse polarity protected, 7 VDC loop loss</p>
<b>Power (solar model only)</b>	<p>Internal 3.6 V NiCd battery provides up to 30 days of power after 6-8 hours exposure of the integrated photovoltaic cell to direct sunlight</p>
<b>Flow Sensor Input</b>	<p>User selection of magnetic pickup or amplified sensor signal</p> <p><b>Range:</b> 1 to 3,500 Hz</p> <p><b>Magnetic:</b> Direct connection to magnetic flow sensor pickup (variable reluctance); 30mVp-p or 60mVp-p trigger sensitivity, user selectable; 30 V overvoltage protection</p> <p><b>Amplified:</b> Direct connection to amplified signal (pre-amp output from sensor)</p>
<b>Pulse Output</b>	<p>One pulse for each increment of the least significant digit of the totalizer</p> <p><b>Pulse Type:</b> Opto-isolated open collector transistor and non-isolated open drain FET, user selectable</p> <p><b>B30S Pulse Type:</b> Non-isolated open drain FET</p> <p>30 VDC maximum, 0.1A maximum, 30mS pulse width, 16 Hz maximum</p>
<b>Status Alarms (B30A and B30Z only)</b>	<p>Two adjustable flow rate alarms with programmable dead band and phase. Open drain FET, 30 VDC Max, 0.1A Max</p>
<b>Digital Communications (B30A and B30Z only)</b>	<p>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</p>
<b>Data/Configuration Protection</b>	<p>Two 4-digit user selectable passwords; level one password enables Job Total reset only, level two password enables all configuration and totalizer reset functions</p>
<b>Totalizer Operation</b>	<p>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)</p> <p><b>Totalizer Reset:</b> <b>B30A/B/S:</b> 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 B30B/S)</p> <p><b>B30X/Z:</b> 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</p> <p><b>Totalizer Preset:</b> User can preset Job Total values</p>

<b>Measurement accuracy</b>	0.05%
<b>Response (Damping)</b>	1-100 seconds response to a step change input, user adjustable
<b>Environment</b>	-22 to +158 °F (-30 to +70 °C); 0-90% humidity, non-condensing
<b>Construction</b>	<b>B30A/B/S:</b> Polycarbonate, stainless steel, polyurethane, thermoplastic elastomer, acrylic; Type 4X/IP66 <b>B30X/Z:</b> Copper free, epoxy-coated aluminum, buna seal, Type 4X/IP66
<b>Certifications</b>	<p><b>Safety:</b> <b>B30A/B/S:</b> 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 safety standards: EN 60079-0, EN 60079-11, EN 61241-0, and EN61241-11*</p> <p><b>B30X/Z:</b> 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 T120 °C Db. Complies with safety standards: EN 60079-0, EN 60079-1, and EN60079-36*</p> <p><b>Entity Parameters:</b> <b>B30A/B only:</b> 4-20mA Loop: Vmax=28 VDC, Imax=26mA, Ci=0.5uF, Li=0mH  <b>B30A/B/S only:</b> Pulse Output: Vmax=28 VDC, Imax=100mA, Ci=0uF, Li=0mH  <b>B30A/B/S only:</b> Reset Input: Vmax=5 VDC, Imax=5mA, Ci=0uF, Li=0mH  <b>B30A/B only:</b> RS485: Vmax=10 VDC, Imax=60mA, Ci=0uF, Li=0mH  <b>B30A/B/S only:</b> Turbine Input: Voc=2.5 V, Isc=1.8mA, Ca=1.5uF, La=1.65H</p> <p><b>CE:</b> Emissions / Susceptibility; Complies with EN 61000-6-4 for a Class B product and EN 61000-6-2 for an ISM product</p>
	*Approvals Pending

#### Engineering Units

<b>Liquid:</b>	Gallons, Liters, Oil Barrels (42 gallon), Liquid Barrels (31.5 gallon), Cubic Meters, Million Gallons, Cubic Feet, Million Liters, Acre Feet
<b>GAS:</b>	Cubic Feet, Thousand Cubic Feet, Million Cubic Feet, Standard Cubic Feet, Actual Cubic Feet, Normal Cubic Meters, Actual Cubic Meters, Liters
<b>Rate Time:</b>	Seconds, minutes, hours, days
<b>Total Exponents:</b>	0.00, 0.0, x1, x10, x100, x1,000
<b>K-Factor Entry:</b>	Pulses/Gallon, Pulse/cubic meter, pulses/liter, pulses/cubic foot

## PART NUMBER CONSTRUCTION



\*Explosion-Proof models available as Remote Mount only

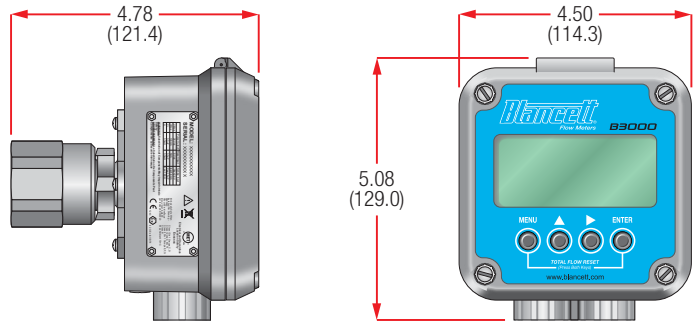
## DIMENSIONAL SPECIFICATIONS

# B3000 Series

### MECHANICAL DIMENSIONS: INCHES (MM)

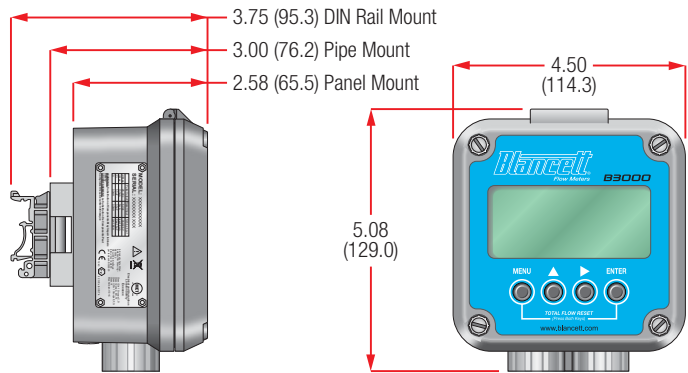
#### Meter Mount

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



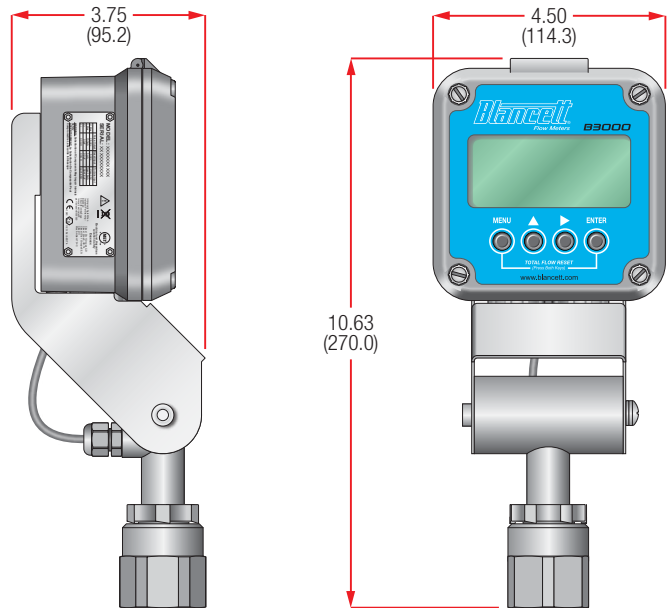
#### Remote Mount

- Ideal when flow meter needs to be located away from flow sensor; 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' (3 meters) up to 100' (30.5 meters) sold separately



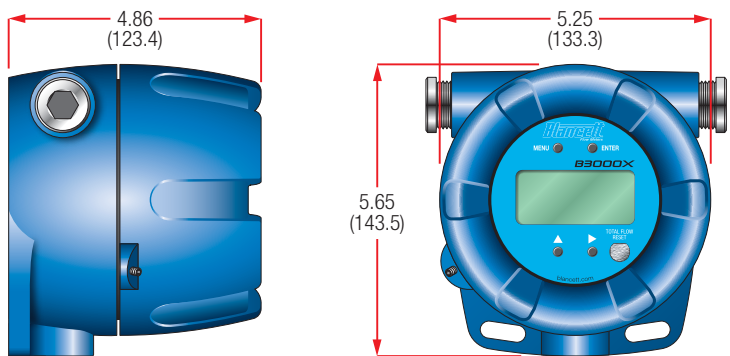
#### Swivel Mount

- 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



#### Explosion-Proof

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





## RACINE FEDERATED INC.

Racine Federated Inc. is a private corporation celebrating forty years of continuous operation in Racine, Wisconsin, USA. The Company is comprised of several divisions that serve the construction, industrial, municipal and commercial markets worldwide. This includes six flow meter divisions representing a variety of measurement technologies including turbine, variable area, hydraulic testing, differential pressure, vortex shedding, and ultrasonic flow measurement. With this unique product mix and a team of dedicated and experienced personnel, RFI offers high quality and cost-effective solutions for most flow measurement applications.



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