



## Power Protection Solutions Pty Ltd

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Inverter / Chargers • Marine Switchboards • Battery Chargers • Desalinators • Generators

Press Release November 2008

### Blue Sea Systems – VSM422 Monitor

The Blue Sea Systems Vessel Systems Monitor offers boat owners an attractive and compact meter to monitor a wide array of systems aboard. The Vessel Systems Monitor's simple user interface and adjustable alarm functions allow the boater to concentrate on boating, yet still be aware of critical conditions.

The VSM 422 offers complete monitoring of: DC systems, including amp-hours; AC systems; tank levels; and bilge. Alarms are included for all functions. It has three intuitive display modes, a versatile case design, and customizable legends to fit the needs of every boater.

Blue Sea Systems was founded in 1992 based on a commitment to create innovative high quality marine electrical products to improve the safety, simplicity, and reliability of boating. Blue Sea Systems employees are active boaters who apply their passion to designing, developing, and building products that enhance the experience of boaters.



## Four meters in one—less space and lower cost than 4 individual meters

- **Monitors DC systems**  
voltage, amperage, battery state of charge—amp hours remaining, time remaining, % charge, battery temperature (alarms for all values)
- **Monitors AC systems**  
voltage, amperage, watts, frequency (alarms for all values)
- **Monitors tank levels**  
fuel, water, waste (alarms for high level waste, low level fuel, and water)
- **Monitors bilge**  
bilge pump—active, cycle count, volume, duration (alarms for cycles, volume, duration)
- **Three intuitive display modes**
- **Flexible case design**  
offers three mounting options
- **Fully programmable legends and adjustable alarm functions** can be customized to fit every boat



1800 Actual Size Illustrated

### DC Specifications

Nominal System Voltage	12 or 24 Volts
Operating Voltage	8.5–33.0 Volts
Minimum Current Draw	10 mA
Voltage Accuracy	+/- 0.5%
Current Range	0–500 Amperes
Current Accuracy	+/- 1.0%

### AC Specifications

Nominal System Voltage	120 Volts@60 Hz, 240 Volts@60 Hz 230 Volts@50 Hz
Operating Voltage	0–300 Volts
Voltage Accuracy	+/- 0.5%
Current Range	0–150 Amperes
Current Accuracy	+/- 1.5%
Frequency	40–90 Hz
Power	0–45kW

### Regulatory

CE Marked for ignition protection and electro-magnetic interference

**IP** Meets UL 1500 and SAE J1171 ignition protection requirements

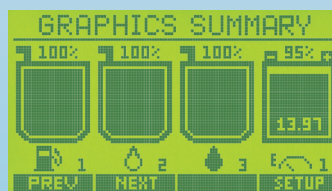
**66** IP66—withstands water from heavy seas

PN	Description
1800	Vessel Systems Monitor 422

### Three Intuitive Display Modes



**Large Font Display Mode**  
can be easily read from a distance



**Icon Display Mode**  
for simple multi-language visual status



**Multi-line Text Display Mode**  
monitor 5 systems at a single glance

### Three Mounting Options



Front Panel Mount



Rear Panel Mount



360 Panel Mount

# Side by Side Comparison

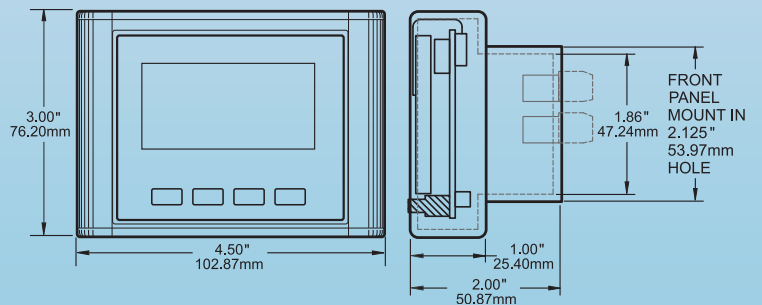
	ALL FUNCTIONS	DC FUNCTIONS				AC FUNCTIONS		TANKAGE FUNCTIONS		BILGE FUNCTIONS	
Manufacturer	BSS	Xantrex	Xantrex	BEP	Cruz Pro	BSS	BEP	BEP	Hart Systems	Celectron	BEP
Model	VSM 422	Link 10	Link Pro	600-DCM	VAH110	8247	600-ACM	600-TLM	Tank Tender	BW8	600-SOM
<b>DC SYSTEM FUNCTIONS</b>											
Voltage 1/Voltage 1 alarm	Yes	Yes	Yes	Yes	Yes						
Voltage 2/Voltage 2 alarm	Yes		Yes	Yes	Yes						
Voltage 3 (alternates as Tank 3 or Bilge)	Yes			Yes							
Voltage 3 alarm	Yes			Yes							
Amperage DC1	Yes	Yes	Yes	Yes	Yes						
Amperage DC1 alarm	Yes										
Ampere-hours remaining	Yes			Yes	Yes						
Ampere-hours remaining alarm				Yes	Yes						
Ampere-hours consumed		Yes	Yes								
% charge remaining	Yes	Yes	Yes	Yes	Yes						
% charge remaining alarm	Yes	Yes	Yes								
Time Remaining	Yes	Yes	Yes								
Battery Temperature	Yes	optional	optional								
Battery Temperature alarm	Yes										
Battery capacity calculation	Yes										
<b>AC SYSTEM FUNCTIONS</b>											
Amperage	Yes					Yes	Yes				
Amperes alarm high	Yes					Yes	Yes				
Frequency/Frequency alarm	Yes					Yes	Yes				
Power (Watts)	Yes					Yes					
Volts AC Line 1	Yes					Yes	Yes <sup>1</sup>				
Volts AC Line 1 alarm high/low	Yes					Yes	Yes				
<b>TANKAGE FUNCTIONS</b>											
Tankage 1	Yes							Yes	Yes		
Tankage 1 alarm high/low	Yes							Yes			
Tankage 2	Yes							Yes	Yes		
Tankage 2 alarm high/low	Yes							Yes			
Tankage 3 (alternates as DC Voltage 3 or Bilge)	Yes							Yes	Yes		
Tankage 3 alarm high/low	Yes							Yes			
<b>BILGE MONITORING FUNCTIONS</b>											
Bilge active (alternates as DC Voltage 3 or Tank 3)	Yes									Yes	Yes <sup>2</sup>
Bilge cycles/Bilge cycle alarm	Yes									Yes	
Bilge run time/Bilge run time alarm	Yes									Yes	
Bilge volume pumped/Bilge volume pumped alarm	Yes										
Average and maximum run times	Yes										
Typical Approximate Street Price*	\$599.50	\$244.00	\$322.00	\$316.00	\$399.00	\$267.00	\$380.00	\$255.00	\$595.00	\$158.00	\$285.00
Lowest Street Price	\$599.50	\$244.00				\$267.00		\$255.00		\$158.00	
Highest Street Price	\$599.50	\$399.00				\$380.00		\$595.00		\$285.00	

\*Prices based on data available on 09/2008

1 Monitors up to 3 AC Lines  
2 Monitors 3 bilge pumps

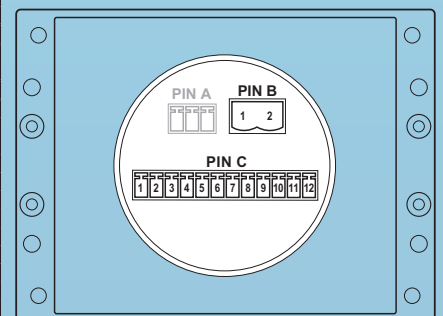
## Side by Side Comparison Price Summary

	BSS 1800	LOW PRICE	HIGH PRICE
DC FUNCTIONS	✓	\$244.00	\$399.00
AC FUNCTIONS	✓	\$267.00	\$380.00
TANKAGE FUNCTIONS	✓	\$255.00	\$595.00
BILGE FUNCTIONS	✓	\$158.00	\$285.00
TOTAL EST. STREET PRICE	\$599.50.00	\$924.00	\$1,659.00



## Pin Connections and Functions

PIN	FUNCTION
<b>Header A</b>	
Communication*	
1	Communication
2	Communication
3	Communication
<b>Header B</b>	
AC	
1	AC Line
2	AC Neutral
<b>Header C</b>	
Sensors and Power	
1	DC Voltage Battery 1 (Unit Power)
2	DC Voltage Battery 2
3	DC Voltage Battery 3 of Tank Level or Bilge Function
4	DC Negative
5	Battery Temperature (Positive)
6	Battery Temperature (Negative)
7	Tank Level 1
8	Tank Level 2
9	DC Shunt (Positive)
10	DC Shunt (Negative)
11	AC Current Coil (Positive)
12	AC Current Coil (Negative)



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Specifications subject to change.  
See [www.blueseas.com](http://www.blueseas.com) for additional information and specifications.